



OXFORD

Metaphysics, Soul, and Ethics in Ancient Thought

Themes from the Work of Richard Sorabji

edited by

RICARDO SALLES

METAPHYSICS, SOUL, AND ETHICS
IN ANCIENT THOUGHT

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FOREWORD

The work of Richard Sorabji spans over four decades and encompasses practically the whole of the history of ancient thought. The breadth of his work, combined with his distinctively philosophical concerns and close attention to intellectual contextual detail, have established him as one of the leading scholars in the study of ancient philosophy in the past half-century. Metaphysics, the nature of soul, and ethics are three areas in which his research has transformed our understanding of the deep relations between ancient and modern thinkers. They were therefore selected as the main headings under which the several papers presented here are organized. Some of them are polemical and they all reflect somehow their authors' indebtedness to his ground-breaking contributions to these areas. The essays dealing with Metaphysics range from Democritus to Numenius on basic questions about the structure and nature of reality: atoms, necessitation, properties, and time. The section on Soul includes one essay on the individuation of souls in Plato and five essays on Aristotle's and Aristotelian conceptions of the relation between soul and body, and, especially, of the physical basis of perception. The essays on Ethics concentrate upon Stoicism and the complex views the Stoics held on such topics as motivation, *akrasia*, *oikeiōsis*, and the emotions. It also includes one essay on the influence of Greek ethics in Modern Philosophy. The whole is complemented by an Intellectual Autobiography by Richard Sorabji and a full Bibliography of his works.

The project of which the present volume is the final outcome began life on a bitterly cold day of the English winter at Oxford, when I first told Richard about the possibility of doing a conference in his honour. The conference was held in the warm and sunny Mexico City of March 2001 at the Institute of Philosophical Research of the National Autonomous University of Mexico. Early versions of many of the essays that are published here were delivered at the conference. The conference, and now this volume, sought to bring together specialists with different backgrounds, interests and methodologies. Only so would it be possible to give a minimally accurate idea of the complexity and the extent of the influence of his work on people studying ancient philosophy nowadays.

At UNAM's Institute of Philosophical Research, the project as a whole received the generous support of its Director, Paulette Dieterlen. Among other crucial things, she kindly arranged the conference to take place at the Conference Center of the beautiful Botanical Garden of the main

campus. Both the conference and part of the research involved in the edition of the present volume were financed by the General Office for Academic Affairs (DGAPA) of the UNAM and the National Council for Research and Technology (CONACYT) through the following projects: PAPIIT IN401799 and IN401301, and CONACYT J30724 and 40891A. The final steps of the edition were carried out during a Fellowship at Harvard's Center for Hellenic Studies in Washington DC. At the Center I greatly benefited from the expert knowledge and assistance of Erika Bainbridge in compiling the Sorabji Bibliography. My gratitude also goes to M. M. McCabe and Bob Sharples in London for their ongoing support and advice throughout the project, to the several contributors for their enthusiasm and their help, not to mention their patience, as well as to Peter Momtchiloff, Rupert Cousins, Rebecca Bryant, and Jacqueline Baker for their interest in the project and their help at Oxford.

R.S.

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I

Intellectual Autobiography

RICHARD SORABJI

1930s

I was born in 1934 and my first lessons, aged 4, in 1938 were with my English grandmother, May Monkhouse, in our Oxford home. She told me of the Greeks and Romans, and put to me philosophical questions. 'What are you thinking about?', she once asked me. 'Nothing', I replied. 'It is impossible to think of nothing', she said sternly. Next time I said, 'Something black', which seemed to me positive enough to avoid the rebuke, but close enough to 'Nothing' to preserve the truth.

She also taught me what much later I learnt to be a Stoic lesson, that after stretching out one's glass for water, one must never take it straight to one's lips. Rather one must set it first on the table, as if one had all the time in the world.

I am told that she once looked at me approvingly and said, 'He'll be a philosopher'. Whether these syllables had any influence on my childhood self I cannot say. But another episode certainly did. When I was 6, my 12-year-old sister Francina (now Francina Irwin) told me, 'You will die one day'. 'Don't be ridiculous', I replied, 'dying is for flies and butterflies.' I had seen these dead on our sunny window sill in Oxford, but I did not accept the preposterous proposition that it could apply to me. 'I will show you you're wrong,' I said, 'I will ask Mummy'. I shall never forget the scene. Our mother was standing by my little plot in the garden, where a chestnut shoot sprouted from the corner, and she told me the truth in the nicest possible way, she herself believing in an afterlife and picturing it like a garden. But I could never put this truth behind me, and it certainly influenced my inclination to philosophical study.

My father was Indian and had married an English girl, Mary K. Monkhouse, thirty years his junior. Elders from the Indian side, as well as the English, were set up for me as models: my Indian grandfather, whom I didn't know, but who survived murder attempts for his new-found Christian faith, my Indian Aunt Cornelia, the first woman lawyer

in England or India, and my Indian Aunt Alice, who survived as a doctor and wife of a doctor among the wild tribes of the Afghan frontier. I have fond memories of these and other Indian aunts descending from London to Oxford, in their brilliant saris, during the 1940s. Being all but one of them childless, they liked to instruct my mother on how to bring up a son. Fortunately, my mother was robust.

My father and my Aunt Cornelia had come up to Oxford University in 1890 and were both protégés of the Plato scholar, Jowett, the most influential English academic figure of his age. It was he who forced the law examiners at Oxford to reverse their refusal to examine Cornelia as a woman, by taking a vote of the Oxford Congregation. Cornelia had become Jowett's confidante, and he sent her to stay with some of the leading figures of the late Victorian age. When Tony Kenny became a remote successor of Jowett as Master of Balliol College, I confided to him that as a child I had supposed that to be the most important job in the world. 'Only as a child, Richard?' he asked. When I was 9, Cornelia asked me up to lunch in London at Barristers Mess in Lincoln's Inn, where she then lived, and asked in a loud voice what I wanted to be when I grew up. Unfortunately, I gave the wrong answer, since I had already decided I wanted to be a teacher.

1940s

I started going to school at 6. At that little school, I started my Greek activities by producing a play on the satisfying subject of Procrustes, who lopped or stretched his guests, until they fitted his bed exactly, but received his come-uppance from the hero Theseus.

In 1943, a little before my ninth birthday, I started going to the Dragon School in Oxford, driven by Mr or Mrs Bryan Brown, he being the formidable Latin Orator of Oxford University. I loved the school above all because on the last day of the summer term, the staff would perform a fancy dress play on the river bank, which ended with them all throwing each other into the water. But the person who impressed me most of all was the brilliant science teacher, Gerd Sommerhoff, who gave me a love of science that has lasted all my life. In my first year, we were still being taught to recite the falsehood, 'The atom is the smallest part of any matter'. But then Gerd Sommerhoff, a non-Jewish refugee from Hitler's Germany, returned from his intern camp in Canada. The British had sent him there, along with the communist atom-spy Fuchs, and the Nobel Laureate-to-be Hermann Bondi, who had the misfortune to be in Cambridge in 1939, when the government decided to intern 'aliens in coastal areas'. Cambridge, unlike Oxford, was classified as a coastal area.

Sommerhoff had just left Oxford for his mother's home in the Isle of Wight, which was definitely coastal. So he spent two of the war years in Canada teaching physics with Fuchs in an internee camp. Fuchs was welcomed back by the Government earlier in the war, and so was able to spy on the British atom-bomb project and later pass the secrets to the Soviet Union. But Sommerhoff was told he must stay, or there would be no one to do the teaching.

Sommerhoff, long before the days of electronic toys, made an electronic battleship which launched its lifeboats on the river, and an electronic organ, played by interrupting its beams at a distance. He made a revolving solar system suspended from an old violin attached to the ceiling, and a punched metal display which lit up the constellations in response to switches. Later at another school, he got the pupils to make electronic sensors to help the blind navigate, and much later I was to learn that he had written a philosophical article on the first subject I was to write about myself, purposive explanation in biology. He also taught me an important moral lesson by announcing that the boy who came top in a test he gave could beat with his hand the boy who came bottom. It so happened that on that occasion I came top and a close friend came bottom, so I gave him a proper beating. 'Why did you do that?', he asked, and I was absolutely humiliated. I hope I have never again done anything merely because an admired authority said I could. Sommerhoff's lesson, I believe, was that what had happened under Hitler could happen anywhere. It was to the credit of my friend, David van Rest, that he remained my friend.

Another more unlikely hero was Baden Powell, not because he founded the Boy Scout Movement, but because his autobiographical *Indian Memories* included his watercolours of India, and because his account of the siege of Mafeking taught me lessons which I was to exploit in the 1980s, when government funding to the British universities was under siege. He made his only gun out of a gatepost, and kept the besiegers at bay by poking over the parapets arrays of helmeted faces painted on biscuit tins. From the 1980s, the British universities were under siege from a cost-cutting government, and similar techniques were needed in order to grow and flourish.

While I was still at the Dragon School, my mother ran an informal theological discussion group in the house weekly and eventually I came to attend regularly. One of the participants, Stuart Blanch, later became the Archbishop of York, though he was then in his first job as a curate; another had been a German anti-aircraft gunner in the recent Second World War, and they might well have fired at each other. The theology came easily to me, but I also took in Stuart Blanch's skill at answering off-beat questions. 'Do you really think so?' he would reply, 'How very interesting.'

From the age of 8, the Dragon School used to spend the first part of every day, while one was fresh, on Latin, adding Greek at the age of 11. At the age of 12, I was in the second stream from top, but I was told that I could be promoted to Upper 1, if I learned the Greek irregular verbs over the Christmas holiday. My mother knew no Greek, but helped me rehearse the Greek for 'I have been known' (*egnōsmai*) by mnemonic techniques such as I was to write about later. She drew an egg, a nose and a finger pointing to it as *my nose: egg-nose-my*. The success with these verbs was just enough for me to gain the thirteenth scholarship out of thirteen offered by my next school Charterhouse, and to move on there at age 13 in 1948, with my fees paid. I had been attracted to Charterhouse because it had been Baden Powell's school.

At Charterhouse, as at other such schools, we learnt a great deal of English verse by putting into Latin or Greek verse such rhymes as, 'The chief defect of Henry King was chewing little bits of string'. Failure to translate into English a particle or connective word from the beginning of a Greek sentence was treated as a total failure to translate the sentence at all. My careless translation from Latin of *noctes amaras* as 'nights of love', instead of 'bitter nights', was inscribed on the blackboard and I was not allowed to erase it for the rest of term. The worst moral offence at Charterhouse was to be caught using an English translation or 'crib', as I once was, to help one translate one's Greek or Latin. All this was a good preparation for the future.

The master for whom I mistranslated *noctes amaras*, I learnt much later, was a notable scholar of patristics, Henry Bettenson, whose scholarly books I was to use. He was also the school chaplain. I decided, with great regret, not to accept confirmation in the Christian faith, because I had doubts. I was horrified when one of my schoolmates said he was getting confirmed only because it gave him a day off work to meditate in the bishop's garden, and I told Bettenson. He was very angry with me and said I should never take at face value what people said about their faith. To this day, I do not know whether he was right or wrong.

1950s

Just before I left the school in 1953, there arrived a brilliant headmaster, Brian Young (later Sir Brian), known as the Black Death because of his elegant black suits. Each week, he set us four tasks for our spare time such as, 'find (a) the funniest, and (b) the least funny joke in ancient literature'. This was the most exciting teaching I had had at the school. I was by then the top boy academically, although this was a very low standard

compared with that of those I would go on to meet. I had been given a scholarship by Pembroke College, Oxford, to go there with my fees paid, an act of faith by my later classics tutor and friend, Godfrey Bond.

I volunteered first to do my two years of compulsory military service. I chose the Navy and the course in Russian language based at London University.¹ This meant getting to know the most interesting fellow students, as well as practising cabaret skills. We had to work hard because failure in any single one of the fortnightly exams entailed exile to the East German border. But after passing the one-year course in London, we spent much of the rest of the time conversing in Russian, in the beautiful countryside of Cornwall, with Russian émigrés, all of whom had hair-raising tales of escape from their own Soviet forces at the end of the Second World War.

Returned to Oxford in 1955, I still had a two-year postponement before I could start philosophy. The Latin and Greek had to be honed to a higher level. But I used the time well by courting my future wife Kate. In the term of my classics exams, we were asked to a party every night in return for my performing cabaret with the guitar. We married in 1958, a year before I finished being an undergraduate. Godfrey Bond, a good tutor and friend, made sure that I suffered in no way from the seventeenth-century statutes of King James I, which forbade scholars of the college to marry. I did not even have to surrender my scholar's gown.

The philosophy course began in 1957, and my tutor was Donald MacNabb. MacNabb was actually, though he was too modest to say so, The MacNabb, the head of his Scottish clan. The main teaching took the form of tutorials, that is of reading aloud one's essay to an expert tutor, in the company of at most one fellow student. We wrote two essays a week, one in ancient history and one in philosophy. With a good tutor, it could be a transforming experience to try out one's faltering ideas on a first-class and sympathetic mind.

Unfortunately, for my first eight tutorials, MacNabb said, 'You could read Gilbert Ryle, *Concept of Mind*, a splendid book, and write on the Mind-Body problem.' Seven times I replied, 'I read that the first week, Sir. Is there anything else you would recommend?' But he only said, 'the books—read the books'. I later learnt that this meant 'read the two books in Greek, Plato's *Republic* and Aristotle's *Ethics*', which constituted the ancient philosophy part of the course. But I did not understand at the time.

After the first term, I wrote as politely as I could to the Master of my college and said I had enjoyed my first term of philosophy, but could I get

¹ The Russian course has been described by Geoffrey Elliott and Harold Shukman in *Secret Classrooms* (London, 2002).

another perspective by trying another tutor? The letter was forwarded to MacNabb, who wrote to me that he was sorry he was considered a fuddy-duddy (something I had never said), but I would have to put up with him. He then sent all my fellow students to other tutors, but me he kept to himself for the remaining two years. None of this could happen nowadays. There are safeguards and appeal procedures and my Oxford colleagues are among the most conscientious I know. In fact I think the danger is the opposite, that their teaching and college duties have become *too* heavy. But in those days there was only one solution.

I paid graduate students out of my own pocket to give me tutorials, read them an essay at the beginning of the week, and then read the same essay later in the week to MacNabb. The graduate students were brilliant. One, Michael Woods, later became an Oxford tutor, as well as a lifelong friend. He opened my eyes to what it was to read a philosophical text in Greek. MacNabb hospitably gave me my official tutorial in his home, but all he asked me was, 'What is the *Philosophical Review*?' (it was then the world's leading English-language philosophy journal, edited at Cornell), or 'Who is Miss Anscombe?'. Elizabeth Anscombe, later to be professor at Cambridge, was then at another Oxford college, and had just published in 1957 what seemed to me the most original set of philosophy lectures of that period in Oxford, *Intention*, which in effect recreated a whole subject, the examination of human action and motivation.

Much later, I learnt that MacNabb had been very bright at the time of his appointment in 1936, and defeated A. J. Ayer for the job. He succeeded the great R. G. Collingwood, and both his predecessors in Pembroke, Collingwood and the Aristotelian Henry Chandler, attained to Oxford's Waynflete Chair. His display of insouciance may have been partly assumed. He had written a clear and pleasantly self-deprecating book on Hume, which I read. He also took me to the 100th anniversary meeting of the Oxford Philosophy Society, where he was pleased to hear Isaiah Berlin record that he, MacNabb, was one of the six elite Oxford philosophers who met in Berlin's rooms and developed the style of linguistic philosophy known after the war as Oxford Philosophy. But he had not kept up with the subject. It was said that when an enthusiastic lady exclaimed, 'How wonderful it must be to be an Oxford don', he replied, 'I would rather be a master of foxhounds.'

Fortunately, final examiners were independent of tutors, and at my final undergraduate examination I was given a friendly interview by Mary Warnock representing the ethicists. That went all right, but I was asked to come back for a second interview an hour later. I had been thinking about philosophy, but I was sure I would be interviewed on ancient history. So I went across the road to Magdalen College, where there was a teacher famous for getting his students through the exam, Tom Brown Stevens.

I knocked on his door and said, ‘You don’t know me, but I am about to be questioned on ancient history, and I can’t remember any.’ ‘Dear boy, sit down’, he said, ‘and I will tell you exactly what to say.’ Then he gave me a very large glass of rum, so that I returned to the interview with my head swimming. Meanwhile he sat down and typed out half a page of information. ‘Here you are’, he said. ‘Whatever the first question, you must reply: “As you said in your lectures, Dr Chilver, the whole question turns on the issue of manhole covers”.’ Apparently, the head examiner had written about inscriptions on manhole covers in first-century Rome. ‘Then you have the examiners in a *trap*’, he said ‘—you can predict their second question: “What do you mean, Mr Sorabji?”’, and here is the answer.’ With that, he handed me a summary of the head examiner’s opinions concerning inscriptions on first-century manhole covers. With thanks, I staggered back to the Examination Schools, only to find that it was not the ancient historians, but the logicians who wanted to see me.

The logic written exam was always set on a Monday, ethics on a Thursday, and one of the questions in my written paper had been, ‘if today had been a Thursday, would you be doing a Logic or an Ethics exam?’ Such unpredictable questions were a particular feature of the logic exam, and no doubt part of the reason why success in this syllabus gave immediate entry to the highest administrative jobs. Anyone who could think clearly in these circumstances would certainly be able to withstand the siege of Lucknow. Jowett, I believe, had made Plato’s *Republic* and Thucydides’ *Histories* part of the Oxford syllabus for a related reason, as being the ideal preparation for administrators in India.

1960s

After my four years as an undergraduate, I left and became a teacher at my old school in Oxford, the Dragon. I should have been very happy as a schoolteacher, and never thought that I would have an opportunity to continue with philosophy. But I was lucky that one of my examiners was John Ackrill, and he, prompted by Michael Woods, encouraged me to return. MacNabb arranged the introduction to the all-powerful Gilbert Ryle, and to my delight I was at once allowed to return to the graduate course specially designed by Ryle for future university teachers, the B.Phil., elsewhere called the M.Phil. and introduced by many universities in many subjects.

I had the extraordinary good fortune to have as my postgraduate teachers Gwil Owen and for a time John Ackrill, the first urbane and ebullient, a continuous firework display of knowledge and references, the second a perfectly matched scholar inculcating care and exactitude, so

that you knew that any loose thread would lead to your entire tapestry being unravelled. I was not as over-awed as I should have been, because I thought that this was the standard of teaching that others had been enjoying in Oxford all along.

It was on returning to study that I had the first of my chance conversations with Isaiah Berlin. ‘What are you studying?’, he asked. Having so far read the two prescribed texts of Plato and Aristotle, I said, ‘Ancient Philosophy’. ‘Ancient Philosophy, Ancient Philosophy’, he replied, and then mentioning two parties of whom I knew absolutely nothing, ‘Don’t you think that the Stoic theory of *Oikeiōsis* (attachment) is the very obverse of Marx’s theory of alienation?’ I thought about that question for over thirty years. Only in 1993 did I reach the point of writing about Stoic attachment. Even now I have not written about Marxist alienation. But what was important about Berlin’s remark was not the scholarship—I don’t know what he would have said about the Stoics—but his ability to make you realize that there were important things to be thought about far beyond those of any curriculum. When I had the privilege, near the end of my career, of becoming a fellow of the college he in effect founded, Wolfson College, Oxford, I encountered another importance, the embodiment of a humane and liberal imagination in the design of a college uniquely devised for the needs of researchers of all ages and countries.

Oxford in my undergraduate days in the mid-1950s was the home of the philosophy of ordinary language, as spoken in the senior common rooms of Oxford. Appeals to ordinary language were thought, not by all but by the most extreme, to dissolve metaphysical speculation. The most feared of the practitioners, the dominant member of Berlin’s sixsome, was J. L. Austin. I went to Austin’s lectures in the first year of my philosophical studies, and for eight lectures he pretended he was sincerely trying to understand the first sentence of a book on perception written by another member of the circle, A. J. Ayer. Berlin’s own vignette on Austin describes how this tournament also went on in Berlin’s rooms, and how Ayer complained, ‘Austin, you are like a greyhound who doesn’t want to run himself, but bites the other greyhounds, so that they can’t run either.’ It would take careful analysis to say in what sense Austin was an ordinary language philosopher, but what I can say is that the lectures were extremely funny. I emerged from each one with my sides aching from laughter more continuous than any I have ever experienced in the theatre. Austin’s aim was to deflate theory, or at least that particular theory of perception which I later came to agree in rejecting, but curiously enough his work led him on to something more theoretical, which was in the end, in my view, to undermine many of the ordinary language techniques.

Austin himself, before his premature death, started developing a positive theory about how language worked and this was continued by Paul Grice, another Oxford philosopher, in lectures given in Harvard in the United States. I attended the first try-out of Grice's US lectures in my first year of teaching at Cornell in 1963. He showed that the appeal to ordinary language, 'We don't say that', demands further questions. If we do not say something in ordinary language, is that because it would be false, or because it would be obvious, or irrelevant, or insufficiently informative, although true? People may refrain from saying things not because they would be untrue, but because to say them would violate conversational expectations by being too obvious, or irrelevant, or insufficiently informative. A lot of the information conveyed in conversation is conveyed not by the meaning of the words (although Grice had very interesting theories on that aspect of meaning too), but by the inferences we make about the speaker's meaning on the basis of conversational expectations. I believe that Grice's work made simple-minded appeals to what we ordinarily say or don't say impossible thereafter.

The climate was changing in other ways too against appeals to ordinary language. Anscombe had never, to my mind, practised this technique, and Strawson was writing books of a different sort. But now in the 1960s, Hilary Putnam and Saul Kripke were drawing attention to the role of scientific knowledge, as well as ordinary language, in our concepts. This led to my first small act of rebellion against the philosophy I had encountered as an undergraduate student. Aristotle, I argued in 'Aristotle and Oxford Philosophy' in 1969, was not just an ordinary language philosopher, acute as he was in his observations on ordinary language when the occasion demanded. But in his definition of lunar eclipse, for example, he inserts information not available to ordinary speakers in his time, about lunar eclipse being due to the earth's shadow. Moreover, for better or worse, Aristotle did not recognize the idea, then basic to Oxford Philosophy, of conceptual necessity as the strongest necessity, and the necessity that it was philosophy's particular task to establish by non-empirical means.

In 1972, some years after I had started my teaching career, Saul Kripke published his lectures *Naming and Necessity*, in which he brought out that there are other equally strong forms of necessity. This should not have been a surprise, but a reminder of what was well known to medieval philosophers and to Leibniz, for example. But I remember feeling a certain terror that I would have to rethink everything I had previously thought. Kripke himself did not recognize Aristotle as an ally, and explained this to me by saying that his teacher, Rogers Albritton, had put his whole class off studying Aristotle by saying that Aristotle was only for the cleverest.

I have moved ahead, in order to indicate some of the changes going on in the English-speaking philosophical scene. But it was in 1962 that I completed the B.Phil. and with Owen's support, I was again very lucky and without interview was offered a job at Cornell University. For me to obtain a visa, it had to be stated that no available US citizen could do the job, and so different were the times that it was possible to say this. The subject of ancient philosophy now is full of talented people, but then there were few philosophers trained in Greek in the USA. My immediate predecessor in the Cornell Philosophy Department had been Gregory Vlastos and in classics the last ancient philosophy scholar had been Friedrich Solmsen, two giants, but for a considerable time there had been a gap with no one there in ancient philosophy.

I was told that my first two courses would be on Karl Marx and on the history of western philosophy for the 1,800 years from Thales to Thomas Aquinas. The two works of ancient philosophy I had studied as an undergraduate at Oxford had taught me how to read a text, but they left me with a feeling that I have never quite lost, that I would have to read very hard to fill in the gaps. It didn't occur to us in 1962 to go to the USA by plane. On the ship going over with our first two children, Dick and Cornelia (Tahmina was born later in the USA), I spent the entire five days preparing, until we slid up the river alongside the skyscrapers of New York and docked. But on arrival in Ithaca I was told, 'Did we say Marx? That was a mistake.'

The towering figures at Cornell then were Max Black and Norman Malcolm. Black and Malcolm had transformed the *Philosophical Review* from 1954 into the leading philosophy journal in English and as a student in Oxford I had bought it back to that date. I had also read all Malcolm's writings, because he was Wittgenstein's student and first biographer. His *Memoir* records in his rock-like way the extraordinary insult which Wittgenstein inflicted on him as a student, refusing to speak to him for five years because of a conversational comment which Wittgenstein mysteriously took to be stupid. Wittgenstein's *Philosophical Investigations* had been published with Elizabeth Anscombe's translation in 1953, and was beginning to be discussed in Oxford when I arrived there. It too offered to dissolve the big metaphysical problems, but not by any technique which could be quickly understood, and I was still very intrigued as to how it would work out. If Anscombe's interpretation of Wittgenstein was the most original, Malcolm's was the clearest, and I felt particularly privileged to be going to his department.

Malcolm met us off the Greyhound bus at Ithaca, New York, with our snow toboggan and many accoutrements, and took us straight to the vast supermarket in this rural town. I had totally failed to anticipate his appearance. He was wearing shorts and a sweat shirt and had silver

crew-cut hair. He gave us the bed on which Wittgenstein had slept during his stay in Cornell, and when we visited him the following day, he was up a ladder painting his house. He thought of himself as a Nebraska farm boy. We became close friends and in his retirement he joined our philosophy department in London.

Max Black and he were opposites, Max Black was cultivated and very fast in argument with high-speed manoeuvres. He excelled on subjects like Zeno's paradoxes, one of my favourite topics for a long time. Malcolm by contrast was extremely slow, but when he said, 'Now wait a moment', even Max Black waited. A discussion club met once a week in Cornell's Sage School of Philosophy, as it was called. It was virtually a necessary condition of getting 'tenure', that is of getting one's job made permanent after six years, that one's contributions to these discussions should meet with approval. The last two to get tenure had been Sydney Shoemaker and Keith Donnellan, so the standard was high, and the success rate was about 50 per cent. There were two rules about the discussions that made the task rather formidable. First, the proceedings were to last exactly two hours. Secondly, you might never change the subject currently under discussion until it had been exhausted. People could be seen who had thought of a tenure-winning point twenty minutes before the end, and who were waiting in agony to see if they could get it in without violating the 'no change of subject' rule.

Somehow I did get offered tenure after six years, in spite of the fact that I had by then published only one article and had my first book commissioned. With a historical subject, it can take a long time to read enough to be able to write. My seven and a half years at Cornell were an ideal training, in that I was among analytic philosophers from whose standards I could only learn, and who wanted to be shown the philosophical interest of anything said by the ancients. Only towards the end was I joined in the philosophy department by another historian of philosophy, Norman Kretzmann, although the classics department after a while appointed first Philip de Lacy and then in his place Malcolm Schofield. Philip urged me to join him in translating a work of Galen, but I only came to realize its interest many years later when I wrote about emotions. My time at Cornell included a period as one of the two editors, with Norman Kretzmann, of the *Philosophical Review*, which gave one a sense of what was happening in philosophy all over the English-speaking world.

1970s

In 1969 I was enjoying a sabbatical leave back in England when a job arose at King's College London and I applied. I was interviewed by Peter

Winch, a philosopher of formidable intellect, and General Sir John Hackett, an excellent classical scholar and inspired principal of the college, who was later to head a march of students demanding bigger grants, carrying a placard saying, 'More Pay for Principals.' I was told on the spot that I had the job and I began on 1 January 1970.

Peter Winch's department had only four members and a group of students very carefully selected by personal philosophical discussion. Students and staff could all know each other and all the undergraduates were invited each year to our house. Our best teaching was probably done in two weekends of philosophical discussion at King's country retreat in the Sussex countryside. Peter Winch himself undertook all the administrative work, which had not in those days spiralled out of control, so that we were free to teach and research.

One of the most exciting circumstances of my career was that Myles Burnyeat invited me to join him in giving the London intercollegiate lectures in ancient philosophy. These were attended by students from all the London colleges, so that we had about a hundred. One of us would give the lecture and the other shout objections from the front row. Myles is perhaps the most electric philosopher I have known. Everything he says is exciting. There was something gladiatorial about these lectures, which was good for the strong students, though I suspect that the weaker students may have been too much spectators. It was a very great loss to me when Myles moved in 1976 first to a research leave and then to Cambridge.

Another exciting experience was compiling the four volumes of *Articles on Aristotle* with Malcolm Schofield, who had himself returned from Cornell to Cambridge, and Jonathan Barnes from Balliol College, Oxford, to whom Malcolm introduced me. We met in our house at Wandsworth Common, and before lunch were quite unable to agree what should be included. But after a magic bottle of wine over lunch, agreement seemed perfectly easy.

The comparative leisure supplied by Peter Winch enabled me to finish my first book, *Aristotle on Memory*. The most interesting episode for me was my correspondence with the Russian neuropsychologist A. R. Luria, who had just published in English a book, *The Mind of a Mnemonist*, about a patient who had exploited his pathologically overdeveloped visual imagery by performing memory stunts. Aristotle also gives some advice about recalling memorized information in chapter 2 of his *On Memory*. He was explaining the 'place' system of memorization, which one is still taught, if one answers advertisements offering to improve one's memory. To remember twenty or more names (up to 2,000 in ancient accounts) in the right order after the first hearing, one has first to prepare in one's imagination a row of twenty or more distinctive houses or other

visualized places. This is the part that takes time, but it enables one to keep track of the right order. Then when one hears the names to be memorized, one quickly installs symbolic images outside each house in order. The name 'Robinson' might lead one to instal an image of a robin and baby robin at the front door of house number 1, the name 'Smith' an image of a blacksmith at the front door of house number 2, and so on. In order to recall, one revisits the places in imagination.

What had happened with Aristotle's text was that he had labelled the mental images of places to be visited with letters of the alphabet, and scribes, having no idea what he was talking about, had over the centuries jumbled the names of the places he was recommending one to visit in the process of recall. But just at the moment when I was trying to understand the text, Luria's book came out and explained that his memory man had a technique for speeding up recall of a missing name. One could skip to alternate places and take a quick look on either side, rather than visiting each place in turn. I subsequently found this advice in other mnemonist texts too. What Aristotle was recommending was that if the item sought was not at A, you should skip to C and take a quick look to either side; failing that, move on to F and do the same again. Moreover this reconstruction fitted with the readings of the best manuscripts. The skipping method could also be used with memorized sequences more rudimentary than the place system. I wrote to Luria to ask if he knew that his patient's system was an ancient one, and he replied that he had not known at all.

I also wrote about colour and vision in the 1970s. At Cornell, I had heard Edward Land, the inventor of the polaroid camera, lecture on his discovery that Newton's theory of colour is wrong. The eye responds not to absolute wavelengths of light, but to the more complicated property of reflectance, which involves the proportions among wavelengths in the available scene. Land was able to cast on the screen at Cornell a slide showing all the colours of the garden, yet he was using wavelengths only from within the yellow waveband. I was intrigued that Goethe had also rejected Newton's theory of colour, and praised Aristotle for his theory that the other hues are produced by combinations of the brightest and the darkest. This, according to Goethe, is the theory that any painter would accept. We had a reproduction in our hallway of a painting by Bridget Riley consisting of wavy black and white stripes. Some of our guests saw brilliant colours in it. Others merely felt giddy. I wrote to ask Bridget Riley what she thought of Goethe and Aristotle, but this time I did not get an answer.

I had enough leisure in the 1970s to write my second book, *Necessity, Cause and Blame* (1980). The ideas of the first two chapters I tried out in lectures with Myles Burnyeat. It was often thought that Aristotle did not discuss the worrying deterministic threat that everything we are going to do

is already fixed and inevitable in advance because of antecedent causes. On this view, whatever happens in the future has prior causes, and those causes have prior causes, and the chain of causes stretches back before you were born. Since the past is irrevocable, it was already fixed before you were born what you are going to do tomorrow. I sought to attack this argumentation at two points. One was the inference from ‘caused’ to ‘necessitated’. The other was the idea that whatever happens has a cause. I attacked both ideas on the basis of Aristotle’s view that a cause is a certain type of *explanatory* factor. He challenges the claim that whatever happens has a cause, so I thought, in a chapter whose meaning had been considered ‘baffling’, *Metaphysics* 6.3. Coincidences, he replied, do not have causes, because they have no *explanation*. Admittedly, to supply an example, if a little girl asks, ‘why is it raining on my *birthday?*’, there may be a perfectly good explanation of why it is raining today, and a perfectly good explanation (what her parents were doing nine months before her birth) of why it is her birthday today. But these do not add up to an explanation of what she asked. It would be an answer to her question if it were true to say, ‘the rain is a punishment for being naughty’, but of course we do not believe that that is true. The only honest answer is, ‘there is no explanation—it is just a coincidence’. Aristotle infers, ‘no explanation—no cause’.

Later, these ideas about coincidence were used in an interesting way by David Owens, in his book *Causes and Coincidences* (1992), to attack certain reductionist theories of explanation in economics. It is not true, Owens argued, that explanation of inflation as due to increasing the money supply can be reduced to an explanation of all the activities which constitute inflation by reference to all the activities which constitute an increase in money supply. If one so treated the activities involved in inflation separately in this way, they would constitute one giant coincidence and have no explanation at all.

One has no idea whether one’s work is good or bad, except from the reaction of other people, whose knowledge of one’s own mind is better than one’s own. Tony (A. A.) Long telephoned me one day, and said, ‘Congratulations on the review’. I had no idea what he was talking about, but it turned out that Elizabeth Anscombe had reviewed the 1980 book in the *Times Literary Supplement*. We were just setting out for dinner in Hampstead, and I stopped off at Euston Station to get a copy. Thanks to her review, the 1980s were entirely different for me, and by 1981, I was a professor.

1980s

In 1980, I was 45 and I decided it would be a pity for the rest of my career to remain a specialist only on Aristotle. Despite the notorious remark of

Cornford, Lawrence Professor of Ancient Philosophy at Cambridge in the 1930s, that we would gladly sacrifice all 700 lost rolls of the Stoic Chrysippus in return for one lost roll of the early Presocratic Heraclitus, it seemed to me that the story of philosophy was a continuing one with very interesting sequels, particularly so on the subject of my next book, which was about the nature of time. I had come to favour studying the story as a continuing history, rather than skipping from one famous name to the next. Some of my colleagues had already been opening up the study of Stoics, Epicureans, and Sceptics, and I later found that there had been a parallel expansion in other branches of the classics, with ancient history and literature being widely studied right through to the sixth or seventh century AD. The alternative method, on which we had all been brought up, was to skip from Aristotle over 1,500 years to Thomas Aquinas, or nearly 2,000 years to Descartes. But it is hard, if one skips, to understand the later people. How could Thomas Aquinas, for example, think that Aristotle was compatible with Christianity? Only because he read Aristotle through Neoplatonist lenses. The Neoplatonists had to answer Christian charges that the pagan philosophers disagreed with each other, and for this purpose they made Aristotle's God, like Plato's, a Creator, and his human intellect, like Plato's, immortal. It was this anti-Christian harmonization of Aristotle with Plato that by an irony enabled Thomas in the thirteenth century to present Aristotle as suitable for Christians.

In 1981, Peter Winch put me forward for a personal London University Chair at King's College. I gave my inaugural lecture on the arguments of Philoponus in the sixth century AD on behalf of the Christian belief in God's creation of the universe. The pagan Greek philosophers accepted Aristotle's account of infinity as an ever-expandable finitude. Aristotle denied that you could finish going right through a more than finite series. But unless the universe had a beginning, as the Christians claimed, so Philoponus pointed out, it would by now long since have finished going right through an infinite number of years. And the number of days would be 365 times infinity, which the pagan philosophers all considered absurd. In 1983 I held a conference at the Institute of Classical Studies in London on how Philoponus had sought to replace Aristotelian science with a science adapted to Christianity, devising ideas sometimes considered revolutionary and often wrongly credited to the later Middle Ages.

In King's, I held a seminar with a well-known, but maverick pupil of Einstein, David Bohm. He was about to publish his book, *Wholeness and the Implicate Order*, and in the first half of term, he expounded his ideas. Clive Kilmister, one of our professors of mathematics acted as chair because of his wonderful ability to explain the mathematical and

humanist sides to each other. In the second half of term, we looked at some of the Neoplatonists' ideas of space and time. Bohm kept clapping his hand to his brow and exclaiming, 'This is what I have just published in the *Journal of Physics*.' It may not have been exactly what he had published, but the attraction was that the Neoplatonists considered the world of space and time to be wholly dependent on a higher world that was indivisible and unextended.

Continuing my layman's exchanges with scientists, I published a trilogy of books in the 1980s on ancient philosophy of physics, on such subjects as cause, necessity, time, space, matter and motion. I was able to consult on modern physics first Arthur Fine, who had been my colleague at Cornell, and then Michael Redhead, when he came to King's and later took over the chair in philosophy and history of science.

Another valuable encounter for me in the early 1980s was with Fritz Zimmermann, a leading scholar of Islamic philosophy. It is standardly recognized that from the ninth century AD Islamic Philosophy was a response to ancient Greek philosophy, which is not in any way to deny its towering brilliance. But I read an article of the 1930s by a German scholar, Pretzl, claiming that before the ninth century there was an indigenous philosophy in Arabic, which, in the author's view, was too irrationalistic to be influenced by the Greeks. On looking at a translation of the star specimen of this supposedly indigenous philosophy, I got a considerable surprise. The translator was not sure whether the text was about atoms or ants. But it seemed to me that the text was replying sentence by sentence and line by line to some late Greek arguments concerning atomic discontinuities in space, time, and motion. Discontinuous motion would be like the cinematographic motion on a movie screen, with objects disappearing from one spot and reappearing further on, without having been in between. Fritz Zimmermann, for the first of many times, made for me a careful paraphrase of the Arabic, and confirmed that it was indeed responding to the ancient Greek.

I learnt further in the 1980s, because a scholar of Neoplatonism, A. C. Lloyd, started coming to the seminars I was running on late Greek philosophy at the Institute of Classical Studies in London. For several years, thanks to the fast Intercity trains, he regularly brought with him up to three other members of his department at Liverpool. He knew far more than me or any of the rest of us about Neoplatonism, and since he took the view that anything he knew surely we must know, I constantly had to ask him to stop and explain the brief allusions which poured out from him. Whenever he did stop and explain by reference to his copious exercise books, it was of very great benefit for us all.

In December 1982, I became one of a stream of visitors to a group that met secretly in Prague,² to study Aristotle's *Metaphysics*, a work innocent of political implications, but banned by the ignorant communist authorities. We met in people's houses and could not speak aloud each other's names, as the walls were bugged. The participants had been sacked from their academic jobs for wishing to study this subject, and given other jobs as window cleaners and so on. Hence they could only read at night from inadequate and outdated texts. I had to memorize a list, not to be entrusted to writing, of books they wanted sent from England, something I had earlier done in 1965 for the dissident Julius Tomin, who was not yet at that earlier time well known. It was touching how long they had tried to prepare for our two meetings. We had to leave each house in small groups at midnight, so as not to attract attention, and after walking me back to my hotel, they went on talking with me in the snow outside, since to come in might have betrayed the affiliation of the person who booked me in. Only one of them was allowed to use a university library, and then only to read books recognized as belonging to ancient philosophy. A book on ancient astronomy was forbidden to him. When he was later allowed to visit the Institute of Classical Studies in London, he committed suicide rather than return to Prague.

The most dramatic event of the 1980s in Britain was the installation of a prime minister famous for saying, 'There is no such thing as Society'. Margaret Thatcher very much disliked the spending of public money. One result, early in the 1980s, was the closure, through want of funds, of five colleges in London University. One of the five, Bedford College, which had a brilliant philosophy department, had originally been a women's college, the first in Britain, and the subject of a gentle lampoon about women taking over the world in Gilbert and Sullivan's *Princess Ida*. They occupied an extremely beautiful site in Regent's Park in the middle of London. The survivors were sent out to join another college, variously estimated by different parties to the dispute, as 25 or 30 miles away, and within five years lost even the mention of their name. Whatever the distance, it would have prevented our continuing to include Bedford College in the combined intercollegiate lectures, which were part of the source of our strength.

I spent much of the year of 1983, as acting head of the King's philosophy department, debating whether, because of the same funding crisis, our own department should be reduced from five members to three, which would in effect be abolition, since three was below the official estimate of viable size, or increased to eleven by the acquisition of the Bedford

² These and other academic visits to Prague have been described by Jessica Douglas Hume in *Once upon Another Time: Ventures behind the Iron Curtain* (Norwich: Wilby, 2000).

department. I offered the Principal of King's, then Air Chief Marshall Lord Cameron, a bottle of champagne, if he got the Bedford department. He said it would have to be the best champagne. The harder task was undertaken on the Bedford side by Mark Sainsbury, resisting first abolition, and then removal to a variously estimated distance. The initial discussions in King's had to decide which humanities departments would shrink to meet the funding cuts, and they were surprisingly good-natured discussions despite some protests. When they were over, the next step was comparatively easy, since everyone in King's agreed concerning Bedford College. Thanks to the help of an outside adjudicator, Ronald Dworkin, I had eventually to buy the champagne, and the King's department has now grown to seventeen permanent members, or twenty-seven with postdoctoral research fellows included.

It was in 1985 that I began, with funding from the USA, the research project for translating into English the philosophy of 200–600 AD, the crucial period of transition from antiquity to the Middle Ages. That philosophy to a large extent was conducted in the form of commentary on earlier philosophy. Part of my reason for deciding to go ahead was the same funding crisis. The number of philosophers in Britain was reduced by 25 per cent during the 1980s. From all over London, people were asking me if I could take over the teaching in ancient philosophy that they could no longer maintain. One side-effect of taking on the project was that, since it could not be run without research assistants, there would at least be jobs for exceptionally able young researchers, and a real presence in the subject. This, of course, was not the reason for conceiving the project in the first place, but it was a consideration in deciding whether to undertake the enormous labour that it involved.

The project came about in an unexpected way. As a young lecturer at Cornell in the 1960s, I had said to my medievalist colleague, Norman Kretzmann, 'Wouldn't it be wonderful if we could translate the ancient commentators on Aristotle?' I made this remark in ignorance, because at the time I knew only the period down to Aristotle, and I was merely thinking of the light that would be thrown on Aristotle, not on the commentators in their own right. Twenty years later, Norman Kretzmann was on the translation panel of the National Endowment for the Humanities in the USA, and at the end of the year's round of awarding grants, the panel asked itself, 'What translation project out of the whole of history would we like to see done most?' Remembering our conversation, and conscious of the light that would be shed on medieval philosophy, Norman Kretzmann said, 'translating the ancient commentators on Aristotle'. It happened that the entire panel agreed, and they initially looked for an American to devise such a project, but, not finding one who was willing, they wrote to me.

My initial answer was 'no'. I explained that I would never have time to do anything else, and I wanted to write books of my own. Then I wrote another letter to fifty colleagues, to confirm my impression that the idea was not practical. To my surprise, I got forty-nine letters back, saying that it would be a wonderful thing to do. Ten of the respondents revealed that they were doing translations of their own for private use, but thought nobody would be interested. Fifteen further people volunteered, although I hadn't asked them, to become translators. I was close to being committed. But I still said that I must be free to do other research as well, and I could not undertake the project without research assistants. It was necessary to make an application to the National Endowment for the Humanities. But in consultation, the Endowment said that I could certainly apply for research assistants to work with me in King's College, London. I also proposed that there should be trainees, so that people could learn about the subject. But the Endowment's Translation Section was not authorized to fund educational programmes. What they said to me was, 'Your assistants will be the ones to learn about the subject, and they will spread it across the world.' And this is in fact what came about.

The application still had to be made, and the constraints of the Endowment are formidable. They send applications to fifty referees of their own choice and to eight chosen by the applicant, who, however, are not allowed to have any involvement in the project. The application required is over 100 pages in length.

I think it is a mark of the idealism in the USA that when they did eventually award the grant, there was no requirement that the London assistants should be American. They wanted to support what they considered to be the most valuable projects. This kind of idealism is completely at variance with the misconception that was then being promoted by the UK authorities as an ideal to be copied, that Americans think about nothing but return on investment, and not spending a dime more than necessary. As it happened, Americans tended to be the ones selected as assistants, but this was purely on the basis of merit, not because of any requirement.

There was a requirement, however, that the official applicant should be an American resident or citizen. The Endowment had itself ascertained that the American Philosophical Association wanted for the first time to sponsor a major project, and so the official applicant was the secretary of the Association. But in another demonstration of idealism, the secretary, not himself a Greek scholar, was left free to choose whomever he thought best to carry out the donkey work, which was myself.

Just before I was to hear the outcome of the application, I got an urgent message from the Endowment. An obstacle had arisen. The best-known scholar in the field of ancient philosophy, Harold Cherniss, had opposed

the project. The reason was that another outstanding scholar, his own best-ever pupil, had applied for funds to re-edit the Greek of the largest among the ancient commentaries that I proposed to translate. The commentary in question occupied two of the twenty-four volumes of commentary edited by Diels at the turn of the nineteenth to twentieth centuries. The point was that Diels's text contained misprints and other more serious inaccuracies, and Cherniss's view was that no translation should be funded, until the Greek text had been re-edited by reference to the medieval manuscripts, although even the one text could well take twenty years to correct. I had never met Cherniss, but I immediately took the train to Princeton and visited him at the Institute of Advanced Study. It seemed to me that there was an opportunity here. I proposed to him that I should write to the Endowment to say that it was essential that both projects should be funded, on condition that they exchanged information with each other, because then each could enhance the other. Cherniss was convinced, and withdrew his objection, and both projects were funded.

To illustrate some of the difficulties of the translation, I should explain that some of the relevant texts have been lost in Greek, and survive only in medieval translations. One has passed through lost Syriac and Arabic on its way to the surviving Hebrew. Another survives only in the medieval Latin translation of Thomas Aquinas' collaborator, William of Moerbeke. We had a translation of this last text, Philoponus *On Aristotle on the Intellect*, done for our series by William Charlton, and we followed the standard procedure by which other specialist scholars help me check the final draft. Charlton had done a very good job of making some sense of Latin that was often unintelligible, despite having been re-edited twice by scholars earlier in the century. One of our checkers, Fernand Bossier, was a specialist on the practices and handwriting of William of Moerbeke. Bossier telephoned me from Antwerp in some agitation. 'You can't publish the translation as it is', he said. 'I must come and see you.' So Bossier came to my kitchen in London and gave me a tutorial on the mysteries of retrotranslation. Just to provide an example, there was a sentence which was nonsensical because in the middle of the sentence were the words 'if not'. They weren't even grammatical. The Latin was *si non*. This didn't make any sense at all. But Bossier said to me, 'Please think what would have been the original Greek before William of Moerbeke translated into Latin. What's the Greek for "if not"?' So I said 'The Greek is *ei mē*' He said 'Right you are: the Greek was *ei mē* and the Latin translator rendered it into Latin as "if not", *si non*. But *ei mē* can't have been what the Greek original said. What the original said must have been a very similar word, *Eidē*, the Platonic Forms.' It made perfect sense. Bossier then produced 163 further emendations of the text. This was very hard on Charlton, who had other projects to get on with. But the two

scholars were persuaded to stay together for a further twelve months' work. The result was that the public got what was in effect a new original text, and also a translation that was intelligible from beginning to end.

The project has facilitated and benefited from new discoveries and identifications of texts. Two scholars, one of them, I believe, when still a Ph.D. student, have been able to reassign wrongly identified Arabic translations to the right Greek commentator. Two other Parisian Ph.D. students have discovered substantial chunks of previously lost commentary, one chunk in Arabic translation, one in the original Greek, by one of the most important of the commentators, Alexander. English translations of both are being published in the series.

Eventually funding from the USA dried up. There are always swings of the pendulum, and a new US Congress halved the Endowment's funds, with the result that the entire Translation Section, with ninety people, had to be disbanded at two months' notice. Fortunately, by then the series was well established, and generous support was forthcoming in England and Europe. There were by then 120 collaborators in fourteen countries, and by 2003 we had completed well over fifty volumes of translation, two of explanatory books, and a three-volume sourcebook.

Towards the end of the US funding, my then assistant, Sylvia Berryman, got a call from the USA asking if I would sign that I would be happy to go to prison, if the accounts were wrong. Quite rightly, she replied that I would be very happy to go to prison, if there was the slightest thing wrong. We had always had to account for every cent. It turned out that our final grant had gone over a certain limit at which certain extra accounting questions needed to be answered. We had not been briefed on the questions, but fortunately, after considerable enquiries, we were able to answer them all to the complete satisfaction of the accountants.

A relevant side effect of my interest in later Greek philosophy was that we were invited by the archaeologists, Jean and Janine Balty, to the beautiful site at Apamea in Syria, where one of the most important Neoplatonist philosophers, Iamblichus, had had his school around 300 AD. The site was marked by a set of mosaics, one of which showed Socrates teaching his companions, and since the figure of Socrates was labelled in Greek, there could be no doubt about the identification. A second mosaic, convincingly interpreted by Janine Balty as representing the liberal arts in relation to philosophy, had been moved from the site in the 1930s and we were to see it later. But there was something strange about the third mosaic. It showed a lady taking her clothes off. Assuming this was the philosophy school, Janine had put forward the hypothesis that the lady was taking off the robe of the body, to reveal the soul. But it did not look like her soul that she was revealing. I doubt if I persuaded Janine of my alternative, but as I looked at the mosaic, I noticed that one

of the figures was labelled in Greek 'Persuasion' (Peitho) and another 'Judgement' (Krisis). The disrobing lady was marked 'Cassiopeia' and beside her was picked out the sea-god, Poseidon. Now it was the custom in rhetoric schools in antiquity to train students by making them take a story from mythology and argue that the verdict should have gone the other way. In an earlier version of the story, Poseidon had disqualified Cassiopeia in the beauty contest, angry that his sea nymphs had been challenged. But here in the mosaic, Poseidon was standing happily beside Cassiopeia while she was being crowned beauty queen. And all this was brought about by Persuasion, and confirmed by the verdict of Judgement. The message was, 'Come to the Rhetoric Department, and we shall teach you how to reverse the verdict.' The philosophy department mosaic with Socrates was in the smaller room next door, and this corresponded to the fact that rhetoric was the popular course for getting on in the world. Only a smaller number of students would go on to do philosophy.

The mosaics had been installed by the emperor Julian some forty years after Iamblichus' death, when the philosophy school had been dispersed under Christian pressure. Iamblichus was Julian's hero, and he made a short-lived attempt to restore pagan religion in the empire. Even this could now be better understood, I thought. Julian would not have been installing mosaics in a dead museum, but in a living university. What he would have been saying was, 'Restart the philosophy classes'. And since we know that often lecturers could teach both rhetoric and philosophy, the staff could well have been already there to do it.

By the end of the 1980s there were a lot of graduate students studying Greek philosophy in King's. At the peak, there were twenty students and others in other colleges, with up to five seminars in the subject each week. I also took my own Ph.D. students in a group, asking them to hear each other's dissertation drafts. That way, they got continuous feedback from their fellow students, additional to anything they got from me, and also formed a community of their own. As I asked them to draft a chapter per term, they also got a sense of pacing, and in many cases were able to publish discrete portions before completing their Ph.D.

One of the most exciting and formative experiences of my life was a ten-week tour arranged for me in 1989 by the Indian Council for Philosophical Research, an extremely imaginative body supporting philosophy very effectively in a country much poorer than Britain. Invited to lecture in India, I said that we would like to see more than one campus, up to half a dozen. Having heard nothing, I telephoned on the eve of departure and learnt that they had arranged for thirty lectures on twenty campuses in a great circle around India. I shall here mention only one of my stops, which was at Kottayam in Kerala. The vice-chancellor there, Ananta Murti, was a well-known novelist one of whose novels had also been

made into a movie. He had arranged for me to talk about time to an invited interdisciplinary group. The conversation, which clearly touched people's lives, included a moving confession of his beliefs from a doubting Jesuit priest newly risen from what he had expected to be his last illness. The following day, I joined the vice-chancellor, running through the streets of Kerala at the head of a column of running academics, to inaugurate his programme to make Kottayam 100 per cent literate in 100 days. The language was an ancient literary language, Malayalam, and the level of literacy was already high. But he had arranged that every person in the city over six years of age who could not read should choose a university lecturer, or relative, or friend, to teach them to read in 100 days. He did not know what the response would be, but the local citizens had certainly turned out and were lining the streets, as we ran past, sheltering from the noonday sun under black umbrellas. When we ran into the town hall, everyone from all over the state was there, the ministers, the chief of police, the priests, the bishop. Everyone was backing the project. And indeed I later heard that the target had been met, though whether the project continued when Ananta Murti returned to his native Tamil Nadu I do not know.

This experience convinced me that universities could do far more for the public than British universities had thought of doing. It was no wonder that the public did not rise up to defend them, when funding was cut, if they were not doing things for the public. The head of King's was then a philosopher, Stewart Sutherland, and he had had the excellent idea of creating a centre to bring together the philosophers who at that time were scattered among different departments in the college. The idea was further developed by Christopher Peacocke, then head of our department. When I agreed to be the first director, it seemed to me that we could exploit the fact that the philosophers in other departments had special expertise in matters of public interest, medical law and ethics, military defence and religion, in order to interest the general public. While bringing in the best philosophers to talk on their special subjects, we also asked them to address questions of public interest, and we advertised to the public in a well-sited plate-glass window by a bus stop in the Strand. We also invited non-philosophers to speak to philosophers, which they found a very novel experience. Among the speakers, we had two of the country's leading and most controversial architects, Sir Denys Lasdun and Quinlan Terry. We invited two people who had been advising the Labour Party in opposite directions, without realizing it, on whether Britain should have a Bill of Human Rights. And we had a conference in 1991–2 on morality in warfare from Cicero to Saddam, which I located partly at the Institute of Classical Studies.

1990s

In 1990, I was summoned by the then Principal of King's for an unexpected interview. I assumed that he was going to ask me if I would help meet the continuing financial crisis by offering to take early retirement. This was a widespread response to the funding shortage, and I wondered why I had been so stupid as not to foresee that it could happen to me. To my surprise, the Principal asked me something completely different. Would I consider standing for the post of director of the Institute of Classical Studies, which belonged not to any one college, but to the university as a whole, and was a national resource? It had not occurred to me that I could be considered. Quite recently, ancient philosophy had been a fringe subject in classics. The centre of the subject was philology and literature. I was also unsure if I would know enough about the classics, since I had not studied it since I finished being an undergraduate in 1959. But I was overlooking certain factors. First, classics had changed. Greek and Latin language were no longer being taught at many schools. Students first encountered the classics in translation, and read them not for the linguistic discipline, but because of the intrinsic interest. They learnt the languages after arrival at university. The seminar in ancient history, also once a fringe subject, was now the best-attended one at the institute, and the ancient philosophy seminar was not all that far behind. As for my own lack of knowledge, the directorship provided the most wonderful crash course at the frontiers of research, because the director had to introduce many of the world leaders who came to speak in different branches of the subject.

As it turned out, I was offered the job, and it provided a crash course not only in the classics, but also in administration, partly because the agency for government funding sent a letter to all the Humanities Research Institutes which, like ours, provided a research facility without taking student fees, and asked why the government should continue funding us. On the administration side, I had to learn faster than at any time since my childhood.

The Classical Institute's funding comes from the government and depends on its being a national, and indeed international, resource, not a local one. It was founded in 1954, thanks to the vision of Tom Webster, who had the brilliant idea of pooling resources with the two independent bodies, the Hellenic and Roman Societies whose classical libraries were very well established, having been founded at the turn of the century, but which now needed to find new premises. The custom-built institute was designed to accommodate them.

The first seminar and the first publication of the Institute were the work of Michel Ventris. Ventris's great discovery had been announced at the time of the queen's coronation the previous year, along with Edmund Hillary's climbing of Everest, as one of two great British achievements of 1953. Ventris was an architect by profession, but he studied the unknown script, Linear B, excavated from sites of the Mycenaean period in the second millennium BC. Against initial opposition, he established that it was a script of ancient Greek. He took as his collaborator John Chadwick, a classical scholar who had worked at Bletchley on deciphering the secret German codes during the Second World War. The Mycenaean seminar was the institute's first. Although Ventris was killed tragically in a motorcycle accident as a young man, Chadwick was still taking part in the Mycenaean seminar when I came to the Institute.

By that time, the Institute was running two seminars a night on almost every branch of the classics. Its combined library was about to be acknowledged by the government as the UK's leading research library in classics. The publication list was already very long. Other classical organizations had come to place their headquarters in the building. And all these activities were held together by a common room, where research students would come to meet many of the leading classical scholars of the world over a period of two or three years' study.

My predecessor as director, John Barron, had had the excellent idea of pooling the Humanities Research Institutes of London University into a School of Advanced Study. There were other institutes with remarkable histories. Closest to ours in subject matter was the Warburg Institute for the study of the history of the classical tradition in Europe. Their predecessors had escaped to London from Hitler's Germany with their entire library intact on seven trucks, I believe—a library 40 per cent of whose books were not even owned by the national British Library. The formation of the new school led to more interdisciplinary seminars and discussion, and we collaborated also in addressing the threat to funding.

I took advice from the director of the School of Oriental and African Studies, which was too large an institute to form part of our group, but which had experienced an earlier threat to its government funding. The Director had asked for a review before funding was cut, and some nonsense businessmen were sent in to make a report. This produced an unexpected result. They reported that the Institute was grossly underfunded. I transmitted the director's advice to the Directors of the School of Advanced Study, and we too asked for an inspection and drew up our own performance criteria, providing statistical tables, showing just how much the institutes achieved at a national, not a local, level. After three years of discussion, we received letters saying that government funding would continue on the original basis.

A side result of our many discussions in the school was that the directors agreed to provide funding for a baby Philosophy Institute, not yet allowed to call itself an Institute, alongside the other institutes. The idea had first been put to me by John Barron, in his period of directorship, but was not at that time welcomed by the philosophers. The idea had now been independently revived by Mark Sainsbury. The philosophers were very keen and the directors in the school made the aspiration financially possible.

The Classical Institute itself had to negotiate each year with its partners, the private Hellenic and Roman Societies, about how much each party would contribute to the library. As an amateur in finance, I was at a definite disadvantage, because the Treasurer of the Roman Society was Graham Kentfield, the man who signed the UK's banknotes. I was at a further disadvantage because the Institute turned out on my arrival to have overspent its budget, for reasons which it was hard to analyse, until several years later a very extensive costing operation was carried out. Severe economies and the librarian's inspired fund-raising were not enough and I had to ask our partners to help us correct our deficit as a favour. Although they very generously did so, this naturally caused some resentment, so long as the underlying causes remained unclear. In the end, Graham Kentfield graciously agreed to join my own committee of financial advisers, so that we, as well as our Roman partners, had the benefit of his advice.

The institute's common room had a balcony overlooking a beautiful London square and it was much loved by everybody. But the library was running out of space. In addition, I sometimes had to turn down an excellent seminar, because we could only accommodate two per night. We were fortunate to have as our publications officer Richard Simpson, a scholar-architect, who discovered exactly what the participants in the building would want, if a new and larger space could be found. There had been some false alarms about moves, but when an ideal possibility arose, Richard Simpson's plans had enabled the institute to seize it. In my last year, the institute was invited to bid for nearly double the space at no increase of rent in a prominent position at the heart of the University's Senate House. Sad as we were to lose the charm of our custom-built building, the decision of all parties to seize the opportunity was absolutely unanimous.

Not everything was administrative. The post enabled me to continue running or co-organizing the ancient philosophy seminars at the institute as before, even though I no longer had time to attend all the other ancient philosophy seminars. One of the most rewarding occasions was the visit of an American war hero, Admiral Jim Stockdale. Stockdale had been shot down over Vietnam, and had endured eight years of captivity, four

years of solitary confinement and nineteen occasions of physical torture, he said, by following the precepts of the ancient Stoic philosopher Epictetus. He had recently stood as candidate for the vice-presidency of the USA. He did not at that time know any Greek, but I invited him over so that we could learn how Stoicism worked out in practice, and I think I got more feel for this than I ever could from the texts alone. At the first meeting in the institute, we had present scholars of Epictetus and a practitioner of modern cognitive therapy, which is close in certain ways to ancient Stoic practice. At a more public meeting in King's, I said to Sibyl Stockdale, his wife, 'I presume you found no help in a philosophy which says that it does not eventually matter whether your husband returns,' and she agreed. But when I read their book, *In Love and War*, I realized that the situation was different. In fact, she was often practising Stoic techniques without realizing it, while when the admiral returned as a hero, he sometimes felt impatient with the peacetime culture in cases where Stoicism could have been a calming influence. I came to see that Stoicism offers tranquillity in prosperity as well as in adversity.

When Stockdale parachuted out of his plane, the parachute was fired on, and he fell heavily and broke his leg. The torturers exploited the pain he felt, but this gave him something in common with Epictetus, who had had his leg broken when a slave. Stockdale found that under torture everyone broke down and gave more information than their name and number. But information was not what the captors wanted. Upon giving out extra information, the captives felt so ashamed that they could not face their fellow men. The shame gave the captors what they really wanted, because then the prisoners were ready to go on television to denounce American policy. Stockdale told his men Epictetus' precept that you have to distinguish what is in your power from what is not. It is not in your power to confine yourself under torture to giving name and number. But something else is in your power—to disobey your captors in trivial matters and court renewed torture. Some of the men agreed to do this. They were tortured again and blurted out too much again, but this time it didn't matter because they had regained their pride, and not one of those men could be persuaded to go on television. The captors were powerless, just as Epictetus describes the tyrant who can put Epictetus' leg, but not himself, in chains.

Mrs Stockdale meanwhile had an experience that was terrible in a different way. The USA had not officially declared war and therefore would not admit that there were any prisoners. Correspondingly, the Vietnamese were not obliged to treat the prisoners according to the rules of war, so she only heard from him by chance and very irregularly. After five years of waiting, she set up an office on behalf of prisoners' wives a mile from the White House in Washington and within a month

had forced President Nixon to admit that there were prisoners and start negotiating. I published an account by Admiral Stockdale in the first number I edited of the *Bulletin of the Institute of Classical Studies*.

The most exciting other seminar in ancient philosophy was organized by Richard Janko. In the late eighteenth century, excavation uncovered a philosopher's library that had been buried under volcanic lava in the eruption of Vesuvius of 79 AD, described by Pliny the Elder. The library contained the main works of the philosopher, Epicurus, previously lost, as well as the works of an Epicurean philosopher, Philodemus, from 200 years after Epicurus, around 100 BC. The works describe the practices, values, and beliefs of the school 200 years on, and report some of the contrary views of their rivals, the Stoics. The only problem was that the papyrus rolls were so badly charred that they were very difficult to unroll, or to read when unrolled. One technique for unrolling them is to soak an even number of layers, because papyrus is woven across and across in double strands. If you soak an odd number of layers, you pull the page to pieces. In the last few years, machines for computer enhancement, one of them from the United States Space Agency, NASA, have been brought to bear on unrolled pages. On the screen one sees a blackened sheet turned into a perfectly legible Greek script before one's eyes at the press of buttons. What cannot yet be done is to read the texts without unrolling. But the philosophical content of those scripts which can be read is very interesting indeed, and new editions are now appearing continuously. Moreover, there is more of the library to be excavated when there are no longer buildings on top of it, and it is perfectly possible that lost works of Aristotle, for example, or of the classical tragedians could be found.

In the nineteenth century, the easiest rolls were opened, sliced like apples until legible layers were reached, and copyists then copied the script very carefully. The slicing cut through the middle of pages, and a scholar in Paris, Delattre, had recently discovered that some of the copied half-pages had been stored in the wrong order, so that scholars were trying to make sense of misassembled half-pages. Janko invited Delattre to visit his seminar at the Classical Institute from Paris, now only a 3½-hour journey away thanks to the Channel tunnel, and give us his latest new readings. The seminar was in the first place for the papyrologists, but when the new readings were explained, it was the philosophers' turn to say what that meant for the philosophical thrust of the text: 'So the argument is against the Platonists, not the Stoics'.

Janko was one of three leading scholars of the Herculanean papyri who had come to Britain from the USA at this time, bringing research grants to pursue this exciting line of discovery. The small size of Britain makes it easy for scholars to keep in close personal touch over this kind of work, and this asset has attracted scholars to come here, at least if they can

stand the current culture of accountancy assessments whose hilarities I have touched on.

During the 1990s, I turned from writing books on ancient scientific ideas to writing books on mind and ethics. I had avoided teaching ethics, so long as our children were at home, forcing me to rethink my ethical views once a fortnight, but now they had left home. The switch to mind and ethics did not involve abandoning science altogether. In order to write about animal minds and human morals, I had discussions with animal researchers and watched animals being trained. To write about emotions, I had discussions with brain specialists, and to start work on the concept of self, I had to look into infant psychology. In addition, philosophical topics interconnect, and in my earlier books on time and on determinism, I had discussed the implications for mortality and for responsibility. But the main direction of the new books was different, and the ethical subjects proved to be directly relevant to life. I modified my eating habits considerably, although not totally, after writing about animals. This was not because the history of philosophy had revealed neglected good arguments against killing animals, although that kind of discovery is common enough. Rather, I was appalled at the badness of the arguments that killing animals was perfectly alright. History had revealed the lack of sound support for an inherited attitude.

Another conclusion I came to was that the question of how to treat animals was best decided on a case-by-case basis, in the manner of the recently despised casuists. Some have approached the subject on the basis of the idea that there is only one thing that matters, which can be formulated in a rule. But I believe there are so many different things that matter, which all need weighing, that a rule picking out only one thing, or only a few, will lead to counter-intuitive results.

In my next book, I studied emotions, and this was extremely useful when directing an Institute in times of threatening financial hazard and alarming change, even though in the end the institute was very well treated. I might have substituted Seneca on emotion for Jowett's Plato and Thucydides as the best preparation for administrators. My stoical grandmother had not prepared me to attend sufficiently closely to negative emotions. She had often enough had to 'pull herself together', as the one married woman looking after the men who were clearing a very inhospitable bit of the New Zealand bush in the 1880s, and her uncomplaining letters home reveal the hardship. Nonetheless, I came to feel that I would have been more emotionally helpful as a father, if I had been able to reverse the order, running an institute through threatening times in my twenties and having children in my fifties. One sign of my increasing appreciation of the emotions was that with our three children I recorded with fascination their conceptual development, but with our

grandchildren I have been recording their emotional development and their sense of self and other.

The emotions led naturally to the book currently under way about the self, a subject so relevant to fear of death and to selfishness. Here the Indian tradition, thanks to debates with the Buddhists, went beyond the Greek, and I shall be obliged to take cognizance of it. The experience is quite unlike that of looking at Islamic philosophy, which is all part of one tradition with the west. In the case of Indian philosophy, apart from Buddhism, I have never had the feeling with a western philosopher and an Indian that one must have read the other, as is normal in studying Islamic philosophy. At most I have thought, 'Great minds think alike'.

After five years at the institute, in 1996, one of the British Academy's two Research Chairs fell vacant, with two and a half years remaining. When I applied and was offered it, this gave me an opportunity to undertake something I could never otherwise have done, namely to prepare a sourcebook in three volumes to explain and illustrate the philosophy of the commentators of 200–600 AD. The first draft was got ready with the help of a team of assistants just in time for a week-long conference at the Classical Institute in June 1997 for young scholars from Europe, Canada, and the USA. Five of those who helped expound the different topics were research assistants past and present in the Commentators project as a photograph records. Others had taken part over the years in the seminars at the Institute. Two of those present were shortly to get European chairs, while still in their thirties. After revision in the light of comments, the sourcebook was ready to send to press in 2002, and I felt for the first time that I had an overall picture of the commentators on whom I had been working since 1985.

Twenty-first Century

On retirement from King's in 2000, I found myself with tasks in five places. The most unexpected development was receiving a three-year appointment to a 400-year-old professorship, the Gresham Chair of Rhetoric in the City of London. The quaint appointment of a philosopher to this chair of rhetoric was unprecedented. Thomas Gresham, author of the law that bad money drives out good, had founded the Royal Exchange in London, and from part of the rents he had seven chairs posthumously established in 1597. He is said to have restored the fortunes of King Henry VIII by his dealings on the Antwerp stock exchange. In the seventeenth century, Gresham College was the place where the Royal Society was planned and initially housed in the time of Christopher Wren's professorship and Robert Hooke's curatorship at Gresham. The

Gresham chairs nowadays call on the holders to formulate lectures for a broad, though acute, audience, and this led me to consider subjects of wider public interest than I might otherwise have dared to talk about. Something rather similar happened with a second three-year invitation to mount activities on subjects of wide interest in classics at New York University for a few weeks each year, with the added bonus of an apartment in Washington Square in Manhattan.

My lectures in New York University were given within view of the tragic and moving site where thousands of innocent people were massacred by terrorists on 11 September 2001. The streets were still full of the smell of smoke when I gave my lectures there in October 2001. A minor side-effect of the 11 September massacre was that I was prevented a few days later from addressing an institute in Iran set up to promote 'Dialogue among Civilizations', at a time when such dialogue was much needed.

Within a year, there had been an unhappy response to the massacre, with the US administration proposing, and the British prime minister, endorsing, against the wishes of his country, an invasion of Iraq, a country which had nothing to do with this horrible crime. When in October 2002 in New York I put on a conference on the concept of a just war, I found that mine was only one of four such discussions of just war planned in New York within that week, so worried were the New Yorkers by their own government's reactions. I organized a further conference on the subject at Wolfson College, Oxford in 2003, with speakers including not only academics, but also some leading figures in British public life.³ It is some comfort to know that philosophers in all the traditions involved in the current conflicts, Christian, Islamic, Jewish, and Indian, have devoted centuries of careful thought to justice in war. I have been particularly impressed by the sixteenth-century Spanish discussions on the rights of the American Indians vis-à-vis the Conquistadors. The main subjects that have recurred, regime change, pre-emptive killing, rescuing victims of human sacrifice in another's country, were already carefully discussed then. Of course, the theoretical background was different with its appeals to the laws of nature and of nations. But the considerations of simple justice appealed to are hard to deny, even when detached from their original backing, and it was very interesting that a majority of the British public clearly preferred them to their prime minister's moral beliefs. Suddenly philosophical considerations, as well as factual ones, had become central to public discussion in the UK.

In October 2002, back in Oxford, Wolfson College was kind enough to make me a Fellow for life. Wolfson is the college founded by Isaiah

³ To appear as Richard Sorabji and David Rodin, eds., *The Ethics of War: Shared Problems in Different Traditions* (Ashgate, forthcoming 2005).

Berlin. I had been a fellow since my oldest friend, Jon Stallworthy, proposed me in 1966 and a good many postdoctoral scholars and some Ph.D. students were now applying to work with me either at Wolfson or at the Institute of Classical Studies. Wolfson had something in common with the Institute of Classical Studies in having been specially designed for people involved in research, and having a large proportion of students and visitors from overseas. Just as the Institute Common Room was a place for research students and senior scholars to meet, so Isaiah Berlin's Wolfson had rejected, as inappropriate to the research stage, the tradition of separating students from senior scholars at table or in the common room. In multiple ways, it had recognized the different stage of life represented by research, for example providing a nursery school and safe play areas for those who had children, and by welcoming partners at all meals and children at some.

Retirement enabled me not only to give more seminars in Oxford University, but also to undertake some annual teaching in a fourth place, Austin, Texas, whose ancient philosophy programme, built up by Alexander Mourelatos, had sent me seven outstanding research assistants and students since 1985, when the Commentators project began, and promptly allowed me to bring over an eighth.

The fifth place in which I continued work was London University, because the Commentators project continued in King's College and the Institute of Classical Studies. I was particularly lucky in my successor in King's, Peter Adamson, because he brought to King's the combination of Islamic and Greek philosophy teaching which I had always hoped to establish. With two other scholars, Han Baltussen and Martin Stone, he planned a programme to extend the translation of commentary works into the period of the Islamic and Latin-speaking Middle Ages. These three scholars organized a conference in London in 2002, the first of three international conferences to be held in different European cities, to bring together study of the commentary traditions in all these periods. At almost the same time, an Australian team organized by Harold Tarrant, held a conference in New South Wales, to celebrate an expansion of translation work into the ancient commentaries on Plato. The London conference established a new landmark, since for the first time, I believe, it had as many papers about the commentators writing in Arabic or Latin as about those writing in Greek, thus bringing the three traditions, and a huge time period, together. Ancient Greek Philosophy lasted well over a thousand years to 600 AD. The conference added on another thousand years.

There was a certain symbolism in our acquiring in retirement a little apartment on Folly Bridge Island in Oxford on the site where supposedly Roger Bacon had promulgated Aristotelian philosophy and Islamic science in the thirteenth century. It was part of an artistic

community created on the island by Orde Levinson and was above the art gallery and next to the art studios he had built. With a little work for family members in the gallery and the studios, life took on extra dimensions.

Another pleasure was having more time to travel, sometimes visiting former students. The University of Mexico, UNAM, in Mexico City has two very well-appointed Research Institutes in Philosophy and Classics side by side in its beautiful grounds, in addition to its teaching faculty in both subjects. Three of the permanent researchers had earlier, as Ph.D. students, been with me in King's College, London, with imaginative and generous long-term student grants provided by Mexico. Now they were all established researchers, and one of them, Ricardo Salles, organized the international conference in Mexico, which provided the original core of papers for this book. I should like to thank both him and the colleagues who so generously came to the conference, or subsequently contributed their work to the volume.

History of Philosophy

I have already mentioned some of the lessons I believe I have learnt about *philosophy*: the ramifications which make study of the physical universe and of the mind relevant to each other, and to how to live. But what have I learnt about the *history* of philosophy, since I started in 1980 to read it as a continuous and continuing story, instead of skipping from one famous name to the next? I have already mentioned my first lesson, that intermediate philosophers may be needed for understanding later ones. In addition, I had learnt how ideas can be *transmuted*. One striking example was the transmutation of a Stoic theory of how to avoid agitation into a Christian theory of how to avoid temptation. Another was the harmonization of Plato and Aristotle, which, in the Neoplatonists, produced a new philosophy that was identical with that of neither.

But I also got a sense of how ideas can be *revived* in very different contexts. Berkeley's idealism was designed to solve a problem of knowledge—if we know only the ideas in our own minds, how can we know about tables and chairs outside our minds? Answer: tables and chairs are bundles of ideas in the mind, sometimes of ourselves and always of God. This, I came to realize, is a revival of the fourth-century theory of St Gregory of Nyssa. Material objects, he said, are bundles of God's ideas. But his reason was to do with a quite different problem concerning causation. If cause must be like effect, how can an immaterial God have created a material world? Answer: the world is not material in the way you think. Material things are bundles of God's ideas. Same theory:

different reasons. Of course, Berkeley may have known of Gregory, and he does give Gregory's reason as a supplementary one.

One more example of revival, this time not based on reading the earlier sources, is provided by the work of Derek Parfit, *Reasons and Persons*. Although it is presented from an atheistic point of view, with examples not from theology but from science fiction, I am not the only one who has noticed that his ideas about the survival of the self in unfamiliar situations parallel the ancient Christian discussions of resurrection. The idea of transplanting at least half of the brain relates to the orthodox Christian belief that your original matter will be reused in your resurrected body. The fiction of electronically beaming someone to another planet, and constituting a new body there, relates to Origen's unorthodox proposal that in the resurrection each individual will get a new body with photographically similar structure. There is even, in another context, an anticipation of Parfit's further question, whether the surviving transplantee could be made to perish, if the other half of the brain were successfully transplanted into someone else. For there could hardly be *two* survivors and yet how could the survival of the first transplantee depend on an operation performed on the second? I believe the same question, with the example of a surgical operation, was raised in connection with what I would call the Shrinking Argument levelled in the third century BC by Chrysippus, the Stoic, against the Growing Argument. How can a surgical amputation performed on a man with a foot, Dion, be supposed to affect the survival of a different footless person, Theon? I am inclined to wonder if there are any ideas that could not be revived in a new context.

Parfit writes in the tradition of John Locke, who is often called the father of modern theories of personal identity. But Locke too, I think, was returning to antiquity, in his case from Christian theories of personal identity to the pagan theories of Epicureans and Stoics.

The possibility of reviving ideas is part of what gives point to philosophers studying the history of philosophy. It liberates us from the circle of ideas which happen to be most recent and expands the philosophical imagination. The opposite utility has also been illustrated, that history can make us question the soundness of some of our inherited presuppositions, as with the supposed harmlessness of killing animals.

This idea of history as *liberating* contrasts with the view that we are trapped in our circle of ideas and the ancients in theirs. On this view, ideas are so tied to the context of a given time that we can easily say they could not have been thought of before that date, or could not be taken seriously after it. There are also ideas, on this view, so entrenched that we can foresee that our own circle will not give them up. Again, history, on this view, merely shows us why we have inevitably come to adopt certain views, and discard others. This is the opposite of what I think.

Admittedly if we revive an idea, we may need to detach it from its original background, as ideas about when it would be just to go to war, may get detached from their background in natural law. But detachability is not only an interesting historical phenomenon. It is also what helps to make ancient ideas directly applicable to modern philosophy, or, as in the example of justice in war, to life. As historian, one must be keenly aware of the original background, or one will miss significant differences. As philosopher, one may consider how far the background can be detached.

I do not wish to deny that there are limits to the repetition of ideas. A particularly interesting one which I have mentioned is that I have found at most likeness, never exact similarity, in the case of non-Buddhist Indian philosophy, perhaps partly because it was until recently the guarded preserve of Brahmins who felt the west could teach them about technology, but not about philosophy.

To return to the ramifications of philosophy, they are so extensive, and the cultures which have studied them so varied, that Gregory of Nyssa's charming idea is surely right: there is room for the understanding to make perpetual progress and one need never grow tired.

An autobiography, including an intellectual autobiography, is selective. The idea was formulated originally in Plato's *First Alcibiades* that one sees oneself better through the eyes of others. But of course different people give very different accounts. Daniel Dennett, indeed, has cited the very different life stories that people can write about the same person to show that the idea of a self is merely a convenient fiction. But the fact of different stories does not in fact tell us whether all the stories are false, or all true. My colleague in King's, Jim Hopkins, revealed that he had thought of me through the 1970s principally as a lover of medieval churches, because I took our students to visit medieval churches on our philosophical weekends in the country. But in the 1980s he saw me galvanized by Prime Minister Thatcher's attack on university budgets, and he felt that that redoubtable lady had given me a new self. My schooldays friend, the poet Jon Stallworthy, had seen me first and foremost as Indian. He wrote a poem expressing the thought that he had stolen my birthright by going to the Indian subcontinent before I did. For his memoirs, *Singing School*, (1998), he asked for a photograph of my nine-year-old self dressed as attendant to one of the Three Wise Men, and wearing a turban. I featured in that book not as I have been asked to describe myself here as scholar or philosopher, but as player of the guitar that his father gave me for my twenty-first birthday and singer of songs, some of them written by Jon. Jon had introduced me to Kate and one thing he said in his memoirs I could not bring myself to

correct when he asked me for corrections to the manuscript. By the standards of historical chronology, he had reversed the order of two events, but I think he was following the higher standard of poetic truth, when he said that in 1958 I married Kate and went off to live in a place called 'Paradise Square'.

Metaphysics

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Intrinsic and Relational Properties of Atoms in the Democritean Ontology

ALEXANDER P. D. MOURELATOS

Aristotle's survey, in book I of the *Metaphysics*, of the contributions of the earlier natural philosophers provides us with a major source-text for the fundamentals of fifth-century BCE atomic theory:¹

Leucippus and his associate Democritus declare the full and the empty [void] to be the elements, calling the former 'what-is' (τὸ ὄν) and the latter 'what-is-not' (τὸ μὴ ὄν). . . . They declare that the differentiations (διαφοράς) [of 'what-is', or of 'the full'] are the causes of all else. Now they say that the differences at issue are three: shape, and array, and posture (σχῆμά τε καὶ τάξις καὶ θέσις).² For they say that what-is differs only in 'rhythm', in 'junction', and in 'bearing' (ῥυθμῶ καὶ διαθιγῆ καὶ τροπῇ μόνον). Of these, 'rhythm' is shape, 'junction' is array, and 'bearing' is posture. For *A* differs from *N* in shape, *AN* from *NA* in array, and *Z* from *N* in posture.³ Concerning motion—the origin of it, and how it is present in the things-that-are (ὅθεν ἢ πῶς ὑπάρχει τοῖς οὐσί)—they, more or less like the others, did not bother to give any account (παραπλησίως τοῖς ἄλλοις ῥαθύμως ἀφείσαν). (*Metaph.* I.4.985b4–21)⁴

¹ In the discussions of atomic theory in his two magisterial surveys of ancient philosophy and ancient science—*Time, Creation, and the Continuum; Matter, Space, and Motion*—Richard Sorabji has offered us analyses, comments, and insights that are as permanently of value as those found in the best of monographs on the subject of early Greek atomic theory. It is with immense admiration, in awed humility, and with deep gratitude for his personal and academic friendship that I dedicate this essay to him.

² The usual translations for τάξις and for θέσις are 'arrangement' and 'position', respectively. But 'arrangement' has the misleading connotation of purposeful ordering by an arranger, and 'position' fails to capture the semantic component of orientation or (geometric) attitude.

³ For the last of the three contrasts, Aristotle's examples are capital eta and capital iota (which in his script is H turned 90 degrees).

⁴ My translation, with borrowings from: A. E. Taylor, *Aristotle on his Predecessors: Translated with Notes and Introduction* (La Salle, Illinois, 1906), 90–1; Richard D. McKirahan, Jr., *Philosophy before Socrates: An Introduction with Texts and Commentary [Before Socrates]* (Indianapolis and Cambridge, 1994), 304–5; and C. C. W. Taylor, *The Atomists*,

The differentiated bits of ‘the full’ are, of course, the atoms. The remark about motion is tendentious. Our evidence is that Democritus did say a lot about the motion of the atoms;⁵ he just did not say what Aristotle would have wanted him to say, viz., what the ‘natural’ motion of atoms is, in that technical sense of ‘nature’ and ‘natural’ Aristotle introduces in *Phys.* II. Nonetheless, through this studied separate mention of the motion of the atoms, Aristotle conveys, in effect, an important theme of Democritus’ theory: the actual motion of atoms is not intrinsic to them; it is a property atoms *acquire* as a result of collision;⁶ and thus it cannot be included in a statement of the causally primary differentiations.

On a first reading, there are two obvious infelicities in this statement of ‘the three differences’. To begin with, there is the curious omission of the property of size. That is surely as much of an intrinsic property of atoms as shape, and the causal role of atomic size is widely attested in the testimonia.⁷ Indeed, there is a pattern in our sources for the omission of separate mention of size when shape is cited as a fundamental property of atoms. So it is not unreasonable to assume that ‘shape’ was used by Democritus in synecdoche for both shape and size; and that presumably is the case also in *Metaph.* I.4.

The second infelicity is that only one of ‘the three differences’ explicitly mentioned by Aristotle, shape (or shape-size), can specify properties that belong to atoms individually, in themselves, intrinsically. ‘Array’ could only be a property of pairs, trios, or n-tuples of atoms. Likewise, ‘posture’ necessarily implies a background or matrix, against which, or within which, an individual atom is placed. That background or matrix could not be merely the void. The latter, conceived as a ‘what-is-not’, lacks even the minimal degree of definiteness that would allow for some points of purchase or reference. The matrix or background for the single atom would have to be provided either by one other single atom (compare our own use of underlining to help distinguish the numeral 6 from the numeral 9), or in a configuration with two or more other atoms.⁸

Leucippus and Democritus: Fragments, a Text and Translation with a Commentary [Atomists], *Phoenix* suppl. vol. 36 [= *Phoenix Presocratics* vol. 5] (Toronto, 1999), 72–3. This famous passage has many parallels in the ancient commentators on Aristotle and in other sources: see S. J. Lur’e [Luria], *Demokrit: teksty, perevod, issledovanija* [Demokrit] (Leningrad, 1970), 69–71.

⁵ See Lur’e, *Demokrit*, 79–83; McKirahan, *Before Socrates*, 317–20; Taylor, *Atomists*, 88–9.

⁶ See esp. fr. 67A6 in Hermann Diels, *Die Fragmente der Vorsokratiker*, 6th edn. revised by W. Kranz, 3 vols. [cited here as ‘DK’] (Berlin, 1952). Cf. Taylor, *Atomists*, 88 (texts 60a–e), and 179–84.

⁷ Cf. Taylor, *Atomists*, 172.

⁸ The infelicity has often been noted in modern accounts of this Democritus testimony. See: W. D. Ross, *Aristotle’s Metaphysics: A Revised Text with Introduction and*

Aristotle himself gives an aptly more cautious statement in *On Coming to Be and Passing Away*:

Democritus and Leucippus say that there are indivisible bodies out of which everything else is composed (ἐκ σωμαίων ἀδιαίρετων τᾶλλα συγκείσθαι); that these (indivisible bodies) are infinite both in number and in variety of shape; and that compounds differ from each other (αὐτὰ πρὸς αὐτά) in respect of the components [i.e. the number and the shapes of components] and also in respect of the posture and array of these components (διαφέρειν τούτοις ἐξ ὧν εἰσι καὶ θέσει καὶ τάξει τούτων). (*De gen. et corr.* I.314a21–4)⁹

Array and posture are here explicitly mentioned as properties possessed by atoms within compounds. The same cautious formulation is found in several other Leucippus/Democritus testimonia.¹⁰

Let us then assume, for a start, that the infelicity in the phrasing of the passage from *Metaph.* I.4 is to be corrected by our understanding all three of the ‘differences’ (including the property alternately referred to as ‘shape’ and ‘rhythm’) as applying to atoms in relational complexes—either within stable compounds or as atoms are juxtaposed one to another in various configurations.¹¹

There is, however, yet another and more intriguing inconcinnity in *Metaph.* I.4. Aristotle offers ‘shape’, ‘array’, and ‘posture’ as appropriate synonyms of the Democritean *rhysmos*, *diathigē*, and *tropē*. But, as was noticed by Kurt von Fritz nearly half a century ago,¹² there is a striking and systematic discrepancy between the Democritean terms and the synonyms Aristotle offers. The discrepancy is not to be explained away as one between two dialects, Aristotle’s Attic and Democritus’ Thracian Ionic. As the examples of letter shapes and syllables suggest, Aristotle understood the properties at issue as occurrent and static. This is clearest

Commentary, 2 vols. (Oxford, 1953), 140 ad loc.; Jean Salem, *Démocrite: grains de poussière dans un rayon de soleil [Démocrite]* (Paris, 1996), 33; R. J. Hankinson, *Cause and Explanation in Ancient Greek Thought* (Oxford, 1998), 206 n. 4; Taylor, *Atomists*, 171–2.

⁹ Translation as in C. J. F. Williams, *Aristotle’s De generatione et corruptione [Aristotle’s GC]: Translated with Notes* (Oxford, 1982), 1, with minor adaptations. For the text and construction, see Harold H. Joachim, *Aristotle On Coming-to-Be and Passing-Away* (Oxford, 1926), 65–6.

¹⁰ For example, in the Aëtius compendium: τὰ δ’ ἐκ τούτων θέσει καὶ τάξει καὶ σχήματι διαφέροντα συμβεβηκότα, ‘the compounds [literally “the things out of them”] differing, as they happen to do so, in posture, array, and shape’ (DK67A32). For other texts, see Lur’e, *Demokrit*, nos. 233, 433, 434.

¹¹ In due course this provisional assumption will be qualified. It will turn out that whereas *schēma* can be understood as a property of atoms as distinct individuals (*per se*), *rhysmos* is shape that involves relations with other atoms and patterns of atomic movement.

¹² See Kurt von Fritz, *Philosophie und sprachlicher Ausdruck bei Demokrit, Plato und Aristoteles [Ausdruck]* (Darmstadt, 1966 [orig. Leipzig, 1938]), 25–9. Cf. Sousanna-Maria Nikolaou, *Die Atomlehre Demokrits und Platons Timaios: Eine vergleichende Untersuchung*, Beiträge zur Alterumskunde, 112 (Stuttgart and Leipzig, 1998), 77.

in the case of his translation *schēma*, ‘shape’. Moreover, from the examples Aristotle uses, it is also clear that in the case of the terms *taxis*, ‘array’, and *thesis*, ‘posture’, Aristotle envisages occurrent or actual states of atomic configuration. By contrast, the Democritean terms—all three of them—have a strongly dynamic and dispositional flavor.

It is worth reviewing, and in some respects amplifying, the observations made by von Fritz. The noun *tropē* derives as transparently and as directly from the action-sense of the verb *trepein* as the English gerund ‘turning’ does from its cognate verb.¹³ The term *diathigē*, ‘junction’, combines the preposition *dia-*, ‘trans-’, or ‘cross-’, with a noun derived from the verb *thinganō*, ‘to touch’, ‘to take hold of’, or—what is more likely—directly from the middle form, *diathinganomai*, ‘to come in mutual contact, touch and be touched’.¹⁴ In either case, the derivation of the noun from an action verb by addition of the accented suffix *-ῆ* or *-ῆ* (eta with acute or grave accent) is likely to convey not a state but, as in the derivation of *tropē* from *trepein*, a disposition or activity.¹⁵ Finally, and most interestingly, *rhysmos* is not to be given the facile translation ‘shape’. When referring directly and simply to the intrinsic shape of atoms, Democritus uses the term *idea*. As von Fritz explains, *rhysmos*, which is etymologically related to *rheō*, ‘to flow’ (a semantic nuance that survives in the modern term ‘rhythm’), conveys ‘the objective law of a pattern [that is characteristic] of an object in itself . . . form as an outflow of motion from the object itself’.¹⁶ Democritus’ eschewing of the term *idea* in the present context, his choosing instead terms with pronounced dynamic connotations, must have a special rationale that may have been rubbed out in Aristotle’s flat translations.

In this essay I propose to use the passage from *Metaph.* I.4 as the starting point for exploring the logical structure of Democritean¹⁷ atomic proper-

¹³ Cf. von Fritz, *Ausdruck*, 26–8.

¹⁴ See below n. 43. In von Fritz, *Ausdruck*, *diathigē* is explicated as follows: ‘das “sich hindurch bewegend in Berührung, in Kontakt, in Zusammenhang mit etwas kommen” das “sich fügen”’ (p. 28).

¹⁵ Consider the noun derivatives from verbs that have some semantic affinity to *θηγάνω*/*διαθηγάνομαι* (all of them implying some form of contact): *ἀρπαγή*, ‘snatching away’, ‘seizure’ (from *ἀρπάζω*); *ἀφή*, ‘touching’, ‘kindling’, ‘faculty of touch’ (from *ἄπτω*); *βαφή*, ‘dipping in dye’ (from *βάπτω*); *γραφή*, ‘drawing, painting, writing, art of writing’ (from *γράφω*). The tendency of the suffix *-ῆ* (*-ῆ*) to retain the dynamic connotation of the base verb is especially striking when the derivation involves, as in the case of *τροπή* from *τρέπω*, an ablaut shift, for example: *ὀλκή*, ‘drawing’, ‘tugging’ (from *ἔλκω*); *κλοπή*, ‘stealing’ (from *κλέπτω*); *μομφή*, ‘blame’, ‘censure’ (from *μέμφομαι*), etc.

¹⁶ von Fritz, *Ausdruck*, 26: ‘das objektive Gestaltgesetz des Gegenstandes in sich; . . . die Gestalt . . . als Ergebnis einer Bewegung aus sich selbst’.

¹⁷ As is now standard in accounts of fifth-century (Abderite) atomism, I make no attempt to distinguish between the contributions of Leucippus and Democritus. I shall be using the proper name ‘Democritus’ and the adjective ‘Democritean’ to refer to Leucippus and/or Democritus and to aspects of the philosophy of either or both.

ties—from the level of the utterly simple, independent, and fundamental to higher levels that are cumulatively more complex, dependent, and derivative. Some properties belong to an atom intrinsically, without any implied reference to anything outside it. Other properties can only be made sense of insofar as atoms are in some relation to other atoms. The outcome in this exercise will, I hope, provide something more than a tidied-up statement of the fundamentals of Democritean atomic theory. It ought to help exhibit Democritus' overall project of physicalist metaphysics as logically systematic, gradualist, synthetic, and generative.

A historically germane by-product of the present account will be an explication of the pointedly dynamic vocabulary Democritus had used in the original context that lay behind the passage from *Metaph.* I. It will emerge that the Aristotelian trio of shape/array/posture need not be taken merely as a slack, prosaic version of the Democritean trio of rhythm/junction/bearing. Both sets of terms have their function; but they come into play at different levels in the scheme of properties. I shall myself initially use the semantically less charged Aristotelian terms. At a later stage, a richer context will demand and will help explicate the semantic rationale of the Democritean trio.

In constructing and exploring the scheme of properties, I need to deploy three conceptual devices. First, I shall be making reference to the 'Parmenidean requirements', by which I mean the four attributes of 'what-is' famously deduced by Parmenides in fragment 8 of his 'Truth': (a) 'unborn and imperishable'; (b) 'homogeneous', 'indivisible', 'one'; (c) 'immobile'; (d) *tetelesmenon*, i.e. 'fully actualized', 'free of latent dispositional properties', 'totally unchangeable'.¹⁸ Even though there is no need to assume that Leucippus and Democritus saw their project as one of 'replying to Parmenides', or more generally 'replying to the Eleatics',¹⁹

¹⁸ The four attributes are announced as follows in the programmatic statement in the central fragment from Parmenides' 'Truth', DK28B8: (a) *ἀγένητον, ἀνώλεθρον* (line 3); (b) *οὐλον μουνογενές τε* (line 4), *ὁμοῦ πᾶν | ἔν, συνεχές* (lines 5–6); (c) *ἀτρεμές* (line 4); *τέλειον* or *τελήεν* or *τελεστόν* (line 4, with one or another of the now widely adopted emendations for the illogical *ἀτέλειστον* of the MSS). The announced attributes are then supported with arguments, in some cases with additional synonyms of the attributes appended: (a) (lines 6–21); (b) *οὐδὲ διαιρετόν, ὁμοίον* (22–5); (c) *ἀκίνητον* (26–31); (d) *οὐκ ἀτελεύτητον, τετελεσμένον* (32–3, 42–9). Some readings of Parmenides treat 'eternal' or 'existing now' (*οὐδέ ποτ' ἦν οὐδ' ἔσται, ἐπεὶ νῦν ἔστιν*, line 5) as a distinct second attribute, and accordingly increase the total list of attributes to five. But if this second-out-of-five attribute has the sense of sempiternity (always existing), it is not sufficiently distinct (for purposes of a Democritus–Parmenides comparison) from 'unborn and imperishable'. If, however, it bears the sense either of 'atemporal' or of 'punctual' existence, then it has no counterpart in the Democritean system and would likewise not be relevant to the present investigation.

¹⁹ See my study, 'Pre-Socratic Origins of the Principle that There Are No Origins from Nothing', *The Journal of Philosophy* 78 (1981), 649–65, at 664–5.

it is transparent that the fundamental realities of atomism are modeled on Parmenides' 'what-is'. Adherence to, or deviation from, the four requirements can thus serve as the historically most germane measure of the conceptual distance between stages in the systematic transition, referred to above, from static monism to dynamic pluralism.

The second device is one I have already used, the familiar distinction between 'dispositional' and 'occurrent' properties. The distinction can be reviewed briefly with reference to an example: a ball has the *dispositional* property to roll; when the ball is actually rolling, the property is *occurrent*.

Related to this distinction, but not quite equivalent to it, is the third device I shall need: the distinction between *determinable* and *determinate* properties. All pots in a potter's studio have shape in the determinable sense of 'shape': they have some-shape-or-other. But the particular pot on the showcase has shape in the determinate sense of shape: it is, say, an amphora of X, Y, and Z specifications. Technological limitations notwithstanding, it is possible for two or more pots to have exactly the same determinate shape.

Let me first present the overall scheme in outline form. I shall then expand on each of the lemmata of the outline.

PROPERTIES OF DEMOCRITEAN ATOMS: INTRINSIC VS. RELATIONAL

I. INTRINSIC

A. *Dispositional?*

1. [Mobility is not an intrinsic property.]

B. *Occurrent (fixed)*

1. Uniform
 - a. [The atom has no special material-constitutive qualities.]
 - b. Fullness, rigidity, solidity (properties opposite to those of the void)
2. Multiform
 - a. Shape
 - b. Size

II. RELATIONAL (OF ATOMS IN RELATION TO ONE ANOTHER)

A. *Dispositional*

1. Independent of shape-size
 - a. Univalent
 - i. Impassivity (except for rebound)
 - b. Multivalent
 - i. Bearing
 - ii. Mobility
 - iii. Capacity to rebound

2. Dependent on size
 - a. Weight
3. Dependent on shape and size
 - a. Conjunctivity
 - b. Motility
 - i. The tendency of atoms of like shape/size to aggregate
 - ii. The kinematic disposition of different atomic shapes/sizes
 - α. Characteristic speed
 - β. Characteristic geometry of motion

B. Occurrent (variable)

1. Determinate posture or tilt (cf. Aristotle's *thesis*)
2. Determinate motion
3. Determinate array or join (cf. Aristotle's *taxis*)

I. Intrinsic Properties

It is a fundamental principle of the Democritean theory that there is a plurality, indeed an infinity, of atoms. The 'intrinsic' properties are the ones an atom could be meaningfully said to possess independently of any reference to other atoms, or even if—contrary to another fundamental principle of the Democritean theory—there was just a single atom in the infinite expanse of the void.

IA. Intrinsic and Dispositional?

Democritean atoms—and, for that matter, atoms in all versions of ancient atomism—are famously unchanging and unchangeable in all intrinsic respects (see below **IB1**); they do, however, move through the void. Should we then not say that there is just this one intrinsic dispositional property even a single isolated atom should possess, that of mobility? Prima facie, it ought to make sense to say even of a single atom that at any time it has the *determinable* property of motion, in other words, that it is either at rest somewhere-or-other in the void, or moving in some-way-or-other through the void. And since atoms generally do exhibit motion as an extrinsic occurrent property, it should appear strange to hold that a single atom, *per se*, does not possess the ability to move. And yet that seems to be precisely what is required by the logic of Democritus' conception. The same considerations that rule out 'array' and 'posture' as intrinsic properties of atoms dictate that motion *even in the dispositional sense* can only be conceptualized as a relational property of atoms.²⁰

It is relevant here to remind ourselves of the major contrast, alluded to at the start of this essay, with Aristotelian 'elements': Democritean atoms

²⁰ This implication of the analysis pursued here was most helpfully pointed out to me by Richard McKirahan. In comments he offered on a draft of this essay (see below n. 47) he

do not possess an ‘intrinsic principle of motion and rest’;²¹ nor, unlike the atoms of Epicurus, may they be said to be constantly ‘falling’. Any motion exhibited by a Democritean atom results from collision with other atoms.²² If occurrent and determinate motion implies reference to a prior collision (for that matter, to a history of such collisions), mobility and determinable motion as properties of a given atom correspondingly and inevitably posit the existence of atoms other than the one at issue.

The corollary at this point is that the only intrinsic properties of atoms are strictly occurrent.

IB. Occurrent and Fixed

Accounts of Democritus do not always emphasize this point, but it is of some importance to note that in the domain of intrinsic properties that are occurrent and fixed (or unchanging) we need to distinguish between uniform and multiform properties.

IB1. Fixed and Uniform

One is sometimes tempted to ask: What is the stuff Democritean atoms are made of? What is the material inside the borders set by the shape of the atom?²³ It would make especially good sense for Aristotle to frame the question in these terms, since Aristotle is committed to a hylomorphic paradigm, one that sharply distinguishes between the figurational/formal/structural aspect of things and their material-constitutive aspect. Indeed, the form–matter distinction does come up in one of his references to the Atomists:

[Leucippus and Democritus] say that the nature [of ‘the shapes’, i.e. the atoms] is one, as though each were a separate piece of gold. (Aristotle, *De caelo* I.7.275b–276a1 = DK67A19)

wrote: ‘If there were only one atom in an infinite expanse of void, it would be impossible to tell whether [that single atom] were in motion or at rest; motion and rest can only be relative to other atoms.’

²¹ The ‘vibratory motion’ (*palmos*) attributed to Democritus’ atoms in the Aëtius compendium (DK68A47) is almost certainly a pattern of occurrent motions that results from frequent collisions, not an intrinsic tendency for random motion. See below at **IIB**.

²² And, as it has often been pointed out, no vicious regress is involved in allowing acquisitions of motion to regress to infinity. The regress is merely temporal, and Democritus expressly holds that time is infinite. See Taylor, *Atomists*, 181. Cf. McKirahan, *Before Socrates*, 318.

²³ Cf., for example, Pieter Sjoerd Hasper, ‘The Foundations of Presocratic Atomism’ [‘Foundations’], *Oxford Studies in Ancient Philosophy* 17 (1999), 1–14, at 4: ‘given the fact that all atoms are made of the same material’.

It is well to note that Aristotle hedges his ‘gold’ example with an ‘as though’. The question I called ‘tempting’ is in fact misguided; the analogy is, in the end, more misleading than helpful. The form–matter distinction is conspicuously absent at the fundamental level of Democritean metaphysics.²⁴ Atoms are certainly *sōmata*, ‘bodies’, ‘corpuscles’; but they have no specifiable constitutive matter. Materials, such as gold, or the Empedoclean ‘elements’ (earth, water, air, and fire), and indeed stuff and matter generally—all these are physically and metaphysically derived entities in all versions of ancient atomism; they are complex aggregations of atoms.

Interestingly, Aristotle himself comes close to making this point in another context, in a comparison between Leucippus’ conception and Plato’s theory of elementary triangles in the *Timaeus*:

This account <of Plato’s> is to this extent different from that given by Leucippus, that in the latter solids, while in the former planes are regarded as the indivisibles. (Aristotle, *De gen. et corr.* I.8.325b25–7)²⁵

We might add that the early Atomists, true to their commitment to the indivisibility of the atom, showed as little interest in the interior of their atoms as Plato showed in what lay inside the triangles that form the faces of his elementary molecules. Indeed, some of the ancient sources speak of the atoms as *apoiā*, ‘qualityless’ (DK68A125), which is an apt negative description of the interior of Democritean atoms.

Nonetheless, if we are to characterize properly the atom in contrast both to the void and to non-atomic objects, there are some intrinsic properties that are independent of properties conferred by the shape of the atoms and which, in that sense, may be thought of as applying to the atom through and through.

Like the void, the atom is *apathes*, ‘impassive’.²⁶ This attribute can obviously be taken in two senses: (i) internally unchanging, always in the same state; (ii) immune to any change that may be brought about through interactions with other atoms. In the second of these senses, impassivity expressly envisages the existence of other atoms. Sense (ii) of impassivity

²⁴ I have argued elsewhere—in a forthcoming study and in the article cited immediately below—that another distinction, that between universals and particulars, or types and tokens, is indeed paramount in Democritus. See ‘*I aparkhyēs tis filosofikyīs éniās tou katholou*’ [Beginnings of the Philosophical Concept of the Universal], *Praktiká tis Akadhimías Athinón* [Proceedings of the Academy of Athens] 75 (2000), 509–25 [English summary, p. 526]. My claim that Democritus has thematic awareness of the type–token distinction does not compromise the point made above concerning the absence of a form–matter distinction in Democritus. For it is a mistake to assume that the form–matter distinction is presupposed by the type–token distinction.

²⁵ Translation from Williams, *Aristotle’s GC*, 28.

²⁶ DK68A1, A49, and additional texts in Lur’e, *Demokrit*, 65–7.

is therefore best discussed under **IIA1** below. In sense (i), impassivity need not even be understood as a disposition (i.e. as immunity to change); it should rather be viewed as a state, as changelessness, an occurrent property that is uniformly possessed by each atom.²⁷

Moreover, unlike the void, indeed in direct contrast to it, the atom is an absolute plenum, free of gaps or interstices, absolutely solid, rigid. These multiple characterizations of the second property do not represent different properties but different entailments of the single property of *to naston*, ‘the solid’.²⁸

It is now relevant to observe that with respect to these two uniform and unchanging properties (changelessness and solidity), all four of the Parmenidean requirements may be claimed as fulfilled—with no qualifying rider. Since what is presently at issue are properties that are occurrent and fixed, there is no need to dwell on the requirement of ‘unborn and imperishable’. The requirement ‘homogeneous’, ‘indivisible’, ‘one’ is ostensibly fulfilled by virtue of the property of solidity. Our sources offer ‘solidity’ as the reason for the atom’s indivisibility.²⁹ The property of mobility, as we saw, may not be regarded as intrinsic; the atom *per se* may properly be regarded as ‘immobile’, and that is precisely how it is spoken of in one of our sources.³⁰ With even the dispositional property of mobility ruled out at this level of the analysis, the atom’s changelessness guarantees that the fourth Parmenidean requirement, ‘fully actualized’, is also met.

IB2. Fixed and Multiform

It is at this level that we have the first deviations from the Parmenidean requirements. Though we are not yet taking into account relations among atoms, we do recognize not only a plurality, indeed an infinity, of atoms but also a plurality, indeed likewise an infinity, of shapes and sizes that characterize them. It is worth noticing that it is not the first of these pluralities, that of token atoms, which makes for incompatibility with Parmenides’ second requirement of ‘homogeneous’, ‘indivisible’, ‘one’.

²⁷ For the denial of *metaballein*, ‘changing’, see, e.g., DK68A57. There are also several references to denials both of *metaballein* and of *alloiousthai*, ‘alteration’, in the texts cited at Lur’e, *Demokrit*, 66.

²⁸ DK67A7, 68A38, and additional texts in Lur’e, *Demokrit*, 65–7.

²⁹ DK68A43, A56 (Cicero: *individua propter soliditatem*), and additional texts in Lur’e, *Demokrit*, 65–7.

³⁰ Simplicius: *Δημόκριτος φύσει ἀκίνητα λέγων τὰ ἄτομα πληγῆ κινεῖσθαι φησιν*. ‘Democritus arguing that the atoms are by nature immobile, states that they are moved by “blow”’ (68A47). The ‘nature–blow’ contrast shows unmistakably that the contrast here is not between changelessness-in-general and locomotion but rather between denial of intrinsic locomotive ability and extrinsically acquired motion.

For there have been models of Parmenides' argument that allow the requirements to apply to a universe of multiple Parmenidean 'ones' or monads.³¹ The crucial incompatibility comes with the stipulation of shape as an intrinsic property of atoms. Even if all atoms had the same shape, and even if there were just a single spherical or cubical or however-shaped atom, we would immediately need to recognize that we are envisaging entities that have parts. Atoms, accordingly, may not be considered indivisible in an unqualified sense.³²

The violation of the second requirement is only compounded with the stipulation of diversity in shape and size. What is inevitably entailed in this stipulation are contrarieties of all sorts, when even one such contrariety would have violated Parmenides' requirement of homogeneity. There are, for instance, atoms that have curved surfaces, and others that have surfaces bounded by straight lines and angles; there are atoms that have regular shapes and others that have irregular shapes; and there are larger atoms and smaller atoms.

The other three Parmenidean requirements are in no way adapted or modified at this level; they apply at full strength. An occurrent, determinate shape and an occurrent determinate size are an atom's unborn, imperishable, and unchanging possession throughout infinite time. The total rigidity-solidity of the atom is the secure warrant of this. Moreover, there is nothing either about shape as such or about size as such, nothing about the actual infinity of shapes and sizes, and nothing about the infinity of token atoms that should prompt us to reconsider the character of individual atoms as intrinsically 'immobile'. With respect to the fourth requirement, that of 'fully actualized', it suffices to note that fixed shape and fixed size are occurrent properties. With no regard taken of relations among atoms, there is no hint of

³¹ See, e.g., my study, *The Route of Parmenides: A Study of Word, Image, and Argument in the Fragments* (New Haven, 1970), 111–14, 130–5; Jonathan Barnes, *The Presocratic Philosophers*, 2 vols. (London, 1979), ii. 204–7; Jonathan Barnes, 'Parmenides and the Eleatic One', *Archiv für Geschichte der Philosophie*, 61 (1979), 1–21; Patricia Curd, *The Legacy of Parmenides: Eleatic Monism and Later Presocratic Thought* (Princeton, 1998), 65–75.

³² Some of the testimonia support the view that Democritean atoms were only physically indivisible; others, that atoms were also conceptually indivisible. Richard Sorabji—in *Time, Creation, and the Continuum: Theories in Antiquity and the Early Middle Ages* (Ithaca, 1983), 354–7—offers a comprehensive and judicious account of the controversy and proposes mediation: Democritus did not distinguish between physical and conceptual indivisibility. This I find unlikely. In the context of specific passages from authors who give testimony about Democritus there may well be a failure to distinguish between the two alternatives. But I have difficulty accepting that Democritus would have missed so glaring a contradiction at the heart of his theory—shapes that have no parts. For a recent account that lends support to the alternative that atoms are not indivisible magnitudes, see Hasper, 'Foundations', 4, esp. n. 5, and p. 12.

interactive powers, abilities, or dispositions that might compromise the fourth requirement.

There is, however, an important respect in which the fourth requirement is enhanced by the stipulation of an infinite variety in atomic shapes. This actual infinity of types would certainly imply that all possible shapes are realized in the elements of the Democritean universe—the term ‘universe’ understood, of course, as referring not to a particular *kosmos*, ‘world’, but to the totality of things, the totality of worlds. At least with respect to atomic shapes, there is no distinction in the universe of Democritus—as there is also no distinction within the ‘what-is’ of Parmenides—between possibilities and actualities. This global or collective completeness of ‘the all’ may or may not correspond to the completeness of Parmenidean ‘what-is’ (the uncertainty here reflects problems in the interpretation not of Democritus but of Parmenides); it is nevertheless significant that in the atomic theory the requirement of completeness is fulfilled both distributively and holistically.

The same double fulfillment may not, however, be claimed with respect to atomic sizes. These too are presumably infinite, notwithstanding the fact that ‘no source explicitly states that they [Leucippus and Democritus] argued from the Principle of Sufficient Reason to an infinity of gradations of size’.³³ For, as we saw earlier, there is a pattern in our sources of mentioning ‘shape’ in synecdoche for ‘shape and/or size’. This unlimited diversity of atomic sizes, however, must obviously have both a lower and an upper bound. There certainly could not be an atom of infinite size; that would be tantamount to denying the existence of infinite void. Moreover, the whole thrust of the atomic theory is that there are certain bodies that are smallest. So, the infinite variety of shapes ranges between the largest and the smallest type of atomic size—these upper and lower bounds being set arbitrarily, at the cost of Democritus’ consistency in adhering to the Principle of Sufficient Reason.

II. Relational Properties

At this level, properties involve reference to at least one other atom, beyond the atom that bears the property at issue. No relation between two, let alone more than two, atoms is permanent. Having concluded our exploration of the first level of the Democritean scheme (**IA** and **IB**), we have left behind us those properties of the atom that are both fixed and occurrent. Fixity at the second level will apply to dispositions as dispositions and to determinables as determinables.

³³ Taylor, *Atomists*, 173. Cf. McKirahan, *Before Socrates*, 308.

IIA1. Dispositional and Shape-Size Independent

The distinction drawn at level **IB** between uniform and multiform properties has two counterparts in level **IIA**. First, we need to distinguish between dispositions that are ‘univalent’, in the sense that they express themselves (are actualized) in only one way, and dispositions that are ‘multivalent’, inasmuch as they express themselves (are actualized) in an unlimited variety of ways. Moreover, the diverse shapes and sizes established at level **IB2** give rise to certain corresponding dynamic properties, as atoms of specific shapes and specific sizes exhibit patterns of array with one another. I shall speak of the latter group of dynamic properties as ones that are ‘dependent on shape and size’. But there are also dispositions that are dependent on size alone; and, finally, there are some that are independent both of shape and of size.

Understandably, both those dispositions that are dependent on shape and/or size as well as those that are dependent on size alone are multivalent. But within the domain of dispositions that are shape-size-independent it is of interest to apply the univalent–multivalent distinction. When we do so, it emerges that there is just one such disposition, viz., the property of impassivity (*apatheia*), in the second of the two senses distinguished above (**IB1**), reactive impassivity. No atom can cause another atom to undergo internal change; every atom is immune to internal change regardless of the behavior of other atoms with respect to it. Specifically, an atom’s shape cannot be deformed by the impact of another atom upon it; nor is it possible for one atom to penetrate another atom even slightly. The only way this disposition is expressed is with the atom’s steady retention of its shape and maintenance of its absolute distinctness from other atoms.

The remaining shape-size-independent properties are all multivalent. Let me first take up the property of *tropē*. When Aristotle refers to this property as *thesis*, ‘posture’, he is obviously thinking of the actual, occurrent tilt or slant that differentiates, as in his example, an eta from a iota (N from a Z in the translation). But the pointedly more dynamic nominalization *tropē*, ‘turning’ or (as I have rendered it earlier) ‘bearing’, is best taken as envisaging the full capacity of an atom to assume an unlimited variety of different tilts vis-à-vis another atom or reference-providing complex. The atom’s dispositional bearing is a permanent and essential characteristic of it: at any time an atom has some-tilt-or-other in relation to its surroundings. Firmly grounded as a disposition and determinable, the property of ‘bearing’ will allow the full gamut of its determinates (as ‘posture’, ‘tilt’, or ‘slant’) to play a decisive role at level **IIB**.

The second shape-size-independent property is the one we had some conceptual difficulty placing at level IA: dispositional motion; the sheer mobility of atoms. In the first instance, it is the ability of a given atom to acquire motion (some-motion-or-other) upon collision with another atom that is already moving (in some-way-or-other). But it seems logical to extend this property to encompass also the generic capacity to rest, i.e. the ability of a moving atom (regardless of the specifications of that motion) to come to rest upon contact with another atom or group of atoms. On that basis, we can say that motion is an essential and determinable atomic property: at any time an atom is either at rest or in some-motion-or-other vis-à-vis another atom or reference-providing complex. Let me emphasize the shape-size-independent character of this property, as we shall soon have occasion to introduce the shape-size-dependent dispositional property of *motility*, which is the ability of atoms of a *specific* shape and size to move in a *special pattern*.

Quite apart from that further distinction between mobility and motility, the distinction between dispositional and occurrent motion allows us to capture with greater precision the peculiar status of motion in the Democritean ontology. It is the occurrent motion of atoms that is wholly extrinsic. Mobility, however, implies a reference not to atoms *per se* (to any single atom as an individual) but to the relational complex of some-atoms-or-other that are in some-way-or-other dispersed in the void. This distinction may help explain why some of the testimonia appear to suggest that the void is not only a necessary but even a sufficient condition for the motion of atoms.³⁴ Speaking generally—that is, outside the context of Democritean atomism—the circumstances that may be regarded as jointly sufficient for the presence of an *ability* are far too numerous and complex to permit a priori determination and closure.³⁵ With atoms and the void, the situation is so starkly simple that there is no such indeterminacy. The void is not only the one and only necessary

³⁴ Aristotle, *Phys.* VIII.9.265b24 (= DK68A58): διὰ δὲ τὸ κενὸν κινεῖσθαι φασιν, ‘they [Leucippus and Democritus] say that there is motion because of the void’. Aristotle has just referred to the Love and Strife of Empedocles and to the Mind of Anaxagoras as efficient causes. So, it is clear that, at least in this passage, a similar role is being ascribed to the Atomists’ void. Cf. Simplicius *In phys.* IV.1.209a18 (= Lur’e, *Demokrit*, no. 251, quoted in the next note here). For discussion, see: W. K. C. Guthrie, *A History of Greek Philosophy, Volume II: The Presocratic Tradition from Parmenides to Democritus* (Cambridge, 1965), 398–9; Rudolf Löbl, *Demokrit: Texte zu seiner Philosophie, ausgewählt, übersetzt, kommentiert und interpretiert*, Elementa-Text 4 (Amsterdam and Atlanta, 1989), 72–3; Taylor, *Atomists*, 194–5; Sylvia Berryman, ‘Democritus and the Explanatory Power of the Void’ [‘Power of the Void’], in Victor Caston and Daniel W. Graham (eds.), *Presocratic Philosophy* (Aldershot, 2003), 183–91; cf. Hasper, ‘Foundations’, 7 n. 12.

³⁵ Consider: What is the set of conditions that is sufficient for Jones’s ability to play the piano? or for sugar’s being soluble in water? or for the flammability of paper? The safe recourse in such cases is to the epistemic test, the one that demands the relevant performance:

condition (as Democritus sees it) for the actual, occurrent motion of atoms; it is also the sufficient condition for the atoms' *mobility*. Put in another way, the void is only a necessary, not a sufficient, condition for any *determinate* motion of a given atom; it is, however, a sufficient condition for the *determinable* motion of any one atom, i.e. for the fact or circumstance that at any given time a particular atom is either at rest somewhere-or-other in the void, or moving in some-way-or-other through the void. The point can be made yet more elegantly by exploiting the contrast between perfective (aoristic) and imperfective verb aspect in Greek: the void is certainly never τὸ κινήσαν, 'the thing that did/does the moving', but it may quite legitimately be viewed as τὸ κινούν, 'the thing that makes for moving'.³⁶

The third shape-size-independent property at level **IIA1** is *antitypia*, the capacity of atoms to rebound after collision. Its multivalence resides in the unlimited ways in which the property is expressed in the circumstances of collision. We shall shortly attempt to encompass that variety under ten very broad but nonetheless distinct types. But it is relevant to consider, first, whether the reactive impassivity of atoms is compromised by *antitypia*.

Certainly, if we should think of the collision between atoms A and B in the familiar terms of Newtonian physics, a full panoply of dynamic concepts come into play: action, reaction, elasticity, force, counter-force, transfer of momentum, and more. In these modern terms, it is obvious that bodies A and B have both undergone some internal change

'Proof is in the pudding'; *ab esse ad posse valet consequentia*. Ontologically speaking, each necessary condition bears an 'at least this' qualifier, and there is generally no a priori criterion for closing the set of necessary conditions just short of the relevant performance, at the immediately antecedent terminus that would determine purely the configuring of the ability.

³⁶ In a discussion, at Simplicius *In phys.* IV.1.209a18 (= Lur'e, *Demokrit*, no. 251), of the putative causal efficacy of *topos*, 'place', Eudemus is quoted putting an imaginary question to Democritus (on the assumption that 'place' is equivalent to Democritus' 'void'). Note the use of the aorist participle (κινήσαν) to convey perfective (inceptive) aspect: 'ἀλλ' ἀρά γε, φησὶν, τὸ κινήσαν [scil. τὸν τόπον θετέον]; ἢ οὐδὲ οὕτως ἐνδέχεται, ὧ Δημόκριτε; δεῖ γὰρ κινητικὸν εἶναι καὶ ἔχειν τινὰ δύναμιν.' 'But are we to posit place, he [Eudemus] says, as the thing that brings on the moving? or is that too likewise impossible, Dear Democritus? For it must be generative of motion and must have some such power.' (My translation. Urmson's otherwise fine translation in the 'Ancient Commentators on Aristotle' series fails to capture the force of the aorist, and consequently the reference in this passage to occurrent, determinate motion: J. O. Urmson, [Translation of] Simplicius, *On Aristotle's Physics 4.1–5, 10–14* [Ithaca, 1992], 26.) The sense in which the void is a cause of motion, without being τὸ κινήσαν, 'what brings on motion', is accurately explicated by Aristotle himself at *Phys.* IV.7.214a24–5: αἴτιον δὲ κινήσεως οἴονται εἶναι τὸ κενὸν οὕτως, ὡς ἐν ᾧ κινεῖται... 'They [the Atomists] consider the void a cause of motion in this way, as that in which [something] moves.' For a different solution to the problem of Aristotle's ascribing to the Atomists the doctrine that void has causal efficacy, see Berryman, 'Power of the Void', 187–90.

as a result of the collision. But it is not right to think of the collision of Democritean atoms in these terms. Let me first set aside some potentially confusing uncertainties. With one single exception, all testimonia that speak of contact and subsequent rebound appear to assume full contact and, if there is no rebound, interlocking. The one exception is John Philoponus, who reports that the closest possible ‘contact’ between two atoms involves some measure of separation between them—else the two atoms would be one.³⁷ This uncertainty need not be resolved here. We can simply think of *antitypia* as the property that makes for rebound either upon contact or upon very close approach—I shall henceforth refer to either of these as ‘contact’. What is crucial is that rebound changes none of the intrinsic properties—whether uniform or multiform—of the atoms. All that is changed is occurrent motion; but that is an extrinsic property.

Indeed, *antitypia* has scope much wider than that of rebound. Suppose Democritean atoms A and B are moving toward one another and then come in contact—what might be the possible types of outcome? We need to distinguish between cases of clean rebound, or mere juxtaposition, and of entanglement. This yields ten possible types of outcome—only some involving rebound but all being the causal offspring and direct expression of *antitypia*.

- Assuming that there is rebound
 - (1) Atom A carries atom B forward.
 - (2) Atom B carries atom A forward.
 - (3) The two atoms rebound and thus reverse their respective pre-collision courses.
 - (4) Each of the two atoms rebounds at a certain angle with respect to its pre-collision course.
- Assuming that there is no rebound, the two atoms simply making contact without forming a stable compound
 - (5) Both atoms stop moving.
 - (6) The two atoms continue moving in a tandem motion.³⁸
- Assuming that the two atoms join to form a stable compound
 - (7) The compound itself does not move.

³⁷ DK67A7. See Taylor, *Atomists*, 84 and 186–8. ‘[T]here is a wealth of references in Aristotle and others to the possibility of touching and colliding atoms’, observes Hasper, ‘Foundations’, 7; and cf. his n. 13.

³⁸ My thanks to Richard McKirahan for pointing out this possibility, one I had initially overlooked.

- (8) The compound continues to move in the pre-collision course of atom A.
- (9) The compound continues to move in the pre-collision course of atom B.
- (10) The compound moves in a pattern and course different than that of the pre-collision course either of A or of B.

The specific outcome in any case of contact between moving atoms is determined, of course, by the shape, size, tilt, and the direction and speed of the atoms involved.

In closing this section, let me revert to the point made in the first of the sections concerning the relational properties of atoms. Dispositional and determinable properties certainly violate the fourth of the Parmenidean requirements, 'fully actualized'. It must nonetheless have struck Democritus as significant that variability and multivalence are grounded in dispositions which, in themselves, are as permanent and as fixed in their nature as any of the intrinsic properties of the atoms.

IIA2. Dispositional and Size-Dependent

It is at this level that the property of atomic weight comes into play. For this is the only property of Democritean atoms that is dependent purely on size. There has indeed been much debate and some confusion in modern scholarship, because of discrepancy in our sources on the topic of atomic weight. The emerging consensus appears to be that Democritean atoms have weight in a sense that corresponds—roughly—to the modern concepts of *mass*, *momentum*, and *kinetic energy*: upon collision, larger atoms have a stronger impact on smaller atoms than is true vice versa. In regions of atomic congestion, or in compounds, the larger atoms will tend to impart the direction and speed of such motion as they possess (as a result of whatever history of prior collisions) to the smaller ones.

What Democritean atoms almost certainly do not have, as was pointed out earlier,³⁹ is weight in the Aristotelian–Epicurean sense of an intrinsic pre-cosmic tendency 'to fall downwards'.⁴⁰ Since atomic size is multiform, ranging in variety between the lower and upper bounds cited earlier, atomic weight exists in a correspondingly unlimited variety of types between those same two bounds. But unlike atomic size, which is an intrinsic property, atomic weight is pre-eminently a relational concept. Accordingly, the effects of some particular atomic weight will vary with the circumstances of the collision or contact and with the previously acquired motion of the atom whose weight is at issue.

³⁹ See above at IA.

⁴⁰ See Pierre-Marie Morel, *Démocrite et la recherche des causes* (Paris, 1996), 75–83; Salem, *Démocrite*, 89–95; Taylor, *Atomists*, 179–84.

Specific atomic weights share in this respect the multivalence of properties at level **IIA1b**. If a large ‘heavy’ atom is moving at very low speed just behind a marginally slower small atom, the two of them on the same line of motion, the smaller one will increase its speed only slightly after the larger one catches up with it and the two make contact, and there will be no change of direction for the smaller atom. Under the same conditions of shared line of motion, the same large atom moving at high speed will drastically change the speed of the same smaller atom (forcibly carrying it forward); and there will also be change of direction for the smaller atom if the collision takes place at an angle. The effect of the small atom on the large atom, in either case under these same conditions, will be negligible.

IIA3. Dispositional and Dependent on Shape and/or Size

The first of two properties at this level I shall call *conjunctivity*, deferring briefly the question whether Democritus himself may have had a corresponding term. Every combination of different atomic shapes and different atomic sizes logically generates a repertoire of possible arrays with other atomic shapes and sizes. Modern LEGO sets provide an obvious model for this, albeit one that requires immediate adjustment in its application to the Democritean context. It is clear that individual LEGO pieces have a distinct repertoire in the exercise of their ability to form ‘joins’; and that repertoire can be either quite small or quite large, yet still finite. In the case of Democritean atoms, however, given infinite diversity in shapes and sizes, the repertoire is infinite both for those looser cases of array that involve no more than contact (in the sense of the term defined above) and in the case of joins. Nonetheless, as with the manageably finite repertoire of LEGO pieces, any one of the possible arrays of Democritean atoms, like any of the possible atomic shapes, sizes, and combinations thereof, can be distinctly specified and envisaged. An atom that has the stellated geometry of a sea urchin can be entangled in an immense variety of ways either with a like-shaped and like-sized atom or with one that has, say, the shape and size of a cone that can fit between the stellated atom’s spines. On the other hand, a stellated atom affords almost no possibility of a join with a like-sized spherical atom. Small spherical atoms, however, could lodge themselves between the spines of a large stellated atom.

I have introduced conjunctivity as the ‘repertoire’ a given atomic shape and size offers ‘of possible arrays with *other* atomic shapes and sizes’. But we can also think of it as a property that binds *similar* atomic shapes and sizes. For this sub-type of conjunctivity we have fairly detailed testimony: atoms of like shape and like size tend to aggregate. This appropriation by Democritus of the familiar ‘like to like’ principle plays a major role in his

cosmogony (67A10, A24).⁴¹ The principle was evidently supported by analogy with patterns of aggregation observed in ordinary objects, both animate and inanimate: doves with doves, cranes with cranes; in a sieve, lentils with lentils, barley with barley, wheat with wheat; on a beach, oblong pebbles together, round pebbles together (68B164, 68A38, A128).⁴²

The second of the properties at level **IIA3 I** I shall call *motility*. It is evident that the specific pattern of motion characteristically exhibited by an atom depends in some crucial respects on its shape: a spherical atom rolls smoothly; an atom that has the shape of a cube or prism tumbles or slides; an atom of irregular contour is likely to exhibit an irregular path of motion as it is twirled and twisted after collisions. All of these effects are compounded and enhanced by atomic size. The two factors, shape and size of a given atom, taken together, make both for the tendency of that atom to display a certain geometrical pattern in its motion and for a certain tendency of speed. On the whole, small spherical atoms will tend to move at high speed. The reason for this tendency is twofold: the smallness and rolling surface of such atoms allow them to escape unhampered through areas of atomic congestion, and even through the interstices of compounds; and the cumulative effect of those collisions which the small spherical atoms do not escape can only be one of successive increases to their speed. Large stellated polyhedrons, by contrast, will tend to be sluggish, as their many protuberances offer frequent occasions of entanglement, thus constantly detracting from whatever speed they may have acquired.

We saw earlier that Democritus' *tropē* corresponds to Aristotle's *thesis* as disposition does to occurrence—'bearing' and 'tilt', respectively. The two concepts of motility and conjunctivity now make it possible for us to make sense of the other two pointedly dynamic Democritean terms which, in Aristotle's account, are summarily equated to 'shape' and 'array'. The concept of motility provides us with an insight into Democritus' intriguing choice of the term *rhysmos* for atomic shape. When the level of consideration is that of individual atoms considered in themselves, the proper term is, of course, *idea* (or, in Aristotle's terminology, *schēma*). But when the level is that of atoms in relation to other atoms (which is, as we saw, the context in the Aristotle passage in which the term is quoted), *rhysmos* is strikingly the better term. My suggestion is that *rhysmos* was Democritus' term precisely for 'motility', the pattern of motion determined by shape-size.

⁴¹ Cf. Taylor, *Atomists*, 94–5.

⁴² Cf. *ibid.* 4–5, 121.

The noun *diathigē*, best identified as derived from the verb *diathinganomai*, ‘to touch and be touched’, ‘to be in mutual contact’,⁴³ should logically have both a dispositional and an occurrent use. In the latter sense, as ‘junction’, it does indeed serve as a synonym of Aristotle’s *taxis*, ‘array’. But in the dispositional sense, as tendency or capacity for frequent and reciprocating contact, the term is aptly the Greek equivalent for the concept of conjunctivity introduced earlier in the present section.⁴⁴

The full logical space of types, sub-types, and species of motility and conjunctivity is, of course, infinitely vast. And yet, this nearly dizzying proliferation of logical possibilities should not obscure the fact that each token atom, given its particular combination of atomic shape and atomic size, has a distinctive combination of *rhysmos*, ‘motility’, and *diathigē*, ‘conjunctivity’, as its fixed and permanent dynamic endowment. That particular combination of dispositions is as unborn, imperishable, and unchanging—as ‘Parmenidean’ with respect to these attributes—as is the shape and size of each token atom.

But there is also a noteworthy reversal in the Parmenidean affinities of properties as we pass from level I to level II. At level I it was the properties of shape and size that introduced deviation from the Parmenidean requirement of indivisibility–homogeneity. At level II, while mobility and the other two multivalent properties hugely expand ramifications into the realm of plurality and change, it is those initial Parmenidean ‘apostates’, shape and size, that reintroduce principles of constancy. In this we have an aspect of what was referred to, at the start of this essay, as the ‘gradualist’ character of the Democritean project.

⁴³ The verb occurs in a medical context at 634a9 of the *History of Animals* in the Aristotelian corpus—in book X, which is regarded as spurious. The passage at issue draws on the widely held (false) doctrine of the wandering womb: ‘if the womb remains close [to the vagina] and is not capable of withdrawing, it will be less responsive because of recurrent touching [by the penis] (καωφότεροι ἔσονται, (τῷ) διαθιγγάνεσθαι ἀεί), and will not open promptly [to receive the sperm].’ This occurrence of *διαθιγγάνομαι* is missed in many Greek dictionaries; but it is picked up in Hermann Bonitz’s *Index Aristotelicus* (Berlin, 1870), s.v.; also in Dhimitrios Dhimitrakos (ed.), *Mégha lexikón tis elinikyís ghlósis*, 9 vols. (Athens, 1950), s.v. A search of the Thesaurus Linguae Graecae database confirms that this is the only attested occurrence of this passive/middle form.

⁴⁴ Much of the argument in von Fritz’s *Ausdruck* bears out strongly the dispositional sense of the noun *diathigē*. It might then, at first blush, appear surprising that von Fritz concludes his discussion by shifting emphasis to the stative aspect: ‘In *diathigē* . . . ist . . . in ganz eigentümlicher Weise der *Zustand* [von Fritz’s emphasis] des Eingefügtseins, d. h. des “Sich in einer Anordnung Befindens”, also etwas, das wir eigentlich als etwas Statisches empfinden, als Moment in einer Bewegung gefasst’ (p. 28). I count this explication as enhancing the evidence for the dual character of the term.

IIB. Occurrent and Variable

It is only at this level that we build distance from the Parmenidean requirements. Atoms frequently change their position and the direction and other parameters of motion through the void. Indeed, there is some evidence that they do so constantly: one of our sources (Aëtius, in DK68A47) speaks of atoms having *palmos*, ‘vibratory motion’, which is best understood as the ‘bouncing back and forth of the atoms between collisions’.⁴⁵ These are all cases of occurrent, determinate motion. Moreover, as atoms make or unmake contact, the occurrent relational properties of array and posture change. I revert here to the Aristotelian terms of *Metaph.* I.4 advisedly, since at this stage the purview matches Aristotle’s assumption that the ‘differentiations’ are to be taken as occurrents: and these are precisely the determinates that fall under the Democritean dispositions and determinables of conjunctivity and bearing (*diathigē* and *tropē*).

The last of these determinates, *tropē*, understood as ‘tilt’, now plays a decisive role. For whether two atoms may ultimately either join or collide depends totally on their tilt. However much their respective conjunctivities may favor their junction, if their mutual approach is not at the appropriate tilt, no join will result, perhaps not even an array in the weaker sense of mere juxtaposition. Likewise, however much their respective motilities may favor collision, if the tilt does not put them on a collision course, they will just bypass one another. Moreover, if tilt brings them in contact, it will play an important (though not exclusive) role in determining the outcome of contact, viz., the direction and speed of the rebound.

We are now in a position to survey in an overall outline the entire logical scheme of atomic properties in Democritus. The earlier outline had the rationale of highlighting the distinction between intrinsic and relational properties. If we should now take as our major divide the distinction between fixed and variable properties, the outline should be drawn as follows:

⁴⁵ McKirahan, *Before Socrates*, 319.

THE LOGICAL TIERING OF PROPERTIES OF ATOMS IN DEMOCRITUS:
FROM FIXED TO VARIABLE

I. FIXED

A. *Occurrent*

1. Uniform
 - a. Fullness, rigidity, solidity
2. Multifform
 - a. Shape
 - b. Size

B. *Dispositional*

1. Univalent
 - a. Impassivity (except for rebound)
2. Multivalent
 - a. Dependent on shape and size
 - i. Conjunctivity
 - ii. Motility
 - α. The tendency of atoms of like shape/size to aggregate
 - β. The kinematic disposition of different atomic shapes/sizes
 - b. Dependent on size alone
 - i. Weight
 - c. Independent of shape-size
 - i. Bearing
 - ii. Mobility
 - iii. Capacity to rebound

II. VARIABLE

A. *Occurrent*

1. Determinate posture or tilt (cf. Aristotle's *thesis*)
2. Determinate motion
3. Determinate array or join (cf. Aristotle's *taxis*)

The above outline brings out strikingly the gradualism and progressivity in the transition from fixed to variable, from simple to complex, from fulfillment to non-fulfillment of Parmenidean criteria—in sum, from Being to Becoming. Note how all the dispositional properties retain in their own way the fixity of the occurrent properties; how the first of the dispositions recalls the character of the first of the occurrent properties; how the shape-size dependent dispositions both look back to the multifform occurrent properties but also, in their multivalent character, mediate the much greater variability represented by the lemmata that follow; and, finally, how the scope of variability is at its freest in the case of dispositions that are shape-size independent.

And yet, even after we pass to consideration of variable and occurrent properties (IIA above, stage IIB in the earlier outline), we are only at the threshold of Becoming. For we are still, after all, speaking strictly of properties realized in atoms. To be sure, all the atomic properties at issue are utterly ephemeral, at any time subject to change. What gives us license, nonetheless, to speak of a 'logically progressive transition' is that all these changes in determinates are traceable to collisions between or among atoms, and that these events follow a deterministic logic in which geometry and kinematics are the only factors at play.

For one who takes the longest possible perspective—and for Democritus that would be nothing short of the temporal infinity of the universe—the two properties in the middle of the outline above, motility and conjunctivity, serve as crucially invariant factors. An atom in its career through infinite time will have assumed every spatially possible tilt, and it will have undergone every spatially possible collision with other atoms. Apart from its intrinsic properties throughout this career in eternity, there are only two other constants: motility and conjunctivity. One might adapt Heraclitus' saying, 'character (*ēthos*) is a man's fate-dispensing deity (*daimōn*)', to coin a metaphysical slogan for Democritus: 'shape and size are an atom's destiny'.

At the start of this essay, intrinsic properties were defined as those which even a single solitary atom would possess, specifically in the absence of other atoms. The relational properties may correspondingly be defined as those which atoms possess even in the absence of compounds. The next stage in a logical reconstruction of the Democritean ontology would, accordingly, take up what might be called 'colligative' powers of atoms, viz., those properties that can be conceptualized insofar as atoms exist in certain arrays within compounds. It is at that level that the Democritean project provides explanatory constructions (still in essentially geometric terms) of effects and phenomena at the macro-physical level: e.g., the combination of heaviness with softness or brittleness that is characteristic of lead; the lesser heaviness but greater hardness and rigidity of iron; the friability of certain substances; the glutinous texture, or the acidic properties, of others—to mention just topics that come up in Theophrastus' account of Democritus in *De sensibus*.⁴⁶ And it is likewise by recourse to such colligative properties that Democritus can claim, as Theophrastus' account would suggest, some success in 'reducing' certain of the effects of taste and color to atomic structures.

⁴⁶ Reproduced in DK68A135; cf. A129–33. See McKirahan, *Before Socrates*, 330–3; cf. Paul Cartledge, *Democritus* (London, 1997), 27–30.

Investigation into that third level of the Democritean scheme is best deferred to a separate essay or other project. But even at the two initial stages explored here, one may discern the potential of logically progressive advance to the complex and variegated ‘manies’ of the world of ordinary-size objects. Much can be intelligently constructed (or, proceeding top-to-bottom, much will be reduced) before Democritus should find himself compelled to have recourse to the eliminativist move of declaring the ‘raw feels’ of sensation as existing only ‘by convention’.⁴⁷

Bibliography

- BARNES, JONATHAN, *The Presocratic Philosophers*, 2 vols. (London: Routledge & Kegan Paul, 1979).
 — ‘Parmenides and the Eleatic One’, *Archiv für Geschichte der Philosophie*, 61 (1979), 1–21.
 BERRYMAN, SYLVIA, ‘Democritus and the Explanatory Power of the Void’, in Victor Caston and Daniel W. Graham (eds.), *Presocratic Philosophy* (Aldershot: Ashgate publishing Company, 2003), 183–91.
 BONITZ, HERMANN, *Index Aristotelicus* (Berlin: Georg Reimer, 1870).
 CARTLEDGE, PAUL, *Democritus* (London: Phoenix, 1997).
 CURD, PATRICIA, *The Legacy of Parmenides: Eleatic Monism and Later Presocratic Thought* (Princeton: Princeton University Press, 1998).
 DIELS, HERMANN, *Die Fragmente der Vorsokratiker*. 6th edn. revised by W. Kranz, 3 vols. (Berlin: Weidmann, 1952), cited as DK.
 DHIMITRAKOS, DHIMITRIOS (ed.), *Mégha lexikón tis elinikyís ghlósis*, 9 vols. (Athens: Dhimitrakos, 1950).
 FRITZ, KURT VON, *Philosophie und sprachlicher Ausdruck bei Demokrit, Plato und Aristoteles* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1966 [orig. Leipzig, 1938]).
 GUTHRIE, W. K. C., *A History of Greek Philosophy, Volume II: The Presocratic Tradition from Parmenides to Democritus* (Cambridge: Cambridge University Press, 1965).
 HANKINSON, R. J., *Cause and Explanation in Ancient Greek Thought* (Oxford: Clarendon Press, 1998).

⁴⁷ My sincere thanks to Ricardo Salles for helpful comments and suggestions on an earlier draft of this essay. As indicated also *passim* in the notes above, I have sought to make further improvements on that earlier draft by taking into account detailed critical comments by Richard D. McKirahan, Jr.; and I express to him my very deep appreciation. I also thank Lesley Brown and the members of the Southern Association of Ancient Philosophy for inviting me to present this work at the Association’s meeting at Somerville College, Oxford, in September 2003. Excellent comments were offered by participants at the conference; but because the final draft was already in the production phase, the adjustments I was able to make are minor. Such obscurities, errors, and quirks of interpretation as may linger here do so in spite of the good counsel of all these thoughtful critics.

- HASPER, PIETER SJOERD, 'The Foundations of Presocratic Atomism', *Oxford Studies in Ancient Philosophy* 17 (1999), 1–14.
- JOACHIM, HAROLD H., *Aristotle On Coming-to-Be and Passing-Away* (Oxford: Clarendon Press, 1926).
- LÖBL, RUDOLF, *Demokrit: Texte zu seiner Philosophie, ausgewählt, übersetzt, kommentiert und interpretiert*, Elementa-Text, 4 (Amsterdam and Atlanta: Rodopi, 1989).
- LUR'E [LURIA], S. J., *Demokrit: teksty, perevod, issledovanija* (Leningrad: Nauka, 1970).
- MCKIRAHAN, JR., RICHARD D., *Philosophy before Socrates: An Introduction with Texts and Commentary* (Indianapolis and Cambridge: Hackett Publishing Company, 1994).
- MOREL, PIERRE-MARIE, *Démocrite et la recherche des causes* (Paris: Klincksieck, 1996).
- MOURELATOS, ALEXANDER P. D., *The Route of Parmenides: A Study of Word, Image, and Argument in the Fragments* (New Haven: Yale University Press, 1970).
- 'Pre-Socratic Origins of the Principle that There Are No Origins from Nothing', *The Journal of Philosophy* 78 (1981), 649–65.
- 'Dhimókritos: filósofos tis morfís' [Democritus: Philosopher of Form], in *Proceedings of the 1st International Congress on Democritus*, 2 vols. (Xanthi: International Democritean Foundation, 1984), vol. 1, pp. 109–18 [English summary, pp. 118–19].
- 'I aparkhyés tis filosofikyis éniás tou katholou' [Beginnings of the Philosophical Concept of the Universal], *Praktiká tis Akadhimías Athinón* [Proceedings of the Academy of Athens] 75 (2000), 509–25 [English summary, p. 526].
- NIKOLAOU, SOUSANNA-MARIA, *Die Atomlehre Demokrits und Platons Timaios: Eine vergleichende Untersuchung*, Beiträge zur Altertumskunde, 112 (Stuttgart and Leipzig: B. G. Teubner, 1998).
- ROSS, W. D., *Aristotle's Metaphysics: A Revised Text with Introduction and Commentary*, 2 vols. (Oxford: Clarendon Press, 1953).
- SALEM, JEAN, *Démocrite: grains de poussière dans un rayon de soleil* (Paris: Vrin, 1996).
- SORABJI, RICHARD, *Time, Creation, and the Continuum: Theories in Antiquity and the Early Middle Ages* (Ithaca: Cornell University Press, 1983).
- *Matter, Space, and Motion: Theories in Antiquity and their Sequel* (Ithaca: Cornell University Press, 1988).
- TAYLOR, A. E., *Aristotle on his Predecessors [Metaphysics Alpha]: Translated with Notes and Introduction* (La Salle, Ill.: Open Court, 1906).
- TAYLOR, C. C. W., *The Atomists, Leucippus and Democritus: Fragments, a Text and Translation with a Commentary*, *Phoenix* suppl. vol. 36 [=Phoenix Presocratics vol. 5] (Toronto: University of Toronto Press, 1999).
- URMSON, J. O., [Translation of] Simplicius, *On Aristotle's Physics 4.1–5, 10–14* (Ithaca: Cornell University Press, 1992).
- WILLIAMS, C. J. F., *Aristotle's De generatione et corruptione [Aristotle's GC]: Translated with Notes* (Oxford: Clarendon Press, 1982).

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Necessitation and Explanation in Philoponus' Aristotelian Physics

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Recent interest in Aristotle's metaphysics has been fueled by the understanding of his position as an innovative attempt to steer between the reductionism of his materialist rivals, on the one hand, and the dualism of the Platonists, on the other. In biology and psychology especially, his account has occasioned renewed scrutiny from scholars, some of whom have drawn parallels to positions in contemporary philosophy that also aim to occupy some such 'middle ground'. Others are more sceptical, pointing to significant differences between modern and Aristotelian physics, differences of a sort that would preclude any such parallels.

Much scholarly debate about the viability of comparisons between Aristotle and modern views concerns the extent to which Aristotle takes material accounts of the natural world to be lacking. Does he insist on the need for form and teleological explanation because of some concern about the insufficiency of the matter alone to *necessitate* particular outcomes, or merely think that teleological considerations are needed in addition to *explain* why these processes occur? A distinction between necessitation and explanation, drawn by Richard Sorabji in his *Necessity, Cause and Blame*, frequently appears in these debates. In discussing Aristotle's account of coincidences, Sorabji argued that Aristotle might reasonably hold that distinct events or actions could each, individually, have necessitating causes, without the *coincidence* of events itself having a cause or explanation.¹ Sorabji makes further use of this distinction in his account of Aristotelian teleology: he argues that 'teleological explanations in nature do not exclude explanations by reference to ordinary necessitating causes.'²

¹ R. R. K. Sorabji, *Necessity, Cause and Blame: Perspectives on Aristotle's Theory [Necessity]* (London and Ithaca, 1980), 3–44.

² *Ibid.* 163.

Although Sorabji's position on the role of teleological explanations has its critics, his distinction between necessitation and explanation is still invoked by those who think that Aristotle's insistence on the explanatory role of form and final cause allows that there could be sufficient material conditions.³ This last is important if there are to be any meaningful comparisons to current philosophical debates, and to avoid the charge that Aristotle has 'a deeply alien conception of the physical'.⁴ This distinction has been used to make sense of some passages in *Physics 7*, where Aristotle discusses the relationship of a group of properties to their material base. Some scholars think that Aristotle's account of certain 'higher level' properties in *Physics 7* is fairly described as a supervenience relation; this is rejected by those who deny that Aristotle could accept the idea of 'necessitation *from the bottom up*'.⁵

Scholarly opinion is still divided on the interpretation of Aristotle on these questions. There are passages in the work of the sixth-century Aristotelian commentator John Philoponus, however, where it seems clear that he does take the matter to suffice for the occurrence of some higher level properties, and yet where he still insists on the explanatory irreducibility of those same properties. I argue that Philoponus' account of the properties of mixtures is compatible with Aristotle's views on the form-matter relationship. While still working within a broadly Aristotelian framework for natural philosophy, Philoponus offers new considerations that speak against the explanatory adequacy of material accounts alone. On this issue too there are new insights from this original Aristotelian philosopher, whose work Richard Sorabji has done so much to bring to the attention of scholars today.⁶

Supervenience in Aristotle?

Those doubting whether Aristotle's physics could even be compared to modern views have questioned whether an Aristotelian could take the matter to determine whether other higher level properties occur. In his

³ For a survey of approaches to teleology in recent scholarship, see A. Gotthelf, 'Understanding Aristotle's Teleology', in R. F. Hassing (ed.), *Final Causality in Nature and Human Affairs* (Washington, DC, 1997), 71–85.

⁴ M. Burnyeat, 'Is an Aristotelian Philosophy of Mind Still Credible? A Draft', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's De Anima* ['Philosophy of Mind'] (Oxford, 1995), 26.

⁵ V. Caston, 'Aristotle and Supervenience', ['Supervenience'] *The Southern Journal of Philosophy* 31 (1993), 108.

⁶ In addition to the many volumes translating the Aristotelian commentators on Aristotle, see especially R. R. K. Sorabji (ed.), *Philoponus and the Rejection of Aristotelian Science* (London, 1987); R. R. K. Sorabji (ed.), *Aristotle Transformed* (London, 1990).

discussion of a difficult passage of *Physics* 7.3, Robert Wardy considered whether Aristotle's approach resembles a modern notion of supervenience. There are, Aristotle seems to say, a number of changes that occur when a given alteration occurs in the most basic mixtures of the physical world (*Phys.* 7.3, 246^b3 ff.).⁷ Discussions of this passage have raised a general question whether Aristotle's metaphysics might leave room for the idea that higher order properties—including psychological properties—*supervene* on properties at a more basic level of analysis.⁸

In modern discussions, the notion of supervenience has become important as a kind of relationship said to hold between 'higher level' and 'lower level' properties. If any two entities, states, or events are the same in all their lower level properties, their supervening properties cannot differ; the supervening properties cannot alter unless there is some change in the lower level properties.⁹ The converse is not true, however. The possibility that supervening properties may be multiply realized in radically heterogeneous physical bases strengthens claims about the autonomy of the supervening domain.

Wardy considers whether *Physics* 7.3 could be saying that the facts about the higher level are determined by the matter. Wardy takes this to be a problematic reading, since it runs contrary to Aristotle's views on the relationship between matter and form. As Wardy puts it, 'for Aristotle, there is no sense in which matter "fixes" form'.¹⁰ The issue here is whether Aristotle's view could even be comparable to modern physicalist accounts: whether Aristotle thinks of higher levels—form—as somehow determining what happens at the material level—'fixing', in Wardy's phrase—or merely as explanatory. Michael Wedin, responding to Wardy, affirms that Aristotle could be advancing a supervenience account of psychological and noetic states:

So we need to distinguish between explanation and necessitation and to insist that form will supervene on matter insofar as the *existence* of certain matter and material states *necessitates* the *existence* of form (because it necessitates the existence of a substance having the form). But nothing here purports to explain what the matter or material states are for. Explanation starts at the macro or intentional level. . . . But it is consistent with this that the lower level account, taken by itself, be given in terms that do not mention the form and that the

⁷ R. Wardy, *The Chain of Change: A Study of Aristotle's Physics VII [Chain]* (Cambridge, 1990), 204–5.

⁸ For the argument that these passages are merely about the supervenience of events, not properties—and hence not as significant as sometimes thought—see Caston, 'Supervenience'.

⁹ This is based on the formulation found in D. Davidson, 'Mental Events', in *Essays on Actions and Events* (Oxford, 1980), 207–27; see J. Kim, 'Concepts of Supervenience', in *Supervenience and Mind* (Cambridge, 1993), 57.

¹⁰ Wardy, *Chain*, 206.

occurrence of material states and processes at that level is sufficient for the emergence of form (or an enformed thing) at a higher level.¹¹

Wedin argues that Aristotle's position on the explanatory need for form is compatible with the view that matter nonetheless determines what higher level properties occur.

Such an interpretation of *Physics* 7 faces programmatic challenges. Wardy and Granger both take Aristotle's account of hypothetical necessity—the idea that given materials are required in order to realize a given form—to preclude the comparison of Aristotle's view to modern 'bottom up' physicalism.¹² Aristotle's 'hypothetical necessity' can be taken to mean that the form is causally prior to the matter, so that there is no sense in which the matter determines the higher level properties.¹³ This is not universally accepted as a reading of the doctrine of hypothetical necessity, however. David Charles has argued that the doctrine of hypothetical necessity does not preclude Aristotle from holding that there could be a complete account in independent material terms, i.e. that there could be material conditions sufficient for the occurrence of the relevant form.¹⁴ He examines Aristotle's usage to show that hypothetical necessity 'should be understood to include instances of efficient (forward-looking) necessitation,' not merely instances that already presuppose as explanatorily basic the existence of organisms.¹⁵ Cases are classified as hypothetically rather than absolutely necessary if they follow (necessarily) from non-necessary conditions.¹⁶ Charles argues that nothing in the notion of hypothetical necessity precludes us from supposing that 'he treated certain crucial features of an organism as securely anchored in its physical states . . . but not fully explained by them'.¹⁷ Here again, the distinction between necessitation and explanation serves to leave open the possibility that there could be sufficient material conditions in Aristotelian physics.

There is, however, another programmatic difficulty with the assimilation of Aristotle's view to any modern account. Victor Caston notes that, in some of the cases mentioned in *Physics* 7.3, the subject of the properties in question cannot be robustly identified as persisting through a change. In cases involving the generation of a new substance, Aristotle is said to claim

¹¹ M. Wedin, 'Content and Cause', *The Southern Journal of Philosophy* 31 (1993), suppl. vol., 81.

¹² Wardy, *Chain*, 206; H. Granger, 'Aristotle and the Concept of Supervenience', [*Supervenience*] *The Southern Journal of Philosophy* 31 (1993), 161–77.

¹³ Granger, 'Supervenience', 166; Caston, 'Supervenience', 108.

¹⁴ D. Charles, 'Aristotle on Hypothetical Necessity and Irreducibility', [*Hypothetical Necessity*] *Pacific Philosophical Quarterly* 69 (1988), 2, 20 ff.

¹⁵ *Ibid.* 6.

¹⁶ *Ibid.* 17: in contrast to things that follow from a necessary starting point or an eternal process: *ibid.* 13.

¹⁷ *Ibid.* 4.

that 'it is not there to serve as the subject of the alterations that bring it about'.¹⁸ This is, I think, a more serious challenge to any meaningful comparison between Aristotelian physics and modern concerns.

Aristotle famously denies that the matter for a given organism can be identified independently of the existence of that organism. An eye is an organ capable of sight; the eye of a dead person is an eye only in name; a corpse is not the matter of the living thing.¹⁹ Some scholars take this Aristotelian doctrine to argue generally against any attempt to compare Aristotle to modern physicalist views. If we cannot identify the material properties of a living thing independently of its actually being alive, it is not clear that we can robustly identify the properties of matter independently of the enformed subject. Appearances aside, that is, we cannot really talk about living organisms being composed out of the same matter as something that was previously nonliving. Burnyeat takes the so-called principle of homonymy to preclude *tout court* any comparison of Aristotle's view to modern physicalism, in that it forfeits the possibility of a 'bottom up' account.²⁰ The properties of the complex could not be necessitated by the properties of the matter, if these cannot even be identified independently of the complex.

Charles denies that the functional definition of organs precludes Aristotle from thinking that there is a sufficient material account. His response to the homonymy problem focuses on what Aristotle says in the case of homoiomerous tissues, i.e. stuffs of a uniform composition like blood, wine, honey, flesh, bronze. In describing them, Charles argues, Aristotle gives materially sufficient conditions for their existence, even while he maintains that an additional teleological account is needed to understand 'what it is to be' for tissues such as blood.²¹ Charles' view is that the essence of something, because it makes reference to the good, cannot be given in physical terms, even while the physical story is, on its own terms, complete. He takes Aristotle's analysis of homoiomeries and their causal necessitation by matter as grounds for suggesting that Aristotle could both think that a material account is sufficient and still insist on the explanatory irreducibility of form. It is important to note here that his defense of the idea that Aristotle could accept the possibility of a sufficient material account for all natural phenomena depends on analysis of Aristotle's discussions of the relationship between homoiomerous mixtures and the most basic matter. Charles takes Aristotle's remarks on homoiomeries to shift the burden of proof onto those who hold that

¹⁸ Caston, 'Supervenience', 111.

¹⁹ J. L. Ackrill, 'Aristotle's Definitions of *Psuchē*', in *Essays on Plato and Aristotle* (Oxford, 1997), 161–78.

²⁰ Burnyeat, 'Philosophy of Mind', 26.

²¹ Charles, 'Hypothetical Necessity', 30–7.

Aristotle means to ‘exclude the possibility of an independent physical condition sufficient to necessitate the occurrence of psychological or biological phenomena’.²²

These concerns go to the heart of Aristotle interpretation. The debate centres on questions about the relationship between matter and form, and the precise sense in which explanations in terms of form or function are indispensable. Aristotelian hylomorphism, then, stands as a potential stumbling block in the application of notions like supervenience to Aristotelian natural philosophy, and scholarly opinion is still divided on this. If Aristotelianism constitutes an outright rejection of physicalism, the comparison to modern debates would be inapt.

Whether or not an Aristotelian could accept the possibility of sufficient material conditions for all biological or psychological phenomena, there may still be limited domains in which higher level properties can properly be said to supervene on more basic properties. Philoponus uses some such notion in discussing the status of properties that vary only with changes in the more basic properties of the matter. The term Philoponus chooses for the relationship, *epigignomai*, has been translated ‘supervene’ before the term acquired its current technical meaning in philosophical debates.²³ Nonetheless, this translation still seems appropriate. It is only in this limited domain—the properties of homoiomerics—that Philoponus’ view on the relationship of higher level properties to those of the material base seem comparable to modern concerns; it does not speak to the question whether an Aristotelian could think *all* higher level properties supervene on matter. Nonetheless, the parallels are worthy of note. Philoponus offers new reasons for thinking that materially sufficient conditions for the supervenience of certain properties do not exhaust their explanation, given the multiple realizability of these properties and the irreducibility of facts about them.

Philoponus and the Doctors

Philoponus contrasts his own view on the status of certain properties with that of ‘the doctors’.²⁴ His opponents are those attempting to explain all

²² Ibid. 37.

²³ H. G. Liddell, R. Scott, and H. S. Jones, *A Greek–English Lexicon*, 9th edn. (Oxford, 1940): see Caston, ‘Supervenience’, 129 n.4. C. J. F. Williams uses ‘supervene’ to translate *epigignomai* in his translation of Philoponus for the Ancient Commentators on Aristotle series: C. J. F. Williams (trans.), *Philoponus On Aristotle On Coming to Be and Perishing* 1.1–5 (London and Ithaca, 1999); *Philoponus On Aristotle On Coming to Be and Perishing* 1.6–2.4 (London and Ithaca, 2000). My understanding of the commentary owes much to his work.

²⁴ See Galen, *Quod animi mores*; cf. *Tech. Iatr.* 337, 1. Philoponus presses an argument against Anaxagoras rather than the doctors at *in Phys.* 103, 2 ff.

change solely by changes in the most basic mixtures and—apparently—to reduce the account of higher level properties to mere changes in the underlying mixtures. In the passages I will focus on, it is conceded by both sides that the most basic matter determines what ‘higher level’ properties like colour and taste occur: heating honey makes it change from white to yellow.²⁵ Disagreement focuses on the precise nature of the relationship between the ‘lower level’ mixture and these ‘higher level’ properties. The doctors are reported to hold that these qualities are mere *products* (*apotelesmata*) of the mixture, while Philoponus holds that they *supervene* on the mixture. He apparently means to deny that the correlation between mixture and properties is as close as the doctors think. It remains to consider what he is rejecting when he rejects the doctors’ account—which is not fully laid out—and why in turn he thinks there is need for a different account.

Philoponus’ view is not developed in the service of modern physicalism: indeed, he is committed to the existence of Platonic Forms. But this commitment does not seem to affect the status of the property instances in the natural world: what is said to supervene on the mixtures seems to be a particular property instance that is destroyed when the material base undergoes the relevant changes.²⁶ The supervening property instance seems to meet the criteria generally cited for supervenience: any difference in higher level properties requires that there be a difference in base properties (*in GC* 145,26 ff.), and higher level properties only change when there is a change in the base properties (*in GC* 169,32; cf. *in DA* 51, 24–5). Philoponus seems, in rejecting the doctors’ claim that higher level properties are mere ‘products’ of the mixture, to be resisting some form of reduction of higher level properties to the material base. I suggest that Philoponus here offers evidence—evidence that a materialist would have to consider—for the inadequacy of the doctors’ view of qualities. He thinks that a full account of the higher level properties includes facts that could not be explained in terms of facts about the matter.²⁷

Philoponus and the doctors seem to agree that homoiomers are composed from the most basic ingredients—hot, cold, wet and dry—mixed in

²⁵ On the debate about psychological properties in Philoponus’ *de Anima* commentary, see R. R. K. Sorabji, *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford, 2000); also my ‘The Sweetness of Honey: Philoponus against the Doctors on Supervening Qualities’ [‘Sweetness’], in C. H. Leijenhorst, C. H. Lüthy, and J. M. M. H. Thijssen (eds.), *The Dynamics of Aristotelian Natural Philosophy* (Leiden, 2002), 65–79.

²⁶ *in GC* 170, 27–8; cf. *in DA* 46, 28–32.

²⁷ See A. Gotthelf, ‘Aristotle’s Conception of Final Causality’, in A. Gotthelf and J. Lennox (eds.), *Philosophical Issues in Aristotle’s Biology* (Cambridge, 1987), 208–11, for discussion of the greater restrictions Aristotle would place on the notion of explanation.

specific proportions. The homoiomers have a number of properties like colour that are not properties of any of the ingredients.²⁸ The question at issue is the relationship between these new properties and the ratio of material ingredients that compose the tissues. Philoponus' position seems, at heart, to resist the idea that changes in the mixture is 'all there is' to the account of the higher level properties. Although the debate is not put in modern terms about the laws relating the properties of one domain to another, it seems fair to describe it as one about the possibility of reducing facts about the higher order properties to facts about the mixture. The doctors' strongest argument for calling qualities 'products' of the mixture is, apparently, the claim that higher level qualities covary with changes in the mixture. If any change in lower level properties produces a change in higher level properties, it is intuitively easier to deny the autonomy of higher level properties and claim that they are mere products of changes at the lower level. Philoponus' objections to the doctors not only show that higher level properties do not always covary with changes in the mixture, but also raise more far-reaching problems involving the multiple realizability of higher level properties.

In the Aristotelian tradition, the most basic ingredients are continuous masses rather than discrete particles; thus, the relative proportions of ingredients in a mixture admits of infinitely small variation. Philoponus notes that a given higher level property supervenes on a range of base-level mixtures, and that the boundary conditions for the mixtures that can subvene a given colour, say, are sharp. The gradual change in the relative proportions of material ingredients to the mixture results at a certain point in a sudden change of supervening properties. When gradually heating honey, say, the colour changes suddenly from white to yellow.²⁹ He seems to preclude transitional cases: there is a fact of the matter whether any given mixture is white or yellow.³⁰ While a more sophisticated chemistry might have better resources to account for these kinds of phase changes, Philoponus takes this phenomenon to speak against the view that colours can be accounted for by the proportion of ingredients alone.³¹ Since matter is infinitely divisible and there is a range of mixtures of ingredients on which a given quality can supervene, there will be infinitely many proportions of ingredients suitable for any quality.

²⁸ See Berryman, 'Sweetness', for other cases where Philoponus is concerned about properties of a complex that are not properties of the parts.

²⁹ Philoponus, in *GC* 170, 19–21.

³⁰ On minimal quantities, see F. de Haas, *John Philoponus' New Definition of Prime Matter [Philoponus]* (Leiden, 1997), 156–61; J. E. Murdoch, 'The Medieval and Renaissance Tradition of *Minima Naturalia*', in C. Lüthy, J. E. Murdoch, and W. R. Newman (eds.), *Late Medieval and Early Modern Corpuscular Matter Theories* (Leiden, 2001), 91–131.

³¹ See de Haas, *Philoponus*, 155–8.

Philoponus is also impressed by the fact that different kinds of qualities supervening simultaneously on a mixture vary independently of one another following changes in the matter. Colour changes at a different point during change of the material than does taste. His point seems to be that the new supervening properties are not identical to the ratio of ingredients: supervening properties need not alter with every difference in the proportions of base properties (*in GC* 169,32).

So far, Philoponus' concerns might seem to be answerable. While these phenomena show that higher level qualities do not covary directly with changes in the mixture, there still may be ways to correlate abrupt changes of qualities with gradual changes of the mixture, and to allow for different higher order properties to vary independently with changes in the mixture. But Philoponus offers more telling reasons for thinking that the higher level properties cannot be accounted for by the matter. These concern the fact that higher level properties can be multiply realized in radically heterogeneous, as well as infinitely many, mixtures of base properties.³²

Given his view of matter, there seems no reason to expect facts about the higher level properties to be formulated in terms of facts about the mixtures; and if the same properties supervene on radically different kinds of materials, deeper questions arise about the adequacy of explanation by means of the ingredients of mixtures. Despite the heterogeneity of the mixtures that are suitable for, say, white, certain facts seem to hold of all things—from milk to marble—that have a certain colour. For example, Philoponus often cites the effect that colours have on the faculty of sight. White dilates sight, black contracts it.³³ This is true for all the heterogeneous kinds of mixtures that subvene white: milk and marble have the same effect on sight. He might reasonably hold that this common effect needs to be explained by reference to the colour that supervenes, and not the radically heterogeneous mixtures. If things as different as ravens and ebony have the same effect on sight, the fact that they are all black seems to be essential to the account.

An argument from modern discussions challenges the claim that multiply realizable properties could be explained by the radically heterogeneous base properties that can subvene them. Papineau argues that if supervening properties can be instantiated in very different physical bases and still exhibit the same laws, there ought to be an explanation why the laws that hold amongst the supervening properties are instantiated in all

³² While each individual proportion of ingredients in a mixture seems to have a definite shade that accrues to it, there is a whole range of shades of a color like yellow or white (*in GC* 170, 12). Still, it is to the color rather than the precise shade that the general facts apply.

³³ It is a paradigmatic example of knowledge at *in DA* 1, 16; cf. 188, 1; 439, 18; *in Phys.* 26, 3. The basis for this view is Plato *Timaeus*, 67D–E.

the very different base properties that subvene them. Rather than viewing the general truths about colour, say, as an inexplicable coincidence, Papineau's argument suggests that we should expect to find an explanatory feature common to all of them.³⁴ If all white mixtures dilate sight, we ought to expect to find something common to all mixtures that come out white, a feature which explains why they all have the same effect on our sight.

If it is an empirical question whether the radically different mixtures subvening a quality do in fact have something in common, it is one about which Philoponus might reasonably be less sanguine than someone familiar with the greater explanatory resources of the modern sciences.³⁵ The question remains for him how the presence, or relative proportion, of any one colourless ingredient could account for the colour of a mixture. The mixture is, for him, a genuine unity which, as a whole, provides the conditions for certain qualities to occur, but does not adequately explain them. De Haas' work on mixture has shown Philoponus' awareness of difficulties presented by Aristotle's idea that properties possessed by ingredients before fusion are still somehow present in a mixture only 'in potential'. This view of mixture would make it difficult to rely on properties possessed by the ingredients before mixing to account for the properties of the whole.³⁶ The idea that the ingredients are fundamentally altered as they are fused into a new whole makes it hard to see how the properties of any one ingredient, considered individually, could account for the new properties of the whole.

Philoponus has sound reasons for thinking that the properties of mixtures cannot even be correlated to the properties of the ingredients—individually or collectively—because of the infinity and heterogeneity of material combinations that can subvene a given property. Even

³⁴ D. Papineau, 'Irreducibility and Teleology', in D. Charles and K. Lennon (eds.), *Reduction, Explanation and Realism* (Oxford, 1992), 47.

³⁵ Philoponus cannot simply be ignoring the possibility that there is a feature common to all mixtures of a certain colour, since Aristotle asserts this: however, Aristotle is talking about a mixture, the elements of which already have their own color, whereas Philoponus seems to be thinking of colour as one of many properties that are not properties of the ingredients. See R. R. K. Sorabji, 'Aristotle, Mathematics, and Colour', *The Classical Quarterly* 22 (1972), 293–308. I am grateful to him for drawing my attention to this passage.

³⁶ F. de Haas, 'Mixture in Philoponus. An Encounter with a Third Kind of Potentiality', in J. M. M. H. Thijssen and H. A. G. Braakhuis (eds.), *The Commentary Tradition on De generatione et corruptione: Ancient, Medieval, and Early Modern* (Turnhout, 1999), 21–46. Wardy questioned how virtue can depend on the ratio among the ingredients, since Aristotle's notion of mixture 'is precisely *not* a relation between independently subsisting, distinguishable ingredients': Wardy, *Chain*, 218. Wedin's point that the proportions of ingredients can be specified prior to the mixing only addresses the relative *quantities* of ingredients, not whether their qualities are preserved in the fusion: Wedin, 'Supervenience', 60.

if occurrence of a given colour always *follows* a given proportion of ingredients in the base mixture, there seem to be facts about all the infinite and heterogeneous mixtures having a certain colour like white or yellow, facts which cannot even be restated by enumerating the mixtures having those colours. Philoponus seems, then, to have strong grounds for distinguishing between the specification of material conditions sufficient to necessitate the occurrence of higher order qualities by the mixture, and the explanation of the effects of these colours. Consider again the specific case that Philoponus discusses: white dilates sight. In each case it should be the properties of the mixture that bring about the change in sight. Nonetheless, there are general facts about which mixtures dilate sight, and this cannot be understood without reference to the higher level properties. The case for explanatory irreducibility of these properties—even where they are necessitated by the matter—looks strong.

Is Philoponus' Account Aristotelian?

Philoponus offers new reasons for thinking that the properties necessitated by the matter are not thereby explained by them. But how would he respond to criticisms that his view is fundamentally at odds with central Aristotelian doctrine? In the debates whether Aristotle has a supervenience account of certain properties, some scholars have claimed that Aristotle would deny the sufficiency of matter for higher level properties and, thus, that his view cannot be compared to modern physicalist accounts. In taking the changes in the ingredients to be sufficient to necessitate changes in colour or sweetness, say, has Philoponus simply violated a fundamental assumption of the Aristotelian form–matter relationship? I propose that there are textual reasons for thinking that matter may be sufficient for the occurrence of higher level properties in the case of mixtures, even while an Aristotelian might still hold that other considerations prevail in biology or psychology.

For an Aristotelian, the most basic matter forms various homoimerous tissues; these in turn form organs like hands or eyes; bodies have various organs. At each level, one could analyse the composite into its matter and form, i.e. the more basic and the higher level properties. It might be thought that the relationship an Aristotelian takes to hold between matter and form—between lower level and higher level properties—ought to be isomorphic at various levels. In other words, whatever relationship holds between the properties of homoimerous tissues and the most basic mixtures, the same relationship holds between organs and the tissues that compose them, or between living beings and their organic parts.

The topic where this distinction appears most clearly is the so-called ‘homonymy’ problem. Aristotle claims that organic parts that can no longer perform their functions do not even merit the name of their functioning equivalents: the eye of a dead body is an eye ‘in name only’. In a living body, the soul is considered to be its form, while the matter consists in the organic parts. Because the organic parts of a living body cannot really be identified independently of their functional abilities, some suppose that it is not in fact even possible to identify the ‘matter’ of a living body apart from its actually being alive. This is sometimes taken to imply that, at every level, the matter cannot be sufficient for the form. In Burnyeat’s view, it is because Aristotle would deny that ‘*determination* is “from the bottom up”: the physical facts provide sufficient conditions for the mental facts’, that we cannot take Aristotle’s physics seriously today.³⁷ Burnyeat reads the homonymy principle as implying that ‘the flesh, bones, organs, etc. of which we are composed are *essentially* alive’.³⁸ If this goes ‘all the way down’, there would indeed be no possibility of an account in independent material terms, or of sufficient material conditions for living things. Charles, replying to Burnyeat, likewise supposes that the considerations governing the form–matter relationship are isomorphic at all levels. He suggests that the relationship between material and functional specification ought to be the same whether we are talking about the relationship of homoiomerics to their matter, or of anhomoiomerous parts to the homoiomerous tissues.³⁹

But one could defend the supervenience of properties on mixtures without taking on so great an argumentative burden. Philoponus seems to take the considerations involved in studying the relationship of properties of mixtures to those of the most basic ingredients to be different from those involved in the study of organisms or of human psychology. There is some support for this in Aristotle: he recognizes that the problem of homonymy is ‘less evident’ at lower levels like the homoiomerous tissues (*Meteor.* 4.12, 390a4; *GC* 1.5, 321b28–32). He explicitly contrasts the fact that homoiomerics are brought about by hot and cold with the insufficiency of matter to bring about anhomoiomerous parts (*Meteor.* 4.12, 390b3–10). In noting these passages, Charles takes Aristotle to think there is a difference of degree rather than a radical break between the treatment of homoiomerics and anhomoiomerics.⁴⁰ While all forms are in some way defined by their functions, the extent to which these are accounted for by the properties of matter is greater the lower the level. Charles is right that the remarks are hard to interpret. Still, Philoponus

³⁷ Burnyeat, ‘Philosophy of Mind’, 23.

³⁸ *Ibid.* 26.

³⁹ Charles, ‘Hypothetical Necessity’, 35.

⁴⁰ *Ibid.* 34–5.

may have good reason to take seriously the claim that the proportions of hot, cold, moist, and dry are sufficient conditions for homoiomerous tissues, but perhaps not for every level.⁴¹

One reason to think that the form–matter relationship could be different at different levels of analysis is that the kind of compositionality involved is different. Homoiomerous stuffs seem to be composed of definite proportions of ingredients fusing into a uniform stuff. Anhomoiomerous parts have a different relationship to their components. A hand is a composite of blood, bone, flesh, and sinew, but—unlike in mixtures—these components are still discernible in the hand. The capacities of a hand, say, more obviously derive from its structure than from the material ingredients: a hand and a foot may be composed from similar materials in comparable proportions, but nonetheless these are differently arranged, and by virtue of this perform different functions. Anhomoiomerous parts, moreover, play a unique role in the body: an eye or a hand are specific to certain functions—functions which make reference to the organization of the body as a whole.⁴² Homoiomerous tissues, by contrast, could be adapted to different purposes in different organs. Their defining properties stem from the ways they act and are affected—hardness, fissibility, etc.—which are dependent on hot, cold, moist, and dry. The defining properties of the homoiomerous found in natural bodies—blood, flesh, bone—are characterized in the same terms as those that occur independently outside of organic wholes, like copper, wax, milk, wine, wood, bronze.⁴³ All these considerations support the idea that the role of form is ‘less evident’ in the case of homoiomerous.⁴⁴

Philoponus may thus think there is a difference between the role of matter in accounting for the properties of homoiomerous and its role in biology or psychology.⁴⁵ Charles’ programme for a general defense of the idea of material necessitation in Aristotle is thus not the only route to defending a supervenience account of properties of homoiomerous: the view that there can be sufficient material conditions for the properties of mixtures need not commit an Aristotelian to the supervenience of all higher levels of properties.

⁴¹ Philoponus *in Phys.* 323, 1–7; *in GC* 114, 3–22.

⁴² I thank Tim O’Keefe for helping to clarify this.

⁴³ *Meteor.* 4, esp. 4.12, 390a18–b15; *PA* 2.1, 646b15–27.

⁴⁴ Against this stands *GA* 2.1, 734b24–34.

⁴⁵ See Berryman, ‘Sweetness’. In other domains, there are other concerns about the explanation of properties that are not properties of the ingredients. In his *Physics* commentary, Philoponus notes that the lesser cause cannot produce the greater: soulless things don’t cause soul; inanimate things don’t cause life: *in Phys.* 191,24–5. See A. C. Lloyd, ‘The Principle that the Cause is Greater than its Effect,’ *Phronesis* 21 (1976), 146–56.

Conclusion

Philoponus rejects the doctors' view that properties of homoiomerous mixtures are mere products of the mixture, both because the properties of the mixture do not directly covary with changes in the mixture, but also because they can be multiply realized in radically heterogeneous mixtures. I have suggested Philoponus offers good reasons why the supervening qualities require further explanation than an account of their material conditions. Although some modern scholars have doubted that Aristotle could countenance the supervenience of higher level properties on matter, Philoponus' approach to the properties of homoiomerous mixtures is defensible on Aristotelian terms.

Philoponus' views are not of course those of a modern physicalist, but it is worth noting that, in this limited domain, his position seems to be responding to comparable considerations. It is undoubtedly the case that some of his views on the explanatory autonomy of qualities reflect the limited resources of the Aristotelian view of matter, and that a different chemistry might make more headway with these. But Philoponus' reasoning is, I have been suggesting, both philosophically rich and metaphysically sound. Richard Sorabji's work in bringing the philosophy of late antiquity to a wider audience has rightly highlighted the ideas of this original philosopher.⁴⁶

Bibliography

- ACKRILL, J. L., 'Aristotle's Definitions of *Psuchē*', in *Essays on Plato and Aristotle* (Oxford, 1997), 161–78.
- BERRYMAN, SYLVIA, 'The Sweetness of Honey: Philoponus against the Doctors on Supervening Qualities', in C. H. Leijenhorst, C. H. Lüthy, J. M. M. H. Thijssen (eds.), *The Dynamics of Aristotelian Natural Philosophy* (Leiden, 2002), 65–79.
- BURNYEAT, M., 'Is an Aristotelian Philosophy of Mind Still Credible? A Draft', in M. C. Nussbaum and A. O. Rorty, (eds.), *Essays on Aristotle's De Anima* (Oxford, 1995), 15–26.
- CASTON, V., 'Aristotle and Supervenience', *The Southern Journal of Philosophy* 31 (1993), 107–35.

⁴⁶ I am very grateful for helpful comments by Bob Batterman, Frans de Haas, Verity Harte, Sean Kelsey, Tim O'Keefe, Diana Raffman, Ricardo Salles, and Allan Silverman; and for discussion by members of the Philosophy Department at King's College London. All errors are of course my own. Most of all I owe my understanding of Philoponus to the work of Richard Sorabji, whose guidance and encouragement have been invaluable: I can only acknowledge my debt to him as a teacher, supervisor, and friend. It is a great pleasure to join others in honouring his contributions to the study of ancient Greek philosophy.

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- CHARLES, D., 'Aristotle on Hypothetical Necessity and Irreducibility', *Pacific Philosophical Quarterly* 69 (1988), 1–53.
- DAVIDSON, D., 'Mental Events', in *Essays on Actions and Events* (Oxford, 1980), 207–27.
- GOTTHELF, A., 'Aristotle's Conception of Final Causality', in A. Gotthelf and J. Lennox (eds.), *Philosophical Issues in Aristotle's Biology* (Cambridge, 1987), 204–42.
- 'Understanding Aristotle's Teleology', in R. F. Hasking (ed.), *Final Causality in Nature and Human Affairs* (Washington D.C., 1997), 71–85.
- GRANGER, H., 'Aristotle and the Concept of Supervenience', *The Southern Journal of Philosophy* 31 (1993), 161–77.
- HAAS, F. DE., *John Philoponus' New Definition of Prime Matter* (Leiden, 1997).
- 'Mixture in Philoponus. An Encounter with a Third Kind of Potentiality', in J. M. M. H. Thijssen and H. A. G. Braakhuis (eds.), *The Commentary Tradition on De generatione et corruptione: Ancient, Medieval, and Early Modern* (Turnhout, 1999), 21–46.
- KIM, J. 'Concepts of Supervenience', in *Supervenience and Mind* (Cambridge, 1993), 53–78.
- LIDDELL, H. G., SCOTT, R., and JONES, H. S., *A Greek–English Lexicon*, 9th edn. (Oxford, 1940).
- LLOYD, A. C., 'The Principle that the Cause is Greater than its Effect', *Phronesis* 21 (1976), 146–56.
- MURDOCH, J. E., 'The Medieval and Renaissance Tradition of *Minima Naturalia*', in C. Lüthy, J. E. Murdoch, and W. R. Newman (eds.), *Late Medieval and Early Modern Corpuscular Matter Theories* (Leiden, 2001), 91–131.
- PAPINEAU, D., 'Irreducibility and Teleology', in D. Charles and K. Lennon (eds.), *Reduction, Explanation and Realism* (Oxford, 1992), 45–68.
- SORABJI, R. R. K., 'Aristotle, Mathematics, and Colour', *The Classical Quarterly* 22 (1972), 293–308.
- *Necessity, Cause and Blame: Perspectives on Aristotle's Theory* (London and Ithaca, 1980).
- (ed.), *Philoponus and the Rejection of Aristotelian Science* (London, 1987).
- (ed.), *Aristotle Transformed* (London 1990).
- *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford, 2000).
- WARDY, R., *The Chain of Change: A Study of Aristotle's Physics VII* (Cambridge, 1990).
- WEDIN, M., 'Content and Cause', *The Southern Journal of Philosophy* 31 (1993), suppl. vol., 49–105.
- WILLIAMS, C. J. F. (trans.), *Philoponus On Aristotle On Coming to Be and Perishing* 1.1–5 (London and Ithaca, 1999).
- *Philoponus On Aristotle On Coming to Be and Perishing* 1.6–2.4 (London and Ithaca, 2000).

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A Contemporary Look at Aristotle's Changing Now

SARAH BROADIE

The aim of this essay is to bring two ideas together for mutual illumination. One is Aristotle's conception of the now as 'always different and different' (*Physics* IV 10, 218a 10; 11, 219b 12–23); the other is the modern dichotomy of time into the two aspects of *order* and *passage*. This dichotomy was first formulated in 1908 by the Cambridge philosopher J. M. E. McTaggart, who made it the basis of a brilliant and controversial proof of the unreality of time.¹ From then on McTaggart's distinction has dominated discussion of time among analytic philosophers; hence it provides a contemporary perspective from which to think about Aristotle's contribution.²

On one side of the distinction, events are considered as past, present, and future, and their occurrence is expressed by sentences with tensed verbs. The most striking thing about this approach is that the attributes of being future, present, and past, and the corresponding tenses, *take it in turns* to belong to each successive set of events. Consequently, what lies (as we say) in the future, in the present, and in the past, is changing from moment to moment. The occasion for which this essay was first written was once future, later on was present, and in a few more days was completely in the past, even if long to be remembered. We can think of each event as passing from the future through the present to the past. Alternatively, we can think of the future, the present, and the past as temporal locations whose contents are always changing in a regular way.

¹ J. M. E. McTaggart, 'The Unreality of Time', *Mind* 17 NS (1908), 457–74 (reprinted in his *Philosophical Studies* (London, 1934)); a revised version of the argument is given in his *The Nature of Existence*, 2 vols. (Cambridge, 1927), vol. ii, ch. 3.

² In adopting this perspective on Aristotle, I follow the example of Richard Sorabji in chs. 3 and 4 of *Time, Creation and the Continuum [Time]* (Ithaca, 1983). I welcome this opportunity to help celebrate Richard Sorabji's magnificent contribution to the study of a thousand years of ancient philosophy.

According to the other side of the distinction, events are considered as standing to each other in the relations of *before* and *after* and *at the same position as*, which in its temporal interpretation means *simultaneous with*. The most striking feature of *this* approach, when we compare it with the previous one, is the fact that the essential relationships are immutable throughout time. The deaths of Julius Caesar and Christopher Columbus were once both in the future, are now both in the past, while for many centuries one was past and the other future. But the order of these events is not affected by the time at which we consider them. Hence, although colloquially we use the past tense to express their temporal order—we say ‘The death of Caesar preceded that of Columbus’—this is logically quite unnecessary. For it is not as if the death of Caesar once preceded that of Columbus, but tomorrow, perhaps, might be simultaneous with it. Thus we are justified in using tenseless language to express these relationships, and likewise justified in regarding these relationships as ‘timeless’.

If we distinguish this second approach by the *immutability* of the relations defining it, then it is natural to expand the repertoire of relevant concepts so as to include *metric* ones. The death of Julius Caesar precedes that of Christopher Columbus *by so much*, an interval which we can specify in years, months, or days. And the size of the interval is as unchanging as the order of the events that determine it. But although the order of the events and the size of the interval between them are immutable and timeless in the same way, there is an important difference. The order is more fundamental. Measurable intervals of time presuppose events in temporal order, but we can surely conceive of a world where events occur in temporal order at no definitely quantifiable intervals.

Given the radical difference between these two aspects of time, order and passage, it is natural to wonder how they relate together in a coherent unity. They are, perhaps, not merely aspects, but *the* aspects of time, since other attributes, such as time’s unidirectionality, may be derivable from one or other of the above, or from the pair of them. They may, of course, turn out to be connected only externally, so to speak, so that time is simply their conjunction. If so, then while time itself is all-pervasive and inescapable, time’s *nature* would be a sort of metaphysical happenstance: an amalgam of elements each making sense on its own somehow, and neither pointing to the other. From a theoretical point of view such a ‘temporal dualism’, as one might call it, would be very unsatisfactory, something we should try to resist.³

³ The dualism problem clearly arises if the passage-attributes of pastness and futurity are understood (like presentness) simply as monadic properties. However, if we add the understanding that for any two non-simultaneous items that are past/future, one is further past/future than the other, it is possible to convey that *E* stands to *G* in the ordering relation *before* by means of the disjunction: ‘Either *E* is past and *G* is present or *E* is past

McTaggart, in effect, dispatches this threat of dualism by means of his argument for the unreality of time, on which a few words of explanation are now due. According to McTaggart, time consists of two disparate elements, one the shifting system of the attributes *pastness*, *presentness*, and *futurity*, the other a timeless series of timeless noumenal items ordered as prior and posterior in a non-temporal sense of 'prior/posterior'. Events considered as becoming past, becoming and ceasing to be present, and ceasing to be future were labelled by McTaggart the 'A-series'. The timeless order of timeless items he called the 'C-series'. Now, according to him, the *temporal* order of events is the product of the C-series and the A-attributes of futurity, presentness, and pastness. By 'the temporal order of events' is meant the order in which events, themselves temporal items, stand to each other as earlier and later in time, and in which the intervals between events are temporal rather than more purely formal. What makes this order *temporal*, according to McTaggart, is the fact that its members exhibit change in respect of their A-determinations: each becomes present, having been future, and then becomes past. Thus the system of A-determinations, since it is necessary for *temporal* order, is necessary for time. McTaggart called temporal order the 'B-series'.

Having premised that temporal order, or the B-series, is the product of the system of A-determinations and the C-series, McTaggart then finds logical fault with the A-determinations. He argues that this system harbours either a self-contradiction or a vicious infinite regress. He concludes that no such thing can be real, and from this concludes that time or the temporal order is unreal. For, according to his analysis, time or the temporal order consists of something real, the C-series, and something else, the A-system, which is provably (he thinks) unreal.

In effect, then, McTaggart eliminates dualism between the two aspects of time by relegating one aspect to the status of an illusion. However, I should make it clear that he is not, so far as I know, interested in proving the unreality of the A-system because this would save us from an

and *G* is future or *E* is present and *G* is future or *E* is more past than *G* or *G* is more future than *E*'. But this hardly allays worries about dualism. Worriers who share McTaggart's assumption that temporal order is metaphysically grounded elsewhere than in A-determinations (i.e. in the shifting system of *pastness*, *presentness*, and *futurity*) are going to retort: 'That *E* and *G* stand to each other in relations of *more* or *less* futurity/pastness is due to a combination of two more fundamental facts: (1) the fact that *E* is before *G*, and (2) the fact that monadic or absolute futurity and pastness duly accrue to these ordered items. But "duly accrue" in (2) is exactly what we worriers about dualism find unintelligible.' (For a thorough discussion, see R. Gale, *The Language of Time* (London, 1968), ch. vi.) One would avoid dualism without denying the reality of one or other side of the contrast, if one either exhibited A-determinations as grounded in temporal seriality (the B-series), or exhibited the converse. An example of the converse would be the Aristotelian theory presented later in this essay.

objectionable dualism. No, McTaggart is interested in the unreality of the A-system because of what, in his view, this implies concerning the unreality of time. And discussion by later philosophers has mainly continued to focus on the two matters to which McTaggart himself gave most attention: (1) his argument purporting to prove the logical impossibility of the A-system, which represents the passage of time; and (2) his claim that time, i.e. the temporal order of temporal items known as the B-series, is impossible unless the A-system, or the passage of time, is possible. These are the problems that have tended to absorb philosophical energy, by contrast with the much less talked about question of how, *if* the basic⁴ passage-aspect of time is possible and real, it is integrated with the order-aspect, whose logical respectability has not been called into question. There has been rather little puzzlement over the fact that, once the two aspects are distinguished as McTaggart distinguished them, it is difficult to see what there is about either that unites it with the other.

Among moderns, the broadest division is into two camps each of which accepts part and rejects part of McTaggart's theory. Both continue to use the labels 'A-series' and 'B-series' in accordance with McTaggart's practice. Neither, however, has any time for his purely noumenal C-series; hence neither camp thinks of the B-series as in part constituted from it. The camps are united in holding, as against McTaggart, that time is real. However, one camp agrees with him that the A-system is a necessary aspect of time, while rejecting his denial that the A-system is logically coherent and real. The other camp follows him in denying the reality of the A-system, but rejects his claim that it is a necessary aspect of time. Time, to this camp, is the B-series cleansed of A-type determinations.⁵

The first camp have their hands so full defending the coherence and reality of the A-system that they hardly consider the dualistic difficulty that would have to be faced if they win this battle. And consequently they hardly think of taking the kind of step back that in general seems clearly right in this sort of philosophical situation. It is a situation in which a certain analysis of a whole into conceptually independent parts or aspects is initially attractive or even compelling, since it brings real clarification, but then is found problematic for failing to explain why the parts or aspects are together in the first place. The right move, once this is seen, is to question the initial analysis—in this instance, the dichotomy we have been discussing. Compare the response of philosophers to the Cartesian mind–body problem. It is very far from being the case that all who find Cartesian dualism repugnant have tried to cancel the problem by, so to

⁴ i.e. monadic. See n. 3.

⁵ This is an ontological position. Its leading contemporary exponents do not, of course, claim that tensed sentences can be adequately translated into tenseless ones.

speak, first accepting the dichotomy and then arguing that one side of it is unreal. On the contrary, the alternative strategy of questioning the entire divisive approach is well practised and has generated a great deal of positive theorizing.

If, to return to the case of time, the A-believers were to mount an initiative showing that McTaggart's seminal dichotomy is misguided, or—a more modest aim—that it is not mandatory, they would deprive the A-disbelievers of one possible source of their disbelief, namely the sense that simply treating time as order plus passage with nothing to be said about why they are together is unworthy of philosophers except as a last resort. For clearly it is more promising (or would be, were it the only alternative approach) to think of one of the aspects—for example, the A-system—as an illusion.⁶ This holds promise because even if some things may be or must be uncaused or inexplicable, anyone who claims that some *X* usually considered real is an illusion incurs the burden of suggesting some kind of explanation for the illusion of *X*: a burden so obvious that to make the claim at all is virtually to imply that in principle an explanation is available.⁷ And when the presumed illusion is (as in the present case) an appearance of something which everyone in the contemporary debate agrees is real (namely, in this case, the *temporal order* of events), any explanation is bound to make reference to the nature of that reality even if other factors enter into the explanation as well. Hence to propose that the A-system is an illusion is automatically to adopt a position in which, first, there is no A-system to explain, and, secondly, what there is instead, namely a sort of similitude of a real A-system, is firmly presented as *not* arising by brute happenstance alongside of or in the context of the very differently natured reality that is the temporal series of events. Even if the explanatory details are not immediately forthcoming, this stance may well seem more rationally respectable than that of an A-believer who ignores the need to explain how the real A-system fits in with the rest of the reality that is time.

I have been speaking in a general way about the problem of integrating the two aspects of time, if one assumes that both are real. Let us now look at the kind of image that commonly suggests itself when we try to bring them together in a single frame. It is a kind of image in which one factor

⁶ In theory it might be suggested that the serial aspect is an illusion, but no one seems to have sponsored this alternative.

⁷ This is not quite true. If there is a knock-down argument, one on whose soundness everyone agrees, showing that *X*, which we thought was real, is in fact unreal, then the claim that *X* is only illusory need not be supported by the promise of an explanation. But it is not clear that such a dialectical situation can occur. In any event, it has not occurred in the case in which we are interested. McTaggart's proof of the unreality of the A-system leaves 50 per cent (I would say) of its readers unconvinced, and no other argument has been produced that is more compelling.

appears as a moving object, the other as an object at rest. We can picture presentness, or the now, as passing like the edge of a wave along the fixed series of events: the part of the series ahead of it is the future, the part behind is the past. Alternatively, we can think of the now as fixed while the events in their order file past it like soldiers past a monument.

Such pictures provoke the annoying question ‘At what speed does the now glide along the successive events, or the events march past the now?’ But perhaps this question can be legitimately dismissed. The pictured situation is rather like a universe in which just one object is moving from here to there, the positions being marked somehow. There is no answer to the question ‘How fast is it moving?’, since *ex hypothesi* there is no other movement by which to measure its rate of change. This seems a possible situation, and I shall assume that its possibility allows us in the analogous case of temporal passage to treat ‘How fast?’ as a question to which it is reasonable not to attempt an answer.⁸

But even granted this leniency, those images of temporal passage demonstrate the problem of integrating the two aspects of time. At first, of course, they seem to solve the problem, since the utter familiarity of seeing something move past something else that is fixed, or of standing still oneself while something moves past one, or moving ahead oneself over a stable ground, lends a comforting glow of what for a moment feels like intelligibility to the temporal case. But this is to mistake the most primitive kind of ‘feeling at home with’ a subject for the kind that is only attained when the critical intellect has prised out every problem and solved them all to its own complete satisfaction. On reflection, the images actually proclaim the absence of any explanation of the togetherness of the two aspects of time. If a column of soldiers marches past a monument, or the edge of a tidal wave passes trees in a row lining the bank of the estuary, the one element’s fixity by contrast with the other’s movement strongly suggests that the first would have been fixed whether or not the second was moving, and whether or not it was even present. For the empirical causal conditions for the fixity of something that happens for a while to be spatially fixed are usually independent of the conditions for the motion of something that moves past it or over it. In general, the fixity of what is fixed neither requires nor gives rise to the motion of what moves.

Keeping in mind the modern analysis of time into changeless order plus ever-changing A-determinations, let us turn now to Aristotle. He seems to

⁸ The ‘at what speed?’ question is raised by C. D. Broad, *An Examination of McTaggart’s Philosophy* (Cambridge, 1938), vol. ii, part I (reprinted as ‘“Ostensible Temporality”’ in R. Gale (ed.), *The Philosophy of Time* (London, 1968), 117–42). Broad would probably reject my dismissal of the question, since his wording suggests the view that a movement has a speed even where measurement of it is completely ruled out.

endorse with enthusiasm precisely the problematic kind of image that we have just been discussing. One of the *aporiai* he raises at the beginning of his discussion of time is 'Does the now remain always one and the same or is it always other and other?' (*Physics* IV.10, 218a10). Later, he answers that the now, and for that matter time itself (*chronos*), is both: always the same and always different and different (*Physics* IV.11, 219b9–33). He explains this by means of analogies, between extended time (*chronos*) and a process of locomotion, and between the now and the moving object:

The now in a way is the same, in a way is not the same. For in so far as it is in another and another (*en allōi kai allōi*), it is different (which is just what its being now was supposed to mean). But whatever the now is whereby it is the now, is the same. For motion, as was said, goes with magnitude, and time, as we maintain, with motion. Similarly, then, there corresponds to the point the body in locomotion, by which we are aware of the motion and the before and after in it. This is the same thing that it is (a point or stone or something else like that), but it is other in definition—as the sophists assume being Coriscus—in the Lyceum—is other than being Coriscus—in the agora. So this too is other through being at one place and at another place. The now corresponds to the body in locomotion, as time corresponds to the motion. (*Physics* IV 11, 219b12–23, my translation, Ross's OC text)

This explanation seems to be carefully worked out, but we may well wonder whether it was worth the trouble.⁹ For the reasons we have been considering, the analogy between the now and the moving object is surely a potential embarrassment, to say the least; so that Aristotle seems unusually insensitive in pushing ahead with it oblivious of the problems.¹⁰

But let us look at this further. When Aristotle offers the analogy, we naturally first see in it what *we* expect to see; and then are surprised that he is not disturbed by some of the implications of what we see. In his image of the moving object *we* see also the ground traversed. We see a fixed series of positions stretching ahead of the moving object and stretching back behind it. But a closer look at the text should warn us not to assume that Aristotle here conceptualizes the moving object's successive positions in the way that seems natural to us, i.e. as locations on an independently existing ground such as the surface of the earth.

In fact, he compares the now which is always different and different with Coriscus-in-the-Lyceum and Coriscus-in-the-agora. The point about Coriscus, he says, gave rise to a sophistical paradox (219b20), which presumably consisted in the claim that it is a different Coriscus in each

⁹ Including the trouble to us of following his exposition, which is very obscure in detail.

¹⁰ Thus Richard Sorabji in fact found Aristotle's discussion quite disappointing: 'he makes no less than four comparisons between the now and a moving body, but surprisingly never manages to articulate the sense in which the now is moving' (Sorabji, *Time*, 49).

place. (The paradox lends itself to a variety of uses: it might be adduced to show that nothing persists through change, or that it is unjust to arrest Coriscus in the agora for a crime 'he' committed in the Lyceum, since as long as Coriscus stays away from the Lyceum the perpetrator does not exist.) The thing to notice for our present purpose is that the paradox treats locomotion as if it were a sort of alteration, and Aristotle here goes along with this. That is to say: his, and the paradox's, walking Coriscus is different and different not for the reason a modern analyst would give, namely that Coriscus stands in the same dyadic relation of *occupancy* to this and then this different spatial location—but because Coriscus first has the attribute of being-in-the-Lyceum, and then the attribute of being-in-the-agora. The Greek name of each location appears in the dative inside a distinct complex monadic predicate formed with the preposition *en*. Construed in this way, the statement 'Coriscus was in the Lyceum, Coriscus is now in the agora' does not sustain an immediate inference to the existence, independent of Coriscus's occupancy, of an agora, a Lyceum, and places in between. In the same way, the statement 'Coriscus was asleep, now he is awake' does not license the inference that the conditions of sleep and wakefulness exist independently of Coriscus so that he 'leaves' one and 'arrives in' the other.

Of course we all know, and so does Aristotle, that in fact the agora, the Lyceum, and the path between them exist independently of Coriscus' transient occupancy. But we must remember what this claim of independent existence means for an Aristotelian. It means that a place currently occupied by one thing will be or can be occupied by something else.¹¹ There is no such thing as space or a system of places laid down in advance of all occupants. A given thing's place exists independently of its current occupant just in so far as the occupant is replaceable there by something else moving in.¹² And as with places, so with paths between places. The path along which Coriscus travels between the Lyceum and the agora exists independently of him just in so far as it is available for others to travel along.

In this respect the 'passing' now is quite different from an object in locomotion. It resembles an object in locomotion in that different and different predicates are true of it. (That will be the case if we treat 'now' as a subject and invent predicates to apply to it whose contents correspond to now-true-now-false present-tensed sentences.) But unlike an object in locomotion, the now is not one of possibly many similar items that can occupy the same positions as it, and traverse the same intervals. In the

¹¹ 'Will be' for Aristotle, because he rejects the possibility of a vacuum anywhere. However, the main point does not depend on this: 'can be' is enough.

¹² Cf. *Physics* IV.4, on place.

light of this, let us consider the fact that events become present successively. It is perfectly natural to put this by saying 'the now is always other and other', because different and different things are going on in the present. It is also perfectly natural to liken this different-and-differentness to the way an object in locomotion is always differently and differently positioned. But from an Aristotelian point of view, this natural comparison lends no plausibility to the thought that the successively present events constitute an order of *before and after* that is independent, both for its existence and for its intelligibility, of the now that 'passes' along it. For this thought to have a basis, it must be true not only that the now is different and different, e.g. is aligned first with my having breakfast, then with my sitting down at the computer, on a certain day—but also that some *other* now is potentially on the scene (in the same perspective¹³) to take its turn at being aligned with the identical successive events.¹⁴ And this is inconceivable.¹⁵

Let us see where we are as a result of this part of the argument. Three observations can be made. First: it is natural to liken the change of now *vis-à-vis* successive events to an object in locomotion. Secondly: this comparison, given an Aristotelian understanding of what it means for a place or series of places to exist independently of any particular occupant or passer-through, generates no temptation to treat successive events as analogous to a series of independently existing places, places which in some sense are 'there' independently of the now's 'visits' to each one. It is, of course, the belief in this independent order that gives rise to the problem of temporal dualism which I discussed earlier. The third observation begins by conceding that, on some non-Aristotelian understanding of the independence of a place from its occupant, the natural comparison between the changing

¹³ The analogy requires that the scene is the common context for a possible plurality of nows, like a place with different occupants; thus the argument is not upset by the possibility that the identical events are successively aligned with different nows corresponding to different frames of reference.

¹⁴ The common accessibility of a place or a path to different occupants or travellers implies 'where X now is, Y can be, but at a different time'. Thus to the extent that picturing the passage of the now involves picturing it passing along a path accessible to another subject like itself, it assumes a common time in which different now-subjects are possible and can take turns to make the same journey.

¹⁵ For completeness, a further word is necessary about 'Coriscus was asleep, and is now awake'. Either conditions of being asleep are individuated so that that of Coriscus and that of Callias are automatically numerically distinct, or not. If so, then Callias cannot replace Coriscus by 'going to' the same sleepy condition. If not, then perhaps Callias takes on the identical sleepy condition, but this is not replacement, since Coriscus can continue to be 'in it' too. Still, on this view the condition exists independently of any particular participant, not as a place but as a real universal. Even so, it would yield a model for a temporal order independent of the now only on the inconceivable assumption that the order could be shared with another now.

now and a moving object may, for all we know, pave the way to a coherent notion of the order of events as existing independently of the activity of the now. This would be a matter for further investigation. But one can say right away (this is the main point of the third observation) that even if such a notion is available, to embrace it is to incur the problem of temporal dualism (and the consequent temptation to explain away one side of the split as illusory). It might therefore make sense not to rush into that embrace if there is an alternative way of viewing the relation between the now and the order of events.

An alternative is to be found in Aristotle, as I shall now explain. The point at which to begin is his account of temporal before and after. Now the concept of temporal before and after figures in two quite different ways in Aristotle's discussion of time. The first way is more famous, and seems to carry more of the weight of his theory; but the second is the one that will concern us here. In the first way, 'before and after' is part of Aristotle's definition of time (*chronos*) as 'number of motion in respect of before and after' (*Physics* IV. 11, 219b1–2). I take this to mean: 'Time is the countable aspect of motion, in which the countable items are distinguished as before and after.'¹⁶ Here Aristotle is not explaining 'before and after', but is using that idea to explain something else, namely time. But quite a bit later on, in chapter 14, he explains how the expressions 'before' and 'after' are applied to events in time.¹⁷ This is the passage that concerns us. Aristotle writes:

we say 'before' and 'after' with reference to the distance from the 'now', and the 'now' is the boundary of the past and the future . . . But 'before' is used contrariwise with reference to past and to future time; for in the past we call 'before' what is farther from the 'now', and 'after' what is nearer, but in the future we call the nearer 'before' and the farther 'after'. (223a5–13)¹⁸

¹⁶ For a penetrating exposition see the forthcoming book by Ursula Coope, *Time for Aristotle: Physics IV. 10–14* (Oxford, forthcoming).

¹⁷ He gives this explanation not for its own sake, but as part of an argument showing that 'what is before is in time' (this is deduced from (1) 'Now is in time' together with (2) 'what is before something else is at a distance from the now', by means of (3) 'if the now is in *X*, distance from the now is likewise in *X*'). The fact that the explanation appears thus incidentally in the *Physics* may be thought to imply that it is only a casual remark about the way we use temporal 'before' and 'after'. If this is true, it may be a mistake to call any theory developed from it 'Aristotelian'. (The mistake would be in suggesting, not that the theory is implicitly there, but that it has Aristotle's endorsement.) But the explanation also occurs at *Metaphysics* V.11, which is his main discussion of 'prior and posterior' including the temporal type; hence, far from casual, the explanation would seem to have been carefully considered by him. See especially 1018b9–29. (The discussion in *Categories* 12 is quite different. The most Aristotle finds to say there about temporal priority (although he says it is priority in the strictest sense) is that for *A* to be prior to *B* is for *A* to be older or more ancient than *B* (14a26–b23).)

¹⁸ *Revised Oxford Translation*, ed. J. Barnes (Princeton, 1984).

On this account, to say that the death of Julius Caesar precedes that of Christopher Columbus is to say the following: if both events are future, the death of Caesar is the one closer to the present; if both are past, it is the one further from the present. To the modern eye, this way of looking at things is rather strange. In the first place, the present or the now is the reference point for the relative proximities of events to it, and these different proximities to it in turn determine which event is before which. It follows that the now itself cannot be conceived of as preceding or succeeding any event. I think it equally follows that present events, considered as present, cannot be conceived of as succeeding past events or preceding future ones. The present as such is outside the temporal series, since it constitutes the reference point determining the positions of items in the series *vis-à-vis* one another. Equally strangely, this way of determining the relative positions breaks down when applied to a mixed set of events in which some are past, some future. Thus on this way of looking at things, a past event and a future event stand to each other in no relations of before and after (and obviously they are not simultaneous either). Yet clearly they are in time, and in some sense they are in the same time, since it is by reference to the same now that the future event is before and after others in the future, and the past one before and after others in the past. But there is no single temporal *series* embracing both past events and future ones. On the contrary, the now as reference point establishes the past and the future as two mutually exclusive series.

In the passage just quoted, Aristotle says that the now is the boundary of the past and the future.¹⁹ At this point in the discussion, the now seems to be a boundary that divides, not one that unites. For how can the past be united with the future except in so far as events falling on the opposite sides of the now can be exhibited as belonging to a single historical order? But if the now is the principle (*archē*) of two distinct orders in the way we have seen, then the now, by bounding the past and the future and dividing one from the other, ensures that *no* seriality is common to past and future events.

But, of course, the now is not *only* the boundary of past and future. If that were its one attribute, we should have the situation just envisaged. Salvation lies in the further fact that the now is 'always different and different'. The boundary moves, what was future comes to be past. No two non-simultaneous events are permanently cut off from standing in before and after relations with each other. The passage of the now breaks the serial relation between two future events when one becomes present,

¹⁹ See also *Physics* IV.13, 222a10–12; 33–b2.

then past, while the other is still future. But the same passage of the now restores them to the same relation by eventually making both past. If, as Aristotle holds, time is infinite in both directions, there never is nor was nor will be a moment when all non-simultaneous events constitute a single temporal series. But for any sub-set of non-simultaneous events, at every moment either all its members *are* in a single series (i.e. all are future or all are past) or they *have been* (when all were future) and *will be again* (when all are past).

Let me now go back to the modern dichotomy between temporal order and temporal passage. In that perspective, the comparison of passage with locomotion made it irresistible to think of the now as moving along the series of events as if along an already constituted path, or the series of events moving, like a regiment on parade, as a single block past the now. The thought was: the now's movement presupposes a unitary path laid out for it to move along—as if the now is like us, and can't go anywhere new except along pre-existing lines that link new places to old ones. Or if it was the now we preferred to think of as fixed, then the thought was: events file past the now in the temporal order in which they have already, so to speak, been drawn up—an order that is theirs, one and the same, as they approach the now, as they pass it, and as they recede from it into the past. On the Aristotelian view, by contrast, for any sub-set of non-simultaneous events,²⁰ the changing now takes their seriality away for a time, and then gives it back for ever. For any such sub-set, there has passed, or is passing, or will pass, a finite time during which they fail to form a single series because the now is somewhere in the middle of them. But there has come or will come a moment after which their common seriality is assured for infinite time, because the changing now will have edged them all into the past.

This Aristotelian approach may seem too strange to be taken seriously (although the strangeness might wear off with use). According to it, *before/after* relations derive from the events' comparative distances from the now in either of the two directions. To us, on the other hand, it may seem intuitively obvious that the dependence lies the other way round: that *E*'s being further into the past, or less far into the future, than *G* derives from *E*'s being before *G*.²¹ But strange or not, no one can complain that the Aristotelian approach fails to integrate temporal order with temporal passage.²²

²⁰ I am assuming that between them they span a finite time.

²¹ See n. 3.

²² Thanks to members of the Leeds Philosophy Department and to Josh Parsons for helpful comments on a previous version.

Bibliography

- BROAD, C. D., *An Examination of McTaggart's Philosophy* (Cambridge, 1938).
COOPE, URSULA, *Time for Aristotle: Physics IV. 10–14* (Oxford, forthcoming).
GALE, R., *The Language of Time* (London, 1968).
GALE, R. (ed.), *The Philosophy of Time* (London, 1968).
MCTAGGART, J. M. E., 'The Unreality of Time', *Mind* NS 17 (1908), 457–74.
——— *The Nature of Existence* (Cambridge, 1927).
——— *Philosophical Studies* (London, 1934).
SORABJI, R. R. K., *Time, Creation and the Continuum* (Ithaca, 1983).

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On the Individuation of Times and Events in Orthodox Stoicism*

RICARDO SALLES

Stoic philosophy has often come under attack with the charge of inconsistency. In this vein, Jonathan Barnes has argued that a logical tension emerges between two tenets of Stoicism: the doctrine of everlasting recurrence in its orthodox version, on the one hand, and the Stoic conception of time as an incorporeal entity (*ἀσώματον τι*), on the other.¹ Barnes's argument runs as follows. Suppose that (a) identically the same world recurs at different times with the same qualities and dispositions, as the orthodox version maintains; if times are incorporeal, however, (b) times are individuated by the qualities and dispositions of the bodies that characterize them. So if (b) is true, (a) has to be false: exactly the same world cannot recur at different times. The different times at which the world supposedly recurs are all characterized by exactly the same bodies, with exactly the same qualities and dispositions, which requires, according to (b), that the times in question be in reality numerically the same. Therefore, to be consistent with (b), the different cosmic cycles cannot occupy different places in time. According to Barnes, logical consistency requires that they all collapse into a single cycle. The very idea of recurrence would be lost. Given that the Stoics were keen on internal consistency, the objection deserves careful consideration.

* I started working on the subject when I was completing my doctoral dissertation at King's College London under the supervision of Richard Sorabji. I am grateful to him for having turned me toward the study of Stoicism and for many years of support and advice. Earlier versions of this essay were delivered at the Sorabji Conference held in Mexico, and at King's College London and the University of Buenos Aires. In addition to Richard himself, I wish to thank for discussion Peter Adamson, Marcelo Boeri, Robert Bolton, Victor Caston, M. M. McCabe, Verity Harte, Guillermo Hurtado, David Papineau, David Sedley, and Bob Sharples. An earlier and substantially different version of this essay was published in Spanish in 2002 in *Diánoia* with the title 'Tiempos, objetos y sucesos en la metafísica estoica'.

¹ In J. Barnes, 'La Doctrine du Retour Éternel' ['Doctrine'], in J. Brunschwig (ed.), *Les Stoïciens et leur logique* (Paris, 1978), 3–20.

In modern discussions of time in ancient philosophy, the thesis that times are individuated by what characterizes them is not new. For reasons other than the incorporeality of time, the claim has sometimes been accepted by ancient philosophy specialists either as true in individual ancient philosophers,² or as plausible as a general philosophical thesis.³ The objection, however, is specifically related to the orthodox Stoics and their thesis about the incorporeality of time. It is *ad hominem*: given *their* conception of time as incorporeal, *they* are bound to accept the thesis that times are individuated by what characterizes them.

I believe that the problem does not really arise. Section 1 specifies the assumptions he seems to be making concerning Stoic metaphysics, and mentions a possible, but problematic, solution to the objection. Section 2 develops a concrete example from the Stoic philosophy of language where two incorporeals of the same type are characterized by the same body in virtue of exactly the same qualities and dispositions. I argue that there is nothing in the conception of time as incorporeal that forces the Stoics to accept the thesis that times are individuated by what characterizes them. This will take us in sections 3 and 4 to the connected issue of the individuation of events and, in particular, to the question of how the principle of the identity of indiscernibles applies to events. In section 5, I tackle the question of whether time requires change and claim that for the orthodox Stoics it does not.

1. Barnes's Objection

Barnes's objection runs under two main assumptions: (1) in orthodox Stoicism, individual incorporeals are characterized by individual bodies qualified and disposed in a certain way; and (2) in orthodox Stoicism, individual incorporeals are individuated by such bodies. These are treated by Barnes as two separate theses. For he presents (1) as a *reason* for (2). Barnes himself does not specify what he means by 'characterization' in this context. But it does not seem to be something weaker than the following:

² See G. E. L. Owen, 'Plato and Parmenides on the Timeless Present', in his *Logic, Science, and Dialectic* (London, 1986), 27–44, who treats the claim as an unspoken assumption in Parmenides.

³ In *Time, Creation and the Continuum. Theories in Antiquity and the Early Middle Ages [TCC]* (New York, 1983), 80, Sorabji claims that this thesis may be 'given some initial plausibility in more than one way'. See also *Matter, Space and Motion. Theories in Antiquity and their Sequel [MSM]* (London, 1988), 164, but cf. 180. See also M. Schofield, 'The Retrenchable Present', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics. Fourth Symposium Hellenisticum* (Naples, 1988), 329–70, at 370.

(C) in orthodox Stoicism, for any individual incorporeal *I* (e.g. a specific time) and any individual body *B*, *B* characterizes *I* if and only if a full description of *I* must include a reference to *B*.

To give an example, a full description of a specific time such as 1917 should certainly include the fact that it is later than 1916 and earlier than 1918, which are also Stoic incorporeals. But it should also include the fact that 1917 is the year *of* the Russian Revolution, which in Stoic metaphysics is a body. Thus, the Russian Revolution characterizes 1917. In this sense of characterization, I have no quarrel with assumption (1). For in addition to individual times each of the other three Stoic incorporeals—place, void, and ‘sayables’ (λεκτά)⁴—is characterized in this sense by bodies.⁵ The questionable element in the objection is assumption (2). For example, 1917 and 1939 are different times and they are each characterized by bodies differently qualified and disposed. But are they different times *because* they are characterized by bodies differently qualified and disposed? According to Barnes, the Stoic conception of time as incorporeal requires an affirmative answer to this question. In fact, a general thesis underlying (2) is that any differentiation between two individual incorporeals of the same type is based upon, and necessarily requires, a differentiation in the qualities and dispositions of the bodies that characterize them. In his argument, Barnes does not spell out this ‘Individuation Thesis’, as I shall call it. But his objection clearly presupposes its attribution to the orthodox Stoics.⁶

One not very promising way out to Barnes’s objection is the idea that the time of everlasting recurrence is circular.⁷ This idea asserts something

⁴ For the canonical list of Stoic incorporeals, see Sextus Empiricus, *adv. math.* 10.218 also in H. von Arnim, *Stoicorum Vetenium Fragmenta* [SVF], 3 vols. (Leipzig, 1903–5), ii, 331; A. A. Long and D. N. Sedley (eds.), *The Hellenistic Philosophers*. [LS], 2 vols. (Cambridge, 1987), 27D, and Plutarch, *col.* 1116B–C.

⁵ True predicates, for example, which are species of sayables, are true *of* bodies qualified or disposed in a certain way, which means that a full description of what it is for a predicate to be true should include a reference to the bodies it is true of (or ‘belongs to’, ὑπάρχει). See Stobaeus, *eclogae* 1.106, 18–23 ed. Wachsmuth (SVF 2.509, LS 51B4). As for places, in Stoic theory any intracosmic place is always occupied by a certain body. See *eclogae* 1.161, 8–26 (LS 49A). Thus, a full description of a place at any given time should mention the qualities and dispositions of the body (or bodies) that occupies it at that time. Regarding void, which only exists extracosmically (and to which the Stoics do not apply the term ‘place’ (τόπος)), it is defined by the *absence* of body. Cf. *eclogae* 1.161, 8–26 (SVF 2.503; LS 49A). Thus void is characterized by bodies, just as places are, although negatively so.

⁶ The inference suggested by Barnes from the incorporeality of time to the idea that exactly the same world cannot recur at different times is invalid unless the Individuation Thesis is assumed.

⁷ As is acknowledged by Barnes himself. See ‘Doctrine’, 12 at n. 64. One proponent of circular time in connection with Stoic everlasting recurrence has been A. A. Long in ‘Freedom and Determinism in the Stoic Theory of Human Action’, in his *Problems in Stoicism* (London, 1971), 173–99 at 189 n. 29, and ‘The Stoics on World-conflagration and

stronger than mere everlasting recurrence. According to circular time, the recurrence does not apply just to the objects, states, and events that constitute the world. It also encompasses the very time at which they exist and occur: although there are infinitely many world-cycles, they all occur at the same period of time, for they all begin and end at the same point of time. To illustrate this idea, suppose that the sequence of times $\langle t_0, \dots, t_n \rangle$ is the one that fixes the duration of a world-cycle C_x . If the times themselves recurred, $\langle t_0, \dots, t_n \rangle$ would repeat itself at C_{x+1} . But if so, both C_x and C_{x+1} would begin at t_0 and they would both end at t_n . Therefore, the world would somehow recur at different cycles, but not at different times: the time at which Chrysippus will live in the next cycle and the time at which he lived in the present one are in fact one and the same.

I believe that the notion of different cycles occurring at the same time is logically flawed if taken literally. If it were coherent, however, it would provide a possible escape route from Barnes's objection. For on a circular conception of time, the Individuation Thesis is not violated. Instead of there being one identical world characterizing different times—which is prohibited by the Thesis—there is one identical world recurring at different cycles but characterizing just one period of time, namely, the period corresponding to the sequence $\langle t_0, \dots, t_n \rangle$.

The Stoics, however, do not need circular time to avoid the objection. There is a much simpler way to evince that everlasting recurrence is consistent with the incorporeality of time. And this is by showing that the Individuation Thesis is not orthodox Stoic. As will be seen, it is a thesis to which the orthodox Stoics never subscribed, and that is not logically implied by anything that they said. As a matter of fact, it is a thesis that they actually called into question. For they explicitly denied that a body that happens to characterize several incorporeals of the same type can only do so in virtue of a differentiation in its qualities and dispositions.

Before I begin, a clarificatory remark is in order. In the formulation of the objection (in French), Barnes uses the term 'event': times are individuated by the *events* that characterize them. No explicit reference is made to bodies:

Le statut ontologique de ces *ἀσώματα* n'est pas parfaitement clair; mais on peut faire la constatation suivante. Le temps étant incorporel, chaque instant de temps

Everlasting Recurrence', in R. H. Epp (ed.), *Recovering the Stoics. Spindel Conference 1984*, suppl. *Southern Journal of Philosophy*, 23 (1985), 13–37 at 28–31. For discussion, see Sorabji, *MSM*, 165–6. Cf. LS i. 312, even though the reason why Long and Sedley introduce circular time in connection with everlasting recurrence is not Barnes's objection specifically, but the problem of how numerically the same token events can recur at different times. I discuss their position in section 3 below.

ne s'individualise que par les événements qui le caractérisent: un instant, ce n'est rien sinon le temps des événements tels quels; c'est un chose relative qui n'a point d'existence en soi, point d'existence absolue. Par conséquent, deux instants seront distincts si et seulement si les événements qui caractérisent l'un se distinguent en quelque manière des événements qui caractérisent l'autre.⁸

The notion of event, however, does not alter the main idea. For events, as construed in modern event theory, are for the Stoics bodily states.⁹ Think of an event type such as the walking by Plato from the Academy to the outer walls of Athens. In Stoic theory, this event type is a *πῶς ἔχον*, or body disposed in a certain way, which is a type of bodily state.¹⁰ The event consists in the satisfaction by Plato of the predicate (*κατηγόρημα*) *to be walking from the Academy to the outer walls of Athens*. And this is a predicate that Plato satisfies because he is disposed in such a way as to be walking from the Academy to the outer walls of Athens. So the identity of the event type is fixed by two elements: (a) the qualities in virtue of which the body that walks is Plato as opposed e.g. to Aristotle; and (b) the disposition, or *ἔξις*,¹¹ in virtue of which the body Plato is disposed in a certain way (*πῶς ἔχον*), namely in such a way as to be walking from one place to the other. The disposition mentioned in (b) may be exercised by a body differently qualified, e.g. Aristotle. If so, a different type of event occurs: the walking by *Aristotle* from the Academy to the outer walls of Athens. Similarly, the same qualified body may be disposed in a different way, in which case too a new event type occurs, e.g. Plato's *walking back* from the outer walls of Athens to the Academy.¹² But however different these events are, they all consist in the possession by a certain body of

⁸ Barnes, 'Doctrine', 12.

⁹ See D. Davidson, 'The Logical Form of Action Sentences', in his *Essays on Actions and Events* (New York, 1980), 105–22; 'The Individuation of Events', in *ibid.* 163–80; and J. Kim and E. Sosa (eds.), *A Companion to Metaphysics* (Oxford, 1995), 140–3.

¹⁰ Things somehow disposed (*πῶς ἔχοντα*), whether intrinsically or relatively (*πρός τί πῶς ἔχοντα*) fall under the category of body. See Simplicius, in *Ar. cat.* 66, 32–67, 2 ed. Kalbfleisch (*SVF* 2.369; LS 27F); Plutarch, *comm. not.* 1083E (LS 28A); Plotinus, 6. 1. 25. 1–3 (*SVF* 2, 371).

¹¹ The difference in Stoic theory between qualities and dispositions being (cf. Simplicius, in *Ar. cat.* 212.12–213.7) that the latter were supposed to explain cases that cannot comfortably be accounted for in terms of the possession by an *x* of a corresponding quality of *F*-ness. Thus Plato's walking is Plato *πῶς ἔχον* rather than his having a certain quality of 'walkingness'. On this issue, see S. Menn, 'The Stoic Theory of Categories' ['Categories'], *Oxford Studies in Ancient Philosophy* 17 (1999), 215–47, at 217–27.

¹² These combinations indicate that a body is not identical to its qualities or dispositions nor to its possessing these qualities or dispositions. This implies that objects are not identical to the events in which they are involved, and also that Stoic *ποιά* and *πῶς ἔχοντα* are analysable in terms of more basic entities: the body that is qualified and disposed, on the one hand, and the qualities and dispositions it possesses, on the other. See Menn, 'Categories', 222 n. 10. For a different interpretation, see Sorabji, *MSM*, 89–93, discussed by Menn.

certain qualities and dispositions. This analysis of Stoic events is indicative that the Individuation Thesis presupposed in Barnes' objection may be restated in terms of events without prejudice to its philosophical content.

I shall now explain why the Thesis is alien to orthodox Stoicism. In order to bring this out, I provide two counter-examples to the Thesis. Although neither deals with times, they concern sayables, which are also incorporeal in Stoic ontology.

2. Incorporeals are not Individuated by Bodies

Let us begin with a bad counter-example to the Individuation Thesis. A diagnosis of why it is bad will help us to work out what a good counter-example should be like.

Suppose that Dion is walking and humming at the same time. He is disposed in such a way as to do both things simultaneously. In virtue of being disposed in this way, Dion characterizes simultaneously both the predicate *to be walking* and the predicate *to be humming*. The predicates, however, are different. They are not logically equivalent. For neither of them entails the other in virtue of its logical form. And they are not materially equivalent either, for either of them can belong to a body without the other. Thus, a single body qualified and disposed in a certain way happens to characterize two genuinely different incorporeal predicates.

This is a bad counter-example to the Individuation Thesis. For Dion characterizes both predicates in so far as he is exercising two different dispositions, one that constitutes his walking and another that constitutes his humming. So the two predicates are characterized by the same set of dispositions of the body Dion. But they are not characterized by the same disposition of that set.

A good counter-example to the thesis, therefore, needs to establish that two, or more, incorporeals of the same type may be characterized by the same body in virtue of one and the same quality and disposition of the body. This possibility is actually explicitly recognized by the orthodox Stoics in connection with the linguistic phenomenon of ambiguity (*ἀμφιβολία*). Here is a crucial passage from Diogenes Laertius reporting 'the Stoics' in Catherine Atherton's translation:

Ambiguity is an utterance signifying two or even more states of affairs, linguistically, strictly, and in the same usage, so that the several states of affairs are understood simultaneously in relation to this utterance; for example *Ἀύληταις πέπτωκε*: for by it are indicated both something like this, 'a house has

fallen three times' [Οἰκία τρίς πέπτωκε = Ἀὐλή τρίς πέπτωκε], and something like this, 'a flute-girl has fallen' [Ἀυλήτρια πέπτωκε = Ἀυλητρὶς πέπτωκε].¹³

Even before considering the passage in detail,¹⁴ it is manifest that it describes a particular case where two incorporeals of the same type (two states of affairs or πράγματα, which are incorporeal) are simultaneously characterized by one single utterance or 'lexis' (λέξις) which is a corporeal entity. Barnes's notion of characterizations is appropriate in this context. For we know that the Stoics defended a theory of meaning based on etymology, according to which the articulate sounds used in meaningful speech bear a non-arbitrary relation to their meanings: the meaning of a meaningful sound is not fixed by convention, but by the nature of the sound, which is naturally fit to express the meaning in question.¹⁵ Thus it is characteristic of any meaning that it is expressed by a certain sound: any meaning is always, and naturally so, the meaning of a certain sound. In consequence, the theory requires that there should not be two different sounds that express the same meaning. The theory, however, is compatible with there being sounds that naturally express more than one meaning, as is the case with ambiguous *lexeis*, which mean two or more different things.

Notice that the phenomenon of ambiguity is not given a pragmatic explanation. According to the text, the bearer of ambiguity is the *lexis* itself, and not the *lexis* embedded in a particular context.¹⁶ It is not because there are contexts where several states of affairs are understood by the *lexis* that the *lexis* is ambiguous. It is rather *because* the *lexis* signifies several states of affairs every time it is uttered that several states of affairs are eventually understood by someone who hears the *lexis*.¹⁷

¹³ Diogenes Laertius 7.62 (LS 37P): ἀμφιβολία δέ ἐστι λέξις δύο καὶ πλείονα πράγματα σημαίνουσα λεκτικῶς καὶ κυρίως καὶ κατὰ τὸ αὐτὸ ἔθος, ὥσθ' ἅμα τὰ πλείονα ἐκδέξασθαι κατὰ ταύτην τὴν λέξιν. οἷον Ἀυλητρὶς πέπτωκε δηλοῦνται γὰρ δι' αὐτῆς τὸ μὲν τοιοῦτον, Οἰκία τρίς πέπτωκε, τὸ δὲ τοιοῦτον, Ἀυλήτρια πέπτωκε.

¹⁴ For a thorough analysis of this passage see C. Atherton, *The Stoics on Ambiguity [Ambiguity]* (Cambridge, 1993), 135–72. Also relevant is the evidence from Gellius that for Chrysippus every word is ambiguous by nature (*omne uerbum ambiguum natura esse*). Unlike the author of the present definition, however, Chrysippus is thinking of potential ambiguity. His claim is that for any word two or more things *can* be understood from it (*ex eodem duo uel plura accipi possunt*). See *Noctes Atticae* 11.12.1–3 ed. Marshall (*SVF* 2.152, LS 37N).

¹⁵ See A. A. Long, *Hellenistic Philosophy* (London, 1974), 131–9; and Atherton, *Ambiguity*, 97. The Stoics (*ap.* Origen) are reported to have claimed that 'the primary sounds imitate states of affairs' (*SVF* 2.146: μιμουμένων τῶν πρώτων φωνῶν τὰ πράγματα) and Chrysippus (*ap.* Galen) to have held that the phonological properties of the pronoun ἐγώ ('I') are *indicative* that the heart, not the brain, is the centre of consciousness (*SVF* 2.884).

¹⁶ See Atherton, *Ambiguity*, 171.

¹⁷ A further reason why Stoic ambiguity is not given a pragmatic explanation is that it is independent from speaker's meaning. In Stoic theory, one may utter a *lexis* with the intention of signifying just one thing and yet actually signify more than one. See Chrysippus *ap.* Gellius, *Noctes Atticae* 11.12.1–3 (*SVF* 2.152, LS 37N).

The details of the text deserve attention. Let us begin with some remarks on the notion of states of affairs (*πράγματα*). The two states of affairs signified or indicated by the ambiguous *lexis* are *a house has fallen three times* and *a flute girl has fallen*. These are propositions and, thus, sayables, which are incorporeal.¹⁸ The relation between the ambiguous *lexis* and the two states of affairs is semantic: they are both signified (or indicated) by the *lexis*. The *lexis* itself is not an act of uttering, but rather the material product of such an act, i.e. the vocal sound emitted in the act. It is important to mention that for the Stoics a *lexis* is an articulate sound, analysable in terms of more basic elements, which are called its *στοιχεῖα* or 'basic constituents'.¹⁹ These basic constituents are the individual vocal sounds of the string that constitutes the *lexis*. Any *lexis* is thus individuated by the combination of two factors, the individual vocal sounds in the string, on the one hand, and the order in which they appear in the string, on the other. This is important for one reason. If *lexeis* are indeed individuated from each other by these two factors, then any *lexis* is constituted by a unique combination of syllables in a certain order, and it is thanks to this unique combination that it signifies a particular sayable. What is characteristic of Stoic ambiguity, then, is that a unique combination of syllables signifies and characterizes more than one sayable. The core of the ambiguity in the example we are considering is the sequence of three syllables < αὐ, λη, τρις >, which is common both to the noun Ἀυλητρίς, 'flute-girl', and the phrase αὐλὴ τρίς, 'a house three times'.²⁰

Now, if we go deeper into the analysis of *lexis*, it becomes apparent how Stoic ambiguity is a good example of how a *body* may characterize, in virtue of a single disposition, more than one incorporeal of the same type. For *lexis* is a species of vocal sound. And we know that for the Stoics sound is generically a portion of breadth (*πνεῦμα*), which, under the form of air, stretches from the commanding faculty of the soul (τὸ ἡγεμονικόν) to the pharynx, tongue, and other appropriate

¹⁸ States of affairs were explicitly defined by the Stoic Diogenes of Babylon as a species of *λεκτόν*. See Diogenes Laertius 7.57 (*SVF* 3 Diogenes 20, LS 33A).

¹⁹ Diogenes Laertius 7.56.

²⁰ The philological question whether these two *lexeis* could be distinguished in speech given the pronunciation and intonation rules possibly used in ancient Greek is well summarized in Atherton, *Ambiguity*, 228–32. On the other hand, although *lexeis* are primarily vocal sounds, they may also be written symbols. I am grateful to Marcelo Boeri for showing to me that in the written case this particular example of ambiguity must have been much more evident to the early Stoics and their interlocutors than in the spoken case in so far as ancient written Greek (at least before the Alexandrian period, cf. Atherton, *Ambiguity*, 225) only employed capital letters, did not separate syllables, and did not use accents. The single written symbol for 'a flute-girl has fallen' and 'a house has fallen three times' would have been ΑΥΛΗΤΡΙΣΠΕΙΤΤΟΚΕ.

speech organs.²¹ This implies that a *lexis* is indeed a corporeal entity.²² What kind of body is it? I am inclined to think that it is a body ‘somehow disposed’ (*πῶς ἔχον*): a volume of air so disposed by the speaker as to sound in a certain articulate way. So the sequence of articulate sounds $\langle \alpha\upsilon, \lambda\eta, \tau\rho\iota\varsigma \rangle$ is a volume of air uniquely disposed which characterizes simultaneously, and in virtue of that single disposition, two different incorporeal states of affairs. Notice that it is not as if one part of an ambiguous *lexis* signifies one state of affairs and another a different state of affairs. The idea is rather that the ambiguous *lexis* signifies more than one state of affairs in virtue of exactly the same bodily disposition of the *same part* of the *lexis*, namely, the core $\langle \alpha\upsilon, \lambda\eta, \tau\rho\iota\varsigma \rangle$.²³

I claim to have shown in this section that for the orthodox Stoics there is nothing wrong in the idea that two different incorporeals of the same type be characterized by a body in virtue of a single disposition. If so, then, *pace* Barnes, it does *not* follow from the idea that time is incorporeal that any instant of time is individuated by the qualities and dispositions of the body by which it is characterized. The idea that exactly the same world recurs at different times is perfectly consistent with the orthodox Stoic conception of time as incorporeal.

3. Times and the Individuation of Events

I now turn to a different, but complementary, issue. We have seen that there is nothing in the Stoic conception of *time* that precludes that exactly the same events—or bodies qualified and disposed in exactly the same way—recur at different times. I shall now argue that there is nothing either in the Stoic conception of *event* that precludes such a thing.

Once more, what is at stake is the coherence of the orthodox version of the doctrine of everlasting recurrence. For if exactly the same world recurs at different times, the events that take place in it must also recur

²¹ See *Doxographi Graeci*, ed. Diels 411, 17–21 (*SVF* 2.836; LS 53H5).

²² On the corporeality of sound see also *Doxographi Graeci* 638, 17–20.

²³ It could be objected to the argument I have been developing that in Diogenes’ example the two states of affairs have different truth conditions. So given that their truth conditions must enter into their characterization, and given also that these truth conditions are bodily states, it follows that the two states of affairs are not characterized by the same set of bodies after all. The set for *a flute girl has fallen* includes a flute girl’s having fallen (which corresponds to its truth condition) in *addition* to the sequence of sounds $\langle \alpha\upsilon, \lambda\eta, \tau\rho\iota\varsigma \rangle$; whereas the set for *a house has fallen three times* includes a house’s having fallen three times in *addition* to $\langle \alpha\upsilon, \lambda\eta, \tau\rho\iota\varsigma \rangle$. Against this objection, however, which I owe to Peter Adamson, it should be noted that there may be a situation where the truth conditions of these state of affairs do not actually obtain. This implies that in such a situation the set of characterizing *actual* bodies at that particular time is the same for both states of affairs: it just includes the sequence $\langle \alpha\upsilon, \lambda\eta, \tau\rho\iota\varsigma \rangle$.

at different times while being the same in each recurrence. But can the same events really occur at different times?

The question may be given two different answers, depending on how we construe the identity at stake.

If by ‘the same events’ we mean *numerically* the same token events, the answer is arguably ‘no’. Consider my eating breakfast this morning and my eating breakfast yesterday morning. Although I did the same type of thing, my doing it yesterday morning is not numerically the same as my doing it this morning. For if one counted how many times I ate breakfast since yesterday morning, the result would be ‘two’. Therefore, the fact that I ate breakfast at two different times—once this morning and once yesterday morning—is sufficient for establishing that the event type consisting in my eating breakfast was tokened twice. Thus, token events of the same type are numerically individuated from each other precisely by their time of occurrence²⁴ and, more specifically, by the combination of an event type with a particular time. To return to an earlier example, Plato’s walking from the Academy to the outer walls of Athens at *t*—his being so disposed *at this particular time*—is a token of the event type consisting in Plato’s walking from the Academy to the outer walls of Athens. And every time Plato does so, a different token of this type occurs.²⁵ So, if the identity the orthodox Stoics had in mind for recurring events is numerical identity of token events, they are not logically entitled to maintain that the present cycle is temporally different from any other cycle.

However, if what we mean by ‘the same events’ is just type-identical token events, the answer to the question should be in the affirmative. For by parity of reasoning with the previous example numerically different tokens of exactly the same type *can* occur at different times. My eating breakfast this morning and my eating breakfast yesterday morning are two numerically different token events of the same type. So, if the identity

²⁴ In contrast with objects, which are *not* numerically individuated by the time at which they exist, numerically the same object (e.g. Socrates) may exist at different times. See the next section.

²⁵ Notice that in this account a difference in the time of occurrence is construed as a mere *sufficient* condition for the individuation of token events. To individuate token events, one does not *have* to appeal to a difference in time, as has been pointed out to me by David Papineau. To take an example, one may individuate a token event *e* simply by appealing to the total set *a* of events with which *e* is simultaneous. Thus, *e* and *e** would be different tokens of type *E* if *e* is simultaneous with *a* and *a* is different from the total set *b* of events that are simultaneous with *e**. To be sure, this mode of individuation involves the notion of time (for the notion of an event’s being simultaneous with another involves the notion of their occurring at the same *time*). The *difference* in time, however, is not used as a premiss in the argument, but inferred from the thesis that *a* and *b* are different (together with the obvious assumption that one and the same token event cannot be simultaneous with two different total sets of events).

the orthodox Stoics had in mind for recurring events is mere type identity, no difficulty would arise in the orthodox theory. What we need to know, therefore, is whether the orthodox Stoics *meant* the events of the present cycle to be numerically identical to those of any other cycle, or just type-identical to them.

According to an interpretation that has been defended by Long and Sedley, the orthodox Stoics meant the former.²⁶ Although Long and Sedley speak of ‘movements’, and not of events, I assume that by ‘movements’ they mean bodies qualified and disposed in a certain way, which on my view are Stoic events:

If t is the set of instants for the present world, and t^* is the set of instants for the next recurrence of that world, t^* must be a temporal dimension of movements all of which occur after t . But *ex hypothesi* the movements which occur at t are numerically identical to those which occur at t^* . Hence, a movement at t , which is before t^* , is numerically identical to a movement at t^* . Now on a linear conception of time this is incoherent: for it implies two quite separate temporal dimensions for one and the same movement.

The difficulty raised by Long and Sedley in this passage—a difficulty connected to the individuation of events (how numerically identical *events* can recur at different times)²⁷—has led them to introduce the idea of circular time in connection with the time of everlasting recurrence. On their view the doctrine in its orthodox version is incoherent unless the time of everlasting recurrence is circular. The root of the problem, on their view, is the numerical identity of token events from cycle to cycle, which is required, they claim, by the orthodox thesis that the present world is indiscernible (*ἀπαράλλάκτος*) from the world of any other cycle.

I propose to rebut this interpretation by arguing as follows. First, the orthodox Stoics did not *intend* the recurring events to be numerically the same from cycle to cycle. The objects involved in the events are certainly numerically the same. But there is no conclusive textual evidence that in orthodox Stoic theory the events themselves should also be. Secondly, transyclical indiscernibility does not *require* a numerical identity of token events. For total indiscernibility (*ἀπαράλλαξία*)—a key notion in the orthodox version of the doctrine—does not imply numerical identity in the case of token events. I deal with the former issue in what remains of the present section, and leave the latter issue for section 4.²⁸

²⁶ LS 1, 312. See also Sorabji, *MSM*, 164.

²⁷ A difficulty that differs from the problem raised by Barnes, who deals with the problem of the individuation of times (how different *times* can be characterized by the same events).

²⁸ Long and Sedley have argued that there actually is *textual* evidence for circular time in orthodox Stoicism. See LS 1, 312 (cf. Long, ‘World-conflagration and Everlasting Recurrence’, 29): ‘The tense-logic required by a circular conception of time includes such

Consider the following passage, which reports the orthodox version of the doctrine of everlasting recurrence:

< 1 > For again there will be Socrates and Plato and each of mankind with the same friends and fellow citizens; they will suffer the same things and they will encounter the same things, and put their hand to the same things, and similarly every city and village and piece of land return. < 2 > The periodic return of everything occurs not once but many times; or, rather, the same things return infinitely and without end. (...) < 3 > For there will be nothing strange in comparison with what came into being previously, but everything will be just the same and indiscernible down to the smallest details.²⁹

The emphasis in the first part of the passage is on the identity of objects, rather than on the identity of events. One of the examples is especially telling: in each new cycle the same *persons* will put their hands on the same things. The idea is, presumably, that if someone puts his hands on a statue in the present cycle, this very same person (i.e. numerically the same), will put his hands on the very same statue in the next cycle. The text does not say, however, that the event itself consisting in the person putting his hands on the object is the same numerically. That this is not what is intended by the proponents of the theory is confirmed in the second part of the passage, which is by far the most decisive. The reconstitution of all things is said to occur not once but *many* times (πολλάκις). But this reconstitution is an event, namely, the one consisting in the coming into being of all things in a new cycle. So this crucial event cannot be numerically the same from cycle to cycle. In sum, there is no clear evidence in

axioms as “What will be so has been so”, “What has been so will be so”, “What is so has been so”, “What is so will be so”. All of these are stated or implied in [LS 52C]. There is certainly evidence for the axioms above in the passage in question (Nemesius of Emesa, *de natura hominis*, 111, 14–25 ed. Morani, part of which I quote further down in this section). The problem is that these axioms are ambiguous as to whether the *time* of recurrence is the same, which is precisely the point at issue. The axiom ‘What is so will be so’, for instance, may very well mean ‘What is so now, will be so at a different time’, whereas Long and Sedley’s interpretation requires that it means ‘What is so now will be so at a time identical to now’. This ambiguity in the meaning of the axioms is not dispelled in 52C. Another argument they use comes in *ibid.*: ‘Given Stoic determinism, and such images of time as “the unwinding of a rope, bringing about nothing new”, it is hardly too much to suggest that Chrysippus... envisaged time as circular rather than linear’. Again, the evidence here is ambiguous as to whether the time is the same or different: ‘time brings nothing new’ may mean that what occurs now is not different from what will occur at a *different* time.

²⁹ See Nemesius, *de natura hominis*, 111, 20–3 and 112, 1–3: ἔσεσθαι γὰρ πάλιν Σωκράτη καὶ Πλάτωνα καὶ ἕκαστον τῶν ἀνθρώπων σὺν τοῖς αὐτοῖς καὶ φίλοις καὶ πολίταις καὶ τὰ αὐτὰ πείσεσθαι καὶ τοῖς αὐτοῖς συντεύξεσθαι καὶ τὰ αὐτὰ μεταχειρεῖσθαι, καὶ πᾶσαν πόλιν καὶ κώμην καὶ ἀγρὸν ὁμοίως ἀποκαθίστασθαι γίνεσθαι δὲ τὴν ἀποκατάστασιν τοῦ παντὸς οὐχ ἅπαξ ἀλλὰ πολλάκις· μᾶλλον δὲ εἰς ἄπειρον καὶ ἀτελευτήτως τὰ αὐτὰ ἀποκαθίστασθαι... οὐδὲν γὰρ ξένον ἔσεσθαι παρὰ τὰ γενόμενα πρότερον, ἀλλὰ πάντα ὡσαύτως ἀπαράλλακτως ἀχρῆκαὶ τῶν ἐλαχίστων.

this important text that numerically the same events occur from cycle to cycle. It is rather the contrary that is suggested.

A further passage that deserves attention comes from Alexander of Aphrodisias' commentary on Aristotle's *Prior Analytics*. It deals with the views of Chrysippus on transcyclical identity:

They hold that after the conflagration all the same things come to be again in the world numerically, so that even the same peculiarly qualified individual as before exists and comes to be again in that world, as Chrysippus says in his books *On the World* (...).³⁰

The claim in this passage that is crucial for our present purposes is that 'all the same things come to be again in the world numerically' (πάλιν πάντα ταῦτα ἐν τῷ κόσμῳ γίνεσθαι κατ' ἀριθμόν). The term 'numerically' (κατ' ἀριθμόν) modifies 'all the same things' (πάντα τὰυτὰ): the numerical identity holds between the things that recur from cycle to cycle. It does not apply to the event itself consisting in their recurrence. On the contrary, the term 'again' (πάλιν), which qualifies 'come to be' (γίνεσθαι), suggests that this event occurs *more* than once and, therefore, that in each recurrence a *new* token of the event obtains. The ὡς clause supports this reading. In contrast with the first sentence, which vaguely alludes to 'things', this clause refers unambiguously to individuals peculiarly qualified (ιδίως ποιά), i.e. to objects. For in Stoic theory it is objects, rather than events, that are peculiarly qualified. Stoic events merely consist in an *object's* being qualified and disposed in a certain way.³¹ Thus the reference in the ὡς clause to ιδίως ποιά intimates that the 'things' intended in the first sentence are also objects. If so, the thesis of numerical identity in the *first* sentence would also apply to objects rather than to events. The argument intended by Alexander on behalf of Chrysippus would run as follows: given that numerically the same objects return from cycle to cycle, the objects of the present cycle and the objects of the next have the same peculiar quality. This is a consequence of Chrysippus' notions of 'peculiar quality' (ιδία ποιότης) and 'peculiarly qualified individual' (ιδίως ποιόν), which are used to define numerical identity: *a* and *b*

³⁰ Alexander of Aphrodisias, *in Ar. a. pr.* 180, 33–6 ed. Wallies (*SVF* 2.624, LS 52F): ἀρέσκει γὰρ αὐτοῖς τὸ μετὰ τὴν ἐκπύρωσιν πάλιν πάντα ταῦτα ἐν τῷ κόσμῳ γίνεσθαι κατ' ἀριθμόν, ὡς καὶ τὸν ιδίως ποιὸν πάλιν τὸν αὐτὸν τῷ πρόσθεν εἶναι τε καὶ γίνεσθαι ἐν ἐκείνῳ τῷ κόσμῳ, ὡς ἐν τοῖς Περὶ κόσμου χρύσιππος λέγει.

³¹ As I explain in the next footnote, in Stoic metaphysics the notion of peculiar quality is used to establish the numerical difference between individuals. But the bearers of peculiar qualities are individual objects, not events. For although the time of occurrence of a token event numerically distinguishes it from another token event of the same type, it was not regarded by the orthodox Stoics as a quality at all. If it had been so regarded by them, they would not have accepted that token events occurring at different times may be indiscernible from each other, which is something that they did accept. See section 4.

are in fact numerically the same object if, and only if, *a* and *b* are the same peculiarly qualified individual (or possess the same peculiar quality).³² The close logical connection between Alexander's inference so interpreted and Chrysippean metaphysics is, I think, a further positive reason for supposing that in this central passage Chrysippus' thesis of numerical identity applies to objects rather than to events.

I have argued that there is no conclusive evidence that for the orthodox Stoics numerically the same *events* recur from cycle to cycle. The evidence considered suggest rather that events are merely type-identical, in contrast with the objects they involve, which are numerically the same. One advantage of this interpretation is that it does not force the Stoics to accept either the logically odd thesis that numerically the same events occur at different times (which was the difficulty posed by Long and Sedley) nor the problematic view that time is circular. Before I tackle an objection to this interpretation, it may be helpful to illustrate what it amounts to by considering a concrete example.

We know that Brutus stabbed Caesar in the year 44 BC. According to the doctrine of everlasting recurrence, he will stab him again in the year 44 BC of the next cycle. In fact he will stab him infinitely many times, once in each cycle. But the *event* consisting in Brutus' stabbing Caesar in this cycle is not numerically identical to the event consisting in his stabbing him in the next (nor to the event in any other future cycle). Numerically the same Brutus will stab Caesar infinitely many times, and numerically the same Caesar will die infinitely many times at the hands of Brutus. The *objects* involved in the events that are repeated from cycle to cycle are numerically the same throughout the series; but the *events* themselves are not numerically the same—they are just exactly (and exhaustively) type-identical tokens. On this view, the same events occur at different times, because the identity envisaged for events is not numerical.

4. Indiscernibility of Events without Numerical Identity

There is one potential objection to the idea that the recurring events are strictly type-identical. How can they be strictly type-identical or indiscernible, as the doctrine of everlasting requires, and yet numerically different? Would not this represent a violation to the principle of the

³² According to Chrysippus, there is for each object a peculiar quality that fixes its individual identity and in virtue of which it is numerically individuated from other objects. Simplicius, in *Ar. de an.* 217, 36–218, 2 ed. Hayduck (*SVF* 2.395 p.130, 43–7; LS 28I). See also Stobaeus *E* 1.117, 21–179, 17 (LS 28D).

identity of indiscernibles, upheld by the orthodox Stoics,³³ according to which complete type-identity implies numerical identity? The objection may be put as follows. Think of two token events e_1 and e_2 . If e_1 and e_2 are strictly type-identical, they involve the same bodies with the same qualities, including the peculiar quality of these bodies, which are also disposed in exactly the same way. In other words, at a corporeal level of analysis there is no differentiation between e_1 and e_2 . But if so, the objection runs, e_1 and e_2 have to be numerically identical. Therefore, no two events can be numerically different and yet strictly type-identical. Hence, the recurring events of the doctrine of everlasting recurrence cannot be strictly type-identical if they are, as I have argued in section 3, numerically different.

The ‘indiscernibility objection’, as I shall call it, can be avoided because it misrepresents the meaning of the principle of the identity of indiscernibles. Contrary to what is supposed by the objection, indiscernibility does not entail numerical identity in the case of token events. This is so for two reasons. One of them is metaphysical: as we shall see, indiscernible token events *can* occur at different times. But if this is possible, then, indiscernible token events can be numerically different, for the time of occurrence of a token event numerically individuates that event from other token events of the same type. The other reason is syntactical. It will be shown that the logical form of the principle of the identity of indiscernibles does not entail in any way that indiscernible token-events should be numerically identical.

To the claim that two token indiscernible events a and b may occur at different times, it could be objected that if a and b were indeed indiscernible, they would have to occur at the same time—otherwise they would be discernible with respect to one of their properties, namely, with respect to their time of occurrence. The basis of this objection is that the time occurrence of a token event is one of its properties. But this assumption

³³ See notably Cicero, *Acad.* 2.83–5 (LS 40J), which I quote and discuss further in this section. Formally (where ‘P’ stands for properties): $(P)(x)(y)((Px \equiv Py) \rightarrow x = y)$. This principle should not be confused with a different one that infers indiscernibility from numerical identity: $(P)(x)(y)(x = y \rightarrow (Px \equiv Py))$. Chrysippus did not accept this latter principle. For an object may change over time and yet endure numerically, which means that the object in question at t is numerically identical to itself at t' but is *discernible* from it. See Simplicius, in *Ar. de an.* 217, 36–218,2 (*SVF* 2.395 p. 130, 43–7; LS 28I) and Stobaeus, *E* 1.117, 21–179, 17 (LS 28D), which I cited earlier. M. Mignucci rightly points out in ‘The Stoic Theory of Relatives’, in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics. Fourth Symposium Hellenisticum* (Naples, 1988), 129–217 at 150 n. 14, that some later Stoics (Mnesarchus in particular, joint head of the Stoa after the death of Panaetius at the beginning of the second century AD) did accept the latter principle. See Stobaeus, *E* 1.179, 6–8 (*Doxographi Graeci* 463, 5–6).

is questionable for metaphysical reasons. To bring this out, I shall appeal to Kantian considerations.³⁴

The time of occurrence of an event cannot be regarded as one of its properties if one means by ‘property’ a possible object of experience. In other words, *F*-ness is a property only if an entity *a* may be experienced as being *F*. In this sense, whiteness, which the Stoics would classify as a quality, is a property. For I can experience entities as being white. But there is a problem in the idea that *time* is a possible object of experience. It consists in three connected difficulties. First, from the fact that an experience *e* occurs at a certain time *t*, it does not follow that *t* is itself an object of *e*. Secondly, the former may in fact be incompatible with the latter: if *e* occurs at *t*, then, *t cannot* be an object of *e* when the experience in question is supposed to be one whose content is a single thing. For example, let *e* be one such experience and suppose that through *e* I experience at *t* something *a* (e.g. an object’s whiteness). In this case, *a* is the single object of *e*. But *a* is different from *t*. So in order to experience *t*—in order, that is, to have an experience whose object is *t*—I would need a further experience *e'*, different from *e*. Thirdly, even if the time of an experience *e* could be the object of further experiences, there should be one of these experiences whose time of occurrence is not a possible object of a further experience. Otherwise, the experience of time would lead to an infinite regress. And it follows from this that at least some times cannot be objects of experience. Given these three reasons, it is problematic to assume that time is a possible object of experience and, hence, that it is a property.³⁵ If so, the idea that indiscernible token events can occur at different times is more plausible than it may initially appear, which implies that indiscernible token events may be numerically different after all. I do not claim that these Kantian considerations are implicit in Stoic metaphysics. But they do not contradict anything that the Stoics actually say on the nature of time. For this reason, they may be used on their behalf in a philosophical defence of their views.

The second argument focuses on the logical form of the principle of the identity of indiscernibles. As we shall see, its logical form does not allow for the numerical identity of indiscernible events, but only for the numerical identity of the *objects* involved in the events.

³⁴ See I. Kant, *Critique of Pure Reason*. Translated from the 1787 edition by Norman Kemp Smith (London, 1929; repr. 1970), A33–7/B49–54, with discussion by J. Van Cleve in *Problems from Kant* (Oxford, 1999), 44–61.

³⁵ For an argument that refers to Stoic everlasting recurrence and reaches this same conclusion without appealing to Kantian considerations, see R. G. Millikan, *Language, Thought and Other Biological Categories* (London, 1984), 261 and 283–96, esp. 289.

Consider two arbitrary Stoic token events, e_a and e_b . Like any other Stoic event, they are both corporeal entities that may be analysed in terms of more basic corporeal entities: objects, on the one hand; and qualities and dispositions, on the other. Let the former event be defined by the possession of certain qualities and dispositions by some body a at a time t , and let the latter event be defined by the possession of certain qualities and dispositions by some body b at a time t' . Now, suppose that e_a and e_b are indiscernible. This means that the objects they involve (a and b) have exactly the same qualities and dispositions. What I just said may be expressed in a symbolic language without referring in that language to e_a and e_b , but only to the objects, the qualities and the dispositions that constitute them:

$$(1) (Q)(D)((Qa \equiv Qb) \ \& \ (Da \equiv Db))$$

Now, e_a and e_b would be numerically the same event only if the *possession* by a of Q and D were itself numerically identical to the *possession* by b of Q and D , i.e. only if the following were true:

$$(2) Qa = Qb \ \& \ Da = Db^{36}$$

But (2) asserts something different from (3), which states that a and b are numerically the same.

$$(3) a = b^{37}$$

And (1)—the thesis asserting the indiscernibility between e_a and e_b —does not imply (2), as is evinced by (4):

$$(4) \neg((Q)(D)((Qa \equiv Qb) \ \& \ (Da \equiv Db)) \rightarrow (Qa = Qb \ \& \ Da = Db))$$

The only implication that (1) may have is (3), namely, that the *objects* a and b are numerically the same. This we may express through the following conditional:

$$(5) ((Q)(D)((Qa \equiv Qb) \ \& \ (Da \equiv Db))) \rightarrow a = b$$

And (5) is nothing but the Stoic principle of the identity of indiscernibles, according to which there are no two *objects* exactly alike. At least this is what Cicero reports when he claims that for the Stoics: ‘no hair or grain

³⁶ The numerical identity of e_a and e_b also implies the numerical identity of t and t' in so far as the time of occurrence of a token event is that by which it is numerically individuated. In symbolic language, the complete statement of the numerical identity of e_a and e_b would be (2)': $(Qa = Qb \ \& \ Da = Db) \ \& \ (t = t')$.

³⁷ On why (2) and (3) cannot assert the same thing, see n. 12 above.

of sand is in all respects as (*omnibus rebus talem qualis*) another hair or grain of sand'.³⁸ The Latin says *talem qualis*. This may be taken to refer not just to the *qualities* of an object, but also to the way in which the object is disposed, either relatively or inherently. However we interpret the sentence, the numerical identity holds between the objects that are alike, and not between their possession of the qualities and dispositions that make them alike. In consequence, indiscernible token events may be numerically different.

In sum, there does not seem to be any good reason for thinking that indiscernible token events have to be numerically identical. The orthodox Stoic view that type-identical, indiscernible, events occur at temporally different cycles does not represent a violation of the principle of the identity of indiscernibles.

5. Time without Change

I have argued in the last three sections that there is nothing in orthodox Stoic metaphysics that precludes more than one time being characterized by the same qualities and dispositions of a body. It is not precluded either by the Stoic conception of an incorporeal or by the Stoic conception of an event.

To conclude, I should like to tackle an issue that is closely connected to the topic of the present essay and that Richard Sorabji has put on the map in the study of ancient philosophy: the possibility of time without change.

Sorabji has argued that it was the exception in ancient Greek thought to allow for time without change.³⁹ Acceptance of this possibility is found mainly in Presocratic philosophers. As he has shown, it is at least strongly implied in Empedocles according to whom the universe undergoes alternating periods of rest, and in Anaxagoras who claimed that there existed an infinite period of rest prior to the cosmogonic activity of Mind. In later antiquity, the evidence is less conclusive. But Iamblichus seems to have allowed for time without change when he argued that a distinction should be made between a static and a flowing time,⁴⁰ and that change depends on the former but not vice versa. To the evidence adduced by Sorabji in favour of time without change in ancient philosophy, I propose to add the orthodox Stoic conception of time I have discussed. For according to this

³⁸ Cicero, *Acad.* 2.83–5 (LS 40J).

³⁹ In *TCC*, 81–3.

⁴⁰ They contend that all bodies (even those that seem to be at rest at a given time) always undergo an intrinsic 'tensile movement' (*τονική κίνησις*) of their constitutive breath, which is constantly expanding and contracting. See notably Galen, *Musc. mot.* 4.402, 12–403, 10 (LS 47K).

conception times are not individuated by the qualities and dispositions of the bodies by which they are characterized. And this implies that a differentiation in time does not require a differentiation in the bodies that exist during the interval. To be sure, the orthodox Stoics would recognize that the flow of time *within* any one world cycle always goes along with bodily changes.⁴¹ But they would add that it does not flow *because of* these changes. For there is at least one case in which the flow of time does *not* go along with any bodily change, namely, during the interval that separates any two cycles. If s_x is the interval that measures the duration of cycle C_x and s_{x+1} the interval that measures the duration of cycle C_{x+1} , then the flow of time between s_x and s_{x+1} , regarded as units,⁴² does not go along with any bodily change because s_x and s_{x+1} are characterized by the same bodies qualified and disposed in exactly the same way. Given that in this one case the flow of time does not go along with bodily changes, the flow of time does not necessarily require that such changes occur, which entails that time differentiations that *do* go along with such changes do not occur because of these changes.

The possibility of time without change does not run against how Zeno and Chrysippus define time, namely, as the ‘dimension’ (διάστημα) of change.⁴³ What they seem to have had in mind through this definition is that time is a parameter that measures the pace of change. It is ‘that according to which the measure of speed and slowness is spoken of’ (καθ’ ὃ ποτὲ λέγεται μέτρον τάχους τε καὶ βραδύτητος), meaning that the slower a change is the larger is the amount of time it takes to be completed.⁴⁴ The idea they are putting forward is *not* that the amount of time elapsed in an interval is determined by the pace of the change that occurs in it, which would suggest that time differentiation depends on change. It is rather the contrary that is suggested: the pace of the change that occurs in an interval is determined by the amount of time elapsed in the interval, which is not internally differentiated *because of* the change.

The idea that time would keep flowing if changes ceased to take place may sound counter-intuitive to anyone who, in the wake of Aristotle, is used to think of the flow of time as depending on change. But from a philosophical point of view, I see no reason why Aristotle should be right on this. Why should we believe that a differentiation in time presupposes

⁴¹ See Iamblichus *ap.* Simplicius, *in Ar. phys.* 793, 3–7 ed. Diels. The theory is presented and extensively discussed by Sorabji in *TCC*, 37–51.

⁴² For the idea that the duration of the present world-cycle may be regarded as a unit of time (viz. as the present as opposed to the past or the future), see Apollodorus, a Stoic of the late second century BC, *ap.* Stobaeus, *E* 1.105, 8–16 (LS 51D).

⁴³ Cf. Zeno *ap.* Simplicius, *in Ar. cat.* 350, 14–15 (*SVF* 2.510, LS 51A: τῶν δὲ Στωικῶν Ζήνων μὲν πάσης ἀπλῶς κινήσεως διάστημα τὸν χρόνον εἶπεν); and Chrysippus *ap.* Simplicius, *ibid.* (Χρύσιππος δὲ διάστημα τῆς τοῦ κόσμου κινήσεως < εἶπεν >).

⁴⁴ Stobaeus, *E* 1.106, 5–6 (*SVF* 2.509, LS 51B).

necessarily a differentiation in what happens in time? Why should not we think instead that time differentiation is a primitive fact about reality, as Empedocles, Anaxagoras, the orthodox Stoics, and Iamblichus seem to have supposed, and thus compatible with the absence of change? Unless conclusive arguments are provided against this conception,⁴⁵ the metaphysics of orthodox everlasting recurrence is perfectly consistent. Numerically the same objects and persons recur infinitely many different times without any variation either in their qualities or in their dispositions.

Bibliography

- ALGRA, K. *Concepts of Space in Greek Thought* (Leiden, 1995).
- ATHERTON, C. *The Stoics on Ambiguity [Ambiguity]* (Cambridge, 1993).
- BARNES, J. 'La Doctrine du Retour Éternel' ['Doctrine'], in J. Brunschwig (ed.), *Les Stoïciens et leur logique* (Paris, 1978), 3–20.
- DAVIDSON, D. 'The Logical Form of Action Sentences', in his *Essays on Actions and Events* (New York, 1980), 105–22.
- 'The Individuation of Events', in his *Essays on Actions and Events* (New York, 1980), 163–80.
- KANT, I. *Critique of Pure Reason*. Translated from the 1787 edition by Norman Kemp Smith (London, 1929; repr. 1970).
- KIM J. and SOSA E. (eds.), *A Companion to Metaphysics* (Oxford, 1995).
- LONG, A. A. 'Freedom and Determinism in the Stoic Theory of Human Action', in his *Problems in Stoicism* (London, 1971), 173–99.
- *Hellenistic Philosophy* (London, 1974).
- 'The Stoics on World-conflagration and Everlasting Recurrence', in R. H. Epp (ed.), *Recovering the Stoics. Spindel Conference 1984*. Suppl. *Southern Journal of Philosophy*, 23 (1985), 13–37.
- and SEDLEY, D. N. (eds.), *The Hellenistic Philosophers*, 2 vols. [LS] (Cambridge, 1987).
- MENN, S. 'The Stoic Theory of Categories' ['Categories'], *Oxford Studies in Ancient Philosophy* 17 (1999), 215–47.
- MIGNUCCI, M. 'The Stoic Theory of Relatives', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics. Fourth Symposium Hellenisticum* (Naples, 1988), 129–217.
- MILLIKAN, R. G. *Language, Thought and Other Biological Categories* (London, 1984).
- NEWTON-SMITH, W. H. *The Structure of Time* (London, 1980).
- OWEN, G. E. L. 'Plato and Parmenides on the Timeless Present' in his *Logic, Science, and Dialectic* (London, 1986), 27–44.

⁴⁵ For two recent treatments of the issue in which this conception is *defended*, see S. Shoemaker, 'Time without Change', *Journal of Philosophy* 66 (1969), 363–81, and W. H. Newton-Smith, *The Structure of Time* (London, 1980), ch. 2.

- SCHOFIELD, M. 'The Retrenchable Present', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics. Fourth Symposium Hellenisticum* (Naples, 1988), 329–70.
- SHOEMAKER, S. 'Time without Change', *Journal of Philosophy* 66 (1969), 363–81.
- SORABJI, R. *Time, Creation and the Continuum. Theories in Antiquity and the Early Middle Ages [TCC]* (New York, 1983).
- *Matter, Space and Motion. Theories in Antiquity and their Sequel [MSM]* (London, 1988).
- VAN CLEVE, J. *Problems from Kant* (Oxford, 1999).

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Stoic Metaphysics at Rome

DAVID SEDLEY

I. Introduction

Probably the shortest, and certainly one of the most intriguing, of the numerous fragments of ancient philosophy to turn up in modern times is POxy 3649.¹ All that the sands of Egypt have preserved of this second–third-century AD scroll is its end title:

Κορνούτου
Περὶ ἐκτῶν
β'

What the content of Cornutus' *On properties* book II was can be a matter of little more than speculation. This is a pity, because the topic was almost certainly metaphysical, and metaphysics is by no means a familiar aspect of the Stoicism that has come down to us from the Roman period. Cornutus himself, on the other hand, is a well-documented figure from the imperial Stoa, even if his one surviving work, the allegorizing *Survey of the Greek Theological Tradition*, is far less often studied, discussed, or cited than the predominantly ethical writings of Seneca, Epictetus, and Marcus Aurelius, or even those of the less well-known Musonius Rufus. Born in Libya, teacher at Rome of the poets Lucan and Persius (the latter of whom bequeathed to him his complete collection of the works of Chrysippus), and exiled by Nero in the 60s AD, Cornutus published extensively in both Greek and Latin. But some information on his *Περὶ ἐκτῶν*, if available, might have helped us decide whether metaphysics continued to be part of the Stoic curriculum in the Roman era. Jonathan Barnes has recently shown that Stoic logic, at least, did survive and even prosper in this era,² but no one to my knowledge has directly raised the equivalent question about Stoic metaphysics.

¹ Posthumous edition by E. G. Turner in H. M. Cockle (ed.), *The Oxyrhynchus Papyri*, lii (London, 1984), 12–13. The text is 35 rT in *Corpus dei papiri filosofici greci e latini I** (Florence, 1989).

² J. Barnes, *Logic and the Imperial Stoa* (Leiden, 1997).

One reason for this is no doubt that ‘metaphysics’ does not start out as a recognized part of the Stoic curriculum. What I intend by this term is a family of philosophical topics, some of which, like qualities, causation, and god, belong within physics, while others, such as genera and species, were probably dealt with under the heading ‘dialectic’. It is primarily when looking through a Platonist or Aristotelian lens that we are likely to see in them a unified area of philosophical discourse. A similar perception, however, was already present in antiquity, starting from the revival of Platonism in the second and first centuries BC (Antipater, Panaetius, Posidonius), as Stoics began to re-explore their common ground with Plato.³

It is, I think, no accident that among the hundreds of early Stoic treatises whose titles are known to us there is no antecedent at all for this one, *Περὶ ἐκτῶν*. The terminology and the philosophical concerns of which it is symptomatic belong to the era in which Stoicism was coming to terms with a newly re-emergent Platonism. The language of ‘properties’, or more literally ‘havables’, is not part of the regular currency of early Stoicism, but, so far as I can judge from the meagre evidence, an oddity which creeps in when Stoicism is being compared with Platonism, the first Stoic to whom it is attributed being Antipater. According to Simplicius (*In Cat.* 209.11 ff., 217.9 ff.)⁴ the term ἐκτά was originally an invention of the ‘Academics’, and I believe there is very good reason to take this to mean members of the early (4th–3rd cent. BC) Academy.⁵ The term, we learn, was coined to designate the relation in which a *hexis* stands to the subject it is found in: that subject simply ‘has’ (ἔχειν) it, the verb apparently being favoured as suitably cognate with the noun ἕξις (ibid. 209.14–15).⁶ However, Simplicius adds, in due course the form ἐκτόν acquired an autonomous substantival usage among both Academics and Stoics, becoming sufficiently broad to cover not only enduring ‘states’ (ἕξεις) but properties of all kinds (209.14–29). Thus at one extreme Antipater went so far as to insist that even the mere fact of being

³ Although the latter two names are better known in this regard, Antipater’s 3-book work *Ἄντιπᾶτος κατὰ Πλάτωνα μόνον τὸ καλὸν ἀγαθόν* is said to have argued for there being extensive doctrinal common ground between Plato and Stoicism (*SVF* III Antipater 56).

⁴ Cf. discussion in the seminal article by J. Brunschwig, ‘La Théorie stoïcienne du genre suprême’ [‘La Théorie’], in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics* (Naples, 1988), 19–127, pp. 116–19 = ‘The Stoic Theory of the Supreme Genus and Platonic Ontology’, in his *Papers in Hellenistic Philosophy* (Cambridge, 1994), 92–157, pp. 150–2.

⁵ I argue this in ‘Aristotelian Relativities’, in M. Canto-Sperber and P. Pellegrin (eds.), *Le Style de la pensée: recueil de textes en hommage à Jacques Brunschwig* (Paris, 2002), 324–52.

⁶ This same apparent conflation of the transitive and intransitive senses of ἔχειν (‘have’, versus ‘be (in some state)’) is also found in another source likely to have emerged from the mid fourth-century BC Academy, Aristotle’s *Categories*, at 15b17–18.

something (τι εἶναι), the ultimate Stoic genus common to corporeals and incorporeals alike, should count as a ἐκτόν.⁷

In discussions with the Platonists, one reported version of Stoic metaphysics distinguished the relation in which concrete individuals stand to at least three distinct items.⁸ We ourselves, for example, ‘partake’ (μετέχειν, i.e. are members) of the species Man, which has the status of a ‘concept’ (ἐννόημα), but which is further identifiable with what the ‘ancients’, i.e. the early Platonists, called Ideas; we ‘bear’ (τυγχάνειν, i.e. are designated by) the common noun ‘man’; and we ‘have’ (ἔχειν) the corresponding quality of being human. ‘Having’ something in such contexts is likely, according to Stoic metaphysics, to mean literally possessing it as a part,⁹ and whatever our relation to the species Man may be—whether man be viewed as a Platonic Idea or a Stoic ‘concept’, or indeed both—it cannot be one of literally ‘having’ it, i.e. as a part, but rather of ‘participating’ in it. By contrast Simplicius’ ‘Academics’, as committed Platonists, had identified the things a subject ‘has’ with the appropriate

⁷ Simplicius, *In Ar. Cat.* 209.24–6 (not in SVF), ὁ δὲ Ἀντίπατρος ἐπεκτείνει τοῦνομα τοῦ ἐκτοῦ μέχρι τοῦ κοινῶς συμπτόματος σωματικῶν καὶ ἀσωμάτων, οἷον τοῦ τί [ἦν] εἶναι. The Aristotelian locution which some MSS present by supplying ἦν cannot be excluded as the right reading, but it has no parallels in Stoic texts. See Brunschwig, ‘La Théorie’.

⁸ See Arius Didymus ap. Stob. I 136.21–137.6 = SVF I 65 = A. A. Long and D. N. Sedley, *The Hellenistic Philosophers* [LS] (Cambridge, 1987) 30A (and cf. *Simpl. In Ar. Cat.* 209.10–14). The terminological distinctions here are attributed to ‘Zeno’ (Ζήνωνος, prefixed to the entry), but Keimpe Algra, ‘Zeno of Citium and Stoic Cosmology: Some Notes and Two Case Studies’, *Elenchos* 24 (2003), 9–32, and in T. Scaltsas and A.S. Mason (eds.), *The Philosophy of Zeno* (Larnaca, 2002), 155–83, shows that Stobaeus standardly prefixes Zeno’s name in this way to Stoic entries excerpted from Arius Didymus, thereby indicating merely that what follows is Stoic doctrine, and that this practice is particularly recognizable when, as here, the main entry that follows uses the plural, ‘they say’. In the light of Algra’s findings, combined with the observations made in the present essay, I find myself increasingly drawn to a relatively late dating of the doctrinal claims in this key fragment—in contrast to V. Caston, ‘Something and Nothing: The Stoics on Concepts and Universals’ [‘Something or Nothing’], *OSAP* 17 (1999), 145–213, who takes it to represent exclusively the first generation of the school. There is good evidence that the matching of Platonic Ideas to Stoic ἐννόηματα had indeed begun in the first generation of the Stoa with Cleanthes (Syrianus, *In Ar. Met.* 105.28–9, on which see p. 120 below, and cf. Aetius I 10.5, attributing the same equation to οἱ ἀπὸ Ζήνωνος Στωικοί); but the developed scheme presented by Arius goes well beyond that, and may attest a much fuller dialogue with Platonism, as does the interpretation favoured by Cornutus (p. 121 below). The differing Stoic views on Platonic Ideas recorded by Syrianus (p. 120 below) need not be taken to represent changes in Stoic teaching on the status of universals, but simply varying (and not necessarily mutually exclusive) historical interpretations of Plato’s theory.

⁹ In this they appear to disagree with the Academics, who had, according to Simplicius (*In Ar. Cat.* 217.13–17), described the ‘having’ relation as the kind exemplified by the way in which the wise have wisdom and walkers have walking (whatever relation that might be), in express distinction from the way we have either body parts or possessions. It is the Stoic theory that all bodies are constituted by pneuma as well as material elements, and that their pneuma is their qualities, that erases this distinction between possession of qualities and possession of parts.

Ideas, thus earning from him the accusation of incoherently making a particular subject *have* an item which was also regarded as in its very nature separate from all particulars.

Although much remains mysterious about the Stoic discussions of *ἐκτά*, it does seem plausible (a) that the issue was one prompted by the growing prominence of Platonic metaphysics from the late second century BC onwards, and (b) that it came to concern the question what properties should legitimately be regarded as *immanent*.¹⁰ Moreover, while metaphysical differences remained between the two schools, there is a strong impression that the Stoics in question were busy mapping their metaphysical schemes onto the Platonic one.

Since Cornutus, the author of *Περὶ ἐκτῶν* in at least two books, represents the Stoicism of an era in which Platonism was finally regaining its old ascendancy, we need not be too surprised by the title. As elsewhere, reference to the ‘hivable’ betokens comparative discussion of Stoic and Platonist metaphysics. But do we possess, independently of the papyrus scrap, any testimonia deriving from the *Περὶ ἐκτῶν*? Possibly we do.

Syrianus (*In Ar. Met.* 105.21–106.13) reels off a list of philosophers who he alleges have misinterpreted the nature of Platonic Ideas. No fewer than three Stoic misinterpretations are included. Cleanthes identified the Ideas with ‘concepts’ (*ἐννοήματα*); Chrysippus, Archedemus, and the majority of the Stoics adopted a nominalistic interpretation; and Cornutus identified the Ideas with *τὰ γενικά*, generic items. It is left unclear what this last interpretation amounted to, but since Syrianus reads it as reducing Ideas to purely mental constructs (106.12, *ἐν ψιλαῖς ἐπινοαῖς γιγνόμενα*) there need be little doubt that Cornutus was employing the term *γενικά* in its proper Stoic usage, just as, before him, Cleanthes had been employing *ἐννοήματα* as a Stoic term of art. The Stoic significance of these terms is as follows, according to Diogenes Laertius (VII 60–1). A Stoic *γένος* is exemplified by ‘living creature’ (*ζῷον*), although some genera are more generic than others, so that ‘most generic’ (*γενικώτατον*) of all is whatever genus does not itself fall under a further genus. So far there is nothing distinctively Stoic about this, but there is when Diogenes continues by defining a genus as a collection of inseparably linked ‘concepts’ (*ἐννοήματα*), the latter term designating all species (*εἶδη*) in the familiar sense (man, horse, etc.),¹¹ but excluding the very lowest species, which in Stoic usage are individuals like Socrates.

¹⁰ Cf. Simpl. *In Ar. Cat.* 212.7–11, where the comparison of Aristotle, Academics, and Stoics on what is and what is not immanent is further complicated by his suggestion that the Stoics, in making predicates (*κατηγορήματα*) incorporeal, are denying their immanence.

¹¹ Although no source affirms this, it seems clear both from the examples of *ἐννοήματα* and from the Stoic definitions of these and of *γένος* that the former are limited to *infimae species*.

According to this Stoic account, then, if what is γενικόν is assumed to be identical with γένη, it is indeed conceptual in status, since a γένος consists of ἐννοήματα or ‘concepts’. But why should Cornutus identify Platonic Ideas with γένη rather than with the ‘concepts’ of which those γένη are said to be composed? This would suggest a revisionary interpretation of Plato, based on renewed attention to his text. For it is perfectly true that, although the critical and interpretative tradition from Aristotle on had chosen Man as a prime example of a Platonic Idea, Plato’s text nowhere fully commits him to there being any such Idea, whereas in the *Timaeus* a generic Idea, that of ‘Living Creature’ (ζῳον), undeniably plays a prominent role. It could be argued, then, that if Cornutus reinterpreted Platonic Ideas as exclusively generic, that had enough prima facie plausibility to get a run for its money, especially given the pre-eminence of the *Timaeus* among the Platonic texts by his date.

On the other hand, it would take a very strained reading of Platonic ontology to exclude *all* species from the realm of Ideas, and there is an alternative, and I think preferable, reading to consider. In certain contexts, Stoic sources may quite happily call even a species like man ‘generic’.¹² And given their idiosyncratic usage of ‘specific’ to include, at one extreme, individuals like Socrates, it is actually quite reasonable that in relation to such individuals the species man should be deemed ‘generic’. If he had in mind this broader Stoic use of ‘generic’, Cornutus’ point in choosing τὰ γενικά, rather than ἐννοήματα, as the Stoic equivalent to Platonic Ideas will have been to ensure that they should not be *limited* to lowest kinds like Man, as Cleanthes’ formulation would imply, but should include genera like Living Creature *as well*, thus having the merit of taking due account of the *Timaeus*.

Importantly, on this latter reading Cornutus would still be, as Syrianus takes him to be, treating Platonic Ideas as purely mental constructs, since every Idea would be either an ἐννόημα or a collection of ἐννοήματα. We will later find reason to think that Cornutus’ conceptualist reading of the Ideas was one that, *mutatis mutandis*, Platonists in his own day might have recognized as comparable to their own. If, as I have suggested, his *Περὶ ἑκτῶν* was an exploration of metaphysical differences and common ground between Stoicism and Platonism, his attempt to align Platonic Ideas with one particular Stoic metaphysical class may well have been part of that process of negotiation.

I do not at present see how to take the discussion of Cornutus’ treatise any further. But the above remarks, however tentative, do make an

¹² See S.E. *M* VII 246, and cf. Simplicius, *In Ar. Cat.* 105.9–11. For Seneca, *Ep.* 58.16, see below.

appropriate prelude to discussion of the broader issue: what became of Stoic metaphysics at Rome, and, more generally, in the Roman imperial era? For on the evidence available (at least, that which I have so far turned up), it seems not only that it was the Platonic spotlight that brought metaphysics into prominence as a distinct area of Stoic discourse, but that Platonism came to be regarded as setting the standard in this field, so that the Stoic contribution to metaphysics was treated, even by Stoics, as tidying up what was a basically Platonist picture, rather than as seeking to replace it in its entirety.

My primary material for developing this claim lies in two letters (58 and 65) of Seneca. While I am in general wary of assuming Seneca to think or behave as a typical Stoic, there will I believe be indications that this particular gesture towards syncretism is less his own idiosyncrasy than a sign of the times. The two letters have frequently been cited and discussed as documents on early imperial Platonism,¹³ and have sometimes been treated as evidence for the Antiochean tradition in middle Platonism, or even—closer to my present concern—for the inter-school syncretism of the early imperial era. Here, however, I want to concentrate on the somewhat neglected question of what they might tell us about Seneca's Stoicism, and more specifically about its relations to his Platonist contemporaries.

2. Counting Ontological Kinds

Letter 58 opens with a Lucretian-sounding¹⁴ lament on the poverty of the Latin language, especially as regards Platonic terminology. After the initial example of how to translate 'gadfly', Seneca chooses to focus on

¹³ For Letter 58 see the recent discussion, with full bibliography, in M. Baltes, *Der Platonismus in der Antike*, iv [Platonismus] (Stuttgart, 1996), 291–7, 310–15. The main earlier contributions on the two letters are W. Theiler, *Die Vorbereitung des Neuplatonismus* (Berlin, 1930; 2nd edn. 1964), ch. 1; E. Bickel, 'Senecas Briefe 58 und 65. Das Antiochus-Posidonius-Problem' ['Senecas Briefe'], *Rh. M.* 103 (1960), 1–20; P. Hadot, *Porphyre et Victorinus [Porphyre]* (Paris, 1968), 156–63; G. Scarpat, *La lettera 65 di Seneca* (Brescia, 2nd edn. 1970; *non vidi*); J. Whittaker, 'Seneca, Ep. 58.17', *Symbolae Osloenses* 50 (1975), 143–8; J. M. Dillon, *The Middle Platonists [MP]* (London, 1977), 135–8; P.-L. Donini, 'L'ecletticismo impossibile. Seneca e il Platonismo medio' ['L'ecletticismo'], in id. and G. F. Gianotti, *Modelli filosofici e letterari. Lucrezio, Orazio, Seneca* (Bologna, 1979), 149–300; S. Gersh, *Middle Platonism and Neoplatonism. The Latin Tradition*, i (Notre Dame, 1986), 181–95; Brunschwig, 'La Théorie'; J. Mansfeld, *Heresiography in Context: Hippolytus' Elenchos as a Source for Greek Philosophy [Heresiography]* (Leiden, 1992), 84–107.

¹⁴ Probably intentional, given that the name Lucretius occurs to Seneca soon after (12) when exemplifying the species 'human being'.

the equally Platonic cases of *οὐσία* and *τὸ ὄν*. His brief remarks on *οὐσία* (6) include a description of it as ‘a necessary thing, by its nature containing the basis of everything’ (‘res necessaria, natura continens fundamentum omnium’).¹⁵ This does not read like a Platonist usage of the term. It is either, as Mansfeld proposes,¹⁶ a reference to the Aristotelian category of substance, viewed as the subject of all predications, or, as I am more inclined to suspect, the regular Stoic use of *οὐσία* as a designation for matter. When it comes to *τὸ ὄν*, with little satisfaction Seneca settles on the rendition *quod est*. This in turn leads him to recount a meeting with a Platonist friend the day before, in which he was informed that *τὸ ὄν* is used by Plato in six senses (8, ‘sex modis . . . dici’ = ἐξἑαχῶς λέγεσθαι). It is from this point that he seems to switch to a fundamentally Platonist perspective.

The reportedly sixfold use of *τὸ ὄν* may at first sound like a contribution from Platonic lexicography, which typically enumerated the number of senses in which Plato uses this or that term. But in what follows it proves to be a primarily metaphysical claim: Plato is committed to six different species, or perhaps levels, of being. This is confirmed, if confirmation were needed, by the interlude at 8–12 in which Seneca proceeds to explain to Lucilius what genera and species are, insisting that to do so is a necessary prelude to recounting Plato’s six kinds of being. Classification into genera and species was an established part of Stoic dialectic too, but Seneca is at this stage so absorbed in the Platonist’s account of classification that he associates the method, as many Platonists (but few Stoics) would, with the name of Aristotle (9).¹⁷ The whole point of the account he offers is to show, by working upwards from lowest species, that we will inevitably end up at ‘what is’, the Platonist highest genus; and, as we will now see, he is conscious that this is an ostensibly *anti-Stoic* metaphysical thesis that he is defending. The key passage is 12–15:

¹⁵ I am not even sure whether to construe this as (1) ‘A necessary thing, a continuous (or “containing”) nature, the basis of everything’, (2) ‘A necessary thing which in its nature contains the basis of everything’, or (3) ‘A necessary thing, a nature containing the basis of everything’.

¹⁶ Mansfeld, *Heresiography*, 90.

¹⁷ It is not just the name of Aristotle, but also the illustrative content, that confirms the largely Aristotelian origin of this account (although the treatment of ‘what is’ as a genus—the highest—is not Aristotelian but Platonist: see Burnyeat in this volume). In particular, it has been noticed that the Aristotelian attribution of soul to plants (10) is not correct Stoicism (nor precisely correct for Plato, who strictly would classify plants as ζῶα, *Tim.* 77a–b). For discussion of the treatment of division in the letter, including ways in which Stoicism may have influenced it, see Mansfeld, *Heresiography*, 90, Baltes, *Platonismus*, iv. 310–15.

- 12 illud genus quod est generale supra se nihil habet. initium rerum est;
- 13 sub illo sunt. (13) Stoici volunt superponere huic etiamnunc aliud genus magis principale. de quo statim dicam, si prius illud genus de quo locutus sum merito primum poni docuero, cum sit rerum omnium capax.
- 14 quod est in has species divido, ut sint corporalia aut incorporalia. nil tertium est. corpus quomodo divido? ut dicam: aut animantia sunt aut inanima. rursus animantia quemadmodum divido? ut dicam: quaedam animum habent, quaedam tantum animam. aut sic: quaedam inpetum habent, incedunt, transeunt, quaedam solo adfixa radicibus aluntur, crescunt. rursus animantia in quas species seco? aut mortalia sunt aut immortalia.
- 15 primum genus Stoicis quibusdam videtur 'quid'. quare videatur subiciam. in rerum, inquit, natura quaedam sunt, quaedam non sunt. et haec autem quae non sunt rerum natura complectitur, quae animo succurrunt, tamquam centauri, gigantes et quicquid aliud falsa cogitatione formatum habere aliquam imaginem coepit, quamvis non habeat substantiam.
- 16 nunc ad id quod tibi promisi revertor, quomodo quaecumque sunt in sex modos Plato partiatur.

That generic genus 'what is' has nothing above itself. It is the principle of all things: they fall under it. The Stoics want to place above this a yet further, more primary genus. I shall tell you about it, as soon as I have started by proving that that genus which I mentioned is correctly placed first, being all-inclusive.

'What is' I divide into these species: beings are either corporeal or incorporeal. There is no third kind. And how do I divide body? 'Bodies are either ensouled or inanimate.' Again, how do I divide ensouled things? 'Some have a mind, some only a soul; or else 'Some have impulse, movement, change of place, some are fixed to the soil by their roots and have nutrition and growth.' Again, into what species do I divide animals? They are either mortal or immortal.

Some Stoics think that the first genus is 'something', and I shall explain why they think so. In the world's nature, they say, some things are, some are not. Yet even these things which are not are included in the world's nature—things which strike the mind, such as centaurs, giants and whatever else, formed by false thinking, begins to have some image although it has no subsistence.¹⁸

Now I shall return to what I promised you: how Plato divides whatever is into six kinds.

¹⁸ *Substantia*—apparently Seneca's own technical coinage—is unlikely to be translating *οὐσία* here (as supposed by Caston, 'Something or Nothing', 154 n. 19, and a number of other interpreters), since Seneca has already announced (58.6, where Muretus' emendation of *quid sentiam* to *essentiam* is universally accepted, and rightly so) that his rendition of *οὐσία* is *essentia*. Even if this evidence were disregarded, by far the most plausible Greek original for *substantia* is *ἐπιόστασις*, which it literally renders. It seems, then, that at least on this version of Stoic metaphysics 'subsistence', while correctly attributed to incorporeals like space and time, which are a real and objective part of the world's furniture, is denied to merely fictional entities, which not only are not bodies but do not so much as subsist. In saying this, I am modifying remarks on the same issue made in LS i. 164.

The point of the uncompleted dichotomous division in section 14, starting from the genus ‘what is’, seems to be precisely to show that it is all-inclusive, and therefore indeed the highest genus.

It would be hard to deny that, by and large, Seneca has here adopted a Platonist voice, while maintaining a studied distance from the Stoics. But has he simply forgotten that he himself is supposed to be a Stoic? Surely not. He contrives the sequence of comments so as to make his contradiction of the Stoics less direct than it might have been: after explaining why Plato is right to make ‘what is’ the highest genus, he employs added precision in attributing the dissenting view only to ‘some’ Stoics, leaving us with the impression that you can if you wish be a Stoic but endorse Plato’s ontology.¹⁹

And there are further signs that what we are hearing is not a simple polarization between Stoic and Platonist metaphysics, but rather the fruit of a dialogue between the two schools. This shows up in at least two ways.

First, the Platonic ontological hierarchy which Seneca proceeds to outline has the following form:

1. The intelligible
2. God
3. The Ideas (*ιδέαι*)
4. Immanent forms (*εἰδη*)²⁰
5. Sensible objects
6. Quasi-beings.

The last item in this list reads: ‘The sixth kind is of things which have quasi-being, such as void and time’ (‘sextum genus eorum quae quasi sunt: tamquam inane, tempus’, 22). This is not a familiar feature of Platonist ontologies, and appears rather to be present as a result of negotiations with Stoicism. Void and time are, along with place and the *lekton*, members of the regular Stoic list of incorporeals, which Stoic metaphysics classifies as non-beings. Although they are nowhere else in our surviving sources for either Stoicism or Platonism called ‘quasi’ beings, even that terminology has sufficient Stoic credentials to fit the hypothesis that we are here dealing with input from a Stoic source.²¹

¹⁹ I agree with Brunschwig, ‘La Théorie’, that Seneca is rejecting the *ti* as highest genus, and not merely maintaining (as proposed by Mansfeld, *Heresiography*, 84–5 n. 22) that ‘being is the highest genus in the context of the Aristotelian division’.

²⁰ These are apparently so named because equated with Aristotelian forms.

²¹ See DL VII 61 and Arius Didymus loc. cit. in n. 8 for Stoic ‘concepts’ (*ἐνοήματα*), e.g. the universal man or horse, as *ὡσαυτεῖ τιναὶ καὶ ὡσαυτεῖ ποιά*. I take the first expression to indicate that they are pseudo-individuals, the second that they are pseudo-humans, pseudo-horses, etc.

A tempting explanation of the formulation we find in Seneca is that roughly the following exchange has taken place. The Stoic party to the discussion has argued, as we know at least some Stoics did,²² that *τι*, ‘something’, is the highest genus, including as it does not only bodies, i.e. beings, but also incorporeals such as void and time. These latter, they will have maintained, may in ordinary usage be said to ‘be’ or ‘exist’, but are in fact mere pretenders to that status, much as one might say of the quasi-being mythical beasts are generally agreed to have. If, then, the furniture of the world includes these non-beings, these plausible pretenders to being, along with the corporeal entities which are *bona fide* beings, the most generic designation of that furniture must be such as to allow both kinds to be included—both the genuine beings and the quasi-beings—and that designation is ‘something’. The Platonist response is, it seems, to accept that these quasi-beings, as listed by the Stoics, must be fitted in somewhere in the ontological hierarchy, but to place them low down *within* the ranks of being: such quasi-beings are simply very low-ranking beings—beings, but not in the strict sense. Above them, we should note, stands the fifth rank of beings, things which ‘are’ in the everyday sense (‘*quae communiter sunt: . . . homines, pecora, res*’, 22). In the immediate sequel, Seneca’s outline of Platonism will acknowledge that Plato denied these everyday sensibles ‘being’ in the strictest sense because of their state of constant Heraclitean flux (22–3, especially ‘*quaecumque videmus et tangimus, Plato in illis non numerat quae esse proprie putat*’; 26, ‘*omnia ista quae sensibus serviunt, quae nos accendunt et inritant, negat Plato ex his esse quae vere sunt*’); yet it still classifies them as beings, albeit lowly ones (a description easily enough paralleled in Platonic texts). Nothing, then, could be more natural than that that same Platonist metaphysics should rank even lower, but still in the same hierarchy as these mere images (cf. 27 ‘*imaginaria*’) of true being, the items which the Stoics see as falling short even of that level of being, because they are mere imitators of *it*, not unlike the items apprehended by the lowest level of cognition in Plato’s Divided Line.²³ (It is in fact quite a tempting speculation that the sixfold list compiled by Seneca’s Platonists represents (1) the entire intelligible realm, (2) the Good, equated with god, and (3)–(6) the four descending levels of the Divided Line.)²⁴

In short, the Platonists whose work has impressed Seneca, and is visible in the letter, are ones who are keen to adapt and incorporate Stoic

²² Texts in LS 27.

²³ Cf. Mansfeld *Heresiography*, 85 n. 23, 106–7.

²⁴ This is, at least, somewhat more plausible than the suggestion of Hadot, *Porphyre*, 162–3 that items (2)–(5) represent the four Stoic categories, respectively *ὑποκείμενον*, *ποιόν*, *πῶς ἔχον*, *πρὸς τί πως ἔχον*, and that of Bickel, ‘Senecas Briefe’, 1–7, that the scheme in its entirety is based on the *Timaeus*, with (6) = matter.

ontology, rather than to ignore or marginalize it. When he calls his Platonist informant a ‘friend’, this may be more than formal politeness or literary convention. We have started to see evidence of a genuinely collaborative dialogue between the schools.

This picture of a Seneca willing to graft into his Stoicism the fruits of a friendly dialogue with Platonists may look a little optimistic, but the following consideration should do something to corroborate it. Seneca’s Stoics call the highest genus ‘quid’. I have, in line with scholarly convention, translated this as ‘something’, as representing the Greek indefinite pronoun $\tau\iota$. But why does Seneca choose what looks like the interrogative pronoun? Elsewhere, when his Greek original has evidently used other forms of the indefinite pronoun $\tau\iota\varsigma$ for designating *members* of this broad genus rather than the genus itself, Seneca does not hesitate to use the more natural *aliquis* or *quidam*, e.g. (in the above passage) ‘quaedam sunt, quaedam non sunt’.²⁵ Clearly in such cases forms of *quis* could not have been substituted for those of *quidam* without wrecking the grammar. But where *could* they be acceptably substituted? Only in a very restricted range of constructions,²⁶ notably in conditional clauses, ‘si quid . . .’, ‘If anything . . .’. Now it is true that the Stoics’ technical use of $\tau\iota$ may sometimes feature in conditionals, notably in the context where definitions and divisions are re-analysed as disguised conditionals ranging over particulars, ‘If something is a man, it is a rational mortal animal’ (εἰ τί ἐστιν ἄνθρωπος, ἐκεῖνο ζῶν ἐστι λογικὸν θνητόν), and ‘If some things (or ‘somethings’) are beings, they are either good or bad or indifferent’ (εἰ τινά ἐστιν ὄντα, ἐκεῖνα ἢτοι ἀγαθὰ ἐστιν ἢ κακὰ ἐστιν ἢ ἀδιάφορα).²⁷ This might indeed come out in Latin as ‘si quid . . .’ or ‘si quae . . .’. But there is nothing in the syntax of *Ep.* 58.15 to encourage us to understand *quid* that way.

Or is it that Latin was by Seneca’s day developing a technical redeployment of interrogative pronouns as indefinites? It is certainly true that such a redeployment was already suggested by Greek philosophical usage, where in most written contexts a reader could not readily distinguish the interrogatives *ποιόν*, *πόσον*, etc. from their indefinite counterparts *ποιόν*, *ποσόν*, etc., the latter group used to designate categorial classes directly analogous to the Stoic $\tau\iota$. And it is undeniably the case that this Greek philosophical fashion had by the first century BC spilt over into Latin usage, since Cicero is happy to represent *ποιά* as *qualia* (just as in the same context, *Ac.* I 24–9, he famously renders *ποιότης* as *qualitas*). Seneca, despite his greater resistance to introducing technical terminology into

²⁵ For a similarly non-casual use of *quiddam*, cf. *Ep.* 117.13.

²⁶ See *OLD*, sv. ‘quis’.

²⁷ S.E. *M* XI 8–11.

Latin, is comfortable about taking over this Ciceronian usage of *quale* without seeing any need to explain or justify it (*Ep.* 117.27). Yet outside the Senecan passage which we are now considering, there seems to be no comparable move to create an indefinite use of *quid*.

Moreover, there is clear evidence that, even to a more or less contemporary Stoic far more tolerant of Latin technical coinages than Seneca, such a use of *quid* would have sounded wrong. Sergius Plautus was a Roman Stoic²⁸ whom Quintilian records as introducing terms which grated on Roman ears (VIII 3.33), such as *ens* for ‘what is’ (where, as we have seen, Seneca prefers the more conservative *quod est*). Sergius also created a vocabulary for the Aristotelian categories (Quintilian III 6.22). In addition to *qualitas*, *quantitas*, *ubi*, and *quando*, he coined a Latinization of the Greek term for ‘relative’, *πρός τι*. If he had been as comfortable with *quid* as with the other Latin interrogative terms he adapted as indefinites, we would have expected the rendition *ad quid*. But instead he chose *ad aliquid* (cf. also Quintilian himself at III 6.37). In exercising this restraint about the introduction of an indefinite *quid*, he was acting in keeping with the entire imperial Latin tradition, so far as I have been able to establish, provided that we discount the present passage in Seneca.

In short, not only was any reader not already familiar with the special Stoic use of *τι* almost bound to take Seneca’s *quid* as interrogative here, but that is likely to be how Seneca himself intended it.

Confirmation of this lies, once again, in evidence about Stoic–Platonist syncretism. We know little of the Platonist Severus, not even his date. He is conventionally placed in the late second century AD on the tenuous ground that Proclus’ list, Severus–Atticus–Plutarch (*In Tim.* III 212.8–9), appears to be in reverse chronological order²⁹—evidence which could readily be discarded if something more substantial came along. He is best known for adopting, in company with Plutarch and Atticus, a literally creationist reading of the *Timaeus*’ cosmogony: the world was created, but thanks to divine benevolence will last for ever. His adoption of this position does little to help date Severus, since, although it was held by Plutarch and Atticus in the late first to mid-second century AD, it had already had some currency in the early Academy, and was (in my view) in fact adopted by Antiochus in the early first century BC as representing the mainstream position of the early Academy.³⁰ Thus a holder of this view might be dated to any time between the mid-fourth century BC and the mid-second century AD, if indeed not later. That it was, for example,

²⁸ See Quintilian X 1.124.

²⁹ Dillon, *MP*, 262. For further bibliography see A. Gioè, ‘Severo, il medioplatonismo et le categorie’ [‘Severo’], *Elenchos* 14 (1993), 33–53, pp. 33–4 n.1.

³⁰ I argue this in ‘The Origins of Stoic God’, in D. Frede and A. Laks (eds.), *Traditions of Theology* (Leiden, 2002), 41–83.

current in the first century AD is supported by the very letter of Seneca which we are currently considering, since the Platonist thesis which he articulates there includes the claim, distinctive of the creationist reading, that the world is only contingently everlasting, thanks to divine benevolence (27–9). Given this, there is no reason why Severus—even if his Roman name is by this date no guarantee that he lived and worked in Roman circles, or even necessarily spoke Latin—should not be a participant in the Platonist discussions echoed by Seneca in Letter 58. That would fit well enough with one feature that has been noticed in the evidence for Severus’ work, namely a degree of sympathy with Stoicism which sets him apart from, for example, his fellow Platonist Plutarch.³¹

But it is when we turn to Seneca’s *quid* and its background that such a hypothesis really begins to commend itself as likely. Severus, in addition to his creationist stance, is known also to have had views about the exegesis of that classic passage *Timaeus* 27d:

ἔστιν οὖν δὴ κατ’ ἐμὴν δόξαν πρῶτον διαιρετέον τάδε· τί τὸ ὄν ἀεί, γένεσιν δὲ οὐκ ἔχον, καὶ τί τὸ γιγνόμενον μὲν [ἀεί], ὄν δὲ οὐδέποτε;

In my judgement, then, one must distinguish the following. What is that which always is but has no becoming? And what is that which becomes but never is?

The answer to *Timaeus*’ pair of questions amounts, of course, to the Platonic dual ontology of the intelligible and the sensible, the same ontology as also underlies Seneca’s letter. Severus had an intriguing suggestion as to the nature of the classification on offer here. Proclus (*In Plat. Tim.* I 227.15–17) writes:

πρῶτον οὖν τὸ τί βούλεται μὲν ὀρικὸν εἶναι (τὸ γὰρ τί ἔστιν ἐν τοῖς ὀρισμοῖς προτάττειν εἰώθαμεν), καὶ οὐχὶ γένος ἔστιν, ὡς οἴεται Σευῆρος ὁ Πλατωνικός, λέγων τοῦ ὄντος καὶ γινομένου τοῦτο εἶναι γένος, τὸ τί, σημαίνεσθαι δὲ ὑπ’ αὐτοῦ τὸ πᾶν.

The first point, then, is that ‘What...?’ is meant to be definitional, it being customary in definitions to open with the ‘What is...?’ question. It is not a genus, as is held by Severus the Platonist, who says that this—namely the ‘What?’—is the genus of what is and what becomes, and that what it signifies is ‘the all’.

I have translated τὸ τί as ‘the “What?”’, but this is by no means certain.³² On the face of it, it is possible that Severus intended the indefinite rather than the interrogative pronoun, and that he took the *Timaeus* lemma to be using τὸ in the same way: ‘That which always is *is something*, and that which becomes but never is *is something*.’ Some may object to the barbarism of the indefinite pronoun (normally enclitic) opening a clause, but actually it is acceptable Platonic Greek in those rare cases where the

³¹ Dillon, *MP*, 262–4.

³² For a critical survey of interpretations, see Gioè, ‘Severo’.

indefinite pronoun requires strong emphasis (cf. *Theaetetus* 147b 12). Plato would, in fact, have good reason for using an emphatic opening $\tau\iota$ here, namely as a ruse for asserting that *there is* such and such a thing without using the existential verb ‘be’, which in this special context would be glaringly inappropriate for that which ‘never is’. I am not suggesting that this is necessarily the right reading of Plato’s text (although I would not discount it either); but we must ask whether Severus thought otherwise. The main reason for in the end doubting that Severus thought intended so revisionary a construal lies in the wording of Proclus’ criticism of him. Proclus, as we have seen, himself takes the interrogative to pose the $\tau\iota \acute{\epsilon}\sigma\tau\iota$ question, and adds that this is a ‘definitional’ locution, not the name of a genus as Severus thought. To all appearances, he understands Severus as agreeing with the usual construal, but as taking Plato to be hinting, not at the ‘What is . . .?’ definitional question, but at a metaphysical class—perhaps, one might surmise, brought to mind by the class which Aristotle calls $\tau\acute{o} \tau\iota \acute{\epsilon}\sigma\tau\iota$, the ‘What is it?’ (naturally Severus’ formulation had to differ in omitting the verb, $\acute{\epsilon}\sigma\tau\iota$, because for Plato the class includes *non-beings* as well as beings). There is no hint, anywhere in Proclus’ discussion of this Platonic lemma, that he is aware of an alternative construal in which $\tau\iota$ is indefinite.³³

Let us, then, assume that Severus shared what appears to have been the unanimous consensus on the syntax of Plato’s sentence. If so, he nevertheless noticed that the ‘What is . . .?’ question, with the usual $\acute{\epsilon}\sigma\tau\iota$ studiously omitted, served Plato for the purpose of generalizing over $\acute{\omicron}\nu\tau\alpha$ and $\omicron\upsilon\kappa \acute{\omicron}\nu\tau\alpha$ alike. And, one must suppose, he proceeded to connect this with the supreme metaphysical genus adopted by some Stoics for the same

³³ On this point, see Brunschwig, ‘La Théorie’, 62–3 (= 117–18 of the English version). Shortly before, at *In Tim.* I 224.25–9, Proclus does acknowledge the Stoic use of generic $\tau\iota$, to dismiss it as irrelevant to the Platonic division at *Tim.* 27d–28a. But he regards this Stoic doctrine as semantic in character (*ἀλλὰ μὴν οὐδ’ ὡς φωνῆν εἰς σημαίνόμενα διαιρετέον ποίαν γὰρ φωνῆν κοινὴν ὁ Πλάτων λαβὼν τό τε αἰεὶ ὄν καὶ τὸ γιγνόμενον διείλει; οὐκ ἔστιν, εἰ μὴ ἄρα λέγοι τις τὸ τῷ τούτῳ δὲ οὐ Πλατωνικόν, ἀλλὰ ἀπὸ τῆς Στωϊκῆς εἰλκυσται συνηθείας*), in express contradistinction to the ontological division of a genus into species (ibid. 225.5–23). Since Severus’ analysis, as reported by Proclus, is explicitly of the latter type, it seems to follow that it did not occur to Proclus himself (*pace* Giòè, ‘Severo’, 42–3) to connect it with the Stoicizing indefinite $\tau\iota$. This further strengthens the impression that Proclus read Severus’ *ti* as interrogative. On the other hand, Plotinus (*Enn.* VI 2.21–5) had referred disapprovingly to what is plainly this same Severan interpretation of Plato in a context where it is natural to read his *to ti* as indefinite (because of the implied reference back to his discussion of the Stoic genus $\tau\iota$ at VI 1.25; see Giòè, ‘Severo’, 41–2). Plotinus was acquainted with Severus’ commentaries (Porphyry, *Vit. Plot.* 14.11), but, if I am right, while he was better informed than Proclus about the Stoicizing import of Severus’ interpretation, he was vaguer about Severus’ precise construal of the Platonic lemma. This would reflect that fact that Proclus is engaging directly with the existing exegetical tradition on the passage, while Plotinus is writing on the underlying philosophical issue, with Platonic exegesis situated only in the background.

purpose of generalizing over beings and non-beings.³⁴ If so, he probably inferred the name of that Stoic genus to be itself one using the interrogative pronoun rather than the indefinite.

This background, conjectural though it may be, would do much to help contextualize and explain the Seneca letter. The Platonic ontology sketched at *Tim.* 27d–28a has become in a sense the shared property of the two schools. Severus has maintained that the ‘What...?’ question from which Plato launches his ontology implies a thesis about ‘What?’ as the supreme genus set over both beings and non-beings, a thesis to which the Stoics are also heirs, even though they may differ sharply from Plato as regards what items to count as non-beings.³⁵ Seneca’s use of the interrogative *quid* to name that same genus is, if I am not mistaken, evidence that at least some Stoics in his day accepted Severus’ syncretistic proposal. His Platonist informants themselves resisted Severus’ thesis, rejecting the imposition of any such genus and instead allowing ‘be’ a sufficiently broad semantic range to take in even mere pretenders to ‘being’. And in this regard the Platonist Severus is, paradoxically, more Stoic than the Stoic Seneca. Such a picture suggests a philosophical milieu in which school interchanges, at least on metaphysical questions, take the form of a two-way trade. (Since, on this story, the interrogative reading of *ti* found in Seneca originates from Severus’ reflections on the *Timaeus*, it would follow that, contrary to the currently accepted chronology, Severus should be dated not later than the mid-first century AD.³⁶ I know of no good reason to discount such a redating.)

Both Severus and Seneca are, albeit in diametrically opposed ways, facilitating a rapprochement between Platonism and Stoicism. By tradition the Stoics had always identified Platonic Ideas with their own class of *ἐννόηματα*, ‘concepts’, a class which they ranked as *outina* (‘not-some-things’, or, on the interrogative reading, presumably ‘not-whats’).³⁷ That

³⁴ Cf. Plutarch, *Col.* 1116B, another Platonist text that constructively compares Platonic non-beings, i.e. *γινόμενα*, to Stoic *τῶνά*, despite its author’s strong dislike for the Stoics.

³⁵ Equally important, Aristotle is *not* heir to the Platonic ontology, given that he does not even go so far as to rank ‘being’ as a genus. This makes Severus’ move fully in keeping with his well-known resistance to the Aristotelianizing wing of contemporary Platonism.

³⁶ See n. 29 above. However, it remains possible, if less plausible, that this reading of the *Timaeus* was (unknown to Proclus) Stoic in origin, and was then merely borrowed by Severus.

³⁷ I here stick to the interpretation I have argued in ‘The Stoic Theory of Universals’, *Southern Journal of Philosophy* 23, suppl., ‘Spindel Conference 1984: Recovering the Stoics’, 87–92, and in LS section 30, as against the arguments of Caston, ‘Something or Nothing’. Its basis is that, for the Stoics, there are only *particulars* (‘somethings’), whereas Platonic Ideas are mere quasi-particulars. Note that the illustrations of the class *quid* quoted by Seneca at 58.15—the plural ‘centaurs’ and ‘giants’—sound carefully chosen to exemplify particulars rather than types.

is, considering Platonic Ideas spurious pretenders to a place in their own ontology of particulars, they banished them to a realm that fell even outside their supreme genus, *ti*, whose hallmark is (or so I believe) particularity. Severus in urging that Plato himself in the *Timaeus* in fact classifies Ideas as *ti*, was surely seeking to vindicate their respectability even within a Stoic ontological framework.³⁸ As for Seneca, encouraged here by his ‘friends’ from the more Aristotelian wing of Platonism, he adopts the opposite tactic of abolishing the Stoic class *ti*. But in doing so he achieves a similar outcome to Severus: without this supreme ontological class *ti*, it will no longer be possible to outlaw Ideas as *outina*, and they can be permitted the status which Plato claimed for them, high up in the ranks of beings—a status which Seneca’s letter is largely devoted to elucidating.

But how can Seneca, as a Stoic, be so hospitable to Plato’s transcendent Ideas? Here we must bear in mind that contemporary Platonists were already offering the path towards such a reconciliation by presenting Ideas as ultimately mental entities—god’s thoughts, in fact.³⁹ The Stoic tradition, although it had differed to the extent of identifying Platonic Ideas with human, rather than divine, concepts, could certainly seek ways of bridging the remaining gap, especially given the widespread Platonist ideal of ‘becoming like god’ (*ὁμοίωσις θεῶν*) according to which human beings can, to a significant extent, come to share god’s thoughts. And this is an appropriate moment to recall that, as we saw earlier, Seneca’s contemporary Cornutus developed his own interpretation of Platonic Ideas in terms of Stoic metaphysical classes, retaining but refining the earlier Stoic identification of them as conceptual. If I am right that the Idea of Living Creature in the *Timaeus* served him as a basis for this revision, he must almost inevitably have discussed the role of Ideas as objects of divine thought.

It is, in fact, a tempting speculation that Cornutus was party to the Stoic–Platonist discussions which we have been witnessing. Section 16 of the letter is puzzling in a number of ways, but reflection on Cornutus can do something to disperse the fog around it. Seneca’s explanation of Plato’s primary class of being reads as follows:

³⁸ How wide the gulf was that had to be bridged between Plato and Stoicism will have depended on the exact spin put on the early Stoic classification of Platonic Ideas as *outina*. On one plausible interpretation, this response is a hostile rejection of Platonic Ideas. But on another, scarcely less plausible interpretation it credits Plato with an anticipation of the Stoic doctrine of universals: universals are *outina*, and it was in fact these same pseudo-individuals that Plato was already seeking to characterize when he introduced the Ideas. I assume Severus to have favoured the latter option, so that, while disputing the Stoic classification of universals as *outina* rather than *tina*, he could nevertheless endorse the existence of common ground between the two schools and work within that framework.

³⁹ See below, n. 45.

primum illud ‘quod est’ nec visu nec tactu nec ullo sensu comprehenditur; cogitabile est. quod generaliter est, tamquam homo generalis, sub oculos non venit; sed specialis venit, ut Cicero et Cato. animal non videtur; cogitatur. videtur autem species eius, equus et canis.

Primary ‘being’ is not grasped by sight, touch, or any sense, but is intelligible. That which is generically, such as the generic man, does not confront the eyes, but a specific man does, e.g. Cicero and Cato. Living Creature is not seen, but its species, horse and dog, are seen.

Clearly something has gone wrong. As it stands, the text first denies, then asserts, that an animal species can be seen.⁴⁰ The most charitable explanation is that Seneca has over-condensed a more complex account found in his source. But what could that account be? Here it may be worth recalling the interpretation of Platonic Ideas advocated in Seneca’s day by Cornutus: Ideas are ‘generic’ items (τὰ γενικά). Earlier I took this to mean that Platonic Ideas are equivalent to Stoic genera *and* species: both of these are classed as generic, the former being more so than the latter. It is this Stoic use of ‘generic’ that is at work in Seneca’s text too, since here too it is applied to a lowest kind like Man as well as (presumably) to genera like Living Creature.

In the light of Cornutus’ usage, it becomes easy to conjecture that the Platonist account went roughly as follows. The primary way of being is to be *intelligible*—taken in accordance with the Platonic two-world ontology as co-extensive with ‘non-sensible’. Intelligibility in turn amounts to genericity, because it is a thing’s greater genericity that makes our access to it less dependent on the senses and correspondingly more dependent on the intellect. Since, then, Platonic being amounts to intelligibility, and intelligibility varies in direct proportion to genericity, it follows that genericity is itself a hallmark of being, and that ascending degrees of being map onto ascending degrees of genericity.⁴¹ Hence, in Seneca’s examples, the ‘generic’ man, in so far as he is less directly accessible via perception than Cicero or Cato is, is called imperceptible; but in so far as such species are *more* accessible via perception than the genus Living Creature, they are called perceptible.

⁴⁰ I have been tempted by an alternative suggestion mentioned to me by Ricardo Salles, that the last sentence might mean ‘but its species [i.e. individual members], a horse and a dog, are seen’. This has the merit of keeping *species* in the last sentence at the same ontological level as the preceding cognate term *specialis*. My reason for not succumbing to the temptation is that the scope of *species* (= εἶδος) and its cognates is determined by the nature of the ‘genus’ under which they fall. Cicero and Cato are represented as species of the genus ‘man’ (*homo generalis*), whereas the last sentence starts from the genus ‘animal’, whose species should be the kinds ‘horse’, ‘dog’, etc., not individuals like Bucephalus, Rover, etc.

⁴¹ This can be compared to the Platonizing thesis scrutinized by Aristotle at *Met.* Z 13–16.

What I am suggesting, albeit tentatively, is the following. Cornutus' Stoicizing mode of speaking about the Ideas as 'generic', and contemporary Platonists' identification of primary being with genericity, have a shared conceptual and terminological framework. Both are adopting a Stoic use of 'generic', according to which its range starts at the level of lowest kinds, and thus excludes only the token individuals which the Stoics idiosyncratically also called 'species'. This reflects once more the climate of inter-school discussion which I have been seeking to depict in the present essay.⁴²

In Letter 58, Seneca goes on to raise the question of what is the Stoic justification for his excursion into Platonic metaphysics. He first admits that reflecting on Platonic ontology confers no direct benefits beyond the intrinsic interest of the subject (25), and the best he can do in this case is urge us to reflect on Plato's eternal Ideas as a device for turning our mind from the fleeting aspects of our own existence to the everlasting benevolence manifested in the world's government. This takes him from hard-core metaphysics to cosmology, and we are urged to extract from the Timaeon picture of a world preserved by divine providence rather than by intrinsic indestructibility some reflections of our own on personal providence as a route to longevity. We must wait for Letter 65 for a more profound statement on the place of metaphysical speculation in an ethically orientated philosophy. It is to that letter that I now turn.

3. Counting Causes

The most obvious link between Letters 58 and 65 is that both are exercises in counting metaphysical items. In 58, on ontological classes, the Platonists' sixfold schema was given the edge over the Stoics (for whom no actual count was returned). In 65 Seneca turns to the task of counting causes, and this time the Stoics will prove to be the winners.

⁴² I am not suggesting that Cornutus himself has necessarily influenced this interpretation of Platonic metaphysics. It is one which would be largely explained from within the Platonists' own resources. Besides, the Platonist sixfold list recorded by Seneca goes on to distinguish the Ideas (item 3) from this primary class. While one can hardly doubt that they also in some sense fall within the scope of this class, the present account focuses on their characterization, not as generic, but as paradigmatic. By contrast, when Cornutus spoke of the 'generic' he was talking specifically about the Ideas.

Yesterday Seneca had a debate with some friends, and Lucilius is being asked to referee it (1–2). The friends in question, it emerges, were proponents of a complex causal theory which combined the Aristotelian four causes with one supplied by Plato. The theory is, in due course, illustrated in terms of the Timaeian world picture, so we need not doubt that the unidentified friends were Platonists, belonging to that wing of the movement which sought to recruit Aristotle as an ally. It may be no coincidence that, in this tendency, they are once more on the opposite Platonist wing to Severus, a known opponent of the Aristotelianizing tendency.⁴³ In a modest degree, that fact encourages the already natural expectation that these ‘friends’ and the Platonist ‘friend’ of Letter 58 represent one and the same group.⁴⁴ Specific doctrinal correspondences between the two Platonist sources—in particular that both distinguish the *ἰδέα*, as transcendent Idea,⁴⁵ from the *εἶδος*, as immanent form—lend further support to their identification.⁴⁶ I do not want to insist that Seneca’s information genuinely comes from conversations with the ‘friends’ and not from a written source. But the kind of interchange that has been emerging does not, at any rate, encourage what has hitherto been the regular assumption, that Seneca is drawing on a Platonizing source a century or more old (Antiochus, Posidonius, and Eudorus being the favourite candidates). What we are witnessing is surely the Platonism of the first century AD. The scholarly tendency to assimilate it to what is known of earlier thinkers simply reflects the accident that, apart from these two letters themselves and the work of Philo, we have very little information on first-century AD Platonism before Plutarch.

The joint Platonic-Aristotelian list of causes (11, ‘haec quae ab Aristotele et Platone ponitur turba causarum’) is as follows:

⁴³ Dillon, *MP*, 262.

⁴⁴ Since the friends of Letter 65 are plural, this link would count against the suggestion of Bickel (‘Senecas Briefe’) that the ‘amicus noster’ of Letter 58 is in fact a person named Amicus.

⁴⁵ As a matter of fact at 65.7 the *ἰδέα* seems to be not only a transcendent Idea but also a thought in god’s mind. That this widespread Platonist interpretation of Platonic separation was present in the form of Platonism known to Seneca is no surprise, and does not constitute any kind of conflict between the two letters, since Letter 58 implies the same by ranking the Ideas below god (see p. 125).

⁴⁶ Note too that in both letters Seneca, presumably following the teaching of the Platonists in question, reads the Timaeian cosmology in the literally creationist way (58.28–9, 65.19).

type of cause	prepositional name	Greek term	'Aristotle', ⁴⁷ statue example	Plato, <i>Timaeus</i>
1. material	id ex quo		bronze	matter
2. efficient	id a quo		sculptor	god
3. formal	id in quo	εἶδος	e.g. doryphoros	world order
4. final	id propter quod		e.g. cash, glory, religious devotion	goodness (<i>Tim.</i> 29e)
5. paradigmatic	id ad quod	ἰδέα	[artist's model]	[intelligible model]

The terms in the first column give the conventional modern nomenclature. The remainder are supplied by Seneca, although the items in square brackets are no more than implicit in his text. While it is Aristotle whom he credits with articulating the first four, Seneca is in no doubt that all of these, plus the fifth, are already acknowledged in Plato's *Timaeus*,⁴⁸ and that the two philosophers may therefore be jointly held responsible, and criticized, for the theory.⁴⁹

⁴⁷ 'Aristotle' is in quotation marks here because the full statue example nowhere occurs in his works, although it is used by Alexander *De fato* 167.2–12 and Clem. *Strom.* VIII 9.26.2–3. See R. B. Todd, 'The Four Causes. Aristotle's Exposition and the Ancients', *JHI* 37 (1976), 319–22. There is also, of course, good reason to doubt that the examples given of an Aristotelian final cause are, or could be made, acceptable to Aristotle.

⁴⁸ Despite the clear allusion to the *Timaeus*, one might have expected the full Platonist account to have cited the *Phaedo* too, a text which offers even better grounds for taking Plato to have regarded all of items 2–5 as 'causes'. Efficient: the 'subtle' causes of *Phd.* 105b–c. Formal: the 'largeness in us' etc. at 102c–e. Final: the good in Socrates' first voyage, 97b–99c. Paradigmatic: the Ideas in Socrates' second voyage, 100b–101d. However, Socrates in the *Phaedo* explicitly denies that matter is a cause (98b–99b); for this, at least, it will have been necessary to cite *Tim.* 46c–e in order to align Plato with Aristotle. Besides, the passage on the demiurge's goodness at *Tim.* 29e, which Seneca quotes at 10 to illustrate the final cause, is preceded by the explicit statement that this is a 'cause' of the world (29d7), and his source clearly had it in mind as evidence.

⁴⁹ After listing the five causes in their prepositional forms, Seneca adds (8) 'novissime, id quod ex his est'; and immediately after, when running through the statue example, he ends up 'id quod ex istis est, ipsa statua est'. He does not say that this is the addition of a sixth cause, but it is not unnatural to read him that way, especially as in section 4 he has done virtually the same thing, announcing that Aristotle has three causes, listing them, yet then adding a fourth. This device is well explained by A. Guida, 'Aristotele e un presunto lapsus di Seneca', *GIF* 33 (1981), 69–78, as one for highlighting the added item as somehow special or standing apart. Yet in the present case, the sixth item added, the product, might well have been assumed to be included in the story as that which *is caused*, not as itself a further cause. It comes, therefore, as something of a surprise when, a little later, Seneca criticizes Plato and Aristotle for doing precisely the latter: 'illud vero non pro solita ipsis subtilitate dixerunt, totum mundum et consummatum opus causam esse. multum enim interest inter opus et causam operis' (14). The explanation is, I suggest, as follows. The first five causes listed are all meant to be understood as necessary conditions (as is made explicit for the first

Seneca's aim is to argue that this time at least it is the Stoics who win the counting game. The elegant simplicity of Stoic dualism (2–4, 12, 23), whereby there is ultimately just one causal agent—'reason' or 'god', combining efficient, formal, and final functions—and one item upon which it acts, simply 'matter', is proffered in the hope that Lucilius will judge it superior to the Platonic-Aristotelian 'swarm of causes'.⁵⁰ The members of the 'swarm' are mere necessary conditions,⁵¹ and, he argues, if necessary conditions are to count as causes then the flood-gates are opened: the list will prove, if anything, to be too short, since there are plenty of further necessary conditions to add—time, place, and so on.

Having, as he hopes, made the winning moves in the metaphysical counting game, Seneca turns once again, as he did in Letter 58, to justifying his brief detour into metaphysics. The justification (15–22) draws even more heavily on Platonism this time than last. Such lofty speculations, he explains, liberate the soul from its imprisonment in the body and enable us to look beyond our own mortal existence, thinking instead about the larger picture.

This is dangerous territory, because the Platonic larger picture was one which placed much emphasis on the soul's survival after death—not a doctrine to which Seneca, wearing his Stoic hat, is committed, although he is keenly aware of its attractions, as Letter 102 eloquently attests, and despite the manifest importance to him of the *Phaedo* in the period, near the end of his life, when he composed the *Letters*. The tension is well illustrated at 18, 'patiturque mortalia, quamvis sciat ampliora superesse'. Gummere's 'he endures a mortal lot, although he knows that an ampler lot is in store for him' is misleadingly explicit. While such no doubt is the borrowed Platonic meaning of the remark, in Stoic eyes it need imply no more than recognition that there are greater things beyond our own

four, cf. n. 52). Over and above these, however, the *conjunction* of all the necessary conditions—'id quod ex his est'—is also to be regarded as a cause, indeed *the* cause, since it could well be argued to add up to the product's sufficient condition. The trouble is, as Seneca has seen, that this conjunction of the matter, the form, and the other necessary conditions is already identical to the *product*. And that, he is complaining, yields the absurdity that an artefact is its own cause.

⁵⁰ Donini ('L'ecletticismo', 158) illuminatingly points out Seneca's deafening silence here about the *corporeality* of the active causal principle—perhaps a concession to the Platonic position. However, it remains controversial among scholars whether Stoic 'god' is corporeal, and it might be unwise to assume that the ancient Stoic tradition was always clear, let alone unanimous, on the point.

⁵¹ In preparation for this criticism, at 4–6 Aristotle's four causes were carefully presented as if they were mere necessary conditions. Paradoxically, in criticizing this equation of causes with necessary conditions Seneca owes his inspiration ultimately to Plato, *Phaedo* 99a–b.

mortal existence.⁵² The carefully ambiguous wording is symptomatic of the limits which Seneca imposes on his absorption of a Platonic metaphysical outlook. The primary lessons of the *Phaedo*, he makes it clear in this passage, are focused on the soul's liberation from the body during our present life, rather than after it.⁵³ Later, when he directly confronts the immortality issue, he presents it as a series of *questions* which metaphysical theorizing encourages us to ask (20), questions treated precisely on a par with another classic bequeathed by the Platonic-Aristotelian tradition, namely whether aether is a distinct element (19). At the end of the letter (24) he reasserts his Stoic agnosticism about the soul's fate after death.⁵⁴ The value of the Platonic discussions of the soul's fate, as presented here, lies not in the prospect of answering such questions, but in raising the mind to a level where it can address them.

4. Counting Categories

We can now leave Seneca, and put the clock back nearly a century. The flood of commentaries on Aristotle's *Categories* began in the mid to late first century BC. That phenomenon lends strong support to the view that, whatever may be the truth about the availability of other Aristotelian treatises in the Hellenistic period, this one at least really was rediscovered during the first century BC.⁵⁵

Here was a strikingly unusual Aristotelian text which some at least judged to have a primarily metaphysical content. What were Stoics to make of the newcomer? Did it pose any kind of threat or challenge? The

⁵² Cf. Seneca's justification for physics, *NQ* I, *praef.* 17: 'haec inspicere, haec discere, his incubare, nonne transilire est mortalitatem suam et in meliorem transcribi sortem? quid tibi, inquis, ista proderunt? si nil aliud, hoc certe: sciam omnia angusta esse mensus deum.' On the present passage, Donini, 'L'ecletticismo', 190, despite translating 'supporta la condizione mortale, anche se sa che gli sono riservate cose maggiori', well remarks '*scire ampliora superesse* è il destino del filosofo platonico o aristotelico che tranquillamente subordina l'azione alla speculazione.'

⁵³ See esp. *Ep.* 65.16: 'nam corpus hoc animi pondus ac poena est; premente illo urgetur, in vinclis est, nisi accessit philosophia et illum respirare rerum naturae spectaculo iussit et a terrenis ad divina dimisit. haec libertas eius est, haec evagatio; subducit interim se custodiae, in qua tenetur, et caelo reficitur.'

⁵⁴ Cf. *Ep.* 102.30. A further characteristically Senecan touch in the present passage is the addition of an Epicurean motif, the symmetry argument against fearing death: 'non desinere timeo, idem est enim quod non coepisse' (65.24).

⁵⁵ I leave for another occasion the question what, if anything, that inference may have to do with the story of Apellicon's recovery of the Aristotelian manuscripts stored at Scepsis, or with the widespread modern attribution to Andronicus, around this date, of a key role in editing and organizing the Aristotelian corpus—an attribution devastatingly criticized by Jonathan Barnes, 'Roman Aristotle', in J. Barnes and M. Griffin (eds.), *Philosophia Togata II: Plato and Aristotle at Rome* (Oxford, 1997), 1–69.

Stoic Athenodorus, active at Rome in the late first century BC, was one of this first generation of commentators on the *Categories*. In the first century AD another Roman Stoic, none other than Cornutus, also wrote on the *Categories*, and, although he apparently took the opportunity to criticize Athenodorus' treatment of it,⁵⁶ what little we know of the two Stoics' remarks about the Aristotelian treatise suggests that they were broadly in agreement about how to react to it: despite any disputes about details, that is, there was an established Stoic way of dealing with the *Categories*.⁵⁷ (A third Roman Stoic who wrote about the Aristotelian categories around this time is Sergius Plautus—above, p. 128—but we have no information on his approach.)

Both Athenodorus and Cornutus represented that party which interpreted the *Categories* as an exercise in linguistic analysis.⁵⁸ And they objected that, by Aristotle's own implicit criteria, ten categories were not enough. I do not want here to go into any detail about their few reported comments on the treatise. But we should pause just long enough to notice the strategic parallelism to Seneca's Letter 65. When it comes to counting causes, Seneca defends the Stoic one-cause thesis by attacking the basis on which the Platonic-Aristotelian party has arrived at its longer list: if you accept their criteria for what is to qualify as a cause, the argument goes, their count actually turns out to be too low. When it came to counting categories, it seems, Athenodorus had used, and Cornutus was still using, almost the identical strategy for disarming the Aristotelian opposition. The four genera of being recognized by the Stoics may well have been seen as potentially competing for the same space as Aristotle's ten kinds of predication. Here too the Aristotelian challenge was deflected by, in effect, demanding a recount: the criteria needed to generate ten Aristotelian categories will actually go on to generate an embarrassing excess of them.

The general strategy was not a new one, and can be traced back at least to the criticisms of Platonic Ideas in Plato's *Parmenides* and Aristotle's *Peri ideōn*. But its shared use by three Roman Stoics, as a way of beating Aristotle at his own metaphysical counting games, looks like no coincidence. In it we glimpse the less hospitable side of Stoic metaphysics in this period.

⁵⁶ Porph. *In Ar. Cat.* 86.22–4, *Simpl. In Ar. Cat.* 62.25–8.

⁵⁷ Discussion in P. Moraux, *Der Aristotelismus bei den Griechen*, ii (Berlin, 1984), 585–601.

⁵⁸ Porph. *In Ar. Cat.* 59.10–14, *Simpl. In Ar. Cat.* 18.28–32. This should not be assumed to mean that their discussion of it excluded metaphysical issues: Cornutus' treatment of relativity, recorded at *Simpl. In Ar. Cat.* 187.30–3, is thoroughly ontological.

5. Overview

In this essay my main concern has been to illustrate the Roman Stoics' attitude to metaphysics. It is an area of philosophical discourse in which Seneca grants the Platonists and Aristotelians greater territorial rights than in any other. For his excursions into it he offers a fundamentally Platonist justification, and as regards ontological kinds, at least, he sees Platonism as superior to the legacy of his own school.

What we have seen to be Seneca's reservations about Stoic metaphysics, I can now add, fit comfortably with Letter 117, where he finds severe ethical disadvantages in the Stoics' too rigid distinction between corporeals and incorporeals, and Letter 113, where he is painfully embarrassed by the Stoic paradox which treats virtues as living beings. But its most typical manifestation is in the counting games which Seneca and other Stoics play with their Platonic-Aristotelian colleagues. Sometimes the Stoics are the winners at these games—notably when arguing more directly against Aristotle, the inventor and chief proponent of such games—sometimes, on Seneca's own confession, the losers. It is this residue of open-mindedness that most clearly characterizes the syncretism which we have been witnessing.

Seneca's readiness to jump ship shows up with regard to metaphysical questions far more prominently and explicitly than in other philosophical areas.⁵⁹ I have tried to sketch in a background which makes it plausible that, far from being Seneca's own quirk, this attitude was characteristic of Roman Stoicism in his day. It is hard to know whether it is anything more than accidental that both the main figures who have emerged as Seneca's fellow-participants in the discussions—Severus and Cornutus—have Roman names. But Cornutus at least, like Seneca himself, worked in Italy; and Sergius Plautus has emerged as yet another Roman Stoic of the era who wrote about both Stoic and Aristotelian metaphysics. In the light of this pronounced pattern, I do not see why we should not assume Italy to be the primary scene of those discussions, as indeed Seneca may be taken to imply when he presents them in narrative guise as recent conversations with his friends. My main point, however, is that Seneca is almost certainly not alone among Stoics in his constructively conciliatory attitude to Platonist metaphysics.

⁵⁹ Seneca's psychology is often taken to be infused with Platonic rational-irrational dualism. For a measured response to this assessment, see Brad Inwood, 'Seneca and Psychological Dualism', in J. Brunschwig and M. Nussbaum (eds.), *Passions and Perceptions* (Cambridge, 1993), 150–83. The Platonizing tendency in Letters 58 and 65 seems much stronger and more explicit than that in any of the psychological cases discussed by Inwood.

If it had merely been a question of Seneca's personal distaste for abstruse areas of Stoic metaphysics, it would have been easy for him to remain silent, as he does for the most part about Stoic epistemology and logic. But instead of thus staying aloof, he cooperates in what I have presented as a pooling of resources between Stoic and Platonic-Aristotelian metaphysics.⁶⁰ If I have been even half right, his way of conducting these negotiations can teach us something about what it meant to be a Stoic in an age when the Platonic worldview was rapidly regaining its old ascendancy.⁶¹

Bibliography

- ALGRA, K., 'Zeno of Citium and Stoic Cosmology: Some Notes and Two Case Studies', *Elenchos* 24 (2003) 9–32, and in T. Scaltsas and A.S. Mason (eds.), *The Philosophy of Zeno* (Larnaca 2002), 155–83.
- BALTES, M., *Der Platonismus in der Antike*, iv (Stuttgart, 1996).
- BARNES, J., *Logic and the Imperial Stoa* (Leiden, 1997).
- 'Roman Aristotle', in J. Barnes and M. Griffin (eds.), *Philosophia Togata II: Plato and Aristotle at Rome* (Oxford, 1997), 1–69.
- BICKEL, E., 'Senecas Briefe 58 und 65. Das Antiochus-Posidonius-Problem', *Rh.M.* 103 (1960), 1–20.
- BRUNDSCHWIG, J., 'La théorie stoïcienne du genre suprême', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics* (Naples, 1988), 19–127 = 'The Stoic Theory of the Supreme Genus and Platonic Ontology', in J. Brunschwig, *Papers in Hellenistic Philosophy* (Cambridge, 1994), 92–157.
- CASTON, V., 'Something and Nothing: The Stoics on Concepts and Universals', *OSAP* 17 (1999), 145–213.
- COCKLE, H. M. (ed.), *The Oxyrhynchus Papyri*, lii (London, 1984).
- DILLON, J. M., *The Middle Platonists* (London, 1977).
- DONINI, P.-L., 'L'eclitticismo impossibile. Seneca e il Platonismo medio', in id. and G. F. Gianotti, *Modelli filosofici e letterari. Lucrezio, Orazio, Seneca* (Bologna, 1979), 149–300.
- GERSH, S., *Middle Platonism and Neoplatonism. The Latin Tradition*, i (Notre Dame, 1986).
- GIOÈ, A., 'Severo, il medioplatonismo et le categorie', *Elenchos* 14 (1993), 33–53.

⁶⁰ For evidence of the degree of syncretism that had developed by Plotinus' day, cf. Porphyry, *Vit. Plot.* 17.3, on Trypho 'the Stoic and Platonist'.

⁶¹ Ancestors of this essay have benefited from discussion with audiences at Chicago, Gargnano (Italy), Mexico City, London, and Cambridge. My thanks to all who were kind enough to supply comments, especially Brad Inwood, Victor Caston, Ricardo Salles, Stephen Menn, and Myles Burnyeat, although responsibility for the views expressed is entirely my own.

It is a special pleasure to be contributing, with this essay, to a collaborative celebration of Richard Sorabji and his work. No one has done more than he has to show the philosophical vitality of the debates conducted in the Roman imperial era.

- GUIDA, A., 'Aristotele e un presunto lapsus di Seneca', *GIF* 33 (1981), 69–78.
- HADOT, P., *Porphyre et Victorinus* (Paris, 1968).
- INWOOD, B., 'Seneca and Psychological Dualism', in J. Brunschwig and M. Nussbaum (eds.), *Passions & Perceptions* (Cambridge, 1993).
- LONG, A. A. and SEDLEY, D. N., *The Hellenistic Philosophers* (Cambridge 1987).
- MANSFELD, J., *Heresiography in Context: Hippolytus' Elenchos as a Source for Greek Philosophy* (Leiden, 1992).
- MORAUX, P., *Der Aristotelismus bei den Griechen*, ii (Berlin, 1984).
- SCARPAT, G., *La lettera 65 di Seneca* (Brescia, 2nd edn. 1970).
- SEDLEY, D., 'The Stoic Theory of Universals', *Southern Journal of Philosophy* 23 (1985), suppl., 'Spindel Conference 1984: Recovering the Stoics', 87–92.
- 'Aristotelian Relativities', in M. Canto-Sperber and P. Pellegrin (eds.), *Le Style de la pensée: recueil de textes en hommage à Jacques Brunschwig* (Paris, 2002), 324–52.
- 'The Origins of Stoic God', in D. Frede and A. Laks (eds.), *Traditions of Theology* (Leiden, 2002), 41–83.
- THEILER, W., *Die Vorbereitung des Neuplatonismus* (Berlin, 1930; 2nd edn. 1964).
- TODD, R. B., 'The Four Causes. Aristotle's Exposition and the Ancients', *JHI* 37 (1976), 319–22.
- WHITTAKER, J., 'Seneca, *Ep.* 58.17', *Symbolae Osloenses* 50 (1975), 143–8.

Platonism in the Bible: Numenius of Apamea on *Exodus* and Eternity

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Let me begin with the customary modest disclaimers. About the Book of *Exodus* I have nothing to say. I shall refer to the narrative, but on scholarly matters my ignorance is total. About Numenius my ignorance is extensive, but compensated for by some opinions—opinions about how he responded to a famous passage in *Exodus*, where God reveals his name to Moses from the burning bush: ‘I am that I am’. The Greek of the Septuagint translation is ‘*Εγώ εἰμι ὁ ὢν*’, ‘I am He who is’. That Greek is my starting point here, for Numenius’ interpretation of it encourages me to persevere in a view of eternity I have maintained since the memorable time, years ago in the 1960s and 1970s, when Richard Sorabji and I used regularly to lecture together in the University of London. We argued amicably against each other for two hours every week, about eternity and much else, before and with a large audience of seventy or more students drawn from several of the London Colleges. Numenius did not feature in those debates. Neither of us was much aware of him yet. If I now claim Numenius¹ as an ally in an old dispute, it is to reinforce the message that Sorabji has made vivid, in so many ways, to the intellectual community today: the voluminous writings of the ancient Platonist philosophers are a treasury of acute, challenging philosophy.

I

Perhaps the best introduction to Numenius is his most quotable line (frag. 8, 13), ‘What is Plato but Moses talking Attic?’ (*τί γάρ ἐστι Πλάτων*

¹ Whom I cite from the Budé edition by Édouard des Places: *Numénius: Fragments*, Texte établi et traduit (Paris, 1973), where ‘fragments’ include testimonia. The translations are my own, but most of the fragments I quote derive from Eusebius’ *Praeparatio Evangelica*, which is helpfully translated into English by E. H. Gifford (Oxford, 1903); his rendering often strikes me as more accurate than that of des Places.

ἢ Μωσῆς ἀττικίζων).² Let this quip serve notice that we are to discuss a writer of wit and verve—the only witty Platonist after Plato himself, whose deep understanding of the Platonic philosophy is set forth in prose of high literary sophistication.

I shall come to the importance of Attic shortly. The importance of Moses for Numenius is that by tradition he was author of the Pentateuch, the first five Books of the Bible, not just a hero of the story.³ That made him a star witness in a project announced in frag. 1a, carefully copied out by Eusebius from Book I of Numenius' dialogue *On the Good*:

On this question [*sc.* the incorporeality of God],⁴ having cited and sealed the testimonies of Plato, we should go back further and bind these testimonies together with⁵ the teachings of Pythagoras, and then summon the peoples of good repute, adding their rites and doctrines and the traditions they celebrate in agreement with Plato (τὰς τελετὰς καὶ τὰ δόγματα τὰς τε ἰδρύσεις συντελουμένας Πλάτωνι ὁμολογουμένως), such as those ordained by the Brahmins and Jews and Magi and Egyptians. (Frag. 1a)

For Eusebius, Bishop of Caesarea in the fourth century AD, this and other texts he quotes from *On the Good* support the idea that Plato had somehow come to know the philosophy of Moses. Either he heard about it when he travelled to Egypt, or he reached the same results by his own reflection on the nature of things, or he was inspired by God (*PE XI 8.1*). Platonism is thus shown to derive from, or to embrace the same truths as, the Judaic tradition.⁶ Numenius' thesis is unambiguously about agree-

² So quotable that apparently it circulated on its own. Eusebius quotes it twice. (i) at *PE IX 6, 9* (followed by frags. 1a and 9) he has it from Clement (*Strom.* I 22.150, 4), who assures us that his near-contemporary Numenius did write the words but does not say where. Then again (ii) at XI 10, 14, just after quoting Numenius' account of eternal being in frags. 5, 6, 7, and 8 to confirm the claim he made at XI 9, 4–5 that Plato reworked Moses' words into the *Timaeus*. (Later appearances of the saying in Theodoret, *Therap.* II 114 and the *Suda sv.* 'Numenius' presumably derive from Eusebius.) This *rapprochement* between Plato and Moses on the subject of eternal being leads Eusebius to comment that Numenius' well-known saying (ἐκείνο τὸ λόγιον) is reasonably attributed to him. We should agree, even if we cannot know which work the saying comes from. Such doubts about authenticity as have been expressed are effectively rebutted by John G. Gager, *Moses in Graeco-Roman Paganism [Moses]* (Nashville and New York, 1972), 66–8.

³ Frag. 30, 5–6 treats Gen. 1:2 as the words of 'the prophet'.

⁴ A safe inference from frag. 1b, 4–6.

⁵ For Numenius' use of *συνδέομαι*, cf. frags. 18, 8 and 24, 59.

⁶ The idea that Plato's philosophy, and Pythagoras' too, derives from the Jews goes back to a commentary on the Pentateuch (standardly dated 2nd cent. BC) by the Jewish Peripatetic Aristobulus, who claims they studied the *Exodus* story and 'our' law in translation (Euseb. *PE IX 6.6*, followed by Numenius' *λόγιον*; XIII 12.1). Pythagoras' borrowing of Jewish (and Thracian) ideas is already found in the third-century biographer Hermippus *ap. Josephus Ap.* I 165. Such claims are but one symptom of a widespread ancient tendency (anxiously combated in the opening chapters of Diogenes Laertius) to find foreign origins for Greek philosophy. By the early modern period some were ready to

ment on the truth (cf. frag. 1b, 2–3: δόγματα . . . ἀληθῆ), not about historical derivation. All these peoples, not only the Jews, agree with Plato that the divine is incorporeal.⁷ Not of course that they express it as clearly as he does, but the agreement discernible in their teachings and cults—coming as it does from other places and times—corroborates the truth of Platonism. They are all independently responding to the same truth as he did. As a modern philosopher might put it, they all ‘tracked the truth’.⁸

But why Attic? No quotable quote could be made of the trite point that Moses did not speak Greek at all. The contrast is not between Greek and Hebrew, but between two dialects of Greek, the Attic used by the Athenian Plato and the Doric of the Pythagorean writings. Modern scholars regard the extensive corpus of Pythagorica as Hellenistic forgeries, leaving only a few fragments of Philolaus and Archytas to represent earlier Pythagoreanism in written form. For later antiquity, that corpus was simply ‘the Pythagorean writings’. Numenius, writing in the second century AD, would know that neo-Pythagoreans of the previous century like Moderatus had adduced three disabling factors to explain the extinction of the good old Pythagorean philosophy: (i) τὸ ἀνινγματῶδες, the enigmatic form in which it was presented, (ii) *the inherent obscurity of the Doric dialect* (ἐχούσης τι καὶ ἄσαφές τῆς διαλέκτου), plus (iii) the fact that the really fruitful ideas were filched and propagated as their own by Plato, Aristotle, and the Academy, who made things worse by collecting the sillier-looking stuff (i.e. the ἀκούσματα) and publishing it as the distinctive teaching of the Pythagorean school.⁹ Moral: Attic is the language of clarity.

believe that Pythagoras was himself a Jew: J. B. Schneewind, *The Invention of Autonomy: A History of Modern Moral Philosophy* (Cambridge, 1998), 536–40.

⁷ On my understanding of frag. 1a, which is indebted to Michael Frede’s groundbreaking study, ‘Numenius’, *Aufstieg und Niedergang der römischen Welt* [ANRW] 36.2 (1987), 1034–75 at 1048, the non-Greek peoples are commended for agreeing with Plato, who sets the standard of truth jointly with Pythagoras. Contrast G. R. Boys-Stones, *Post-Hellenistic Philosophy: A Study of its Development from the Stoics to Origen* [Development] (Oxford, 2001), 114–18, who has frag. 1a commend Plato for his skill in deriving ancient wisdom from non-Greek sources. That derivationist line was taken by many other thinkers discussed in Boys-Stones’ interesting book, but Numenius is importantly different. Even Eusebius allows for the possibility of Plato reaching the truth on his own. An even more derivationist reading appears in Arnaldo Momigliano, *Alien Wisdom: The Limits of Hellenisation* (Cambridge, 1975), 147, who cites the question ‘What is Plato but Moses talking Attic?’ as typifying later antiquity’s subordination of reason to revelation, Greek thought to oriental wisdom. That is quite unjust to Numenius, in whose thought Greek confidence remains as strong as it was in the days of Hippias.

⁸ See Robert Nozick, *Philosophical Explanations* (Cambridge, Mass., 1981), 172–96. Roughly, to track the truth is to be reliably receptive to truth and, in addition, reliably unreceptive to what is false.

⁹ Porph. VP 53. Although the source is usually taken to be Moderatus himself, this is not certain and (c) is cited as a complaint of ‘the Pythagoreans’ generally.

By contrast, the Greek of the LXX is not Attic, and it is often unclear. The same may be said of the supposed hexameters of Musaeus (DK2 B), whose name Numenius uses to speak of Moses in frag. 9.¹⁰ However Numenius understood the identification of Moses with Musaeus, he undertakes to show that the Jews and other peoples of good repute share an understanding of God which is most clearly expressed in Plato's Attic prose. Hence his pointed exclamation, 'What is Plato but Moses talking *Attic*'?¹¹

Now already in the fifth century BC the sophist Hippias (DK86 B6) had included Musaeus, Orpheus, and poets like Homer, together with prose writings of Greek *and barbarian* authors, in a doxographical miscellany designed to bring out the underlying kinship between wildly different expressions of the same idea. For example, he relates Thales' choice of water as the origin of things to the role of Oceanus as progenitor of the gods in Homer and Orpheus, and probably also to the figure of Nun, the primeval waters, in Egyptian mythology.¹² A certain amount of allegorizing is inevitable in such a programme. You show that your non-philosophical sources, however venerable, poetic, or foreign, contain obscurely condensed expressions of thoughts which the philosophers articulated in more adequate form. Most Greek philosophers were happy to continue the practice that Hippias began.¹³ Numenius is thus

¹⁰ It is clear from Eusebius' commentary before and after frag. 9 that he has no doubt that Numenius does mean Moses when he writes 'Musaeus', and Origen confirms in frags. 1b, 1c, and 10a that Numenius did quote Moses and recount his adventures in Egypt. The identification of Moses with Musaeus is otherwise attested only in the romanizing Jewish historian Artapanus (probably 2nd cent. BC), who says that when Moses reached manhood the Greeks called him Musaeus; he became the teacher of Orpheus and the inventor of numerous things including philosophy (Euseb. *PE* IX 27, 3–4). Gager, *Moses*, 139, doubts that Numenius would endorse much of this and diagnoses 'a simple adjustment of the orthography to the common Greek name'. I find that unlikely and suggest two alternatives. (i) 'Moses' could easily oust an original 'Musaeus' as the *λόγιον* circulated on its own, for reasons both of clarity and of Christian propaganda. (ii) Although in the other surviving fragments 'Musaeus' occurs once (frag. 9, 4), 'Moses' not at all, Numenius might still have used 'Moses' in some work other than *On the Good*.

¹¹ Since by Numenius' day Plato had become a model (albeit a disputed model) in the war of styles between the 'Atticists' and 'Asianists', one might suspect further word play on *ἀττικίζων* = 'Atticizing'. Although Numenius' own style is a vigorous, often picturesque Asiatic, the virtue claimed for Atticism was its naturalness and lucidity, a virtue in which Plato excels, at least for much of the time: 'When he expresses himself in plain, simple and unartificial language, his style is extraordinarily agreeable and pleasant; it becomes altogether pure and transparent, like the most pellucid of streams.' (DH *Dem.* 5; tr. Usher). Once again, Attic is the language of clarity.

¹² See Andreas Patzer, *Der Sophist Hippias als Philosophiehistoriker* (Munich, 1986), esp. ch. 2. Patzer builds here on the pioneering work of Bruno Snell.

¹³ Aristotle, for example, is reported (DL I 18) to have written in the first Book of his *De Philosophia* about the Magi and their dualism of good and bad principles, Oromasdes

a relative latecomer in a long tradition, and he too is devoted to the art of allegorizing:

I am also aware [writes Origen] that Numenius the Pythagorean, a man who expounded Plato with very great skill and maintained the Pythagorean doctrines, quotes Moses and the prophets *in many passages* in his writings, and gives them no improbable allegorical interpretation, as in the book entitled *Epops* and in *On Numbers* and in *On Place*. In Book III of *On the Good* he even quotes a story about Jesus, though without mentioning his name, and interprets it allegorically... He also quotes [cf. frag. 9] the story about Moses and Jannes and Jambres. (Frag. 1c and 10a recombined; tr. Chadwick, slightly altered. Emphasis mine.)

The novelty Numenius brings to this tradition is his detailed attention to the Bible and the Jews.¹⁴ The shock value of his question ‘What is Plato but *Moses* talking Attic?’ can be gauged by comparing another Platonist of the second century AD, contemporary with or somewhat later than Numenius, the Celsus against whom Origen wrote his *Contra Celsum*. Celsus agrees with just about everything I have ascribed to Numenius so far, with one exception: Moses and the Jews. According to Celsus, Moses was a corrupt Egyptian priest, not one of the wise men of old who tracked the truth. The Jews were a band of rebellious slaves who escaped with him, not one of the peoples who expressed in their cults and institutions the *Ἀληθὴς Λόγος*, the one true account which Celsus finds independently witnessed to, not only by the non-Jewish peoples Numenius cites in frag. 1a, plus the Assyrians, Odrysians, and Samothracians, but even by the Druids, Getae, Hyperboreans, and Galactophagi. To exclude the Jews Celsus is prepared to go to the limits of the known world and beyond.¹⁵

By contrast, Numenius not only includes the Jews and their prophet Moses. He also appears to *exclude* the Doric Pythagorica. Frag. 1a, quoted above, puts Pythagoras on a par with Plato as a wise man who tracked the truth,¹⁶ but not once in the extant remains does Numenius

(Zeus) and Areimanios (Hades); cf. *Met.* N4, 1091^b4–12, where the Magi are cited alongside the ancient poets, Pherecydes, Empedocles, and Anaxagoras. His pupil Eudemus collected the cosmo-theological views of the early Greeks and the Near East.

¹⁴ I am not bothered if someone prefers to postulate that Numenius got his knowledge of the Bible second-hand from a compendium of some kind. It must have been pretty detailed, to judge by Origen’s report, with quotations included. But I do reject the outright disbelief in Origen manifested by M. J. Edwards, ‘Atticising Moses? Numenius, the Fathers and the Jews’, *Vigiliae Christianae* 44 (1990), 64–75, who urges that Eusebius would have quoted more if there had been more to quote in *On the Good*.

¹⁵ For a helpful detailed account of Celsus’ philosophical outlook, see Michael Frede, ‘Celsus philosophus Platonicus’, *ANRW* 36.7 (1994), 5183–5213.

¹⁶ Frag. 24, 18–20 counts Plato ‘no better than Pythagoras, and doubtless (*ἴσως*) no worse either’. Is Numenius hesitating to rank Plato with Pythagoras? Although some have read frag. 7, 4–7 as allowing that Plato could have missed a truth that Pythagoras knew,

appeal to a Pythagorean source to determine what Pythagoras taught. He proceeds as if the best and only way to find that out is by careful interpretation of Plato.¹⁷ His sole attested reference to ‘certain Pythagoreans’ (frag. 52, 15–24) is a contemptuous dismissal of their claim that matter and the Indefinite Dyad derive from the One. As one of the last Platonists to abide by the correct dualist interpretation of the *Timaeus*, he is sure that Plato’s doctrine on matter agrees (*concinere*) with that of Pythagoras (frag. 52, 3–4). Frag. 1a proposes that we go back to Pythagoras *from* Plato, implying that Plato is the one true exponent of Pythagoras’ philosophy. Plato’s writings need the careful interpretation Numenius provides because, mindful of the fate of Socrates (cf. frag. 23), he did not think it safe to be completely open about theological topics. Instead, his exposition of the Pythagorean philosophy took the middle way between clarity and unclarity (frag. 24, 57–62), striking a mean between Socrates and Pythagoras (frag. 24, 73–4). Plato is clearer than the Pythagorean writings, and clearer than Moses, but still not as clear as Numenius endeavours to be. For he undertakes to give us Plato ‘himself in himself’, separated like the Forms (*χωρίζειν . . . αὐτὸν ἐφ’ ἑαυτοῦ*) from Aristotle, the Stoic Zeno, and the New Academy, so that we may see his Pythagorean essence (frag. 24, 66–70).¹⁸

Question: if while expounding the Pythagorean philosophy Plato is at the same time Moses talking Attic, does that not imply a rather special status for Moses too? I shall argue that in Numenius’ eyes Moses did indeed excel other foreigners as a Pythagorean/Platonist *avant la lettre*, and that the *Exodus* account of his receiving the revelation of the divine name is deliberately echoed in Book II of *On the Good*.

this is merely the concession of an abstract possibility to pacify (*παραμυθῆσθαι*) a troublemaker, followed up at once by a quotation which shows Plato tracking the truth at issue. Accordingly, I suspect that frag. 24, 18–20, is not hesitation, but rather a *recherché* mathematical joke to affirm the equality of the two sages. In Eudoxus’ theory of proportions two magnitudes *A* and *B* are equal if, and only if, *A* exceeds and is exceeded by the same magnitudes as *B*, whether the magnitudes (so long as they are homogeneous) are commensurable or incommensurable. Plato and Pythagoras are both philosophers (homogeneity), but in such different styles that no unit of magnitude will measure both (incommensurability). Nonetheless, they are equal to each other if Plato is neither better nor worse than Pythagoras, because this means that Plato does not exceed in wisdom anyone whom Pythagoras does not also exceed, and he is not exceeded by anyone who does not also exceed Pythagoras. We will meet more examples of Numenius’ remarkable evenhandedness (p. 150 and n. 25 below).

¹⁷ This point is forcefully argued in Frede, ‘Numenius’, 1044–8. I follow Frede in declining to describe Numenius either as a Pythagorean or as a Middle Platonist.

¹⁸ My last four references do not relate to *On the Good*. Frag. 23 is cited by Eusebius from a work entitled *On the Secrets of Plato*, frag. 24 from Numenius’ scintillating *On the Academics’ Infidelity to Plato*.

2

Having sketched a context for Numenius' interest in Moses, I can turn to my next task, which is to make it plausible that Numenius has Moses in mind when he discusses eternity. Remember the conversation with the burning bush. In the King James translation Moses asks, 'Who am I that I should go unto Pharaoh, and that I should bring forth the children of Israel out of Egypt?' Then, when he has been reassured that the Lord will be with him in this undertaking, he asks, 'When I come unto the children of Israel, and shall say unto them, The God of your fathers hath sent me unto you; and they shall say to me, What is his name? what shall I say unto them?'. *Exodus* 3:14 gives the answer to these questions (I insert the LXX Greek at the crucial points): 'And God said unto Moses, I AM THAT I AM (*Ἐγώ εἰμι ὁ ὢν*): and he said, Thus shalt thou say unto the children of Israel, I AM hath sent me unto you (*Ὁ ὢν ἀπέσταλκέν με πρὸς ὑμᾶς*).'¹⁹

It is often thought that Numenius has this biblical text in mind when in frag. 13 he calls the First God of his version of Platonism *ὁ ὢν*. Eusebius, our source for frag. 13, had no doubts, but some modern scholars have hesitated to follow, and a number have resorted to emendation of the MSS reading *ὁ ὢν*. Eusebius can be vindicated, I believe, by independent evidence of Numenius' detailed interest in the *Exodus* narrative.

The scene with the burning bush comes at the beginning of the narrative of the Israelites' escape from Egypt. Numenius frag. 9 (already cited from Eusebius) is about the sequel, the story of how Moses-Musaeus led the Jews out of Egypt after defeating Pharaoh's magicians. Except that in Numenius's retelling Pharaoh's magicians are a match for Moses and are able to disperse even the most violent of the plagues. And they have names: Jannes and Jambres. Numenius did not get those names from the Book of *Exodus*. Their first appearance in the Bible is *II Timothy* 3:8 (c.120 AD), which assumes they will be familiar to its readers from earlier Jewish tradition.²⁰ Evidently, Numenius has not only studied the *Exodus* narrative. He has also done some back-up research.

There were plenty of sources to draw upon. Pro-Egyptian versions of the story had been written by Manetho (3rd cent. BC), Lysimachus (2nd

¹⁹ The Vulgate has: 'Ego sum qui sum. Ait: Sic dices filiis Israel: Qui est, misit me ad vos'.

²⁰ References to Jewish literature in Menahem Stern, *Greek and Latin Authors on Jews and Judaism, Edited with Introductions, Translations and Commentary*, 3 vols. (Jerusalem, 1980), ii. 213. Jannes at least had been heard of at Rome, being coupled with Moses as known magicians by Pliny *NH* XXX 11 and Apuleius, *Apol.* 90.

cent. BC), Apion (1st cent. BC), and the Stoic philosopher Chaeremon (1st cent. AD).²¹ Josephus (1st cent. AD) in his *Contra Apionem* took up arms on the other side, as had Ezekiel (perhaps 2nd cent. BC), who gave a pro-Jewish presentation of the events in the form of a Greek tragedy on the Aeschylean model, from which extensive fragments survive.²² As Michael Frede has shown,²³ there was a philosophical issue at stake in these polemics about how and why the Israelites left Egypt. Did the Jews qualify as an ancient people in their own right, with a wisdom of their own? Not if they originated as a rabble of Egyptians, either slaves on the run (Celsus) or expelled lepers (the more usual view). If, on the other hand, they were a genuine people, their wisdom would be worthy of an allegorizing elucidation to show its affinity with the latest modern philosophy, whether Stoic or Platonic. Chaeremon, like Celsus later, was happy to do this for the Egyptians, but not for the Jews. What is most interesting about Numenius' version of events is that he treats both sides with an even hand.²⁴ In striking contrast to the Bible, frag. 9 reports that Jannes and Jambres were equal to Moses in their powers of magic.

Philosophically, this fits the programme of frag. 1a, where the Egyptians track the truth no less than the Jews.²⁵ *Ergo*, they had better be equally skilled in applying their knowledge to work wonders. Yet wonders are worked within the created realm. According to frag. 17 (from *On the Good* Book VI), while the Divine Craftsman is generally known among the peoples of the world, the First Mind is altogether unknown. This First Mind, the First God of Numenius' version of Platonism, senior to (πρεσβύτερος)²⁶ and more divine than the Demiurge, is Being itself (αὐτοόν). Could it be that in the scene with the burning bush, where Moses writes of a God called ὁ ὢν, Numenius found an exception to the general ignorance of the divinity of Being itself?

Let me repeat here that I know nothing about the Book of *Exodus*. I am not discussing the merits of ὁ ὢν as a translation of the Hebrew.²⁷ Let

²¹ For discussion of this anti-Semitic historiography, see Boys-Stones, *Development*, ch. 4.

²² Text, translation, and commentary in Howard Jacobson, *The Exagōge of Ezekiel* (Cambridge, 1983). What survives of the scene with the burning bush does not include 'I am that I am'.

²³ 'Chaeremon der Stoiker', *ANRW* 36.3 (1989), 2067–2103, esp. 2072–5.

²⁴ Cf. n. 16 above.

²⁵ Cf. the equable juxtaposition of Moses, the Egyptians, and Heraclitus in frag. 30.

²⁶ As the Good is superior πρεσβεῖα at *Rep.* 509b 9–10.

²⁷ Those as ignorant of Hebrew as I am may be interested in a variant translation given by Hippolytus in his account of a self-styled Gnostic sect, the Naasenes: γίνομαι ὃ θέλω καὶ εἶμι ὃ εἶμι (*Haer.* V 7.25, p. 84 Wendland). The first clause comes close to 'I will be what I will be', which knowledgeable colleagues tell me is the meaning of the original. (I owe the reference to Christopher Stead.)

me add that we have no evidence that Numenius read Philo Judaeus, who does of course have a great deal to say about $\delta \omega\nu$ in *Exodus* 3:14.²⁸ My sole concern is what a Platonist philosopher of the second century AD would make of the information that the name of the Jewish God is $\delta \omega\nu$.²⁹ It might, for instance, remind him of Plutarch's *On the E at Delphi*, where the highest-level interpretation of the inscription *E* is $\epsilon\acute{\iota}$ = 'Thou art', which in turn is explicated in terms of the Platonic contrast between being and becoming, eternity and time. The message is that Apollo is to be worshipfully addressed 'Thou art'—an utterance complete in itself (392a: *αὐτοτελῆς προσαγόρευσις*) without any complement after the verb 'to be'—because his being is an eternal present, with no trace of past or future. Plutarch could easily have called the God at Delphi $\delta \omega\nu$, meaning He whose eternal being transcends time.³⁰

This brings me back to frag. 13, where Numenius' First God is called $\delta \omega\nu$ and distinguished from the Demiurge. If the First God is Being itself, there is no call for Dodds's emendation of the phrase $\delta \gamma\epsilon \omega\nu$ ('He who is') to $\delta \gamma\epsilon \acute{\alpha}$ (= *πρῶτος*) $\omega\nu$ ('He who is first').³¹ Dodds argued that the received text 'cannot be defended as a Hebraism'. There is no need to do so, for in itself the phrase is impeccable Greek. The issue is not whether Numenius borrowed it from the LXX,³² but whether the LXX expression struck him as an exceptionally advanced point of agreement with Plato's conception of the first principle of everything. Did he find Moses agreeing with Plato that it is a principle whose being is an eternal present without trace of past or future?

²⁸ *Aet.* 53 and 70; *Mos.* I 75; *Opif.* 170 (cf. 172); *Post.* 168; *Praem.* 40; *Spec.* I 41, II 225. Philo does not connect the name with eternity, but explains it as designating nothing but God's *ὑπαρξίς* in contrast to his *οὐσία* or *ποιότης*, which are beyond our comprehension. Conversely, *Quod Deus* 32 denies past or future to eternity without mention of $\delta \omega\nu$ (though cf. $\tauὸ \delta\acute{\nu}$ in 33).

²⁹ Frag. 56 shows Numenius responding to the commandment 'Thou shalt have no other gods before me' (*Exod.* 20:3).

³⁰ Plutarch also exhibits the shift between masculine and neuter designations of God which some have urged against $\delta \omega\nu$ as an alternative to the *αὐτόον* of frag. 17: *εἷς ὦν . . . ὄντως ὦν* (393ab).

³¹ See des Places *ad loc.* and E. R. Dodds, 'Numenius and Ammonius', *Les Sources de Plotin (Entretiens Hardt 5)* (1960), 1–32 at 15–16, with a parallel emendation of frag. 16 to boost the suggestion. More recently, John Dillon, *The Middle Platonists* (London, 1977), 368 n. 1, would read $\delta \gamma\epsilon\omega\rho\gamma\acute{\alpha}\nu$, picking up the image of the First God as farmer in line 1. This and other emendations are firmly rebutted by John Whittaker, 'Numenius and Alcinous on the First Principle', *Phoenix* 32 (1978), 144–54.

³² Although in his excellent defence of the MSS reading, John Whittaker, 'Moses Atticising', *Phoenix* 21 (1967), 196–201, shows that the phrase travelled from the LXX into quite a spread of later ancient literature. Frag. 13's designation of the Demiurge, Numenius' Second God, as lawgiver derives not from the Bible, but from Plato's *Timaeus*: *νόμους τε τοὺς εἰμαρμένους* (41e), *διαθεσμοθετήσας* (42d).

3

But surely, you may protest, Plato's first principle is the Good, which we all know is 'beyond being' (*Rep.* 509b 9: *ἐπέκεινα τῆς οὐσίας*). It is bad enough having to endure these later Platonists' predilection for treating as Mind and God a principle which for Plato was the supreme *object* of the mind's quest for a kind of knowledge that God, the divine mind, already has. Is it not a travesty of Plato to ascribe eternal (or any other kind of) being to his first principle, and to identify the Good with Being itself?

Not at all. From a philosophical point of view, Numenius' interpretation is quite defensible. In frags. 19 and 20 he argues that if the Demiurge is good, it must be because, like any other good thing, he participates in the Form of Good.³³ Quite generally, he continues, anything which is *F* (a human, horse, ox, etc.) is so because it is modelled after and participates in the corresponding Form, the *F* itself. Now apply this causal principle to the famous passage in *Republic* 509b where Socrates proclaims that the Good is cause of the being (*τὸ εἶναι τε καὶ τὴν οὐσίαν*) of the Forms which are the objects of knowledge. If Plato's first principle, whether we call it the Good or the One,³⁴ is itself good and itself one, because it is the cause of goodness and unity throughout the intelligible realm, must it not also, as cause of the Forms' being, *be* in its own right too? Must not the first principle be Being itself, just as Numenius holds, as well as Goodness and Unity? When Socrates says that the Good is beyond being, perhaps his meaning is that, like any Form in its causal role, it is beyond and distinct from the being it explains.

That Numenius read the passage this way seems to be confirmed by frag. 16, 8–10, which argues that if the Demiurge of becoming is good, the Demiurge of being must be the Good itself, which is by nature one with Being (*αὐτοάγαθον σύμφυτον τῇ οὐσίᾳ*). Frag. 16, 15–16, then distinguishes the being (*οὐσία*) of the First God from that of the Second. Nor is Numenius the only Platonist to take such a view of 'beyond being'. Both the view and the argument for it are found in an anonymous commentary on Plato's *Parmenides* which Hadot attributed to Porphyry,

³³ Cf. also frag. 16, 8–10 and 14–15; frag. 19, 8–11.

³⁴ Numenius frag. 54 derives Apollo's epithet 'Delphian' from an old Greek word *δέλφος* (unknown to *LSJ*) meaning 'one!' A strange twist on the then common etymology of 'Apollo': *a* privative + *πολλά* (e.g. *Plut. De E* 393c). The identity of the Good and the One is unambiguously expressed at frag. 19, 12–13, echoing Aristoxenus' report of Plato's Lecture on the Good: *τὸ ἀγαθὸν ὅτι ἐστὶν ἓν*; see des Places ad loc. Numenius also equates his First God with the *Timaeus*' Form of Animal (frag. 22).

but which some people think could be earlier.³⁵ The commentator is discussing the second deduction of Part II of the *Parmenides*, the positive deduction about the One which is. He claims that this One which is derives its being from the One ‘beyond being’ of the negative first deduction, by participating in it. (After all, it is the *second* One in the dialogue and where else could its being come from?) In that case, he argues, the first One must be Being as well as One, a Being beyond the being that Socrates was talking about in the famous passage of the *Republic*. Plato was riddling (αἰνισσομένῳ) when he spoke of the One beyond being simply as the One which is not.³⁶

But whatever the date of this Anonymus, already in the first century AD Seneca’s *Epistle* 58 records a Platonist division in which the supreme genus is that which is, *quod est*.³⁷ In Aetius, Plato’s God is that which really is (τὸ ὄντως ὄν) as well as the One (*Dox. Gr.* 304.24). We have already seen that the same holds for Plutarch, who expressly declares that what is must be one even as the one must be (*De E* 393b: ἔν ἐῖναι δεῖ τὸ ὄν, ὥσπερ ὄν τὸ ἔν). Another representative of such views is Alcinous, author of a *Handbook of Platonism* usually dated around

³⁵ Pierre Hadot, *Porphyre et Victorinus*, 2 vols. (Paris, 1968). The ascription to Porphyry is powerfully questioned by M. J. Edwards, ‘Porphyry and the Intelligible Triad’, *Journal of Hellenic Studies* 110 (1990), 14–25. Gerald Bechtle, ‘The Question of Being and the Dating of the Anonymous *Parmenides* Commentary’, *Ancient Philosophy* 20 (2000), 393–414, asserts, not without reason, a pre-Plotinian date. The best ground for the earlier date is given by Michel Tardieu, ‘Recherches sur la formation de l’Apocalypse de Zostrien et les sources de Marius Victorinus’, *Res Orientales* 9 (1996), 9–114, who shows that a lengthy passage of Victorinus, *Adversus Arium* (I 49.9–50.21), corresponds closely with material in a Gnostic *Apocalypse of Zostrianus*, now preserved in Coptic translation from the lost Greek original which Plotinus got Amelius to refute (*Porph. VP* 16). The correspondence is so close as to indicate that Victorinus and the Gnostic author used a common source, which Tardieu suggests was none other than Numenius himself. In reply, Hadot, ‘“Porphyre et Victorinus”. Questions et Hypothèses’, *Res Orientales* 9 (1996), 117–25, rightly doubts that Numenius would speak of the first principle as Pneuma (*spiritus* in Victorinus). Still, the source has to be from around his time, the time of so-called Middle Platonism. Hadot remains disinclined to backdate the Anonymous Commentator as well, though it was he who spelled out the parallels between him and Victorinus, which include the primacy of Being. An alternative to a predecessor of Plotinus is a conservative contemporary, reluctant to deny being to the First God of Platonism. One such, according to a suggestive paper by Paul Kalligas, ‘Traces of Longinus’ Library in Eusebius’ *Praeparatio Evangelica*, *Classical Quarterly* 51 (2001), 584–93 at 594–5, was Longinus, who may even have followed Numenius in appealing to Moses and ὁ ὄν. S. Pinès, ‘Les textes arabes dits plotiniens et le courant “porphyrien” dans le néoplatonisme grec’, in *Le Néoplatonisme* (Paris, 1971), 303–13, adduces three Arabic texts which cannot derive from Plotinus because they state or imply that the first principle is itself Being.

³⁶ Anon. *In Plat. Parm.*, ed. Alessandro Linguiti, in *Corpus dei papiri filosofici greci e latini* Parte III: *Commentari* (1995), XII 23–35; cf. IV 8–9, 27, V 4–5, X 16–25. Linguiti himself ends his thorough review of previous scholarship by proposing a fourth-century date (p. 91).

³⁷ Discussion in David Sedley’s contribution to this volume.

AD 150, which would make him Numenius' contemporary. Alcinous' line is that God, the first principle of Platonism, is not totally inexpressible as Moderatus had claimed, and as Plotinus and many others will insist later, but only nearly so (*Did.* 164.8). Rather like the elements of the *Theaetetus*, God can be named but not described, and among his names we find not only 'Good(ness)', 'Proportion', 'Truth', and 'Divinity', but also: οὐσιότης, Beingness (164.33–4).

All in all, around this period a significant group of Platonists maintain that the *Republic* should be interpreted in such a way that, if the Good is beyond and explanatory of the being of the Forms, it must itself be Being.³⁸ And this is hardly surprising if we recall that long ago Aristotle had said that much the hardest and most puzzling problem for first philosophy was whether or not unity and being (τὸ ἓν καὶ τὸ ὄν) are the very substance of the things that are (οὐσία τῶν ὄντων), as 'the Pythagoreans and Plato maintain' (*Met.* B1, 996^a 4–7). The ground he reports for this claim is that unity and being are the highest genera, predicated of everything whatsoever, hence principles of everything whatsoever (B3, 998^b 17–21; cf. Z16, 1040^b 16–19). Half a millennium later, we find Origen (3rd cent. AD) confessing that the issue of whether the highest principle of Platonism is Being or not remains hard to decide (δυσθεωρητός).³⁹

I do not myself undertake to defend Numenius' and others' interpretation of 'beyond being'. But I do defend the *question*, 'Is the Good also Being itself as well as Unity itself? If not, why not?', as a question that any thoughtful Plato scholar should consider today. What I find so admirable in Numenius and later Platonists is the way they can force us to notice aspects and problems in Plato that we moderns have long lost sight of. We have lost sight of them because we no longer approach Plato's writings in the way they did, as repositories of sacred truth. When faced with the phrase 'beyond being' in *Republic* VI, modern scholars tend to respond like Glaucon does. He says Ἄπολλον, δαιμονίας ὑπερβολῆς (509c 1–2), which is Greek for 'Wow!'. Like him, they do not feel impelled to ask what 'beyond being' actually means. Geoffrey Lloyd cites the phrase as a paradigm Greek paradox to compare with the Nuer belief that 'twins are birds' and mysterious Pythagorean injunctions such as 'Abstain from beans', 'Do not stir the fire with a knife'.⁴⁰ How many modern scholars have bothered to confront the phrase 'beyond being' with later passages of the *Republic* which describe the Good as 'the brightest part of being' (518c 9: τοῦ ὄντος τὸ φανότατον), 'the most blessed part of being'

³⁸ Cf. also Proclus, *In Rep.* I 281.11–12, citing unnamed persons who ask why the Good cannot be both οὐσία and ὑπερούσιον.

³⁹ *Contra Celsum* VI 64.14–28.

⁴⁰ G. E. R. Lloyd, *Demystifying Mentalities* (Cambridge, 1990), 16–17.

(526e 3–4: τὸ εὐδαιμονέστατον τοῦ ὄντος), and ‘the best among beings’ (532c 5–6: τοῦ ἀρίστου ἐν τοῖς οὐσι)?⁴¹

4

On the Good came out in at least six Books. Since Aristotle and the early Academy, *Περὶ τὰγαθοῦ* had been a standard title for discussing the fundamentals of Platonism—*die Prinzipienlehre* as our German colleagues put it. In Book I Numenius raised the question ‘What is being?’ (frags. 2, 23; 3, 1; 4a 7–9: τί ἐστι τὸ ὄν;), already equating this with the good (frag. 2, 5: τὰγαθόν). He argued in familiar Platonic style that what is, properly so called, cannot be matter or anything bodily such as earth, air, fire, or water, nor even all these elements taken together, because all such things are subject to change (frag. 3). Consequently, only the incorporeal can qualify as being (frag. 4a, 25–32). Alongside these philosophical arguments he ranged the testimony of peoples of good repute who agree that God is incorporeal (cf. frag. 1a, quoted above).⁴² No details of Numenius’ ethnographical survey have come down to us, but I surmise that Moses and the Jews will have stood out because they alone got so far in tracking the truth as to *identify* God with being. The others will have earned praise for expressing allegorically in their myths and ceremonies the less abstract doctrine proved in frag. 4a, that material things must be held together and governed by some changeless incorporeal entity.

On now to Book II, where Numenius introduced his positive philosophical account of being. As a Platonist, he naturally turned to the *Timaeus*, where Plato himself raises the question ‘What is being?’, presupposing (on the strength of other dialogues containing arguments like those Numenius rehearsed in Book I) that this means: ‘What is it that always *is* and never comes to be?’ (27d 6: τί τὸ ὄν ἀεί, γένεσθαι δὲ οὐκ ἔχον;). Numenius’ interpretation of Plato’s answer to this question exploits not only the *Timaeus*’ initial dichotomy between being and becoming at 27d–28a, but also its subsequent elaboration in terms of the contrast between eternity and time at 37d–38b. Here is how he summons his readers to the task:

‘Come then, let us mount up as close as our power permits to what is (τὸ ὄν), and let us say this: What is never was, nor will it ever come to be. Rather, it always *is*,

⁴¹ An admirable exception is Matthias Baltes, ‘Is the Idea of the Good in Plato’s *Republic* Beyond Being?’, in M. Joyal (ed.), *Studies in Plato and the Platonic Tradition: Essays Presented to John Whittaker* (Aldershot, 1997), 3–23; repr. in his *ΔΙΑΝΟΗΜΑΤΑ: Kleine Schriften zu Platon und Platonismus* (Stuttgart and Leipzig, 1999), 351–71.

⁴² Where note the legal overtones of *σημηγνάμενον, μαρτυρίας, ἐπικαλέσασθαι, προσφερόμενον*.

in a definite time, the present only (ἔστιν ἀεὶ ἐν χρόνῳ ὀρισμένῳ, τῷ ἐνεστώτι μόνον). If anyone wants to call this present “eternity” (αἰών), I join them in that wish. But time past, now that it has fled away, we should think to have fled away and escaped into not being any longer, while time future as yet is not, but professes that it will be able to have made its way into being. It is not therefore reasonable to suppose what is, at least in one sense of the phrase (ἐνί γε τρόπῳ),⁴³ either not to be, or to be no longer, or not yet to be. For when it is put that way, the statement contains a single mega-impossibility, that the same thing both is and is not, all at once.’

—‘In that case, any other thing could hardly be, seeing that what is itself is not, in respect of its very being (τοῦ ὄντος αὐτοῦ μὴ ὄντος κατὰ αὐτὸ τὸ ὄν).’⁴⁴

—‘So what is is eternal (ἀίδιον) and is stable always in its character and identity (κατὰ ταῦτόν καὶ ταῦτόν).’ (Frag. 5, 1–20)

The special mark of being is that it can only be expressed in the present tense, and must always be expressed in the present tense. A thing that *is*, in the sense that it enjoys true being, has no past or future; nothing can be said of it in the past or future tense. You cannot even say, as Melissus did (frag. 2), that it always was and always will be, for that would imply its enduring through the whole of ordinary time in the same way as a flower lasts through a small part of ordinary time and an Oxford college through a somewhat larger part of ordinary time. Epicurus’ atoms and Aristotle’s God do last in that way for all time, but being as Plato understands it is eternal in a different sense. It does not *last through* time at all.

The question is, What does that mean? It is a question that stirs fond memories of the London lecture hall where I first heard Sorabji air his controversial answer, subsequently written up in *Time, Creation and the Continuum*.⁴⁵ He holds that a being, in the sense relevant to eternity, does not last through time because true being, according to Plato, simply has no temporal dimension. It not only has no past or future, it has no present either. Eternity, on Sorabji’s view, is just *timelessness*, the absence of all aspects of temporality. Consequently, the ‘is’ of Plato’s true being is the

⁴³ An acknowledgement, and dismissal, of the ordinary language usage of the verb ‘to be’ in connection with changeable material things, e.g. ‘There is a fire burning in the hearth which is hot and yellowish-red’.

⁴⁴ The first quotation in this essay to bring on an interlocutor. In frag. 14, 16 he is addressed ὁ ξένε, but in truth there are few signs of the dialogue form as we find it in Plato, or even Cicero. Frede, ‘Numenius’, 1050, points out that *On the Good* fits better into a genre which became popular in later antiquity, that of exposition enlivened by the occasional question and answer, such as Maximus *On Matter*, quoted *in extenso* at Euseb. *PE* VII 21–64. We can be reassured by this parallel that the interlocutor’s role is not a casualty of Eusebius’ transcription of Numenius, but was as intermittent in the original as in the surviving fragments.

⁴⁵ Richard Sorabji, *Time, Creation and the Continuum [TCC]* (London, 1983), chs. 8–9, where he gives his own translation and interpretation of the texts of Plato, Plotinus, and Boethius discussed below.

tenseless 'is' that many philosophers find in mathematical statements like ' $2 + 2 = 4$ ' or in trivial tautologies like 'Justice is justice', 'A bachelor is an unmarried man'. According to Numenius, on the other hand, the 'is' of Platonic being is still tensed: it is *present* tense.⁴⁶ The reason why a Platonic being does not last through time is that eternity is present time which stays fixed and never becomes past. A Platonic being always *is*, in a definite time, the present only.

This is an extraordinarily difficult idea to grasp. It is very hard to see how 'always in the present' is not a contradiction in terms or, as Hobbes would have it, unintelligible nonsense:

[T]hey will teach us, that Eternity is the Standing still of the Present, a *Nunc-stans* (as the Schools call it;) which neither they, nor anyone else understand, no more than they would a *Hic-stans* for an Infinite greatness of Place' (*Leviathan*, ch. 46)

Yet, however difficult, the idea of an eternal present is a vital ingredient in the long history of responses to *Exodus* 3:14. When Aquinas came to discuss the divine names, the present tense of the verb 'to be' was one of several reasons he gave why the 'Qui est' of God's answer to Moses is the most appropriate of all names for the deity. 'Est' signifies 'esse in praesenti', which is maximally appropriate to a being whose esse knows neither past nor future (*ST* 1a qu. 13, art. 11).

Aquinas cites Augustine for this conception of eternity,⁴⁷ which points us back towards the Platonic tradition. I believe that the entire tradition, from the *Timaeus* onwards, understands eternity as present being with no past or future, not as mere timelessness. But let me start with Parmenides, for both parties to the debate agree that the history of eternity begins with Parmenides frag. 8, 5–6: 'It never was nor will be, since it now is, all together, one, continuous'.

Many students of Presocratic philosophy have taken Parmenides to be speaking of what is as something with a present but no past or future. Given this interpretation, some find themselves puzzled, others ready to embrace the idea with enthusiasm. I count Plotinus among the enthusiasts, since his treatise 'On Eternity and Time' is full of Eleatic echoes, including 'all together as one' (III 7 [45] 3, 12), as in a point (3, 18),⁴⁸ 'unextended' (2, 33; 3, 15; 6, 46–7; 11, 54; 13, 44 and 63), 'always all present' (3, 17), 'partless' (3, 18; 6, 48–50), 'unshakeable' (5, 21; 11, 3), 'whole' (4, 33–4; 5, 4; 11, 54–6), 'full' and 'not lacking' (6, 36). But Sorabji rejects the interpretation outright, for both Parmenides and Plotinus. Parmenides may seem to speak of a detached present without a past

⁴⁶ The Greek *χρόνος* was used for 'tense' as well as 'time'.

⁴⁷ See *Conf.* XI 13 ('semper praesentis aeternitatis'), *Trin.* V 2.

⁴⁸ Sorabji *TCC*, 118, rightly observes that this need not mean it *is* a point or instant.

preceding it or a future to follow, but a more charitable interpretation is to see him as 'groping for the concept of timelessness'.⁴⁹ And what Parmenides groped for, Plotinus will grasp.

Sorabji's argument for his reading of Parmenides is purely philosophical, not textual. All he says is that the idea of something 'always in the present' is incoherent. 'How are we to understand *endurance* without a past or future?' Indeed, 'the enduring present . . . appears so baffling that argument would be needed to establish not its incoherence, but its coherence'.⁵⁰ He then proceeds to survey a large number of later accounts of eternity, beginning with Plato's *Timaeus* and going on to Plotinus and subsequent Platonists. But however suggestive of a detached present their language may be, he declines to admit that any of them could believe that the 'is' of eternity is genuinely present tense.

Numenius is absent from the survey, for the good reason that in those days neither of us was aware of his contribution to our debate. It is an important contribution because he comes relatively early in the Platonic tradition. His clear testimony, and his well-known influence on Plotinus, make it a live possibility that later Platonists will have shared his understanding of eternity. In some cases at least, that suggestive language is to be taken at face value. The most celebrated example is Boethius' definition of eternity as 'the complete possession all at once of an infinite life' (*interminabilis vitae tota simul et perfecta possessio*), a definition he immediately relates to Plato:

Some people who hear that Plato held that this universe had no beginning in time and will have no end wrongly think that in this way the created world is coeternal with its creator. It is one thing to be extended through an infinite life, which is what Plato ascribed to the world, quite another to encompass all at once the whole presence (*totam pariter . . . praesentiam*) of an infinite life, which is manifestly a property peculiar (*proprium*) to the divine mind. (*Cons. Phil.* V 5)

Mere timelessness is hardly the prerogative of God.⁵¹

This is not the place to reopen the passage-by-passage debate on Platonist texts we used to enjoy. Having put a question mark against the lot, I propose to concentrate here on the crucial sentences of the *Timaeus* from which Numenius begins. That will fortify me to broach the underlying issue in this disagreement, namely: How far is it legitimate to allow ourselves, when interpreting philosophical texts from traditions

⁴⁹ *TCC*, 120–1; cf. 50–1, 99, 128. An important Whiggish influence here, I take it, is G. E. L. Owen's brilliant paper, 'Plato and Parmenides on the Timeless Present' ['Timeless'], *Monist* 50 (1966), 317–40, cited from his *Logic, Science and Dialectic* (London, 1986), ch. 2.

⁵⁰ *TCC*, 100, criticizing unpublished early work of mine on Parmenides.

⁵¹ Sorabji's ch. 8 considers whether timelessness is plausibly attributed to universals, numbers, or truth.

other than our own (be they past or contemporary), to be guided by what ‘we’ can make sense of?

5

If eternity was mere timelessness, as Sorabji holds, the creation of time would require the creation of the present as well as the creation of past and future. But that is not what we find in *Timaeus* 37e–38a:

There were no days and nights, months and years, before the Heaven came into being, but he planned that they should now come into being at the same time that the Heaven was framed. All these are parts of time, and ‘was’ and ‘will be’ are forms of time that have come to be; we are wrong to transfer them unthinkingly to eternal being. For we say that it was and is and will be, but ‘is’ alone really belongs to it and describes it truly; ‘was’ and ‘will be’ are properly used of the becoming that proceeds in time, for they are changes (*κινήσεις γάρ ἔστων*), whereas that which is always changelessly in the same state cannot become older or younger by the lapse of time—it neither became so ever, nor has it become so now, nor will it be so hereafter. (tr. after Cornford and Zeyl)⁵²

Only ‘was’ and ‘will be’ have come to be (37e 4). Only they are changes (note the dual *ἔστων* at 38a 2)—as Plutarch put it (*De E* 393a), ‘They are displacements and deviations of a nature unfitted for constant being’.⁵³ Unlike ‘was’ and ‘will be’, the present tense ‘is’ is not said to have come to be and is not characterized as change (*κίνησις*). It should be perfectly clear that the ‘is’ which really belongs to the realm of true being is the very same ‘is’ as occurs in the mistaken pronouncement ‘It was and is and will be’ (37e 6). It is also the same ‘is’ as occurs in a list of supposedly ‘inaccurate’ statements with which *Timaeus* rounds off the paragraph: ‘What came to be *is* a thing which came to be’, ‘What comes to be *is* a thing which comes to be’, and again ‘What will come to be *is* a thing which will come to be’,

⁵² The discussion of this text in Sorabji, *TCC*, 109, concentrates on the word ‘always’ at 38a 3, a topic I shall come to later. For as Sorabji tells the story of eternity, Plato’s use of this and other terms implying duration set a problem for Plotinus and his successors when they grappled with the *Timaeus*.

⁵³ *ἔγκλίσεις τινὲς καὶ παραλλάξεις τοῦ μένειν ἐν τῷ εἶναι μὴ πεφυκός*. The phrase *κινήσεις γάρ ἔστων* is usually translated ‘for they are motions’. That would be correct for days and nights; as parts (*μέρη*) of time, they are units measured by the Sun’s motion around the Earth. But ‘was’ and ‘will be’ are contrasted with such parts and called forms or types (*εἶδη*) of time. *Tht.* 181cd distinguishes local motion (*φορά*) and alteration (*ἀλλοίωσις*) as two forms or types (*εἶδη*) of *κίνησις*, where ‘alteration’ covers growing older as well as change of quality. Given the focus in 38a 3–5 on becoming older or younger (first brought out properly, to my knowledge, by Owen, ‘Timeless’, 39, and now reflected in Zeyl’s translation), it seems best to take our cue from Plutarch and read *κινήσεις γάρ ἔστων* in terms of the *Theaetetus*’ generic notion of change (Plot. III 7 [45] 3. 35 writes *μεταβάλλειν εἰς τὸ ἔσται*). A close association between being in time and becoming older and younger can be observed at *Parm.* 141ad, 151e ff.

plus ‘What is not *is* something that is not’. Timaeus defers for a more suitable occasion the task of picking over these sentences to expose their faultiness, but at least in the first three it seems clear that his analysis would turn on the point that ‘is’ is *present* tense⁵⁴—exactly the point which Numenius insists upon.

Once again, the admirable Platonist Numenius can force our jaded modern eyes to notice a feature of Plato’s text—only past and future are created—which has not been sufficiently emphasized in modern attempts to understand Plato’s doctrine of eternity. It is true that Plato does not echo Parmenides’ emphatic ‘now’, still less does he anticipate the later Platonist distinction between the ‘now’ of eternity and the ‘now’ of ordinary time (Boethius’ *nunc stans* and *nunc fluens*). But throughout the passage he is plainly thinking in terms of the present tense use of ‘is’, not of some detensed alternative. All honour to Numenius for confronting us with a particularly forthright statement of the idea that eternity is genuinely *present* being. Let that serve as prelude to his equally interesting account of *being*.

6

For all these remarks about eternal being, Numenius tells us at the start of frag. 6, have been by way of introduction. Frag. 5 on eternity led immediately to the great revelation:

I will not make any more pretences, nor claim not to know the name of the incorporeal. Perhaps this is the point at which it is more agreeable to say it than not to say it. So then—I say that its name is the very thing we have long been inquiring into (λέγω τὸ ὄνομα αὐτῷ εἶναι τοῦτο τὸ πάλαι ζητούμενον). Let no one laugh if I say that the name of the incorporeal is ‘substance and being’ (οὐσίαν καὶ ὄν).

The reason why ‘being’ (ὄν) is its name is that it has not come to be and will not perish, nor can it undergo either any other change or any better or worse development. Rather, it is simple and unalterable and constant in its form, neither voluntarily departing from its sameness nor being forced to do so by anything else. Then again⁵⁵ Plato said in the *Cratylus* that names themselves are applicable to things by virtue of their likeness to them. So let it be granted and decided thus: the incorporeal is that which is.⁵⁶

⁵⁴ If the second example seems innocuous, because τὸ γιγνόμενον is present tense like ἐστί, turn to *Parm.* 153c 7–e 3 and *Soph.* 245d 1–4 (cf. *Ar. Top.* IV 5, 128^b6–9): only at the end of the process does τὸ γιγνόμενον come to be ὄν and ἄλλον.

⁵⁵ This use of δὲ καί (Denniston, 305) adds a further reason for the name; a reason based on the nature of the name supplements a reason based on the nature of its nominatum.

⁵⁶ So Gifford translates εἶναι τὸ ὄν ἀσώματον. Des Places has it the other way round: ‘l’être est incorporel’, which he admits is not the conclusion we have been led to expect. He

Appropriately for a climactic moment, this passage is dense with allusions to other texts. It will take time to spell them out in detail. I shall proceed in chronological order.

First, the Book of Exodus. There is no parallel in Plato or any other Greek philosopher I know for such a revelation of the divine name, let alone for the revelation to consist of so common or garden a name as 'being'. Given that Numenius' First God has already been called *ὁ ὄν*,⁵⁷ and given that the Exodus narrative has already been used to show the Jews agreeing with Plato, I trust that readers will find it overwhelmingly likely that Numenius' own revelation scene in frag. 6 was meant to recall Moses' encounter with the burning bush.

Second, Plato. At first sight, he may seem to yield precedence to Moses here, with only a supplementary argument from the *Cratylus* expressly attributed to him. But a work *On the Good* can hardly neglect the famous simile of the Sun in Plato's *Republic*. The link is the words 'Let no one laugh', which take us back to Glaucon's reaction on being told that the Good is 'beyond being, surpassing it in dignity and power'. Socrates reports, 'And Glaucon said *μάλα γελοίως*, "Apollo, what daemonic excess"' (509c 1–2). Translators divide over *μάλα γελοίως*. Is Socrates laughing at Glaucon ('Glaucon very ludicrously said')⁵⁸ or the other way round ('with much amusement Glaucon said')?⁵⁹ The Greek could mean either, but the second alternative is a better match for 506d, where Socrates feared that if he tried to say what the Good is, even at the level of his earlier account of the virtues, he would disgrace himself and incur laughter. He plays safe by offering a likeness of the Good instead of a

cites the same formula in the first sentence of frag. 7, which followed closely after frag. 6, but this reports what the speaker has just said and so is not independent evidence for what he meant to say in frag. 6. The solution is to read Plato as closely as Numenius did, for there one can find definitions stated in this form, with the definiendum lacking an article and seemingly in predicate position: e.g. *Rep.* 332b 9–c 2 with d 7–8, 335c 1–5 with 336a 9–10. Des Places gets it right at frag. 19, 12–13: *τὸ ἀγαθὸν ὅτι ἐστὶν ἐν*.

⁵⁷ More than once, it would seem from the resumptive *γε* in *ὁ γε ὄν*. The *πάλιν* in frag. 13, 1 introduces a *second* proportion to explain the relation between the First God and the Demiurge. This disposes of the confident assertion of M. J. Edwards, 'Numenius, Fr. 13 (des Places): A Note on Interpretation', *Mnemosyne* 42 (1989), 478–82, that it is 'sufficiently plain' that Numenius had done nothing earlier in *On the Good* to prepare his readers for the unusual nomenclature *ὁ ὄν*. Edwards therefore goes back to Gifford's construal: *ὄν* as copula with *σπέρμα* its predicate. In reply to the usual objection that a sower cannot sow himself, he cites texts on the consubstantiality of parent and offspring. But then, in a construction he admits to be difficult, to secure an object for the verb *σπείρει* he detaches *χρήματα σύμπαντα* (understood as a periphrasis for the soul mixture of the *Timaeus*) from *εἰς τὰ μεταλαγχάνοντα αὐτοῦ*. The complications soon multiply *praeter necessitatem*.

⁵⁸ So Shorey, in line with Proclus (*In Rep.* I 274.5, 286.1), Jowett, Adam, Lindsay, Bloom. Lee has 'to the general amusement'.

⁵⁹ So, in effect, both Grube and Reeve. *Rep.* 398c 7 shows that it is not out of character for Glaucon to laugh at what Socrates says.

definition—and still incurs laughter. Numenius' speaker has even more reason to fear being laughed at when, like Moses, he announces that the name of the incorporeal is just 'being'. All that palaver building up to the revelation of the divine name, and then, when the revelation arrives, as in *Exodus* it is more of a puzzle than the question it answers. The name of the incorporeal, the name that is to say of God, is *ὄν*. But surely we have all along been arguing that only the incorporeal is *ὄν*. Are we not now being told the utterly trivial truth that *τὸ ὄν* is named *ὄν*? Besides, as the most unspecific word in the language *ὄν* would seem to be the *least* revelatory name you could come up with.

This is the point at which to note a third allusion threaded into frag. 6. For anyone familiar with Aristotle's *Metaphysics*, the phrase *τοῦτο τὸ πάλαι ζητούμενον* should leap off the page as a semi-quotation from Z1, 1028^b2–4,⁶⁰ where Aristotle states that the question everyone has been asking and puzzling over since philosophy began, the question *τί τὸ ὄν*; ('What is that which is?') is the question *τίς ἡ οὐσία*; ('What is substance?'). The allusion explains why the word *οὐσία* ('substance') suddenly appears alongside *ὄν* in frag. 6, 7. Already, in Book I, Numenius was asking *τί τὸ ὄν*; and treating it precisely as an old, old question on which ancient peoples agreed with Plato. He does not need Aristotle's support for going back to the distant past. His reuse of Aristotle's phrase *τὸ πάλαι ζητούμενον* is more likely to point a way forward from the seemingly laughable conclusion that the name of the incorporeal is the very name we have been puzzling over all along, *τὸ ὄν*. Numenius, I suggest, follows Aristotle in thinking that the question *τί τὸ ὄν*; can usefully be recast as the question *τίς ἡ οὐσία*; Let me explain why this would be a helpful way forward.

In a much cited passage of his classic study *L'Être et L'Essence*,⁶¹ Étienne Gilson claimed Z1, 1028^b2–4 as proof that Aristotle made no distinction between essence and existence. To this interpretation there are two important objections.

The first objection is to Gilson's understanding of *οὐσία* in this text as essence rather than substance. Aristotle's view is that the Presocratics did not have, save for a few fumbles, the concept of essence, so they could not possibly have been asking 'What is essence?'.⁶² When read in its entirety, *Metaphysics* Z1 shows that the question Aristotle conceives himself to share with the older philosophers is the question, 'What are the fundamental underived constituents of the universe? What are the things that exist and are what they are independently and in their own right, such

⁶⁰ So too Frede, 'Numenius', 1051, but no sign of recognition from des Places.

⁶¹ Étienne Gilson, *L'Être et L'Essence* (Paris, 1948), 59.

⁶² *Ph.* II 2, 194a18–21; *Met.* A6, 987b3–4; M4, 1078b17–29.

that everything else owes its being to them?" To *that* question Numenius as a Platonist quite naturally replies that what exists and is what it is independently and in its own right is: Being with a capital B, Being itself, the *αὐτόον* of frag. 17.

Like Aristotle's *Metaphysics*, *On the Good* is written as an arduous journey which starts from the principles needed to explain the sensible world and ascends to a divine first principle very different from the gods of popular religion, different even from the Divine Craftsman of the *Timaeus* (frag. 12, 7–14). It is easy to see how the question 'What is it that everything else owes its being to?' would fit the context of God's speaking from the burning bush in *Exodus* 3:14. The God of the Old Testament is precisely that to which everything else owes its being. But a Platonist can understand this in two ways, one as efficient causation by a Divine Craftsman, the other as imitative participation in Being itself, whether directly or by way of less exalted Forms which themselves derive from Being. Numenius could well have been encouraged to take 'I am that I am' in this second way by the fact that Aristotle speaks of 'What is the primary, fundamental being?' as the old, old question which everyone has been grappling with since philosophy began. Numenius would not be the first to count Moses the discoverer of philosophy itself.⁶³

The second objection to Gilson is that Aristotle does not mean that there is no difference at all between his two questions *τί τὸ ὄν;* and *τίς ἡ οὐσία;* On the contrary, precisely because *οὐσία* signifies that which is in the primary way, that which explains the being of everything else, if we can answer the second question we will have the key to answering the first. There is a difference between the two questions because the highest level of being, whatever it may be, is the one that explains the rest. And it seems to me that, as against Sorabji on Plato on eternity, so against Gilson on Aristotle Numenius has it right.

Finally, Plato's *Cratylus*. The speaker has already explained (frag. 6, 7–12) why the name *ὄν* is appropriate to the incorporeal, viz. because the incorporeal, and only the incorporeal, is immune to change. This explanation of the name, based on the nature of its nominatum, is a straightforward corollary of the thesis argued at length in Book I that nothing corporeal can be *ὄν*, because all bodily things are subject to change. We now expect a supplementary explanation based on the nature of the name *ὄν* itself,⁶⁴ which should display some likeness to its incorporeal nominatum. But our expectation is frustrated. Numenius moves at once to trumpet his conclusion ('So let it be granted and decided thus: the incorporeal is that which is') without stopping to specify any resemblance

⁶³ See n. 10 above on Artapanus.

⁶⁴ Cf. n. 55 above.

between name and bearer.⁶⁵ He is as much of a tease as the God of *Exodus* 3:14.

Since we are left to speculate on our own, I suggest we recall the etymology of ὄνομα ('name') as 'search for a being' at *Cratylus* 421ab: τοῦτ' ἔστιν ὄν, οὐδ' τυγχάνει ζήτημα τὸ ὄνομα. I cannot help thinking that Numenius' strangely worded sentence λέγω τὸ ὄνομα ἀπὸ εἶναι τοῦτο τὸ πάλαι ζητούμενον (frag. 6, 5–6: 'I say that its name is the very thing we have long been searching for') is a transposition of this etymology into a context where it can be fused with Aristotle's τὸ πάλαι ζητούμενον to suggest that the name of the incorporeal signifies *the* object of search, the being which, once found, will explain everything else. Its name is Name itself, from which all ordinary names derive as all beings derive from Being itself.⁶⁶

7

But enough of speculation. The ancient obsession with etymology does not appeal to modern philosophers trained in the analytic tradition. But please put up with it a little longer, for etymology can provide a useful focus on the debate I began from.

Here is Plotinus on the etymology of αἰών, 'eternity':

When we use the expressions 'always' (τὸ ἀεί) and 'not a thing which at one time is and at another is not' (τὸ οὐ ποτέ μὲν ὄν, ποτέ δὲ μὴ ὄν), it is *for our own sake* (ἡμῶν ἕνεκα)⁶⁷ that we put it that way. No doubt 'always' is not used in its proper (κυρίως) sense. When applied to the incorruptible it might mislead the soul into imagining an extension of something becoming more, something indeed which is never going to fail. It would have been better perhaps just to say 'being' (ὄν). But even though 'what is' (τὸ ὄν) is a satisfactory name for being (οὐσία), since people tended to think that becoming is in fact [or: is also] being (οὐσία), to grasp <the difference> they needed the addition of 'always'. For it is not the case that being (ὄν) is one thing and *always* being another, any more than a philosopher is one thing and the true philosopher another. It is because there is such a thing as putting on a pretence of philosophy that 'true' got added. Just so, 'always' (ἀεί) was added to 'being' (τῷ ὄντι), i.e. to ὄν, so that the word αἰών ['eternity'] means 'always being'. For this reason, the 'always' should be taken to mean 'truly' being (ἀληθῶς ὄν), and it should be contracted into an extensionless power which in no

⁶⁵ Des Places ad loc. seems oblivious to the difficulty, merely referring us to *Crat.* 430a 10 for a general statement of the likeness theory of names.

⁶⁶ Another route to the same conclusion would be a different etymology: ὄνομα = ὄν + ὁμοιώσει.

⁶⁷ In their *editio maior* (1951) Henry-Schwyzler put a comma between ἡμῶν and ἕνεκα to join ἕνεκα with τῆς σαφηνείας. Their *editio minor* (1964) accepts, as does Armstrong's Loeb (1967), Dodds' proposal to excise τῆς σαφηνείας as a gloss on ἡμῶν ἕνεκα.

way needs anything besides what it already has. Rather, it has everything there is (ἔχει τὸ πᾶν). (III 7 [45] 6, 22–36; tr. after Armstrong)

The etymology αἰών = αἰεί + ὤν may come from Aristotle (*DC* I 9, 279a 22–8), but Plotinus gives it a pedagogical twist towards Platonism. ‘Always’ is said from the point of view of ordinary people immersed in the sensible world of becoming, to guide them to a higher perspective. Sorabji takes a different view of this ‘crucial passage’. Its purpose is to introduce a novel, non-temporal sense of ‘always’ in which the word ‘merely has the function of denoting *true* being as opposed to coming to be’.⁶⁸ This makes it sound as if Plotinus bids us disregard the usual meaning of ‘always’ and substitute a quite different, unrelated sense, which only the philosophically enlightened will understand. For anyone else—for anyone, that is, unacquainted with the Platonist concept of true being—the etymology of ‘eternity’ will be more of a hindrance than a help.

In ancient theories of language the ‘proper’ (κυρίως) sense of a word may contrast with a variety of ‘improper’ extended, figurative, or catachrestic uses, not all of which would call for a separate entry in the dictionary. For example, when Homer speaks of the ‘ten thousand noble deeds’ accomplished by Odysseus (*Il.* 2. 272), that grand hyperbole counts for Aristotle (*Poet.* 1457^b11–13) as ‘metaphor’ (μεταφορά), i.e. as an ‘improper’ (οὐ κυρίως) meaning of the number word. The example is pertinent because Plotinus clearly wants people to keep in mind some part, but not all, of the ordinary meaning of ‘always’, otherwise he would not warn them against extrapolating to an infinite extension. (We would not ask Odysseus to tell us about deed no. 9,997.) The helpful force of the etymology αἰών = αἰεί + ὤν is negative: an eternal thing is *not* a thing whose being has a beginning and end in time—hence Plotinus’ addition of the phrase ‘not a thing which at one time is and at another is not’ (τὸ οὐ ποτέ μὲν ὄν, ποτέ δὲ μὴ ὄν). What we must resist is the temptation to infer (with Aristotle) the positive conclusion that an eternal thing *endures forever* throughout an infinity of time. Only so will the etymology of ‘eternity’ help us transcend the temporal order to renew contact with the extensionless present of true being.

We live, Plotinus goes on to say (7, 1–6), in both time and eternity. We have a share of both. This calls attention to the ‘we’ who read and respond to his treatise. Is it the ‘we’ who grew up Here in the sensible world of time or the ‘we’ who most truly belong There in the realm of eternity? Plotinus answers ‘Both’. He is writing for those who attempt the

⁶⁸ His phrase, *TCC*, 112, where in translating the passage he renders ἡμῶν ἕνεκα ‘as a concession to ourselves’.

journey of thought from Here to There. The phrase ‘always in the present’ joins the view from Here with the view from There to express, not a contradiction in terms, but the termini of an arduous transition from one all-encompassing perspective to another. Remember Boethius’ comparison: God sees the whole of history in his eternal present as a traveller on a high mountain sees things far and near all at once, in a single temporal present (*Cons. Phil.* V 6). A more mundane comparison would be with a novelist’s synoptic grasp of all the events and life-histories in a story. Such analogies offer a many–one mapping from the infinitely numerous successive times of ordinary experience to the unitary present of the divine (authorial) perspective. As *homo viator* ‘we’ are on the way to that height. ‘Always in the present’ is meant to help us upwards, not to fix in a formula the perspective we are struggling to achieve. Sorabji’s disambiguation would frustrate Plotinus’ pedagogic aim. To repeat, ‘It is *for our own sake* that we put it that way’.

Let me concede that Plotinus’ more scholastic successors do make formulaic use of two senses of ‘always’.⁶⁹ But this concession offers less than Sorabji wants, because when they speak of the ‘always’ of ordinary time and contrast it with a non-temporal (*ἄχρονος*) ‘always’ belonging to eternity, the question arises whether the second term of this contrast is the bare contradictory of the first, as Sorabji holds, or the richer notion of an eternal present. For any follower of Plato, time is a likeness (*εἰκλόν*) of eternity, its moving image (*Tim.* 37d). Time’s model is non-temporal in the sense that it is other than time,⁷⁰ but it can hardly be a mere absence or negation of time. Without a strong positive notion of eternity Platonic metaphysics would collapse.

8

There is much in Platonism that does not make sense to a mind content with the conceptual framework of ordinary experience. Plato speaks frequently of the bafflement and hostility that philosophy arouses, in intellectuals as well as others. His word for what philosophy—his type of philosophy—is up against is *δόξα*, inadequately

⁶⁹ See Procl. *In Tim.* I 239.2–6 and other passages cited by Sorabji, *TCC*, 115—where, however, note the beautifully fluid treatment of ‘always’ quoted from the Christian Origen, fellow-student with Plotinus in the school of Ammonius Saccas. It does credit to their teacher.

⁷⁰ So already, long before Plotinus, Plut. *De E* 393a: *κατὰ τὸν αἰῶνα τὸν ἀκίνητον καὶ ἄχρονον καὶ ἀνέγκλιτον*, where the last epithet picks up the description of ‘was’ and ‘will be’ as *ἐγκλίσεις* (n. 53 above) and in the very same sentence God is assigned to a single ‘now’ for always.

translated ‘opinion’, by which he intends the full range of beliefs, assumptions, values, and habits of mind we acquire, largely without realizing it, by being brought up to live in the sensible world.⁷¹ The dialogues record many confrontations between Opinion and Philosophy, but the refutation of Opinion is less an end in itself than a means of opening our minds to the possibility of an alternative perspective. That is why the dialogues are full of images as well as arguments. Opinion is so deeply rooted in our soul that it tends to be intransigent, blind to alternatives, resistant to argument. An image like the Ship of State in the *Republic*, or the Charioteer with his two horses in the *Phaedrus*, can liberate us from the familiar chains of Opinion to the realization that alternative perspectives are available, which provide novel starting points for argument. And the famous similes of Sun, Line, and Cave offer the prospect of progressing, gradually, from the temporal perspective of ordinary life in the sensible world towards the godlike perspective which the *Timaeus* identifies with eternity in contrast to time. Such progress, a turning of the whole soul from the realm of Becoming to that of Being (*Rep.* 518c), will transform everything: our understanding of the world, our values, the way we live—and thereby our standards of what makes sense.

This transformative intent is characteristic of all ancient philosophy,⁷² but the other-worldly leanings of Platonism take it to extremes and thereby set a problem for historians of philosophy, especially those like Sorabji and myself whose background in the analytic tradition encourages a critical engagement with the views and arguments of past philosophers.⁷³ The problem is this. From what standpoint are we to judge the coherence of the idea of an eternal present? Who are the ‘we’ who write the history of this long-lived notion? I suspect that Plotinus would hear in Sorabji’s objections the voice of a ‘we’ who insist, with Aristotle, that the temporal framework we grew up with Here—the framework which shaped our language and thought—is the only one there is, hence the only one we can make sense of. From this perspective a present tense without past or future connections is ‘a kind of logical torso’,⁷⁴ a defective

⁷¹ Cf. Numenius frag. 52, 53–5: Pythagoras did not hesitate to defend the truth with assertions that go against people’s opinion and expectations.

⁷² See my ‘The Sceptic in his Place and Time’, in Richard Rorty, J. B. Schneewind, and Quentin Skinner (eds.), *Philosophy in History: Essays on the Historiography of Philosophy* (Cambridge, 1984), 225–54, or in Myles Burnyeat and Michael Frede (eds.), *The Original Sceptics: A Controversy* (Indianapolis, 1997), 92–126.

⁷³ I do not mean that critical engagement is bound to be hostile. On the contrary, Eleanor Stump and Norman Kretzman, ‘Eternity’, *Journal of Philosophy* 78 (1981), 429–58, give an admirable display of how analytic techniques, sympathetically applied, may be used to rescue the eternal present from over-quick dismissal.

⁷⁴ Owen, ‘Timeless’, 40.

remnant of ordinary time. Which is to say, with Borges, that ‘eternity is an image wrought in the substance of time’.⁷⁵ But does not that inversion of Plato simply beg the question?⁷⁶

Bibliography

- BALTES, MATTHIAS, ‘Is the Idea of the Good in Plato’s *Republic* Beyond Being?’, in M. Joyal (ed.), *Studies in Plato and the Platonic Tradition: Essays Presented to John Whittaker* (Aldershot, 1997), 3–23; repr. in his *ΔΙΑΝΟΗΜΑΤΑ: Kleine Schriften zu Platon und Platonismus* (Stuttgart and Leipzig, 1999), 351–71.
- BECHTLE, GERALD, ‘The Question of Being and the Dating of the Anonymous *Parmenides* Commentary’, *Ancient Philosophy* 20 (2000), 393–414.
- BORGES, JORGE LUIS, ‘A History of Eternity’, in *Selected Non-fictions*, ed. Eliot Weinberger (Harmondsworth, 1999).
- BOYS-STONES, G. R., *Post-Hellenistic Philosophy: A Study of its Development from the Stoics to Origen* (Oxford, 2001).
- BURNEYAT, M. F., ‘The Sceptic in his Place and Time’, in Richard Rorty, J. B. Schneewind, and Quentin Skinner (eds.), *Philosophy in History: Essays on the Historiography of Philosophy* (Cambridge, 1984), 225–54, and in Myles Burnyeat and Michael Frede (eds.), *The Original Sceptics: A Controversy* (Indianapolis, 1997), 92–126.
- DES PLACES, ÉDOUARD, *Numénius: Fragments*, Texte établi et traduit (Paris, 1973).
- DILLON, JOHN, *The Middle Platonists* (London, 1977).
- DODDS, E. R., ‘Numenius and Ammonius’, *Les Sources de Plotin (Entretiens Hardt* 5 (1960)), 1–32.
- EDWARDS, M. J., ‘Numenius, Fr. 13 (Des Places): A Note on Interpretation’, *Mnemosyne* 42 (1989), 478–82.
- ‘Atticising Moses? Numenius, the Fathers and the Jews’, *Vigiliae Christianae* 44 (1990), 64–75.
- ‘Porphyry and the Intelligible Triad’, *Journal of Hellenic Studies* 110 (1990), 14–25.

⁷⁵ Jorge Luis Borges, ‘A History of Eternity’, in *Selected Non-fictions*, ed. Eliot Weinberger (Harmondsworth, 1999), 123.

⁷⁶ This essay began as a pagan contribution to a memorable inter-faith (Jewish, Christian, Muslim) conference on ‘The Great Tautology’, organized by myself, Alexander Broadie, and George Steiner at Robinson College, Cambridge on 22–4 May 1992 to discuss the centuries-long reception of Exodus 3:14 by philosophers of the three religions. Subsequent versions benefited from discussions at Cambridge (the Patristic Seminar and the B Club), Cornell, Dublin, London, and Princeton. For advice and help I am most grateful to John Dillon and Michael Frede, for usefully critical comments to Paul Kalligas, Ricardo Salles, and David Sedley. I sign off on 1 May 2003, soon after the fall of Baghdad to the US and British invasion, which gravely damaged the prospects for any renewal of such inter-faith philosophical dialogue.

- FREDE, MICHAEL, 'Numenius', *Aufstieg und Niedergang der römischen Welt* 36.2 (1987), 1034–75.
- 'Chaeremon der Stoiker', *Aufstieg und Niedergang der römischen Welt* 36.3 (1989), 2067–103.
- 'Celsus philosophus Platonicus', *Aufstieg und Niedergang der römischen Welt* 36.7 (1994), 5183–213.
- GAGER, JOHN G., *Moses in Graeco-Roman Paganism* (Nashville and New York, 1972).
- GIFFORD, E. H., *Eusebii Evangelicae Praeparationis Libri XV ad codices denuo collatos recensuit, anglice nunc primum reddidit, notis et indicibus instruxit* (Oxford, 1903).
- HADOT, PIERRE, *Porphyre et Victorinus*, 2 vols. (Paris, 1968).
- "'Porphyre et Victorinus". Questions et Hypothèses', *Res Orientales* 9 (1996), 117–25.
- JACOBSON, HOWARD, *The Exagōge of Ezekiel* (Cambridge, 1983).
- KALLIGAS, PAUL, 'Traces of Longinus' Library in Eusebius' *Praeparatio Evangelica*', *Classical Quarterly* 51 (2001), 584–93.
- LLOYD, G. E. R., *Demystifying Mentalities* (Cambridge, 1990).
- MOMIGLIANO, ARNALDO, *Alien Wisdom: The Limits of Hellenisation* (Cambridge, 1975).
- NOZICK, ROBERT, *Philosophical Explanations* (Cambridge, Mass., 1981).
- OWEN, G. E. L., 'Plato and Parmenides on the Timeless Present', *Monist* 50 (1966), 317–40; cited from his *Logic, Science and Dialectic* (London, 1986), ch. 2.
- PATZER, ANDREAS, *Der Sophist Hippias als Philosophiehistoriker* (Munich, 1986).
- PINÈS, S., 'Les textes arabes dits plotiniens et le courant "porphyrien" dans le néoplatonisme grec', in *Le Néoplatonisme* (Paris, 1971), 303–13.
- SCHNEEWIND, J. B., *The Invention of Autonomy: A History of Modern Moral Philosophy* (Cambridge, 1998).
- SORABJI, RICHARD, *Time, Creation and the Continuum: Theories in Antiquity and the Early Middle Ages* (London, 1983).
- STERN, MENAHEM, *Greek and Latin Authors on Jews and Judaism*, Edited with Introductions, Translations and Commentary (Jerusalem, 1980).
- STUMP, ELEANOR, and KRETZMAN, NORMAN, 'Eternity', *Journal of Philosophy* 78 (1981), 429–58.
- TARDIEU, MICHEL, 'Recherches sur la formation de l'Apocalypse de Zostrien et les sources de Marius Victorinus', *Res Orientales* 9 (1996), 9–114.
- WHITTAKER, JOHN, 'Moses Atticising', *Phoenix* 21 (1967), 196–201.
- 'Numenius and Alcinoüs on the First Principle', *Phoenix* 32 (1978), 144–54.

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The Senses and the Nature of Soul

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Platonic Souls as Persons

A. A. LONG

The concept of *psyche* is central to Plato's philosophy. If you doubt that, try to imagine subtracting *psyche* from his metaphysics, cosmology, epistemology, or ethics. The theory of Forms, the structure of the universe, the conditions of understanding, virtue and happiness—all of these are intimately connected with Plato's doctrine that rationality and desire for objective goodness are properties of the *psyche* at its best. In spite of its centrality, Plato's generic concept of *psyche* is neither one of the most discussed nor one of the most admired features of his philosophy.¹ Two principal reasons, I think, account for this state of affairs.

The first of these has to do with an apparent incoherence in the way Plato uses *psyche*. Thus I. M. Crombie specifies 'four forces which pull upon the word *psuche* [*sic*] as Plato employs it'.² He identifies these by noting that Plato makes *psyche* responsible for the life of plants, the orderly movements of the heavenly bodies, the immortal feature of human beings, and everything mental. On Crombie's assessment Plato has either succumbed to primitive animism, or, as Crombie prefers to think, he has unhappily combined personalist and non-personal functions in his concept of *psyche*. Referring only to Plato's early dialogues,

I am delighted to have the opportunity of contributing to this volume of essays celebrating Richard Sorabji. His explorations of ancient philosophy and his promotion of the subject are a remarkable achievement; and I greatly value the friendship we have shared over so many years. This essay attempts to be sorabjian in its aim of showing the more than historical interest of an ancient topic. I have benefited from comments offered by those who have heard versions of the essay in various places, including a very helpful and constructive response from Terry Irwin at Cornell, and also from comments made by the editor of this volume.

¹ I say 'generic' because there are numerous discussions of particular details of Plato's psychology, especially the tripartite *psyche* of the *Republic*, which is strongly defended by J. Cooper as a fine contribution to the understanding of human motivation: *History of Philosophy Quarterly* 1 (1984), 3–21, reprinted in his book *Reason and Emotion* (Princeton, 1999), 18–37.

² *An Examination of Plato's Doctrines*, 2 vols. (London, 1962), i. 301.

T. M. Robinson finds ‘soul... used in several distinguishable senses’, leading to an ambiguous notion of the ‘self’.³

Doubts about the coherence of Plato’s concept of *psyche* do not arise simply from thinking that he uses the term multifariously and even inconsistently. They are more deeply influenced, I surmise, by a second reason for this scholarly verdict, which is the difficulty of finding an interpretative framework suitable for modern readers to apply to Plato. Crombie discusses Plato’s concept of *psyche* under the heading ‘philosophy of mind’. But philosophy of mind is a relatively recent field of inquiry, indelibly coloured by Descartes and the sharp distinction he introduced between the physical and the mental. Inasmuch as Plato discusses such concepts as belief, desire, pleasure, action, and emotion, he can be brought into contact with what we call philosophy of mind. But the mind/body distinction, in the way it has preoccupied modern philosophy, has only partial bearing on the Platonic dualism of body and *psyche*.⁴ If Plato’s concept of *psyche* does not fit neatly into the philosophy of mind, that may tell us no more than the truism that he was an ancient philosopher.

The difficulty of translating Plato’s *psyche* into modern terms should not prevent us from looking for some approximate notion in our own conceptual scheme. Even if we conclude that the Platonic *psyche* is not commensurable with anything we fully understand or accept, we shall have no proper access to it at all without some hypothesis concerning its scope. In this essay I want to approach the Platonic *psyche* as if it were primarily intended to elucidate what we today understand by the concept of a person. My project is not to prove that the term *psyche* in Plato has a significant overlap with the word person. That overlap is too obvious to need proving. My aim is rather to try to show that Plato in his ‘psychology’ (I will use this word for convenience) was strongly motivated by a wish to establish the credentials of a concept that we can liken to the concept of a person.

Plato, of course, did not, and could not literally, ask the question, ‘What is a person?’ and offer his psychology as an answer to it. He does, however, regard it as the philosopher’s task to ask ‘What a

³ T. M. Robinson, *Plato’s Psychology* (2nd edn., Toronto, 1995), 20. Apart from such objections, there are well-known difficulties about reconciling doctrines of the *psyche* Plato advances in different dialogues—its unity versus its tripartition, its partial or complete immortality, etc. Cf. Robinson, pp. ix–x, on Plato’s use of particular psychic models to suit particular contexts. The different models prove less disturbing if Plato, as I argue, was primarily concerned throughout his treatment of *psyche* with aspects of personhood as distinct from quasi-biological ‘facts’ about human beings.

⁴ Cf. Everson’s ‘Introduction’, in S. Everson (ed.), *Companions to Ancient Thought, ii: Psychology* (Cambridge, 1991), 8–9, on some of the differences between Plato and Descartes.

human being is, and what it is appropriate for such a nature to do or undergo that is different from other creatures?" (*Theaetetus* 174b). Plato's Socrates and Plato's other leading interlocutors approach those questions by developing accounts of the human *psyche*. If there is a significant overlap between those accounts and much that we consider crucial to the concept of a person, that should help us to understand at least some of the aims of Plato's psychology since we shall have a translation system, as it were, for converting them into a modern idiom. I hope to show that an assessment of Plato's psychology from this perspective is particularly helpful not only for identifying the issues that primarily concerned him but also for mitigating the inconsistencies and ambiguities noted by Crombie and Robinson.⁵

By 'translation', I am not suggesting that *psyche* in Plato can consistently be rendered into English by 'person'. That is sometimes possible, and sometimes not. When Plato's Socrates undertakes to test someone's *psyche*, we would say he is trying to find out what kind of a person his interlocutor is. The analysis of the *psychai* of the members of the different constitutions in *Republic* 8 tells us the type of person they are—what they desire, how they order their priorities, and the kind of life that they live. The *psychai* that are judged in Plato's eschatological myths, after the end of their mortal life, retain the basic attributes of persons—life histories, characters, beliefs, and desires. In contexts such as these, person is a better translation than soul or mind. Soul has no agreed meaning in modern English, and mind, though plainly a central property of the Platonic *psyche*, is too restrictive a term to capture all the personal and ethical attributes Plato's concept implies.

However, although Plato consistently identifies the essence of the human being with the *psyche* as such, or at least with its rational part, as at *Republic* 9.588d, he tends to follow the custom of his time in speaking of *psyche* as something that a human being *has*, rather than as what a human being *is*.⁶ Since Platonic human beings, during their earthly

⁵ Given the breadth of the topic, and the requirements of clarity and brevity, I shall discuss only those details of Plato's psychology which seem to be central for interpreting his concept of *psyche* at its most general level. It may be thought that these include, for instance, immortality, details about tripartition, reminiscence of pre-natal knowledge, and incorporeality. Here I want to argue that we may get a better grasp of Plato's thought if we do not start from such properties of the *psyche* but interpret them as conditioned by his prior interest in understanding human identity from the viewpoint that we today would call the life of a person. For a wide-ranging study of ancient concepts of personhood, see C. Gill (ed.), *The Person and the Human Mind. Issues in Ancient and Modern Philosophy* (Oxford, 1990). The chapters of this book most germane to my study are those by C. Rowe (on Plato's *Phaedrus*) and A. W. Price, 'Plato and Freud'.

⁶ But note the possibly spurious *Alcibiades* 1, 130c, where 'human being' (*anthropos*) is formally identified with *psyche*, as distinct from body or the complex of body and *psyche*.

life, also have a body, it seems as if their *psyche* can be only a part of what they are. The concept of a person is not dualistic in this way. We cannot say that a human being has a body *and* a person. Our term person often refers to all of a human being, the whole man or woman, including his or her bodily attributes, as when you read that no more than eight persons are permitted to travel in an elevator at the same time.

This disanalogy between the modern term 'person', with its frequent bodily connotations, and Plato's *psyche* may suggest that it is better, after all, to treat his concept as at least broadly similar in scope to mind: as we speak of body and mind (or body and soul), so Plato speaks of body and *psyche*. Yet, the fact that there are some linguistic discrepancies between person and *psyche* is less significant, I believe, than what the concepts have in common. Although embodiment goes along with being a person in our everyday experience, it is controversial whether embodiment *is included in the concept of person*. There are reputable philosophers who do not think that personhood entails having a body, or at least having the human body a token person presently has.⁷ Actually, while embodiment is not an attribute of the Platonic *psyche*, that entity is intermittently attached to a body of some kind (human, animal, or celestial); and Plato probably thought that one couldn't be a human being unless either one at present has a human body, or in the past has had a human body, although a human being might exist without *still* having a human body, and a pre-embodied *psyche* might exist without *yet* acquiring the identity of a human being (see *Meno* 86a). The theoretical possibility that particular persons are not confined to one human body, and the certainty that Platonic *psychai*, during human life, are connected to one such body, bring the concepts of person and Platonic *psyche* sufficiently close to disarm the main force of the objection that person *can*, as Platonic *psyche* cannot, connote a human body. Moreover, the term person in many of its standard uses refers precisely to what someone is from a non-bodily viewpoint, as when I say: 'Jane has a beautiful body, but I don't care for her as a person'.

I will now make a *prima facie* case for the affinity between the Platonic *psyche* and the concept of a person, drawing on some modern thinking

Note too that Plato frequently shifts without any apparent change of meaning from describing what a *psyche* does to what the human being (whose *psyche* it is) does.

⁷ For a subtle discussion, cf. Bernard Williams, 'Are Persons Bodies?', in his *Problems of the Self* (Cambridge, 1973). Williams, though he argues that his question should be answered affirmatively, does not attempt to show that it is impossible to conceive of disembodied persons. What he claims, correctly I think, is that 'if we admit the possibility of persons previously embodied becoming disembodied, then we are committed to giving a Cartesian or dualistic account of those persons in their embodied state' (p. 70). For a positive account in favour of immaterialism, cf. R. Swinburne, in A. Peacocke and G. Gillett (eds.), *Persons and Personality: A Contemporary Inquiry* (Oxford, 1987).

about the latter concept. In the remainder of the essay, I will try to show how Plato developed the personalist concept of *psyche* he inherited from his culture.

What is a person? The first and most obvious use for the term is a human being *under a particular description*. When we characterize human beings as persons, we are not doing physiology or biochemistry.⁸ Persons are what we study in such fields as moral and political philosophy, law, theology, literature, anthropology, and history. The term ‘person’, said Locke, ‘is a forensic term, appropriating actions and their merit; and so belongs only to intelligent agents, capable of a law, and happiness and misery’.⁹ In a splendidly lucid article Daniel Dennett advances six necessary conditions of personhood.¹⁰ They include rationality, intentionality (acting under the causal influence of beliefs and desires), adopting and reciprocating certain attitudes with respect to others, capacity for verbal communication and, finally, self-consciousness. Dennett also refers approvingly to Harry Frankfurt’s influential thesis that persons, in the fullest sense, are beings who not only want to perform particular actions, but who also have ‘second-order volitions’.¹¹

For Dennett the reflective self-evaluation implicit in second-order volitions makes personhood ‘inescapably normative’. What he means by this is that life as a person is something to be aspired to, implying an ideal of

⁸ As David Wiggins has observed, ‘The Person as Object of Science, as Subject of Experience, and as Locus of Value’, in Peacocke and Gillett (eds.), *Persons and Personality*, 67, the concept of person is primitive in the sense that ‘it presents us with ourselves as we know ourselves’. Or, as he further observes: ‘Starting with *person*, one abstracts to the living body; and from that, one abstracts to an object whose processes can be subjected to biochemical and anatomical research.’ In describing the concept of person as ‘primitive’, Wiggins means that what we are primarily concerned with, when we refer to a person, is ‘a subject of consciousness’ and a ‘locus of value’. What a person may be, from the viewpoint of biology, cannot tell us what it is from the primary perspective of consciousness and value.

⁹ Locke continues: ‘This personality extends itself beyond present existence to what is past, only by consciousness—whereby it becomes concerned and accountable . . . all which is founded in a concern for happiness, the unavoidable concomitant of consciousness’ (*Essays* (5th edn., 1706) Book II, ch. xxvii).

¹⁰ D. Dennett, ‘Conditions of Personhood’, in A. O. Rorty (ed.), *The Identities of Persons* (Berkeley and Los Angeles, 1976), 175–96. Dennett does not claim that his six necessary conditions are jointly also sufficient conditions. His article is chiefly concerned with exploring the relation between ‘metaphysical’ personhood (roughly, ‘being human’) and ‘moral’ personhood.

¹¹ H. Frankfurt, ‘Freedom of the Will and the Concept of a Person’, *Journal of Philosophy* 68 (1971), 5–20. Frankfurt uses the expression ‘second-order volitions’ to refer to ‘reflective self-evaluation’—wanting to live in a certain way, wanting to be someone who has a certain range of desires, wanting to persuade oneself to give up one pattern of behaviour in favour of another, etc.

morality. Frankfurt, in a similar vein, characterizes human beings who lack second-order volitions as ‘wantons’ rather than persons, exemplifying wantons by small children and mentally defective people. There are more charitable ways of making that point, but it seems clear that the modern concept of person strongly includes the normative aspect that Dennett maintains. When we consider what particular human beings are in terms of their attributes *as individual persons*, we are not primarily interested in their physical characteristics or financial position, or even their health, but their mental and moral qualities, their characters, and their personalities. And we cannot consider any of these things without, at the same time, evaluating them.¹²

Plato’s passionate interest in the features of persons that I have enumerated is obvious throughout his dialogues. These are packed with arguments that seek to prove that reason, self-reflection, deliberation about life’s purposes, cultivating certain desires and repressing others, and justice are the *normative* dispositions or activities of a human *psyche*. Plato also seeks to prove that happiness has these dispositions or activities as its necessary and perhaps sufficient conditions. His psychology is in line with Locke’s observation about the connection between persons and intelligence, accountability, and happiness or misery.

It is self-evident that actual persons are living beings. We might also clarify the concept of person by saying that what makes someone a person is a way of living, as specified by the kind of features Dennett picks out—rationality, self-consciousness, intentionality, reflectiveness, and morality, with the important proviso that persons differ radically from one another in how and in how far they satisfy or seek to satisfy these conditions. I say that what makes someone a person is a certain way of living because that formulation, with its reference to life, enables us to see how Plato could use the term *psyche* as his way of identifying that which has the attributes of a person. What *psyche* primarily signified, in the

¹² This obviously and very importantly does not imply that the health and welfare of persons qua persons are matters of indifference. We today expect a good government to promote the health and welfare of all its citizens, precisely because their health and welfare are a primary good for them as persons; and we think it correct to impose strict penalties on anyone who deliberately damages a person’s body or health or welfare. The basis of these judgements, in the modern context, is our belief that persons (irrespective of their *personal* qualities, as cited above) have *rights*, which, in turn, help to establish norms of appropriate interaction between persons, and between governments and citizens. In this essay I am not talking about the concept of a person as the bearer of rights which are inalienable and unaffected by the person’s conduct. The fact that a modern person’s rights are not a function of his or her *personal* qualities is sufficient to differentiate the political/legal domain of the former from the individualistic, psychological, and moral sphere of the latter. The same fact is also sufficient, I think, to make ‘person’, as the bearer of personal qualities, a concept with cross-cultural and diachronic applications that do not apply, at least in the same way, to ‘person’ as the bearer of legally assigned rights.

ordinary language of Plato's time, was that which makes embodied human beings alive as the individuals that they are. For Plato, I propose, what *psyche* gives to human beings is the capacities they need for living well as persons in the sense just explained.

To contextualize these last points, it is important to recognize that Plato, notwithstanding his remarkable psychological innovations, inherited a strongly personalist notion of the human *psyche* from mainstream Greek culture. Human death in Homer, and in all later Greek culture, is explained by the departure of the *psyche* from the body. When someone faints in Homer, the *psyche* also leaves the body, but only temporarily. Since someone who has fainted is still alive, we should be cautious about treating the Homeric *psyche* as if it referred to an organic, or quasi-physical principle, of life. What the Homeric *psyche* constitutes can be inferred from the fact that it survives as a ghost after it leaves the body permanently. Homer's bodyless *psychai* are what we could call ex-persons. By being given draughts of blood, they can talk; and what they reveal, under those conditions, is the identity and character corresponding to their formerly embodied existence.¹³

The Homeric *psyche* gives us an invaluable glimpse of the kind of life this term, in its earliest recorded Greek usage, was taken to confer—life as a conscious, desirous, purposive being. Some of Plato's philosophical predecessors gave the *psyche* a material constituency—air, fire, or types of atom. But such theories, discrepant and recherché as they were, had no apparent effect on the standard understanding of the term. On the evidence of its usage in Greek poetry after Homer and before Plato, *psyche* regularly refers to or implies a human life as experienced in human consciousness. As such, it may stand for the whole person, as when Oedipus says, 'My *psyche* [i.e. "I"] grieves for the city and myself' (Sophocles, *Oedipus Tyrannus* 64), or as Odysseus remarks: 'It is not my habit to praise a stubborn *psyche*' (Sophocles, *Ajax* 1361).¹⁴

¹³ All these points are wonderfully illustrated in *Odyssey* 11.

¹⁴ D. Claus, *Toward the Soul* (New Haven and London, 1981) has argued that the predominant sense of the term *psyche* before Plato was that of a powerful 'life-force' whose manifestations are both physical and psychological. I think that the term 'life-force' is seriously misleading. The Homeric *psyche*, as we have just seen, is an ex-person when it leaves the body at death. The *psyche* mentioned in my two Sophoclean texts is not a life-force but a person. 'Life-force' treats the early Greek uses of *psyche* as if they picked out a biological principle. Claus (*Toward the Soul*, 163) finds it remarkable that Plato in his early dialogues makes 'no direct reference to the traditional function of the *psyche* as animator familiar to ordinary Greek usage' (p. 163). Plato's psychology was undoubtedly revolutionary in many respects, but, if I am right, he inherited the view that *psyche*

Isocrates, Plato's exact contemporary, expects his readers to agree with these remarks that he makes concerning 'our nature' (*ten physin hemon*):

[It consists] of body and *psyche*. And everyone would admit that, of these, the *psyche* is by nature the more authoritative constituent and the one of greater worth. This is so because it is the function (*ergon*) of the *psyche* to deliberate (*bouleusasthai*) on private and public affairs, whereas the body's function is to minister to the decisions (*gnostheisin*) of the *psyche*. (*Antidosis*, 180)

Isocrates goes on to explain that there are two corresponding branches of education—philosophy for the *psyche*, which renders it more intelligent, and gymnastics for the body, to make it more serviceable. There is no reason to suppose that Isocrates is borrowing from Plato here. His opening remarks about body and *psyche* are foreshadowed in earlier Attic orators and in Democritus.¹⁵

Isocrates conceptualizes the relation between *psyche* and body on the model of master and slave. The *psyche* deliberates and takes decisions; the body's function is to execute these as efficiently as possible. Isocrates' brief remarks do not address the question of what *psyche* and body contribute respectively to the life of the composite human being, but we should note that he does not say that *psyche* gives deliberative power and intelligence to the human being. His point is, rather, that the *psyche* as such deliberates and takes decisions. The *psyche* is the intelligent agent which gets the body to do what it wants in the sphere of private and public life. Since that sphere is what we would call the ethical and social domain, Isocrates' usage of *psyche* has clear affinities with the concept of a person.

This revealing passage shows that Plato's dualistic treatment of *psyche* and body was by no means all his own invention. He was probably the first Greek philosopher to make the *psyche* explicitly incorporeal. But the popular belief of his times was already dualistic in the weaker sense that it regarded *psyche* as something other than the bodily complex of flesh, blood, and bones; in other words, Plato also shares with Isocrates the following propositions about body and *psyche*: first, that *psyche* is naturally authoritative over, and more valuable, than the body; second that the body's natural function is to be entirely instrumental to the *psyche*; third, that *psyche* and body require the different kinds of education Isocrates enumerates; and fourth, that *psyche* is by nature an intelligent decision-maker. Keeping these points of agreement in mind, let us now consider what else Plato wants to say about the *psyche* in his earlier dialogues.

primarily signifies life as a conscious, purposive agent. He did not shift the term from its 'life-force' functions because it did not have these in the way that Claus maintains.

¹⁵ See Lysias 24.3, Antiphon 5.93, and Democritus DK 68 B 31, 187.

We may start with a well-known passage from the *Apology*. In defending his mission to the citizens of Athens, Socrates tells the jury at his trial that he makes it his business to urge people to care above all for the perfection of their *psyche* (*Ap.* 29e–30b). What he means is brought out through a contrast between wisdom, truth, and virtue, on the one hand, and body, wealth, reputation, and honour, on the other hand. To perfect the *psyche*, it is clear, entails valuing and cultivating the former rather than the latter. This implies that the *psyche* is someone's intellectual and moral self. There is a further implication. Those who value their body and property above their *psyche* are neglecting the essence of their life. The equivalence between excellence of *psyche* and cultivation of wisdom, truth, and virtue specifies the conditions for living well.

To live well, according to the Platonic Socrates, is to live justly. Socrates seeks to prove this proposition (*Republic* 1, 353a–354a) in an argument that is crucial for understanding Plato's general conception of *psyche* and its virtue or excellence (*arete*). The key to the argument, picked up later by Aristotle (in *Nicomachean Ethics* 1.6), is that the *psyche* has a specific and unique function (*ergon*). Things that have functions are *for something*, and what they are for tells us what they essentially are. Thus the eye is 'for seeing'. Seeing is not only the eye's function; it also specifies a scale of value in terms of which we can say whether an eye is satisfactory or not. We understand what an eye is by starting from its proper function—seeing—and this function tells us that an eye which sees badly is *essentially* defective. By analogy, we are invited to identify the proper function of the *psyche*, and to specify what it and it alone can do. The answer Socrates proposes is that *psyche* is for doing such things as managing, ruling, and deliberating (which, of course, recalls Isocrates). 'What about living?', he asks his interlocutor. The answer is an emphatic affirmative. Socrates then draws a series of inferences: (1) the equivalent of seeing well, in the case of the *psyche*, is ruling and so forth *justly* since justice is the specific excellence or *arete* of the *psyche*. (2) The just human being and the just *psyche* live well. (3) Living well is living happily. (4) The just human being is happy.

Within its context in the *Republic* this argument is programmatic rather than conclusive. Its significance for my purpose here is the light it casts on Plato's *normative* conception of the *psyche*. Just as the eye is for seeing well, so the *psyche* is for living morally well. Plato is saying, I think, that there is no such thing as an eye that *merely* sees or a *psyche* that *merely* gives life to a human being. The degree of goodness or badness with which the seeing or the living is done is an irreducible property of a particular eye or *psyche*. Living, as the function of the *psyche*, is not a value-neutral

activity. To live at all, as an adult human being, is to act with a degree of goodness or badness. To put it another way, in order to understand the *psyche* we must start from what it is its nature to do well; we must start our analysis by identifying the proper function or excellence of *psyche* by discovering what the life that this constitutes is at its best.

T. M. Robinson has argued that Plato, in this argument, equivocates between two incompatible functions of *psyche*—living (in a biological sense) and ‘managing, deliberating and ruling’.¹⁶ Since living well (where ‘well’ equals justly) could apply only to the latter set of activities, he charges Plato’s argument with incoherence. It is true that Plato’s Socrates cites ‘living’ as if it were a function of *psyche* additional to ‘managing, deliberating and ruling’. But I find it quite implausible to suppose that Plato does this because he treats human ‘living’ as something other than, or additional to, ‘managing, deliberating and ruling’. In this argument, ‘managing, deliberating and ruling’ are ways of specifying the normative life-functions of the *psyche*. Once we allow Plato to be talking about the life of persons or possible persons, it becomes clear that ‘life in the [purely] biological sense’ has no place in this argument. The way that Plato uses *psyche* here alerts us to the thought that a human life is ‘for’ something. In the rest of the *Republic* he will seek to prove that injustice is precisely what the life of *psyche* is not for.

Plato, as we have seen, shares with Isocrates the notion that *psyche* is the source and subject of rational agency. What the two Platonic passages I have adduced add to Isocrates is the connection between excellence of *psyche* and justice or moral virtue. This connection, we have good reason to suppose, was Socrates’ special contribution—conceptualizing justice not as an external set of rules, or as a social convention, or even as a virtue that some people might acquire—but seeing it instead as intrinsic to any fully functioning human life. Socrates’, or at least Plato’s, way of expressing this point was to treat ethical virtue as the ‘health’ of the *psyche*. The medical model presupposes the functionalist conception of *psyche*. A normal body is a healthy body, just as a normal eye is good at seeing. If justice is essential to our psychic health, justice or morality offers itself as a standard for evaluating the *quality* of life someone is living. This Socratic and Platonic thought delivers a central component of Dennett’s conception of ‘full personhood’ as a moral notion that is ‘inescapably normative’.

Further components of that conception come to light when we consider the Socratic and Platonic connections between the cognitive and ethical capacities of the *psyche*. In Isocrates’ model of the *psyche* its special excellence is characterized as intelligence or prudence (*phronesis*).

¹⁶ *Plato’s Psychology*, 34–7.

Isocrates does not clarify the relation between the deliberative function of the *psyche* and *phronesis*, but I conjecture that he regarded *phronesis* instrumentally: that is, he supposed that the effectiveness of a *psyche* at deliberating and using its body would depend on its instrumental use of reasoning. For Socrates and Plato, on the other hand, rationality and self-reflectiveness are intrinsic to the normative life of the *psyche*. Indeed, without them the *psyche* lacks the understanding and desires essential to its living well in the practical sense.

The points I have been making about *psyche* as a normative concept apply particularly clearly to the *Gorgias*. This dialogue enables us to see the main lines of Plato's psychology in the making; these were lines from which he never significantly deviated, though they also help us to understand his later development. In addition, the *Gorgias* is interesting for comparison with Isocrates.

The sophist Gorgias drew on *psyche* in his *Helen*, where what an orator seeks to manipulate by the deceptive tricks of his trade is the *psyche* of his audience.¹⁷ In Plato's *Gorgias* the figure of that name has nothing to say about *psyche*. Socrates is the only speaker whose conversation draws heavily on that concept. This must be Plato's way of signalling the distinctiveness of the historical Socrates' contribution.

Socrates in the dialogue introduces *psyche* by distinguishing it from the body (*Gorg.* 464b–465d). Like Isocrates, he proposes that *psyche* is the body's overseer, and, again like Isocrates, he takes no interest in biology. The body is of interest to Socrates mainly as an analogical model. It provides him with the means of arguing that *psyche* is like the body in the following respects: each can be healthy or diseased, and each can be well served or merely gratified. The body is made healthy and well served by doctors and trainers; by chefs and cosmeticians, on the other hand, the body is gratified without regard to its health. Correspondingly, the *psyche* is made just (acquires psychic health) by good government, but is merely flattered, at the expense of its good condition, by rhetoricians and sophists. A further comment on the body helps to clarify this last point. The body, Socrates says, has no power on its own to discriminate between truth and falsehood; its only criterion is pleasure. As the dialogue develops, we are invited to perceive rhetoricians or spurious politicians, and hedonists like Callicles, as defective persons because they identify themselves and their audiences with their bodies rather than with the normative condition of their *psyche*.

The concept of a person, as Locke pointed out, is intimately connected with the attribution of happiness and misery. Today we think of persons as having the right to happiness, and as not having the right to cause

¹⁷ See *Gorgias* DK 82 B11.8–10.

misery to others. Plato does not have this modern concept of a 'right', but his concept of *psyche*, inasmuch as it specifies the normative life for persons, also establishes the essential conditions for authentic happiness and misery. Socrates spends much time in the *Gorgias* attempting to prove that happiness is measured by absence of disease in the *psyche*. Since disease of the *psyche* is to be cashed out in terms of ignorance and injustice, it is taken to follow that a healthy and well-functioning *psyche*—one that cultivates knowledge and justice—will be happy. Later in the dialogue Socrates offers a more positive account of what constitutes goodness of *psyche*. Goodness, he argues, can never arise randomly. It always depends upon *taxis* (504a). This term, which can refer to the good ordering of a battle line, is a Platonic metaphor for the structure of a well-functioning *psyche*. What it particularly generates in the *psyche*, Socrates says, is *sophrosyne*.

As used by Plato, *sophrosyne* is a concept with some similarity to Frankfurt's 'second-order volitions' or 'reflective self-evaluation'. In the *Charmides*, Socrates explores the idea that *sophrosyne* is 'knowledge of knowledge'. In the *Republic*, where *sophrosyne* is a virtue possessed by each class in the ideal state, it constitutes the classes' consent to the specific functions assigned to themselves individually and collectively. *Sophrosyne* implies both self-knowledge and self-control. In the *Gorgias*, it enters the discussion as the antidote to Callicles' unrestrictive hedonism. Callicles presents himself as one of Frankfurt's 'wantons', contemptuous of anything that interferes with the pleasure of the moment. He is interested in intelligence only as an instrument for satisfying every immediate desire. Socrates seeks to refute him by arguing that no one can live satisfactorily without at least restraining some desires and discriminating between pleasures.

The ability to impose this kind of order on one's life requires the self-knowledge and volition expressed by *sophrosyne*. Plato makes Socrates emphasize this virtue at this point in the *Gorgias*, I think, because it sums up the rationality and self-reflectiveness he has been driving at in his refutation of Callicles. At the beginning of his response, Socrates declared his interest in any kind of discussion which could test the *psyche* with regard to living correctly or otherwise (487a). By advancing the convictions he attributes to Socrates and by pitting these against those of Callicles, Plato juxtaposes two radically different conceptions of human values. The manner in which he does so is as important as the matter in regard to my thesis about Plato's interest in the concept of a person. As Dennett points out, we expect a certain kind of consciousness and verbal communicativeness from persons. This is not to say that we expect persons to be philosophers or to engage in Socratic debate. Nonetheless, a strong belief in a particular lifestyle, a

commitment to certain choices, and a capacity to defend these choices, if challenged—all of these are qualities we look for in human beings we respect. Plato's focus on the normative life of persons is as sharp in the conversations that he stages as it is in his analyses of the features of the *psyche*.

At the end of the *Gorgias*, Plato confirms his personalist conception of the *psyche* in the myth about its destiny after death. Separated from the body, which Socrates had previously likened to a tomb, each *psyche* is no longer identifiable by the former human being's social position and family. It is, we might say, a 'bare' person, exposing those features of moral character, intellectual attitude, and lifestyle that concern us when we ask what a human being is like *as a person*, as distinct from that individual's acquired roles or necessary identities in terms of gender, race, heredity, and so forth. Later Greek philosophers picked up this point when they distinguished between things to do with the body and 'external' things, and things to do with the *psyche*. The *psyche* judged at the end of the *Gorgias* is a human life stripped of its bodily and 'external' attributes.

In the space that is left I want to glance briefly at some of Plato's uses of *psyche* in his later philosophy. My proposal is that these become more intelligible and coherent when viewed from the perspective I have been advocating: i.e. *psyche* as the concept that specifies the necessary and sufficient conditions for living the excellent life of a person, and correspondingly, as the concept that can articulate deviations from that standard. Person, as I have repeatedly said, seems to be a normative concept. Once we allow Plato to have had a similar intuition, we can understand why he treats *psyche* not as a value-neutral principle of life but as something to be cared for, something that he approaches by first asking what it is like at its best. The paradigm *psyche* for Plato is a lover of truth and beauty. To the extent that a *psyche* falls short of these aspirations, it constitutes a life that degenerates from this ideal. That, as we shall see, has biological implications in Plato's philosophy, but his biology is premised upon the normative functions of *psyche*. A comparison with Aristotle will make my point clear.

Aristotle in *De anima* 2 approaches the question 'What is *psyche*?' by reviewing a series of vital functions. As the primary one of these, he selects the faculty responsible for nutrition and reproduction. This faculty is common to plants, non-human animals, and humankind. It is the minimal attribute of a living being. Aristotle, to be sure, regards human life with its complexity as immeasurably more valuable than the life of plants. But he starts his analysis of *psyche* at the bottom; his so-called

psychology in the *De anima* starts as a contribution to the physical science of biology.

Plato, by contrast, tends to start his analyses of *psyche* at the top. In the *Phaedrus* we are invited to regard *psyche* generically as an everlasting self-mover and as the source of all other motions (246a). It is the tasking of every *psyche* to associate itself with a body and to care for this. A star—in Plato's mythical discourse—is a heavenly body which has a god as its *psyche*. This celestial psychology sets the context for a mythical account of the kind of *psyche* that becomes associated with a human body. I refer to the splendid image of the winged charioteer who drives a pair of horses, one white and one black. The charioteer, who stands for rationality and love of beauty, wants to drive his horses so as to get a view of the Forms. That means, he aspires to a vision of the truth. But the black horse, which stands for carnal desire, drags the charioteer and the honour-loving white horse down to earth. Such a *psyche* loses its wings and becomes embodied in human form.

Plato's account is an allegory. What it shows is his conviction that, to understand our psychic life we need to start from what such a life can be at its best—one in which we identify with the desire for truth and beauty, and have the ambition (the white horse) to pursue these as goals. This ideal has implications for biology since, according to the *Phaedrus* myth, embodiment in human form can happen only to a *psyche* which has previously glimpsed what is unequivocally true and beautiful. If such a *psyche* fails to make good use of its embodied life, it will be judged accordingly and reincarnated in a non-human body. A non-human body, then, is the habitation of a degenerate *psyche*. At its best, on the other hand, a *psyche* is associated with a celestial body and enjoys a life of uninterrupted communion with truth and beauty.

We find the same kind of top-down analysis in the *Timaeus*. There the concepts of body and *psyche* are first applied to the construction of the physical world. The body of the world is endowed with a *psyche* that has the attributes of knowledge and true belief. As a secondary stage, the Demiurge and the lesser gods create the kind of *psyche* which inhabits a human body. It has an immortal part, described as 'ruling in those who are willing to follow justice' (*Tim.* 41c), and mortal parts. Later in the dialogue, these mortal and immortal parts of the human *psyche* are given different locations within the human body. As in the *Phaedrus*, but in greater detail, non-human animals, including birds and fish, are seen as deriving from those human beings who failed to make proper use of their rational faculty.

Doctrines such as these conclusively establish Plato's normative conception of *psyche*. However, it may still seem that Plato has muddied the waters by extending *psyche* at one extreme to the universe and the stars

and at the other extreme to non-human animals (and even plants).¹⁸ Neither extreme, it seems, can have any connection with the concept of a person.

That seems to be Crombie's verdict (as cited at the beginning of this essay), but I think it is anachronistic as far as Plato is concerned. 'Personal', in Crombie's discussion, implies personality and human individuality. Under this perspective it is self-evident that Plato was wildly wrong if he supposed there is anything personal about either a star or a non-human animal. But he plainly did not think of these as being respectively superhuman or subhuman *personalities*. What answers to person in Plato, I propose, is precisely a *psyche* that is or will be or has been *associated with a human body*. The special character of such a *psyche* is its capacity not only for rationality and ethical excellence, but also for choice and self-determination. As embodied, a human *psyche* cannot and should not ignore the needs of its associated body. For that reason, in his mature philosophy Plato attributed an appetitive faculty to the *psyche*—the desires and pleasures of eating, drinking, and sex. However, Plato (like Isocrates) regarded the body as only instrumental to a normative life, and he underlined that point by making the nature of the *psyche* non-bodily, or, as we might say, spiritual.

The body is not what we are constituted to live for. Yet, although the *psyche* is metaphysically distinct from the body, it can become bodily rather than spiritual in its self-identification. In the *Phaedo* (80d–81e) Plato draws a sharp contrast between types of afterlife. A *psyche* which has identified with the body yearns for that kind of life even after death; a *psyche* which achieves detachment from the body during human life is a person for whom spiritual values have become second nature.

Because the *psyche* of Plato's mature doctrine has a complex structure (the three parts comprising rationality, *thumos*, and appetite), it manifests itself to consciousness in more than one voice, and its various voices can generate conflicting desires and a divided self. This fact presents human beings with their primary task: to decide with which voice or ordering of voices they will identify themselves. Someone who identifies with appetite or even with ambition (*thumos*) at the expense of reason and justice is, in Plato's estimate, living a quasi-animal life, and hence not the proper life of persons. The complexity of the *psyche* provides for different *personae* or selves—a spectrum of self-identifications for persons. As we might

¹⁸ I find it curious that Crombie (n. 2 above) specifies 'life' *simpliciter* as the first 'force' influencing Plato's use of the word *psyche*, and illustrates that from *Timaeus* 77b, where plants are called *zoa* and endowed with the appetitive part of *psyche*. This is the only context in Plato which extends *psyche* to plants, and Plato, unlike Empedocles, never includes plants as possible vehicles for the transmigrating *psyche*.

describe a person's life as an achievement or as a waste, so Plato looks at the history of an individual *psyche*.

The *psyche* of a star is not a superhuman person because it has no mortal body to contend with, and no corresponding choices to make. However, its life has a connection with that of persons because, in Plato's view, the stars are models of intelligent action, motivated by consistent desires for the good.¹⁹ A star life instantiates the order and discipline with which Plato in the *Gorgias* identifies the excellence of a human *psyche*. In this way, stars and non-human animals provide Plato with complementary models for conceptualizing the best and worst potentialities of the human *psyche*.

Plato, we will say today, was unfair to non-human animals and too admiring of the stars. (The same criticism can be directed against Aristotle and the Stoics.) But since the feature of persons that he most valued was rationality and objectivity, we can see why (given the scientific climate of his day) he fell for the temptation of attributing the regular movements of the heavens to *psyche*. Our modern science obliges us to treat this celestial *psyche* as a hopeless mistake, but the mistake arose not from equivocation over the meaning of *psyche* but because Plato regarded cosmic order as analogous to the best life of persons.

At the beginning of this essay I offered 'person' as an approximation for Plato's concept of *psyche*. This would be useful, I suggested, if it helped us to discover the dominant impulses of his psychology and rendered them more coherent than they are often taken to be. The points I have particularly emphasized are the distance of the Platonic *psyche* from a biological principle, the constant focus on its normative activity, and the standard identification of *psyche* with the way human beings use their lives. These affinities with the concept of a person are not, of course, accidental; we are able to approach Plato in this way precisely because of his incalculably large influence on western consciousness. Since approximations are illuminating for what they miss as well as for what they capture, I want, in concluding, to consider what our distance from Plato tells us about his conception of the *psyche* and its relevance, or non-relevance, to ourselves.

The Platonic concept of *psyche* would not be a good model for those who have been drafting constitutions in the new democracies of eastern Europe. Liberal democracies, while making room for distinguishing between persons in terms of morality and achievement, grant all persons the

¹⁹ The similarity with cosmic *nous* in Aristotle is obvious. However, by endowing the world and the stars with *psyche* rather than *nous*, Plato deliberately, I take it, opted for the more personalist term.

right and freedom to choose their own values within the limits of the law. Plato, many will say, on the evidence of his *Republic* and *Laws*, has a dangerously impoverished conception of personal freedom. What I called his top-down analysis presupposes a divine origin for the *psyche* and its *natural* interest in transcendent values. Plato's conviction about these things colours his assessments of how someone should live an embodied life. That kind of metaphysics and theology is remote from the modern context of persons, trying to organize their lives within families, professions, social institutions, a market economy, and leisure practices. Person, we think, should be a thoroughly secular concept; otherwise it becomes tinged with prescriptivism and unjustified control.

Immortality, non-essential embodiment, possible reincarnation or transmigration into other life forms—these properties of the Platonic *psyche* are also remote from anything we ordinarily associate with persons; and there is something more basic about modern persons that separates us from Plato. For us, persons are above all human individuals, and we value individuality for its own sake. This can be seen in our use of the term 'personality' (as well as in our concept of a person's rights). In its original usage the word meant simply the quality of being a person. Today, it has a more restrictive application. Media figures are personalities because we find them interesting, and we tend to evaluate personality by such terms as vivid, dull, lively, placid, excitable, amusing, and the like. Listing features of personality is a typical way of characterizing an individual. We can even say some such thing as: John is a decent person but he has a boring personality, or Jack is a bad person but a really interesting human being.

This remark shows that our concept of a person, with its frequent moral connotations, is not coextensive with our concept of a character or personality. (It may be, however, that we are presently in the process of closing that gap, or even reversing priorities, as Nietzschean attributes like creativity and self-expression tend to be more admired than former virtues like piety or self-control.) Plato did not distinguish between the moral and the non-moral characteristics of a *psyche*. Everything human beings do, he thought, depends on the structure of their *psyche* and expresses their ethical character. Many of the features of personality widely admired in modern popular culture were viewed by Plato as an improper use of the *psyche*—socially pernicious displays of self-assertion or self-indulgence.

Plato's Socrates is an astonishingly individual figure. Yet Plato's normative psychology, though clearly inspired by his interpretation of Socrates, accounts for only a fraction of the man. It explains Socrates' moral character, his interest in converting others to philosophy, his fortitude in facing death, his tendency to become preoccupied with thought. It

does not accommodate Socrates' wit and irony, his delight in the landscape setting of the *Phaedrus*, his social graces, and his erotic obsessions with handsome young men. I do not mean to say that any of these Socratic characteristics is inconsistent with Plato's normative psychology. My point is rather to underscore his lack of interest as a theoretician in human individuality for its own sake.²⁰

That lack of interest is, of course, philosophically motivated. For Plato particularity as such is largely associated with the bodily, unstable, pluralistic, and imperfect features of the phenomenal world. What is best about persons, he thought, was their capacity to know themselves as beings with a 'likeness to the divine' (*ὁμοίωσις θεῶν*). This seems to translate for Plato, at the limit, into the cultivation of a self whose identity is defined by properties that it could, in principle, fully share with others—the knowledge and love of truth and *per se* goodness. Such a self, it may seem, has lost all touch with the personal.

But if we draw that conclusion, it is important to see that a wholesale rejection of Plato, on that score, threatens to miss much of what we are accustomed to value most about persons. Only a person *could* aspire to knowledge and love of goodness. If the pursuit of such goals is a proper end for persons, the concept of a person needs to accommodate ways of living that satisfy Platonic conditions of human excellence—transcending individuality, practising objectivity, going beyond the perspectives of here and now.²¹ As Tom Nagel has argued, what it is to be human seems to include an impersonal way of being—he calls it 'the objective self'—along with the individual's unique perspective.²² Plato differs from Nagel in the value and limits of what both philosophers consider 'the possibility of objective ascent'.²³ What they share is a readiness to explore the paradox that persons are still (or, as Plato would say, are especially) themselves when they detach themselves from their individual viewpoint and try to think and act objectively.

As persons or would-be persons of the twenty-first century, we cannot straightforwardly identify ourselves with a Platonic *psyche*. But *mutatis*

²⁰ I am not questioning his theoretical interest in different human types, and I should note that any *psyche* is always an individual. Questions of how Plato construes personal individuation are excellently explored by M. M. McCabe, *Plato's Individuals* (Princeton, 1994), in her chapter on the unity of persons.

²¹ See S. Lovibond's fine discussion entitled 'an ambiguous humanity', the last section of her paper 'Plato's Theory of Mind', in Everson, *Companions to Ancient Thought*, 35–55, and also S. R. L. Clark, 'Reason as *Daimon*', in Gill, *The Person and the Human Mind*, 198–9.

²² *The View from Nowhere* (Oxford, 1986). See also my paper, 'Finding Oneself in Greek Philosophy', *Tijdschrift voor Filosofie* 54 (1992), 255–79, where I discuss Nagel's book in relation to ancient philosophy, especially Heraclitus.

²³ T. Nagel, *The View from Nowhere* (Oxford, 1986), 70.

mutandis we can draw on Plato as a means of asking important questions about what makes us persons. If person is a normative concept, if human life is a project and a quest, if we cannot live well without living *for* something, if our identity has rational and irrational manifestations, if something inward (call it the supra-mundane or absolute) beckons to us, we can try conversing with a Platonic *psyche*. The result may be to make us question some of these conditionals, or at least Plato's way of exploring their implications, but that can still be useful as a means of grasping where we find ourselves.

Bibliography

- CLARK, S. R. L., 'Reason as *Daimon*', in Gill, 187–206.
 CLAUS, D., *Toward the Soul* (New Haven and London, 1981).
 CROMBIE, I. M., *An Examination of Plato's Doctrines*, 2 vols. (London, 1962).
 COOPER, J., 'Plato's Theory of Human Motivation', *History of Philosophy Quarterly* 1 (1984), 3–21, reprinted in his *Reason and Emotion* (Princeton, 1999) 118–37.
 DENNETT, D., 'Conditions of Personhood', in Rorty, 175–96.
 EVERSON, S. (ed.), *Companions to Ancient Thought, ii: Psychology* (Cambridge, 1991).
 FRANKFURT, H., 'Freedom of the Will and the Concept of a Person', *Journal of Philosophy* 68 (1971), 5–20.
 GILL, C. (ed.), *The Person and the Human Mind. Issues in Ancient and Modern Philosophy* (Oxford, 1990).
 LONG, A. A., 'Finding Oneself in Greek Philosophy', *Tijdschrift voor Filosofie* 54 (1992), 255–7.
 LOVIBOND, S., 'Plato's Theory of Mind', in Everson, 35–55.
 McCABE, M. M., *Plato's Individuals* (Princeton, 1994).
 NAGEL, T., *The View from Nowhere* (Oxford, 1986).
 PEACOCKE, A., and GILLET, G. (eds.), *Persons and Personality: A Contemporary Inquiry* (Oxford, 1987).
 ROBINSON, T. M., *Plato's Psychology*, 2nd edn. (Toronto, 1995).
 RORTY, A. O. (ed.), *The Identities of Persons* (Berkeley and Los Angeles, 1976).
 WIGGINS, D., 'The Person as object of Science, as Subject of Experience, and as Locus of Value', in Peacocke and Gillett, 56–74.
 WILLIAMS, B., *Problems of the Self* (Cambridge, 1973).

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Aristotle versus Descartes on the Concept of the Mental

CHARLES H. KAHN

I think we may assume that the history of philosophy is valuable for its own sake, as an understanding of the major thinkers of the past. But I want to appeal here to a derivative use, in which the history of philosophy can contribute more directly to the contemporary discussion of philosophical issues. This can occur when the understanding of a remote and sufficiently unfamiliar perspective permits us to reflect critically on the assumptions that underlie a contemporary discussion. Something like this happened in ethics in the last generation, where reflection on ancient ethics succeeded in shedding a critical light on the standard debate between deontologists and consequentialists, with the result that a new approach was opened up under the title of virtue ethics. I want to suggest that something similar, and perhaps even more radical, might result from critical reflection on assumptions underlying the mind–body problem, and that such reflection can be stimulated by a sympathetic understanding of Aristotle’s philosophy of mind. I am happy to have the chance to dedicate this essay to Richard Sorabji, since (whether or not he will agree with my conclusions) no one has done more than Richard to explore systematically the connections between ancient and contemporary philosophy, and in particular the contrast between Aristotle and Descartes in the philosophy of mind.¹

Every interpreter of Aristotle has struggled with the difficulty of defining his position on the mind–body question. Is Aristotle a physicalist, a dualist, or some combination of the two? Interpreters disagree, because different passages in the text seem to point in different directions. I want to suggest that the difficulty is due, not to confusion or inconsistency on Aristotle’s part, but rather to the distorting bias introduced by our

¹ See Richard Sorabji’s early article, ‘Body and Soul in Aristotle’, *Philosophy* 49 (1974), 63–89, reprinted in J. Barnes et al. (eds.) *Articles on Aristotle 4* (London, 1979), 42–64. My contribution here is the continuation of an old conversation between us.

presupposing, by the very terms in which we pose this question, the dualistic categories of mind versus body, mental versus physical, immaterial versus material. It nullifies what I take to be the principal utility of studying Aristotle's philosophy of mind if we begin with the question: what is his position on the mind-body problem? Rather we should try to see what it is about Aristotle's position that permits him to avoid this problem. What are the assumptions of his approach that prevent our problem of dualism from coming into view? Understanding Aristotle's position will not solve the mind-body problem. But it may help us, by way of contrast, to see more clearly certain traditional assumptions that make this problem insoluble.

This is not the occasion for a comprehensive account of Aristotle's philosophy of mind. I will only sketch some general features of his theory that distinguish it most sharply from our post-Cartesian point of view, and then focus attention on the philosophical move by which Descartes altered the conceptual framework in such a way as to define the modern problem. There will be no attempt here to do justice to Descartes' own philosophy of mind. My discussion will be limited to the passage in the Second Meditation which has had a decisive influence on the empiricist tradition and on the contemporary mind-body problem. I suggest that this problem is determined not by any particular theory of body or mind but rather by the unspoken assumption that there are just these two categories, the mental and the physical. Insofar as we accept this assumption, we are all Cartesian dualists. Thus, even the proponents of reductive or eliminative physicalism are obliged to take for granted the concept of the mental, or the concept of consciousness, in order to define the category that they wish to reduce or eliminate. It is precisely this dualism of categories that the Aristotelian position permits us to avoid.

I suggest that Aristotle is not a dualist but a quaternist: he takes for granted four fundamental categories, not two. The conceptual scheme for Aristotle's philosophy of mind is best represented by a pyramid with four distinct levels. The lowest level is that of body, with or without life; the three upper levels are marked off by different forms of psyche or soul: nutritive, sensory, and rational. Each level presupposes the level before, so that the lower levels are necessary but not sufficient for what lies above. Thus the higher levels are emergent rather than supervenient: they are dependent upon, but not explicable in terms of, the levels below them.²

² In its recent technical use, supervenience implies that no variation in the supervenient level can occur without a variation in the subordinate level. I do not think this principle applies to Aristotle's scheme. Here dependence means only that the lower psychic capacity is a necessary condition for the higher one, and that *some* organic structure is a necessary condition for any level of psyche.

For Aristotle, the lowest level, the realm of corporeal nature, consists of the four elements or simple bodies (earth, water, air, and fire) and their combinations. In a living body these elements are structured hierarchically, in an order of increasing complexity represented by a series of matter–form structures. There is no such thing as ‘mere matter’ for Aristotle; every body is a matter–form complex. The four simple bodies have as their form one principle from each of the two basic qualitative pairs, hot–cold and dry–wet. The matter corresponding to these four forms is just the corresponding privative member of each pair or the potentiality for being either one: being either hot or cold, either dry or wet.³ These simple bodies are combined in basic homogeneous compounds known as homoiomeries, where the parts are similar to one another and to the whole. In the living body these homoiomeries correspond to tissues, such as blood, flesh, and bone. But the tissues are in turn raw material, i.e. matter, for the more complex compounds known as organs, such as heart, eye and hand, or root, leaf, and branch. Properly speaking, however, the organs exist only as parts of an organism, which is itself matter for a living body whose unifying form or principle is the psyche or ‘soul’ that constitutes it as a plant or an animal.

Aristotle’s theory of elemental structures has of course been entirely replaced by modern chemistry and biochemistry. But the principle of levels of increasing complexity, from elemental atoms to the elaborate molecules of organic chemistry, is as common to the modern as to the ancient scheme. What is distinctive of the Aristotelian view is that the relationship between levels is seen in terms of the relationship between matter and form, potency and actuality. The element is raw material for the compound, the tissue is raw material for the organ, and the organ is raw material for the organism. Thus, the organic body as a whole is the matter and potentiality for the life of the organism. That is why Aristotle can define the psyche as the essence or form or ‘first actuality’ (*entelecheia*) of a body that is capable of life. As ‘first actuality’, the psyche constitutes the life of the organism in the sense that it structures and unifies the body as a living thing; whereas the ‘second actuality’ of the body is the set of life activities (feeding, mating, hunting, etc.) that the organism can actually carry out.

We can understand Aristotle’s philosophy of mind as the natural continuation and completion of this conception of the body. The physical world is conceived not as a lifeless mechanism but as the raw material for living bodies. Hence, the human body is conceived not only as an intricate

³ I assume that there is no positive notion of Prime Matter in Aristotle (although the expression occurs). This doctrine is a later development, above all in the Platonic tradition influenced by the role of the Receptacle in the *Timaeus*.

machine but also as the material equipment that makes possible a human life. This is teleology without design, teleology as a way of interpreting corporeal structures in the light of their function in the life of the organism and the life of the species. The psyche is understood biologically, as the functional unity of the body which makes possible the 'second actuality' of these bodily structures as realized in the life activities. Hence, says Aristotle,

one should not ask whether psyche and body are one, just as one does not ask whether the wax and the imprint are one, nor in general whether the matter of each thing is one with that of which it is the matter [i.e. with the form]. For one and being are said in many ways, but the most decisive way [of being and being one] is actuality (*entelecheia*). (*De Anima* II.1, 412b6–9)

As the *entelecheia* of the body, the soul simply *is* for Aristotle the functional unity of the organism.

So much for the lowest level of Aristotle's pyramid, the realm of bodily structure conceived as offering the possibility for life. This possibility is realized in three higher levels, corresponding to the three forms of psyche: nutritive, sensory, and rational. The nutritive psyche is the capacity for absorbing and assimilating food, for growth to maturity, and for reproduction. (Since this capacity is represented in its pure form in plants, it is also known as the vegetative soul.) It is useful to think of the nutritive soul in terms of our notion of DNA, since DNA is likewise responsible both for the growth and development of the organism and also for genetic specificity in reproduction. Like DNA again, the nutritive soul is found in all organisms, not only in plants but also in animals. All forms of life must eat, grow, and reproduce. So the nutritive soul must be present in everything that is alive, and it is included in the souls of higher levels.

It seems strange to us to speak of the soul of plants, and of the soul involved in nutrition and growth. At this level we have scarcely entered what we recognize as the philosophy of mind. But it is important to see that for Aristotle there is no dichotomy here between biology and psychology. The psyche is the principle of life, and hence it is by definition involved in every form of life. For Aristotle the life of the mind is simply the higher reaches of the activity of psyche.

The next level up is the level of *aisthēsis*, sense perception, which Aristotle regards as distinctive of animal life. *Aisthēsis* has two aspects, subjective and objective: on the one hand sense perception means sensation and feeling; on the other hand sense perception is turned outwards, receiving information about the environment. Thus the subjective side is represented by positive and negative affect, by feelings of pleasure and pain, the objective side by the five sense modalities: vision, hearing, smell, taste, and touch. These five modalities are defined in relation to their

proper objects: colors, sounds, and the like. It is in regard to such objects that Aristotle says ‘the sense faculty is potentially such as the sense object is actually . . . It is affected [by the object] because it is unlike; but once it has been affected, it has been made like and is such [in act] as its object is’ (*DA* II.5, 418a3–6). I will comment on this text in a moment. But it is the subjective side, the side of feeling, which predominates in Aristotle’s extension of the sensory psyche to emotions such as desire: ‘whatever has sense perception has pleasure and pain, the pleasant and the painful; and whatever has these also has appetite (*epithumia*), for appetite is the desire (*orexis*) for what is pleasant’ (414b3–5). It is an essential function of the sensory psyche not only to provide the animal with information about the environment but also to govern its behavior in pursuing pleasure and avoiding pain. It is this emotional aspect of the sensory principle, called appetite or desire, that corresponds to what we invoke as drives or instincts, to explain why animals move around in search of food or sex or to avoid predators. Furthermore, at least in the higher animals the results of sense perceptions persist in the form of memory and imagination, what Aristotle calls *phantasia*, the faculty of images or appearances. These persisting results of sense perception, represented by memory and imagination, explain why animals can learn from experience. (Even for Pavlovian learning, animals need to have something like memory.) *Phantasia* does not exactly coincide with what we call imagination, but the two notions overlap: *phantasia* operates in dreams, and in the way things appear to us in sense perception; e.g. it is in *phantasia* that the sun appears to be no larger than a ball. As extensions of the sensory psyche, memory and *phantasia* must have the same subjective–objective duality as *aisthēsis* itself.

With sense perception, desire, and *phantasia* we have clearly entered the domain of the mind, and even the domain of consciousness. For the most fundamental notion in our slippery concept of consciousness is just *sentience*: being aware of what is going on, not being asleep or ‘unconscious’. It is the sensory psyche that ceases its normal function in sleep and regains its activity (*energeia*) in waking up. So it is the sensory psyche that represents for Aristotle this basic notion of consciousness as awareness. This is a faculty that we share with the animals, or at least with the higher animals. Animals that can go to sleep are *ipso facto* conscious when they wake up.

To be faithful to Aristotle, we must be careful not to describe such sensory phenomena in terms of ‘mental events’. This is where the dichotomy between the mental and the physical begins to make nonsense of Aristotle’s view. For Aristotle, the faculty of sense is nothing over and above the functioning sense apparatus of the body. ‘The sense organ and the faculty of sense are the same, but their definition (*einai*) is different;

for the sentient subject is an [extended] magnitude but the sense and the sense faculty are not a magnitude but a certain structure (*logos*) and capacity of this magnitude.’ (DA II.12, 424a25) The sensory psyche is simply the natural power (*dunamis*) of this corporeal structure to carry out sensory activity. ‘If the eye were an animal, vision would be its soul. For this is the essence (*ousia*) of an eye according to its definition (*logos*). The eye is the matter of vision; if it loses this it is no longer an eye except in name (*homōnumōs*), like a stone or painted eye’ (II.1, 412b18–22). The visual psyche is simply the capacity of the visual apparatus (not only of the eye, but of the optic nerve and the central sensorium) to carry out acts of seeing. It is only a capacity, but it is not nothing. For it makes the difference between blindness and sight. And seeing for Aristotle does not mean having visual ‘impressions’; it means making cognitive contact with the colors of things in the world. Such referential contact with its object is built into the Aristotelian notion of a sensory capacity.

As a capacity, the sensory psyche is defined in terms of its objective function, that is to say, in terms of the objects of sense. Aristotle’s general definition of *aisthēsis* is

the capacity to receive the sensible forms without their matter, as the wax receives the seal of the ring without the iron and gold: it receives the golden and brazen seal but not qua gold and brass. So the sense is affected in each case by the object which possesses color or taste or sound, but not in virtue of what this object is, but in virtue of its sensible quality. (DA II.12, 424a17–24)

The interpretation of this passage has been the subject of much controversy. Here I can only state my opinion, without polemical argument. I take the sensible forms here to be colors, sounds, etc. as qualia existing in the world, for example, the color of a bird’s wing and the sound of a bird’s song. (The sense of vision is affected by the color, but not ‘in virtue of what this object is’, i.e. not *qua color of the bird’s wing*.) These qualia are located in the world, but they are not fully realized unless they are perceived, that is, unless they are received by a sensory psyche.⁴ As we have seen, the sensory capacity is potentially such as the object is actually. It becomes actually such by receiving the sensible form, by seeing the color of the bird’s wing and hearing the sound of the bird’s song. This reception is a conscious or lived experience of seeing color and hearing sound. Although colors, sounds, and smells exist actually in the world,

⁴ ‘The actualization (*energeia*) of the sense and the sense object is one and the same ... Necessarily, the sound and the hearing in act are in the [hearing] as capacity; for the *energeia* of what causes action and motion takes place in the subject acted upon’ (DA III.2, 425b26–426a5). Here again we have two levels of actualization (*entelecheia*). Colors are actual in the object, only potential in the sense (418a3–6); but in the act of perception they are more fully realized. That is why we can be sure that what Aristotle means by sensible forms are *phenomenal* colors and sounds.

they are not fully realized unless they are sensed.⁵ In modern terms, such qualia have a phenomenal or 'subjective' status, but they cannot be classed as mental events for more reasons than one. For one thing, these qualia as perceived are identical in kind with the qualities of objects in the world: the color I see just is the color of the bird's wing. Furthermore, according to the definition of psyche, the sense faculty is nothing other than the functional realization (*entelecheia*) of the corresponding corporeal apparatus. Hence, what we regard as the psychological event of seeing a color is for Aristotle also the corporeal event of something happening in the eye and in the visual channel to the central sensorium. Of course Aristotle has no reliable knowledge of the relevant neurophysiology, although he is familiar with the optic nerve.⁶ But he surely assumes that, in any act of visual awareness, some bodily change occurs not only in the eye but also in the internal apparatus of vision connecting the eye with the sensorium, since, as he knows, no perception actually occurs unless the stimulus reaches this central organ.⁷ Such bodily changes might be directly inferred from the definition of the psyche as the *entelecheia* of the body. But the physical presence of such changes in the internal channels is fully documented by what Aristotle tells us of the disturbances in the blood vessels that account for the dream experience.⁸

At the level of the sensory psyche, then, there are no mental events that are not also bodily events, no phenomena of consciousness that are not also phenomena of physiology. But it is we who make this distinction, not Aristotle. He distinguishes between the organ and its capacity, that is, between the power of perception and its bodily instrument (*organon*); but in the *De Anima* he does not normally draw any distinction between the psychological act of perception and the physiological changes which constitute its 'matter'. That is why it has been possible for scholars to

⁵ If the qualitative aspect of things is fully realized in acts of (human) sense perception, it is presumably realized less perfectly in animal perception. But as far as I know, Aristotle never discusses these differences.

⁶ Aristotle refers repeatedly to the '*poroi* which lead from the eyes to the membrane around the brain' (*GA* II.6, 743b36f–744a11; cf. *PA* II.10, 656b17, *HA* I.11, 495a11–18), and he knows that if this is cut, vision is lost (*PN* 438b12). I cannot see any reason to doubt that this is in fact the optic nerve, even though Aristotle did not know that it was a nerve.

⁷ *PN* 455b10–13; cf. 455a15–26; 467–b2b28f.

⁸ *DA* III.2, 425b24f; *De Insomniis* chs. 2–3 passim, esp. 459b5–7: 'there is an affect (*pathos*) in the organs not only during perception but also when perception has ceased, both in the depth and on the surface.' Hence, when we turn from sunlight into darkness, we see nothing 'because of the *kinēsis* subsisting in the eyes from the light' (ibid. 459b10). Such motions descend from the sense organs to the heart, together with the blood; they are compared to small whirlpools in rivers (461a8, 461b11f, etc.). So the bodily character of these motions is unmistakable, but they produce phenomenal *phantasmata* in dreams. The treatises of the *Parva Naturalia* are primarily concerned with bodily mechanisms, but that does not mean abandoning the phenomenal dimension of perception which predominates in the *De Anima*.

come up with such wildly divergent interpretations of Aristotle's theory, ranging from extreme physicalism to explicit dualism, and including the denial of any physiological change in the act of perception. Why is Aristotle's text so ambiguous on this point? I suggest that the explanation is in fact quite simple. In the *De Anima* Aristotle is primarily concerned with the role of the psyche, as the title indicates, and only marginally interested in the corporeal or material underpinnings of psychic function. It is only in the *Parva Naturalia* that Aristotle turns his attention to phenomena that are 'common to the psyche and the body' (*PN* 436a7). That is why the heart itself, as well as the connections between the outer organs and the central sensorium, is scarcely mentioned in the *De Anima* but treated at length in the *Parva Naturalia*. It is a mistake to look to the *De Anima* alone for a full account of Aristotle's theory of perception. Because he is discussing the psyche in this treatise, the objects of perception are normally conceived there in psychological or phenomenal terms, as qualitative colors and sounds. But they are conceived in physical or bodily terms at the same time, as we can see from the passages where he discusses the damage caused to the organ by extreme sensory qualities.⁹

The situation becomes considerably more complex when we move on to the highest psychic level, the level of rationality (*logos*) and intellect (*nous*). On the one hand Aristotle has a metaphysical conception of the intellect as 'another kind of psyche', which does not have a bodily organ.¹⁰ This is Aristotle's version of Platonic dualism, according to which *nous* represents a divine principle in human life.¹¹ On the other hand, as a biologist Aristotle recognizes human beings as a species of animal, and human thinking as dependent on the good condition of the central sensorium (which he mistakenly locates in the heart rather than the brain). For present purposes I will ignore the metaphysical dimension in Aristotle's philosophy of mind and limit our attention to the place of *nous* as the highest level of the pyramid of living forms, supported by the lower forms of sense, nutrition, and the body itself. Thus, I will not discuss the Active Intellect of *De Anima* III.5, nor the doctrine that the intellect in act is identical with its object. If we consider Aristotle's theory in this limited way, from the point of view closest to our own, the contrast with the modern view of the mental will be more sharply delineated.

Despite the essentially immaterial nature of the human intellect, Aristotle recognizes its dependence on the body: a human being cannot

⁹ *DA* II.12, 424a28–31; III.2, 426a30–b3. I have argued at length for the continuity and consistency between the *DA* and the *PN* in 'Sensation and Consciousness in Aristotle's Psychology', *Archiv für Geschichte der Philosophie* 48 (1966) 43–81, reprinted in *Articles on Aristotle* 4, 1–31.

¹⁰ *DA* II.2, 413b24–7; III.4, 429a24–b5.

¹¹ *DA* III.5.

carry out the activity of thought without the images or *phantasmata* derived from sense perception. ‘The intellectual capacity thinks the forms in the *phantasmata*’ (*DA* III.7, 431b2; cf. 431a14–17, 432a7–10, 12–14). Unlike Plato, who often relies on the notion of noetic vision or direct intellectual access to the Forms, Aristotle insists that the raw material for human thinking must come from *phantasia* and hence ultimately from sense perception. This is the Aristotelian origin of the empiricist doctrine that ‘there is nothing in the intellect that was not previously in the senses’, a thesis that Aristotle himself would probably not have accepted in this form. In any case, this dependence of thinking on imaginal material of sensory origin would allow Aristotle to account for whatever modern brain research can discover about correlations between intellectual capacities and specific regions of the brain. Of course Aristotle did not anticipate such research; he was simply taking account of the fact that fatigue, drunkenness, and disease can affect our capacity for rational thought. But his theory is constructed in such a way as to accommodate modern results linking intellectual operations to brain function. It will even more directly admit the identification of emotional states with neurophysiological conditions, since for Aristotle emotions (unlike rational thinking) are properly located in the sensory psyche and hence in the sensorium.

What is distinctive of rational thought for Aristotle are two things: (1) the use of universal concepts (*noēmata*), forms (*eidē*) or essences, the replacement for Platonic Forms, and (2) propositional judgments (*hypo-lēpseis*) of what is and is not the case. The latter is singled out as distinguishing rational thought (*noein, dianoeisthai*) or opinion (*doxa*) from *phantasia* (III.3, 427b27; 428a18–24). Both notions, the conceptual and the propositional, presuppose or entail language: universal concepts require words, propositional judgments require sentence structure. In connecting these capacities with language Aristotle follows Plato’s analysis in the *Theaetetus*, where thinking is defined as silent speech (*Theaetetus* 189e–190a). Thus thinking, which can be true or false, belongs only to animals with language (*logos*, *DA* III.3, 427b14).

The central role of language in Aristotle’s account of human nature is not always recognized in modern scholarship, because of the tradition of translating *zōon logikon* by ‘rational animal’ rather than ‘speaking animal’. It clearly means both. Thus, in the *Politics*, when Aristotle classifies humans among the social-political animals like ants and bees, he remarks that mankind is the *most* social animal because of the possession of *logos*: language, by increasing communication, makes possible a fuller community, introducing concepts like justice, or right and wrong, that require language for their expression. The subhuman animals can only express feelings, like pleasure and pain (*Politics* I.1, 1253a7–18).

Thus, it is the possession of language which marks the boundary between the perceptual and the conceptual, between the sensory and the rational psyche. This demarcation is often blurred in modern discussion, in part by the replacement (since Hume) of the notions of judgment and opinion by the notion of belief. The older notions presupposed language; but belief apparently does not. (It was no accident that Hume introduced the notion of animal belief.) On this and other grounds, there is something to be said for Aristotle's definition of human being as the animal with language. This is approximately co-extensive with the modern definition of *homo sapiens* as the animal with culture. In effect, the two definitions entail one another; it is only the possession of language that permits humans to develop and transmit a culture from generation to generation. In the case of subhuman animals, the lack of linguistic communication will guarantee that whatever they have in the way of culture will be weak and impermanent.

If we survey now the four levels of Aristotle's pyramid—the bodily, the nutritive, the sensory, and the rational, we see why the levels of this scheme cannot be mapped onto the Cartesian distinction between the body and the mind. The two conceptions are (in Kuhn's sense) incommensurable. The lowest level of Aristotle's pyramid corresponds only roughly with the modern notion of the material world as described by the physical sciences. First of all, Aristotle does not have a uniform conception of matter as extended body characterized by mathematical laws. His four elements have their own natural forms and natural motions. On the other hand, they are, metaphysically speaking, not substances in their own right. The potentialities of these bodily elements are fully realized only in the higher forms of organic life. For Aristotle, only organisms are first-class substances, since only living things exhibit the complexity of organization and formal unity over time that is required for them to count as actual individuals. Thus, the ontological role of body is to provide the matter or raw material for the psyche, that is, for actual (living) substances.

As organisms plants are fully substantial, but their psychic life is not the life of the mind. And the same can be said for the role of the nutritive soul in animals. The nutritive life has a teleological structure (seed and embryo for the sake of the adult specimen, food for the sake of survival, teeth for the sake of chewing, etc.), which can find a parallel in the Darwinian notions of fitness and adaptation, but cannot be accounted for by the notion of matter as normally conceived in the physical sciences. Hence, the Aristotelian level of the nutritive psyche is at home neither in the category of mind nor in that of material body, if body is understood in terms of the post-Cartesian notion of matter.

When we move to the third level, the level of the sensory psyche, we do make contact with the modern notion of the mental. For, as we have seen, the Aristotelian concept of sense perception includes *sentience*, that is, qualitative awareness of pleasant and painful feeling as well as the 'subjective' perception of colors, smells, and tastes. To the extent that animals have feelings of fear or hunger or physical pain, and to the extent that they have a qualitative awareness of their environment that goes beyond a motor response, to this extent they are conscious beings, living the life of the mind. Of course they are not living a human life, since they do not share the level opened up, by language and by access to culture and rational thought, to historical narrative and scientific understanding. Although animals are conscious, they do not speak and hence they do not engage in explicit reasoning. Although conscious, they do not exhibit what Descartes calls thinking (*cogitationes*). They cannot say or even mean 'I think, therefore I am'.

Thus, Descartes' notion of mind corresponds to two quite different forms of psyche in Aristotle's scheme. It is precisely this distinction between perceptual experience and conceptual thought, between animal consciousness and human rationality, that separates the two top levels of the Aristotelian pyramid.¹² And it is precisely this distinction that the new Cartesian notion of the mind seeks to obliterate. Let us examine the philosophical move by which Descartes suppressed this distinction and created the modern concept of the mental.

Descartes was of course familiar with the Aristotelian scheme, a version of which was taught at his Jesuit school. But this system, together with all other traditional knowledge, was wiped out by the radical doubt of the First Meditation. Descartes is searching for a new truth, a truth so certain that it can resist the efforts of an omnipotent deceiver—the demonic power who, by hypothesis, is attempting to make Descartes believe something false. What knowledge can be proof against omnipotent deception? In the Second Meditation Descartes is finally convinced that a belief in his own existence cannot be false: 'this proposition, *I am, I exist*, is necessarily true, as often as I pronounce it or conceive it in the mind.'¹³ (This emphasis on the subject's own existence seems to represent a new topic in philosophy; previously it was primarily the existence of God that was in question.) He begins then to ask who he is, this being whose existence is so certain. He rejects the definition of man as rational

¹² Aristotle is not concerned with the first-person aspect of human rationality, and hence of human consciousness. I would argue that the first-person perspective is language-dependent and hence potentially derivable from the Aristotelian emphasis on *logos*. But Aristotle did not pursue this line, and the pervasive influence of the Cartesian *cogito* in the first-person approach to consciousness lies outside my present topic.

¹³ *Med. II*; ed. Adam and Tannery vii. 25, 11.

animal as too obscure. Since he has already agreed that he might be deceived in believing that he has a body, he also rejects as uncertain all attributes of the soul that involve the body. Hence he specifically rejects the Aristotelian activities of nourishment, motion, and sense perception.¹⁴ That leaves only the incorporeal activity of thinking, *cogitare*: ‘I am certain of my existence only as long as I think . . . I now admit nothing except what is necessarily true. I am, therefore, strictly speaking only a *res cogitans*, a thing which thinks, that is, a mind or soul or intellect or reason—words whose meaning was previously unknown to me.’

Why was the meaning of the words for soul and reason (*mens, animus, intellectus, ratio*) previously unknown? Because Descartes is going to give them a new meaning—precisely the meaning determined by the experience of being invulnerable to the most radical doubt. This new meaning of thinking, *cogitatio*, is roughly what we call human consciousness or first-person experience, the object of direct introspection. This is also the traditional notion of ‘the given’, the indubitable starting point or foundation for the empiricist tradition in epistemology. The epistemic privilege of the given, or of sense data, is nowadays subject to doubt, but the decisive influence of this conception on our notion of the mental has not always been recognized. Let us see just how Descartes articulated this notion of ‘thinking’.

‘What is a thinking thing?’ asks Descartes. And he answers: ‘a thing which doubts, which understands, affirms, denies, which wants, which doesn’t want, which imagines also and which senses’. Thus imagination and sense perception re-enter the content of ‘thinking’, but stripped of any reference to their object and of any claim to objective reality. Even if everything I perceive is false, says Descartes, this fact is still indubitable:

I perceive corporeal things, as if from the senses: I see the light, I hear the noise, I feel the heat. These things are false, since I am [by hypothesis] asleep. But surely I seem to see, to hear, and to be warmed. *This cannot be false*; this is what in me is properly called sense perception (*sentire*); and this, taken precisely thus, is nothing other than thinking (*cogitare*).¹⁵

Something quite remarkable is happening here. The ordinary notion of sense perception is here analyzed into two components: the subjective content of the perception, on the one hand, and, on the other hand, the implicit belief that the perception is true of some objective world. But

¹⁴ Adam and Tannery vii. 27, 3–7.

¹⁵ Ibid. 29, 11–18: ‘Idem denique ego sum qui sentio, sive qui res corporeas tanquam per sensus animadverto: videlicet iam lucem video, strepitum audio, calorem sentio. Falsa haec sunt, dormio enim. At certe videre videor, audire, calescere. *Hoc falsum esse non potest*; [italics in original] hoc est proprie quod in me sentire appellatur; atque hoc praecise sic sumptum nihil aliud est quam cogitare.’

subjectivity has been extended to include the descriptive content of the object, minus the claim to objective reference. Thus the belief is rejected but the subjective content is retained. The implicit claim of objectivity, of reaching out, the claim of referring to and giving information about the environment, is deliberately eliminated ('bracketed') from this view of perception as indubitable. The referential dimensionality of perceptual experience is as it were flattened out and we are left with the flat surface of our self-observation, the internal object which wholly belongs to us, and concerning which we therefore cannot be mistaken. What emerges as Descartes' new concept of 'thinking' is thus roughly identical with what later came to be called 'sense data', 'the subjectively given', or 'the immediate data of consciousness'.

By thus absorbing sense perception (stripped of its claim to give information about the world) into his new concept of thinking, Descartes in effect creates the modern notion of the mental as pure subjectivity, the alleged object of direct introspection, the reflexive grasp of one's own first-person experience. Infallibility is achieved by eliminating any space for deception between the knowing subject and the content of its self-knowledge.¹⁶ Similar notions of immediate and hence indubitable experience have served as starting points and foundations for epistemology from Locke, Berkeley, and Hume down to the sense-data theorists of the early twentieth century. Even for those contemporary theories of mind that have given up the epistemological project of achieving certainty by establishing knowledge on indubitable foundations, it is still the notion of first-person subjective experience, stripped of its objective reference, that defines the concept of the mental.

From the Aristotelian point of view, this concept entails a catastrophic loss of clarity. Like the Cartesian notion of thinking, the contemporary notion of the mental eliminates the fundamental distinction between the perceptual and the conceptual, between the consciousness we share with the animals and the distinctively human intellectual activities that presuppose language. Now an Aristotelian is by no means alone in criticizing the Cartesian concept of mind. Ryle's satire on the ghost in the machine is perhaps the most colorful attack on this concept, but Ryle's critique runs the risk of eliminating rather than clarifying any notion of the mental. On the other hand, Heidegger's analysis of being-in-the-world can be seen as a constructive attempt to replace the solipsistic notion of consciousness, as the flat surface of direct self-observation, with the restored dimensionality

¹⁶ There is an interesting parallel to Descartes' guarantee of infallibility, by absorbing the object of immediate cognition into the self-knowledge of the subject, in Plotinus' argument for the identity between transcendent *Nous* and its objects, the *Ideas*. Plotinus argues that if *Nous* were not identical with its noetic objects, it could not be sure of knowing them truly (*Ennead* V.5.1, 50-8).

of a more structured view, where the knowing subject is also an actor and a maker, whose self-knowledge is constituted in part by his or her interaction with the world of things, actions, and persons. From a different point of view, Wittgenstein's private language argument can be read as an attack on the internal consistency and intelligibility of any notion of subjective experience that could pretend to be independent of shared norms for objective reference. Finally, a whole family of assaults on 'the given' in epistemology imply a similar rejection of Descartes' use of the method of doubt to articulate the notion of a private inner space, the object of infallible self-knowledge, defined without essential reference either to the physical environment or to the social world of persons.

So it is scarcely an innovation to propose rejecting the Cartesian concept of mind as articulated in the Second Meditation. And with this rejection, suspicion also falls on the notion of introspection as used in foundational epistemology, and on the concept of consciousness taken uncritically as a given object for analysis. If the private self-knowledge of the Second Meditation is not a coherent position, it is not clear that there is such a thing as 'the immediate data of consciousness' for us to describe or define.

So much might be generally granted. What is less often recognized is the historical dependence of our modern category of the mental on this Cartesian concept of the mind. It has not been so generally noticed that, if Descartes' philosophical position in the Second Meditation is rejected as incoherent, the notion of the *mental* ceases to be well defined. If the mental is not defined by reference to the self-contained subjectivity of first-person self-knowledge, it is not clear what we are talking about when we contrast the mind with the body, the mental with the physical. For similar reasons, Lockean ideas and Humean impressions must fall under the same suspicion of conceptual incoherence.

As an alternative, then, to taking this post-Cartesian dualism of categories for granted, I suggest that we consider seriously a return to the fourfold scheme of Aristotle, appropriately brought up to date by integrating the scientific knowledge of the last few centuries. For one thing, the problem of consciousness will certainly be easier to handle if we distinguish between animal sentience and rational (metalinguistic) thought. Thus, for example, since a clear criterion of sentience is provided by the transition between waking and sleeping, a study of the biological basis for consciousness might well begin with an understanding of the neurophysiology of sleep in animals. If we do not presuppose a basic dichotomy between the physical and the mental, there should be nothing mysterious about the capacity of a complex neural system to alternate between sleeping and waking. When conceived in this way, the emergence of sentience in the higher animals should seem no more problematic than

the notion of sexual attraction, which in turn appears simply as an advanced stage of the sexual differentiation that is common even in plants. The emergence of animal consciousness, involving pleasure and pain, will represent one more step up in the graduated scheme, like the emergence of life when complex proteins combine to form a cell that can grow and replicate itself. If the Aristotelian scheme is adjusted to take account of such modern knowledge, the division into four levels can reasonably provide the framework for a more complex scheme of indefinitely many graduations, designed to do justice to an evolutionary perspective.

In such a neo-Aristotelian view, the fundamental principle of hierarchical continuity will be preserved. Each level in this more complex pyramid will rest upon, but be only partially explained by, the levels that lie below. Human beings, as the animals with language and culture, will live a life that is richer than, but largely dependent upon, the animal, vegetal, and mineral levels on which they stand. I suggest that in many cases the Aristotelian framework will turn out to be useful for comprehending the links between levels. For example, as a comparative zoologist, Aristotle can provide us with a key to understanding the large overlap between human and animal emotions, including fear and anxiety—an overlap reflected in important animal studies in clinical psychopathology. Why do we learn so much about human emotions and human disorders from studying animal pathology? Because, says Aristotle, we share with the animals the phenomena of the sensory psyche, including both the emotions and what he calls *phantasia*, the lasting effect of sensory images. That is why rats can be disturbed by nervous symptoms that parallel the symptoms of post-traumatic stress disorder in humans. The Aristotelian perspective here will be not an alternative to but a more structured clarification of the evolutionary point of view.

As one more example of a philosophical issue that may seem less problematic from a neo-Aristotelian perspective, consider the old question: can machines think? I am strongly inclined to say no. But in Cartesian terms this negative answer seems arbitrary, since machines can be designed to mimic cognitive behavior, including verbal reports of first-person experience. The Aristotelian pyramid, on the other hand, suggests an account of thinking that will justify our basic intuition that this is not what machines do. In the world as we know it, rational thought in human beings presupposes not only language but also animal sentience, and animal sentience in turn presupposes biological life: the life of nutrition, growth, and reproduction. Unless machines are alive, they cannot be conscious; and unless they are conscious they cannot engage in rational thought of the distinctively human-linguistic sort. Furthermore, Aristotle's definition of the nutritive soul provides us with an operational

test for deciding whether or not a machine is alive. Does it ingest food or fuel and transform it into its tissues? Can it (or some of its kind) reproduce? But if it is not a living organism, it cannot have the attributes of animal sentience and rational thought in the only form known to us.

This is not an argument against the possibility of man-made life. The obstacles to producing an artificial organism are technological, not philosophical. On the other hand, the Aristotelian scheme provides a rational basis for the view that machines which are not alive in this biological sense cannot be either sentient or thoughtful. The only sentient creatures we know of are organisms, and there is no good philosophical reason to suppose that things can be otherwise. The Aristotelian scheme of graduated levels of life serves in this case to reinforce our common sense, and to help us draw the line between philosophy and science fiction.

Bibliography

- ADAM, C. and TANNERY, P. (eds.), *Oeuvres de Descartes*, vii (Paris: Cerf, 1897–1909).
- KAHN, CHARLES H., 'Sensation and Consciousness in Aristotle's Psychology', *Archiv für Geschichte der Philosophie* 48 (1966), 43–81, reprinted in J. Barnes et al. (eds.) *Articles on Aristotle 4* (London: Duckworth, 1979), 1–31.
- SORABJI, RICHARD, 'Body and Soul in Aristotle', *Philosophy* 49 (1974), 63–89, reprinted in *Articles on Aristotle 4* (London: Duckworth, 1979), 42–64.

Perception Naturalized in Aristotle's *De Anima*

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I. Aristotle's Aims in the *De Anima*

Perhaps the most prominent feature of Aristotle's general introduction to his psychological works, in the opening chapter of the *De Anima*, is his insistence that what he expects to do there is not only genuine science but also genuine *natural science* (*phusike*). The first half of that first chapter (402a1–403a3) mainly introduces features of Aristotle's intended method that are dictated by the fact that what he expects to do is science as he understands it. Here, as commentators have often pointed out, the useful cross-comparisons with Aristotle's account of science, in the *Analytics*, are numerous, and they reinforce the expectation that there should be a very close fit between Aristotle's theory of science in the *Analytics* and his practice in the *De Anima*.¹ The second half of the chapter, however, focuses more narrowly on features of Aristotle's method dictated by his aim to do *natural science* (403a3–b19). The main implication of this, as Aristotle himself presents it, is that in the scientific study of each of our psychological states and powers *all four causes*—formal, material, efficient and final—must be brought into play. In particular, as Aristotle emphasizes, whereas mathematics, theology, carpentry, and even (empirical) medicine may be mastered without any understanding of scientific efficient and material causes, this is not true of the study of psychic states such as anger, desire, and perception or sensory awareness, where the understanding of efficient and material causes is crucial (403a5–7, 25–7, b7–19, Cf. *De Sensu* I 436a7–10, b6–8, *Met. A.1* 981a12 ff.). Intellection (*to noein*) if anything might *seem* (*eoike*) to be an exception to this, and to have no material cause, Aristotle notes. But, he adds, if our intellection requires imagination or appearance (*phantasia*), then not even our

¹ These are noted in the standard commentaries. See, e.g., R. D. Hicks, *Aristotle: De Anima* (Cambridge 1907), on *DA* I.1.

intellection will be an exception on this point (403a5–10). Later in III.7–8 Aristotle insists that intellection for us does require *phantasia* (e.g., at 432a7–10). So it is clear that it will be a main part of Aristotle's program in the *De Anima* to locate the material and other causes of intellection as well as of perception and other psychological states.

The importance to Aristotle of this doctrine, that the proper study of the soul and of our psychological states, including perception and knowledge, belongs to *natural science*, is further emphasized in the remaining chapters of *De Anima* I where he surveys the views of his predecessors. There Aristotle himself points out that his whole discussion is guided by the idea that the distinctive views of his predecessors were all reached as applications of their own general explanatory principles (*archai*) concerning how things are constituted and how motion and alteration take place in nature (I.3 405b11 ff.). Where Aristotle disagrees with their views, and with their principles, he mainly does so by introducing what he takes to be the proper principles of natural science and by showing how his predecessors fail to conform to them. He criticizes, for instance, the view of his predecessors that the soul can be a source of *motion* only because the soul is itself *in motion*, and is self-moving (I.2 403b28–31, 404a20–7). He mainly argues against this supposition, as commentators have always pointed out, by showing that it conflicts with a proper account of the actual types and principles of natural motion, an account which he develops in more detail in his *Physics*.² On this account it is not necessary for what is a source or cause of motion to itself be in motion (see, e.g., *Phys* VIII.5 256b23 ff. Cf. *DA* III.2 426a2–6). Also, Aristotle criticizes the view of many of his predecessors that the soul can be a source of perception and knowledge only because it is *constituted of* what is perceived or known, since 'like is known by like'. He argues that this conflicts with the fact that perceiving and knowing involve being *acted on* (*paschein ti*) by what is cognized and like does not *act* on like (I.5 410a23–6). When he later returns to this objection in II.5 (416b33 ff.), Aristotle makes it clear that he is relying, in offering this criticism, on his general account of acting and being acted on in *Generation and Corruption* (*GC*) I.6–7. That is, his criticism derives from what he sees as the correct general principles of natural science concerning acting and being acted on.

Commentators, however, have often criticized Aristotle for relying on his own doctrines from, e.g., the *Physics* and *GC*, in objecting to the views of his predecessors in *De Anima* I since these doctrines, they say, would not be agreed to by his predecessors.³ But this criticism of Aristotle is based on

² See, e.g., Hicks, 1907, on *DA* I.3–4.

³ See, e.g., Hicks, 1907, p.239, who was following Bonitz. This mode of criticism of Aristotle's treatment of his predecessors is taken to the limit in two still influential works

a misreading of his objectives which it is useful, for our purposes here, to note. Aristotle is not always aiming in the *De Anima* merely to produce a dialectical or peirastic refutation of the views of his predecessors where, according to Aristotle's own rules for this type of refutation, the objections must be based on premisses that are accepted or granted by his opponents. (See *Topics* VIII. 1–9, *Sophistical Refutations* (*SE*) 2.) Rather, his aim, often at least, is to produce *scientific* refutations where the premisses are based on the proper principles of natural science whether his opponents understand or would accept them or not. In *SE* 9 Aristotle draws a clear distinction between these two types of refutation (170a20 ff.). Scholars often wrongly assume that whenever Aristotle is criticizing and trying to refute his opponents he must be employing dialectical procedure. Attention to *SE* 9 makes it clear that this is not at all likely.

The main significance of this brief notice of these select features of *De Anima* I, for present purposes, is this. Aristotle's clear objective in the *De Anima*, to treat the study of our epistemic and other psychological states as a part of the domain of *natural* science, as clearly evidenced both by his statement of his own methodology and by his mode of criticism of his opponents, is exactly the sort of objective accepted by many contemporary philosophers and social scientists today. In aiming to produce so-called 'naturalistic' accounts of our epistemic and cognitive states these contemporary thinkers have wanted to confine their investigations and results to what strictly conforms to the constraints of proper natural science by contrast with other, more philosophical, modes of inquiry that Aristotle would himself regard as dialectical and not scientific. Since Aristotle's main aims in his psychological works are just the same as this it is not inappropriate to describe his aims as, in spirit, the same as theirs. The view of many recent scholars that we can best treat much of what we find in the *De Anima* as philosophy not science reverses Aristotle's own judgement. It remains an open question, of course, whether the constraints which contemporary philosophers and cognitive scientists would require for a true 'naturalistic' treatment of our epistemic and psychological states are the same as those that Aristotle would require, and if not who has the better naturalistic approach. The exploration of this question is a main objective of this study.

2. Naturalism in the *De Anima*

We may begin to further explore Aristotle's own naturalism in cognitive psychology by returning to the chief requirement which he imposes in of Harold Cherniss, *Aristotle's Criticism of Presocratic Philosophy* (Baltimore, 1935) and *Aristotle's Criticism of Plato and the Academy*. (Baltimore, 1944).

De Anima I.1 on the study of our psychological states as a part of natural science, namely that such a study should bring into play each of their four causes. The significance of this is often not adequately appreciated. Aristotle's approach to the study of psychological entities is standardly described as *hylomorphism*, or the view that psychological entities are, as he says, 'forms [or accounts, *logoi*] in matter'. But it is important to see that when Aristotle says this in *DA* I.1 (403a25) this is only his shorthand way of introducing the view that psychological states, like all natural entities, are determined by all four of their causes, not simply by their form and matter (a25–8). In *Parts of Animals* I.1 also Aristotle can speak of there being just 'two causes' (642a1–15). There he groups efficient and material causes together as one type, and formal and final causes together as another. In *DA* I.1 Aristotle expresses his doctrine primarily as a thesis about the *definition* and *essence* of natural objects. The proper definition or account of the essence of a natural object, Aristotle indicates, must bring into play all of its causes. To illustrate his doctrine Aristotle offers a sample definition schema for *anger* (*orge*) which does just this. He says:

Anger is [by definition] (1) a certain type of change (2) belonging to [or deriving from] this sort of body... (3) due to this [cause], (4) for the sake of that [goal]. (403a25–7)

In this definition schema, or essence schema, for anger all four types of cause are given a place. The most important implication of this is that each of the four causes is, in part, *constitutive* of the very *being* or *essence* of the type of object in question. It is this very fact, Aristotle then explicitly says, 'that directly brings the study of the soul, either all of it or the part that is of this sort, into the domain of the natural scientist' (403a27–8). This, then, is the core feature of Aristotle's naturalism in psychology.

To explore the implications of this doctrine we may first turn to a related passage in *Metaphysics* (*Met.*) H.4 where Aristotle also emphasizes the importance of finding all of the allowable causes of any object of scientific inquiry. To illustrate this he offers an account there of the causes in the case of his favorite scientific example, the lunar eclipse.

What is the cause (*aition*) of an eclipse? What is its matter? There is none; but the moon is what undergoes eclipse. What, then, is the cause in the sense of what brings about the change and extinguishes the light? The earth. Presumably there is nothing for the sake of which [an eclipse occurs]. The cause in the sense of the form (*eidos*) is the account (*logos*). But the account (*logos*) is unclear (*adelos*) unless it is accompanied by its cause. What is [the form or account of] an eclipse? Loss of light [by the moon]. But if it be added 'due to the earth coming to be in the middle [between the sun and the moon],' this is the account (*logos*) together with its cause. (1044b9–15)

Here Aristotle says that the formal cause (*eidos* or *ti esti* or *logos*) of the lunar eclipse is the moon's loss of light (*steresis photos*, 1044b14). But he then says that this formal cause or *logos* of eclipse taken by itself is unclear (*adelos*). That is, it is not sufficiently precise or determinate as a specification of an eclipse, unless, he says, this *logos* or form 'is accompanied by its cause (b12–14). He does not feel the need to explain why this is so but we can easily see that the presence of this formal cause alone, loss of light by the moon, would not be sufficient to guarantee the presence of an eclipse nor, thus, can it be by itself fully constitutive of the essence of an eclipse. A qualitatively identical loss of light by the moon due to, say, its surface turning pitch black, or due to the extinction of the sun, in a certain manner, would not be a lunar eclipse. To guarantee the presence of an eclipse we need to also bring in a reference to the special cause of the moon's loss of light during an eclipse. But this cause is just what Aristotle identifies as the efficient cause of an eclipse, namely the interposition of the earth between sun and moon (1044b11–12). So each of these causes, formal and efficient, is, partly, constitutive of the being and essence of a lunar eclipse in an intelligible sense. The same is true of the fact that such an eclipse belongs uniquely to a certain material subject, namely the moon. (This subject, for Aristotle, is the matter or material cause of the eclipse in a way, as he indicates in *GC* I.5 320a2–5.) Thus, the formal cause alone, in Aristotle's view, is not sufficient to determine the essence, or thus the presence, of an eclipse. Aristotle adds that there is presumably no final cause or goal of a lunar eclipse. So this is not one of the allowable causes that needs to be stated in this case to capture the essence (1044b12).

Aristotle then turns, in H.4, to a psychological case, the case of sleep, which is more fully discussed in the *De Somno*. There Aristotle offers a detailed account of the four causes of sleep (455b13 ff.). The form or *logos* of sleep or what we say it is, he says, is an incapacitation of or bond on perception (455b16 with 454b9–11, 25–6; cf. *Met.* H.4 1044b18–20). But, he argues, not just any incapacitation of our perceptual faculty, such as when we faint, counts as sleep, but only when this incapacitation proceeds from a particular efficient cause (455b2 ff., at b9). So here too the form or *logos* is 'unclear,' or insufficiently determinate, as a specification and account of sleep, unless it is accompanied by its cause, i.e. by the efficient cause of sleep.

To see why, for Aristotle, efficient or material causes are no more sufficient by themselves to constitute the being or essence of a natural object than is the formal cause, we may turn back now to the example of anger (*orge*) discussed in *DA* I.1. We know from *Ethics* VII.6 and *Rhetoric* II.2 that the efficient cause of anger for Aristotle is the awareness of an apparent slight or insult (1149a29 ff., 1378a31 ff.). In *DA* I.1, Aristotle

clearly indicates that the presence of this efficient cause of anger, awareness of insult, will not always be accompanied by the formal cause of anger, which Aristotle there identifies as the desire for revenge (403a29–b2). This, Aristotle claims, may depend on our current bodily state. He says:

It seems that all of the affections of the soul involve a body . . . An indication of this is that, sometimes, strong and obvious stimulations [to anger or fear] result in no irritation or fear, while at other times we are moved by slight and hardly noticeable stimulations when the body is [already] aroused and in a state just as when one is angry. (403a16–22, cf. a29–b3)

So if, for instance, we are very sleepy the efficient cause of anger, awareness of insult, could be present but not the formal cause, desire for revenge, or, thus, anger itself. Equally, one could argue in a similar vein, we might experience the formal cause of anger, that is a desire for revenge or, more precisely, a desire to hurt back (*orexis antilupeseos*, 403a30), when the injury or hurt we wish to have recompense for is not, and is not taken as, an insult or a slight (*oliguria*) but rather, say, is recognized as an accidental injury which someone has inflicted on us. In this case too our state, our impulse to hurt back, would not be an instance of the natural kind *anger* (*orge*) on Aristotle's account but only of some other form of irritation since, though the formal cause of anger is present, desire to hurt back, the requisite type of efficient cause is not. This is one reason why Aristotle can say, as he explicitly does in *DA* I.1, that a definition that gives the form alone is insufficient as an account of the essence of the natural kind anger (403a29–b9). This conforms also to the claim of *Met.* H.4 that the formal cause of a thing taken alone can be unclear, or not sufficiently determinate, as an account of the thing in question. Similarly, Aristotle also says in the passage above, with reference to the material cause of anger, which is described in *DA* I.1 as the seething of the blood and heat around the heart (403a30–b2), that our bodily state in this condition may be just as when one is angry whether or not any efficient cause or incentive to take revenge presents itself (403a21–2). Here our psychological state cannot be anger, even though this bodily state or material cause of anger is present, since the appropriate efficient cause, which Aristotle insists is also part of the definition and essence of anger (403a27), is missing. Without the presence of the essence of anger, clearly, there can be no anger. So the material cause is also not sufficient by itself for anger though it is necessary, Aristotle insists (403b2–3).⁴

⁴ In a similar case in *De Insomniis* 2, Aristotle says that our senses can be materially affected, in a dream, just as they would be in waking veridical perception (460b22–27). The material cause in these two cases is the same, though the efficient causes and thus the resulting psychological states, are different. On this, see further, below.

Aristotle does not directly say in *DA* I.1 what he thinks the final cause or goal of anger may be. But elsewhere he suggests, in *Politics* VII.7, that this involves something like the protection of our freedom, and of our territory, so to speak. That is, the functional role that the occurrence of the impulse to take revenge when we feel insulted plays in our lives is to facilitate the maintenance of a certain level of respect from others, especially from our close associates, for our person and our property. Our anger warns others that they are stepping on our toes. This is needed, Aristotle says, for the development of friendship and affection. (See esp. 1327b40 ff. Aristotle uses the broader term *thumos*, temper, here and not *orge*, anger. But he has in mind the type of *thumos* that arises when one feels slighted (1328a2), and this, as we can see from *DA* I.1, is anger for him.) However, since this goal of anger, namely territory protection and freedom, could be achieved by other means than by experiencing and expressing the desire for revenge when we feel insulted, the presence of this final cause of anger alone will clearly also not be sufficient to determine the presence of anger. So the final cause too, taken alone, is also not the whole of what is constitutive of the being of anger. These examples then, of the eclipse, sleep, and anger, show us in some detail how each cause taken by itself may *underdetermine* the presence of a natural psychological state. This, then, is one reason at least why Aristotle's program in natural science, and in psychology in particular, is so dominated by his interest in specifying each one of the four causes of any given object of study.

To consider now the implications of this, it is first worth noting, briefly, the bearing that these doctrines in the *De Anima* have on various recently popular accounts of Aristotle's views in the philosophy of psychology. On one of these popular accounts Aristotle basically takes a *functionalist* approach to the analysis of psychological states according to which these states are to be defined in terms of their function or final cause.⁵ Proponents of this account typically cite Aristotle's claim that:

Everything is defined by its function (*ergon*), since each thing truly exists when it is able to perform its function, for instance the eye when it can see; while if it cannot it exists in name only, like a dead eye or a stone eye. (*Meteorology* IV.12 390a10 ff., cf. *PA* I.1 640b29 ff.)

So Aristotle does believe, as we have already seen in the *De Anima*, that each natural object, at least, is defined by its function, that is by its final cause, in case it has one, since he indicates there that each natural object is defined by all of its allowable causes. But, *ipso facto*, he does not believe,

⁵ See, e.g., M. Nussbaum and H. Putnam, 'Changing Aristotle's Mind', and S. Marc Cohen, 'Hylomorphism and Functionalism', in M. Nussbaum and A. Rorty (eds.), *Essays on Aristotle's De Anima*, 2nd edn. (Oxford, 1995); and C. Shields, 'The First Functionalist', in J. C. Smith (ed.), *Historical Foundations of Cognitive Science* (Dordrecht, 1990).

nor does he say in the above passage, that every object, or every natural object, is defined *only* in terms of its function or final cause, as a typical functionalist reading would maintain. He also says, for instance, of states such as anger: 'It is necessary for it to be *in this sort of matter* if it exists' (403b1–3). Aristotle means by this, as we have seen, that anger must have a certain particular material cause and, thus, that it has features that can only be explained by the *particular* type of matter that it involves. (In a related passage in *Met. Z.10* Aristotle says only: 'no part [of a living body] can be well defined *without* a determination of its function', 1035b16–18.) We have just seen that the function of anger could be satisfied without the material cause of anger, or anger itself, being present. It is no response to this to say that the material cause or matter of anger will itself be functionally defined for Aristotle. No doubt it will, but like any natural object the matter of anger will not be defined *only* in terms of its function but also in terms of its matter and its other causes. So the functionalist account of Aristotle's approach to the analysis of psychological states accords a defining role to final causes alone which is incompatible with Aristotle's texts overall.

On another popular account, Aristotle is committed to the view that psychological states *supervene* on bodily material states, that is, at least, to the view that the presence of the relevant material cause of a psychological state is by itself causally or nomologically sufficient for the presence of the psychological state in question.⁶ But this too, as we have seen, is ruled out by Aristotle's account in *De Anima* I.1, according to which each cause taken by itself, including in particular the material cause, may underdetermine the presence of a given psychological state.⁷ He says there that the body may be affected just as when one is angry without anger being present (403a21–2). So the material cause of anger can be present, together with its function, without anger, and its function, being present (cf. *Met. H.4* 1044a25–7). The matter or material cause of a thing, for Aristotle, is only what gives something the potential for being that thing (*Phys* II.1 193b6–8, *DA* II.2 414a25–7.) More is required to guarantee the actuality of the thing. So this account of Aristotle's views, on which psychological states supervene on their material causes, gives too much weight to the material cause over the other causes.

⁶ See, e.g., M. Wedin, 'Content and Cause in the Aristotelian Mind', *Southern Journal of Philosophy*, Supplement, 1992, and 'Keeping the Matter in Mind: Aristotle on the Passions and the Soul', in R. Bolton and F. Lewis (eds.), *Form, Matter and Mixture in Aristotle* (Blackwell, 1996), and V. Caston, 'Epiphenomenalisms, Ancient and Modern', *Philosophical Review* 1997, with references there, n. 52.

⁷ Writers sometimes appeal to *Physics* VII.3 to show that Aristotle holds that material causes are sufficient. (See, e.g., Wedin 1992, Caston 1997.) But what Aristotle says there is easily understood as implying, as in *DA* I.1, that the combination of the appropriate material *and* efficient causes is sufficient for the generation of psychological and other psychophysical entities. (See, e.g., 246a4–8, b12–15.) On this see below.

Still another popular account of Aristotle's views accords a special primacy to efficient causes, especially in the discussion of his treatment of perception and perceptual content. On this approach all that is needed, for Aristotle, to account for the presence of a given veridical perceptual state, with a given content, is the action of the object of perception, acting as efficient cause, on the perceptual organs in normal conditions. We will consider this proposal in detail below but we can see difficulties for it already from *De Anima* I.1 where Aristotle argues that the presence of the efficient cause alone is insufficient to guarantee the presence of a given psychological state.

Nevertheless, while, contrary to these accounts, no one cause taken alone is sufficient to guarantee the presence of a psychological state such as anger, the text does indicate that the presence of a *pair* of the causes may be sufficient to guarantee the presence of the others. For instance, in the case of anger, Aristotle is happy to say that when the requisite efficient cause is present, such as the awareness of some insult, *and* the requisite material cause, the appropriate disturbance of the blood, is present, then we will, in normal conditions, be moved to anger, that is to the possession of the formal cause, desire for revenge, and if all goes well the relevant final cause. As Aristotle says:

[Sometimes] we are moved [to anger even] by slight and hardly noticeable stimulations [i.e. insults, namely] when the body is [already] aroused and in a state just as when one is angry. (I.1 403a21–2)

Here the presence together of the efficient and material causes of anger, under standard conditions, guarantees the presence of the full state. This reflects normal Aristotelian doctrine, as we can see from *Met.* H.6:

What is the cause of this, namely of that [matter] which is potentially some thing being actually that thing except, in the case of generated things, the productive agent (*to poiesan*). (1045a30–1)

So if the appropriate proximate matter or material cause is present and the requisite efficient cause is active then, for Aristotle, the entity in question results. In the case of anger, the disturbance of the blood gives one the potentiality for anger, a potentiality which is actualized when the awareness of insult is also present.

3. The Causes of Perception

We may now apply this general sketch of Aristotle's own naturalistic program in psychology to his discussion of perception. What we should expect is that one of Aristotle's prime objectives will be to display the role

that each of its four causes plays in accounting for perception. In line with this, Aristotle begins his discussion of perception, in *De Anima* II, with an investigation of its efficient cause. He introduces perception in II.4 as a sort of natural qualitative change (*alloiosis tis*) that is connected with the soul (*kata psuchen*) since nothing which lacks soul can engage in perception (415b24–5). As a type of qualitative change, he goes on to say in II.5, perception results from being altered and acted on, by an appropriate causal agent, in a way that conforms to the general requirements of natural science for change and alteration (416b34 f.). These requirements dictate that:

Every result of being acted on and altered is due to some active *productive agent* . . . and the things which are productive of the actuality [of perception] are external, namely the objects of sight and hearing, and similarly for the rest of the objects of perception. (417a17–18, b20–1)

These remarks both bring the study of perception firmly under the general study of natural alteration and also clearly identify for us one of the four causes of perception, namely the productive agent or efficient cause, which Aristotle here very explicitly identifies as the external object of perception (*to aistheton*). The *external* objects of perception, he says, are the things, not simply some of the things, which are productive of perception. So the efficient cause of ordinary perception is never some internal object, or some combination of internal and external objects, but always an external object. As Aristotle says in *Met.* Γ5:

That the entities which produce perception would not exist even apart from the faculty of perception is impossible. For, surely, perception is not perception of itself, but there is also something different, beyond the perception, which must be prior to the perception; for that which produces change is prior by nature to that which is changed. (1010b33–1011a1)

Here again the efficient or productive cause of perception is an object entirely external to the perceiver and, indeed, an object which can exist even if the perceiver does not. It is this external object and not any internal object which Aristotle characterizes as what perception is *of*, i.e. as the object of perception. So, in contemporary terms, as we shall see in more detail below, Aristotle is committed to a *direct realist* account of the objects of perception, one on which the objects of perception are simply the external objects themselves. In *DA* II.6, Aristotle then goes on to distinguish three different types of external objects of perception (*aistheta*)—the *special* sensibles that are unique to one sense, as a color is to sight; the *common* sensibles that are perceived by more than one sense, as a shape is by sight and touch; and the so-called *incidental* sensibles, which are described simply as other sensibles that happen to

be one or more of the special or common sensibles and are perceived by virtue of that, as for instance the son of Diarès happens to be a certain white thing and is perceived by virtue of that (418a7 ff.; 425a20–30).

The fact that Aristotle distinguishes these three different types of *aistheta* or objects of perception might leave one with the impression that for him any object of any of these three types may serve, on a given occasion, as the *efficient cause* of a case of perception, since Aristotle has just said in *DA* II.5 that *the* productive agents of perception just *are* the external objects or *aistheta*. If so, then the identification of this cause of perception at least—the efficient cause—would seem unproblematic, unlike the identification of the material cause which, as we shall shortly see, is much more problematic. However, even this is far from clear. To bring out the difficulties here let us concentrate first not on the special sensibles, as writers most often do, but on the type of object of perception which is, after all, most important to us in our perceptual activities, and to Aristotle in his natural science in general, namely the incidental object. Take again, as an example of this, the lunar eclipse or the loss of light by the moon which occurs during a lunar eclipse. (See *APo* I.31 87b39 ff.) When we see a lunar eclipse or loss of light by the moon, as such, what is the efficient cause of this perception? There are very good reasons to think that, for Aristotle, the efficient cause in this case cannot be the *object* of this perception, i.e. an instance of *loss of light by the moon*.

To see why this is so, consider first what Aristotle says at the beginning of *DA* II.12 where he gives his famous general characterization of *sense* or a *sense faculty*, as opposed to other kinds of capacities. He says:

Generally, concerning all perception, it is necessary to maintain that sense is what is receptive of the perceptible forms of things without the matter, as, for instance, wax receives the imprint of a signet ring apart from its iron or gold. The gold or bronze thing undertakes the imprint, but [it does] not [do so] *as* gold or bronze. Similarly, sense in each case is acted on by the agency of that which possesses [special sensibles such as] color, or flavor or sound but not [acted on by that object] insofar as it is said to be each of those things [those incidental objects of perception such as a gold thing, or a bronze thing or a ring], but *only* insofar as it is of that sort [e.g., colored or flavored or resonant in a certain way] as determined by its account. (424a17–24)

In speaking here, and later, of what a sense faculty, such as sight or hearing, or the primary sense faculty (a24), is 'receptive' of, as he makes clear, Aristotle means what the faculty is affected or acted on by, i.e. actualized by, as agent. (Cf. 424b1–3, II.2 414a8–12, III.4 429a12–18.) That is, in characterizing perception as the 'receiving' of perceptible form Aristotle is talking primarily about what the efficient cause of perception

is, not about its formal or material cause, as is often claimed. Thus, he says, to explain his doctrine, the sense faculty in each case of perception ‘is acted on by the agency of (*paschei hupo*) that [incidental object] which possesses’ certain special sensibles, ‘but not [acted on by that object] insofar as it is said to be’ that incidental sensible, ‘but only insofar as it is’ possessed of some special sensibles (424a22–4). So Aristotle’s primary claim here is not that when I see a gold ring I or my senses somehow, either materially or formally (as intentional content), take on its gold color but not its gold matter. His primary claim is that when I see a gold ring my senses are acted on by its gold color but not by its gold matter. So when I do see its gold matter this is not because I or my senses receive (the form of) its gold matter. For that I or my senses would need to be acted on by (the form of) its gold matter and this does not happen. What I am acted on by, Aristotle says, is ‘only’ its gold color. Thus, when we do perceive some feature of some material object such as the loss of light by the moon, the material object, the moon, and its *loss* of light, as such, play no productive efficient causal role in our perception (424b1–3). Thus, the incidental object of perception (*aistheton*) in this case—namely the loss of light by the moon—is not as such the efficient cause of the perception of that object. That object as such is not what *acts on* the perceptual faculty to produce perception of that object. (Aristotle’s view here is somewhat parallel to the modern view that the efficient cause of our seeing the loss of light by the moon is not that very state of affairs but, for instance, the action of certain patterns of light waves reflected from the moon on our retina.) As we have noted already and as we shall see in more detail below, many have wanted to argue that in the case of veridical perception, or indeed of any veridical contentful psychological state, for Aristotle, the efficient cause is always the object of that state.⁸ We can see already here that this is clearly false in the case of certain veridical perceptual states.

Aristotle gives us further indication of what the ‘perceptible forms’ in question are, which do act as efficient causes on and are received by the perceptual faculty, earlier in *De Anima* II.6 where he first introduces the idea that:

[In the perception of incidental sensibles] one is *in no way* (*ouden*) acted on by the object of perception as such. (418a23–4)

Here Aristotle very strongly insists that in the perception of incidental sensibles the incidental object does not as such act on the perceptual faculty in any way. So it does not do so either in virtue of its matter or

⁸ For recent examples, see D. Charles, *Aristotle on Meaning and Essence* (Oxford, 2000), ch. 5, esp. at p. 129, and M. Burnyeat, ‘Aquinas on Spiritual Change in Perception’, in D. Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden, 2001), esp. pp. 5–8, 71–72.

in virtue of its form. He contrasts this with what occurs in the perception of what he calls *per se* (*kath' hauta*) sensibles, i.e. special and common sensibles. (418a24–5) This indicates that both of these types of sensibles *do* act as such as efficient causal agents in perception. At 418a24–5 Aristotle also contrasts special and common sensibles and says that only the former are strictly or dominantly (*kurios*) objects of perception. However, he explains this simply by saying that the special sensibles fix the special being or essence of the individual sense faculties by which they are uniquely grasped. He does not say that the common sensibles do not act as such as efficient causal agents, and later, at III.12 435a5–8, he indicates directly that they do. It may be only in company with the action of special sensibles that the common sensibles act as causal agents but this does not mean that they do not so act. Aristotle says this only about the incidental sensibles. His claim, then, that incidental sensibles are perceived only *because* they happen to be or to have certain special or common sensibles records his commitment to the thesis that when incidental sensibles are perceived it is the accompanying special and/or common sensibles that are the *efficient causes* of the perception in question and not at all the incidental objects themselves, except incidentally. It is just this fact, it seems, that the incidental objects of perception are only *incidental efficient causes* of perception, that makes this perception incidental perception (418a20–4).⁹

So, in the case of the visual perception of a lunar eclipse the efficient cause will be restricted to certain shapes and patterns, of color, light and shade, with a certain size, movement, etc., even though the object or *content* of the perception, so to speak, is the moon's loss of light. This clearly does not mean, according to Aristotle, that strictly speaking all that we literally and directly see are colors, sizes, shapes, movements, and the like, while a conception such as that the moon has lost its light is only a belief intellectually *inferred from* or involving some active *interpretation of*, what we literally and directly see. Commentators sometimes attribute this sort of view to Aristotle, but nothing which he says supports this.¹⁰ In the *De Anima* Aristotle treats all perception, including incidental perception, as a quite different affair from intellection (*to noein*). He treats it, in II.5–6, as an operation of our perceptual faculty alone without any mention of intellection. He there distinguishes perception from intellection, in particular from

⁹ Cf. *DA* III.1 425a 24–7. See *Physics* II.3 195a32–b3 for Aristotle's notion of an incidental cause.

¹⁰ See, e.g., Hicks 1907, and W. D. Ross, *Aristotle: De Anima* (Oxford, 1961), on *DA* II.6; M. Nussbaum, *Aristotle's De Motu Animalium* (Princeton, 1978), Essay 5; and M. Wedin, *Mind and Imagination in Aristotle* (Chicago, 1988), 249. For other references see S. Cashdollar, 'Aristotle's Account of Incidental Perception', *Phronesis* 18 (1973), 156–75, and D. Modrak, *Aristotle: The Power of Perception* (Chicago, 1987), 69–71.

scientific knowledge (*episteme*), on the ground that the first actuality of perception, of all perception, is something we are born with, while the first actuality of *episteme* is something we must acquire by intellectual learning (II.5 417b16–418a1, with 417a21 ff.). That is, before we can entertain or use an item of scientific knowledge we must first have learned it, from previous knowledge. But this is not true in the case of perception. We are born with the capacity passively to experience the objects of perception without the use of previous intellectual knowledge or learning of any sort. Aristotle does not restrict this claim to the perception of proper, or proper and common, sensibles but rather applies it without qualification to all sensibles, including incidental sensibles. In *De Insomniis* I he says: ‘We hold that, equally, we *see* that the thing approaching is a man and that it is white’ (458b14–15). This fits quite closely with and is required by the account of the epistemic status of *all* items of perception and experience found in *Posterior Analytics* (*APo*) II.19 where these states are reached independent of the operations of the intellect.

The most important implication of this, for present purposes, is that, just as in the case of anger, in the case of incidental perception the *efficient* cause as Aristotle describes it clearly *underdetermines* the presence, and the content, of the perceptual state in question. As we have just seen, the efficient cause of my seeing a lunar eclipse or loss of light by the moon, as such, is certain special and common sensibles, certain moving patterns of color and light in the sky. But, clearly, this same efficient cause could also be the efficient cause of my seeing nothing more than those same moving patterns of color and light, without any visual recognition or apprehension of the moon or of its loss of light as such. So the efficient cause *alone* is insufficient to fix the content of my perceptual state in the case of such incidental perception. But, by the same token, this same efficient cause is also insufficient to fix the content of my perceptual state even in the case where what I see is just the special and common sensibles which figure in the moon’s loss of light. For this very same efficient cause can be the efficient cause of my perceptual state whose content is the loss of light by the moon. In other words, to say that the efficient cause of the veridical perceptual state I am in is this set of special and common sensibles that figure in the lunar eclipse does not yet determine which of at least two possible veridical perceptual states I am in.

So the same facts which show that the efficient cause alone is insufficient to fix content in the case of incidental perception also show that it is insufficient in the case of the non-incidental perception of special and common sensibles. Thus, for Aristotle, just as we might expect from the discussion in *DA* I.1, the content of *all* perceptual states is underdetermined by their efficient cause, or by the causal input taken alone, just as with emotional states such as anger.

This point is brought out again in a more general way in *De Sensu* 7 where Aristotle says:

The greater change always nullifies the lesser, so that people do not perceive things brought right before their eyes if they happen to be deep in thought, or in a fright or hearing a loud noise. (447a14–17)

This point is not restricted by Aristotle to incidental sensibles and it obviously applies as much to special or common sensibles right before our eyes as it does to incidental sensibles. If my thoughts are elsewhere, or if a loud noise has just occurred very near me, I may fail to see the distinct colors and shapes of what is right before my eyes, even though these colors and shapes are causally acting on my eyes, *via* the intervening medium, in the way they do when I see them. Similarly, if my perceptual attention is fully occupied by the special shade of green possessed by one of the leaves of a tree at which I am looking, I may fail to see the multitude of other slightly different shades of green possessed by the other leaves in my visual field even though those other shades of green are causally acting on my eyes just as when I see them. There is no problem here, on Aristotle's account, with my eyes or with my other perceptual apparatus. The problem he notes is that my perceptual attention is captured in virtue of some 'greater change', as he puts it, which nullifies the perceptual impact of the 'lesser change' brought about by the unperceived things in my eyes. (Cf. *Insom* 460b30–461a3; *Div Somn* 463a7ff.). So I do not necessarily perceive even the special or common sensibles that are acting on my perceptual system in normal conditions. Here again, then, even under normal conditions the external causal input taken alone can underdetermine the content of our perceptual states including all of our veridical perceptual states.

One might protest against this that when my perceptual attention is fully occupied by some loud noise, say, then even if I do not perceptually take note of the color of what is before my eyes and acting on them nevertheless I can still be seeing the color, without noticing it. But Aristotle himself would not accept this. In *De Sensu* 2 he claims that 'it is impossible to perceive and see [e.g. fire] without being aware of it' (437a27–8). In *Physics* VII.2, Aristotle distinguishes perceptual alterations generally from the alterations of lifeless things on the ground that when we undergo perceptual alterations we are always *aware* of undergoing those alterations (244b12–245a2). So, for Aristotle, we cannot see something, whether it be an eclipse or a color, without being aware that we are. (This is not to say that our visual system cannot somehow register things that we do not at the time visually detect or see, information that we might later have some access to in memory.) Perceptual content then is determined for Aristotle not simply by the causal input but also by what we attend to and take

perceptual cognizance of and this depends on our current interests and our conceptual capacities as well on the causal input. This, needless to say, makes perfectly good sense. Writers have often emphasized, quite rightly, that efficient cause and content can diverge for Aristotle in cases of misperception. What has not been so well noted is how efficient cause and content can diverge even in cases of normal veridical perception due to the underdetermination of any perceptual state and its content by its efficient cause. As we have seen, this holds as much for the perception of special and common sensibles as for incidental sensibles.

It is worth noting, before proceeding further, that it will not help to deal with this problem, as some might suggest, to bring in a reference to the final cause and goal of perception as Aristotle understands it. This he characterizes in *DA* III.12 (434a30 ff.) and *De Sensu* 1 (436b18 ff.) quite generally as survival and the understanding of the world. These things might equally well be promoted, on the occasion of an eclipse, whether we happen to see the moon's loss of light or simply to see certain moving patterns of color and light being exhibited at a certain distance above our heads. I am no more designed to see the one than to see the other on such an occasion.

How then does Aristotle suppose that we can eliminate the underdetermination of content in perception with which we are left when we consider the efficient cause of perception alone? We have seen in *DA* I.1 that Aristotle is fully aware that, in general, the operation of the efficient cause alone is insufficient to guarantee the presence of a given psychological state. This is illustrated pointedly in his discussion of anger and he later draws explicit attention to it again in his discussion of incidental perception. So Aristotle is not simply unaware of this problem, and we should expect that he has some solution to it in view. We also saw earlier that in the case of anger Aristotle's position was that its efficient cause alone is insufficient to guarantee its presence, *unless* the appropriate material cause is also present. But those two causes taken together, efficient and material, were sufficient in that case on Aristotle's account of it, and also on his more general account in *Met.* H.6 1045a30–1. So let us see, then, if we can eliminate the underdetermination of content by the efficient cause in our case of incidental perception by following Aristotle's lead, that is by adding to the efficient cause of seeing a lunar eclipse an account of the material cause.

4. The Material Cause of Perception

The question of what the material cause might be in the case of incidental or other perception has recently become a highly controversial topic.

Some have argued that in any case of normal veridical perception, for Aristotle, incidental or otherwise, the material cause is always the same, namely standard or normal condition in the observer's perceptual organs and other apparatus. No distinctive material changes occur, on this account, in distinct types of acts of normal veridical perception of any sort. There are only quasi-changes in the organs when the efficient cause of perception is active that amount to no more than the *perception* of the object in question with no literal material change involved. The organs simply actualize their potential for perception without material change. This, of course, would offer us nothing to eliminate the underdetermination we have pointed to, and no basis for explaining why with the same efficient cause we can, on some occasions, veridically perceive one thing and, on other occasions, veridically perceive something else. So on this account of the material cause Aristotle's theory would be totally inadequate to deal with a type of problem of which, as we have seen, he is quite aware, in the terms in which he expects to deal with it. Others have argued that in perception, according to Aristotle, the observer's perceptual organs take on the specific perceptible form or character of the efficient cause, such as color, shape, etc., and that this alteration is what constitutes the material cause of the perceptual state in question.¹¹ But this also would not eliminate the underdetermination which remains, in incidental or other perception, after specification of the efficient cause and the perceptible qualities involved in it. On this account of the material cause of perception, in the case we have already considered, the material cause of seeing a lunar eclipse is the same as the material cause of seeing only the correlated patterns of color, shape, etc. For in these two cases the efficient cause is the same and the material cause, on this account, is simply the taking on by the sense organs of the sensible qualities that make up the efficient cause. So the now extensive debate in the literature between these two alternatives is, in one important respect, beside the point, if the point has to do with how the efficient and material causes of perception can be sufficient in combination to determine the presence of the formal cause and content of perception, as Aristotle seems clearly to expect them to be. Neither of these approaches, that is, fits with Aristotle's standard assumptions on the nature of natural

¹¹ The first view is defended in M. Burnyeat, 'Is an Aristotelian Philosophy of Mind Still Credible?', and 'How much happens when Aristotle sees Red and hears Middle C?', and criticized by R. Sorabji, who takes the second view, in 'Intentionality and Psychological Processes: Aristotle's Theory of Sense-Perception', in M. Nussbaum and A. Rorty (1995). For more recent discussion see also J. Sisko, 'Material Alteration and Cognitive Activity in Aristotle's *De Anima*', *Phronesis* 41 (1996), 138–57; S. Everson, *Aristotle on Perception* (Oxford, 1997); T. Johansen, *Aristotle on the Sense Organs* (Cambridge, 1998); and M. Burnyeat, 'De Anima II.5', *Phronesis* 47 (2002), 28–90. See also n. 14 below.

qualitative change of which he takes perception to be an example. This constitutes a major difficulty for both of these approaches.

It is worth briefly noting further that both of these accounts of the material cause of perception also face other serious difficulties from Aristotle's texts. Perhaps the clearest evidence for distinctive material changes in distinct types of acts of perception comes in Aristotle's discussion of taste, in *DA* II.10. There he argues that the efficient cause of taste, i.e. of the perception of flavor, must be an object that contains, or can easily come to contain, appropriate moisture since the efficient cause of taste acts to produce taste by *moistening* the organ of taste, here the tongue (422a17–19, a34–b5). This, clearly, is material change and not just some static material condition in the tongue which is necessary for tasting. It cannot be explained away as a quasi-change which amounts only to the *perception* of the quality in question, with no literal material change,¹² because the moistening in question is not itself perceived. Only

¹² As is claimed in Johansen 1998, ch. 4. In Burnyeat 2001 it is apparently conceded that literal material change, in the form of moistening, does take place in the tongue in taste, but it is claimed that this material change does not stand to the form of taste (which is taken to be the perception of flavor) 'as matter to form'. This, it is supposed, shows that this change is not a constitutive essential ingredient in taste but only a concomitant necessary condition for it (pp.134–7). Burnyeat does not explain precisely what he means by standing 'as matter to form' but he does assume that in Aristotle's example of anger in *DA* I.1, boiling blood does stand to desire for revenge as matter to form (p. 143). But in this case matter and form are not related as the bronze and shape of a statue, its matter and form, are related to each other (as Burnyeat 2002, p. 77 assumes). The boiling blood is not what realizes or has the desire, even potentially, as the bronze has the shape or realizes it. The only thing that strictly has or realizes the desire, for Aristotle, is the whole human being, even if one may sometimes speak otherwise (*DA* I.4 408b1–18). This shows clearly that the form–matter relation in psychological states is not the same as it is in artifacts or substances where the matter is what strictly has or realizes the form. As we have seen, what is crucial for boiling blood to be the matter of anger is for it to be the *material cause* of anger, that is for it to play the crucial explanatory role at the material level in accounting for anger, a role not played by merely necessary material conditions of anger such as, say, having air to breathe. It is clear in *DA* II.10 that the moistening of the tongue does play such a crucial explanatory role at the material level in accounting for taste. Aristotle says there: 'Since the object of taste is moist it is necessary that its organ [the tongue] be neither actually moist [before tasting] nor incapable of being moistened. For taste is acted on in a certain way by the object of taste as such. Therefore, it is necessary for the organ of taste to be capable of being moistened while being preserved [in being moistened], but not to be moist [already]' (422a34–b5).

By the object of taste here Aristotle means flavor or the flavored thing. It is this that acts *as such* as efficient cause on the tongue to produce the perception of flavor. Aristotle says that it is necessary for it to act as such as efficient cause that it moisten the tongue. This clearly implies that the flavored thing *as such* is moist. So the moisture in a flavored thing is not merely a necessary concomitant to its having flavor; it is an essential feature of it as a flavored thing. The reason for this, as Aristotle makes clear in *De Sensu* 4, is that flavor is itself a quality acquired by normally tasteless water when the wet moisture which makes it up is mixed with earthy material of an opposite dry character so that, with the aid of heat, the water's normal mode of moisture is altered (441b9–24). Given that flavor is this kind of

the flavor is perceived, due to the literal moistening. On the other hand, when an appropriately moist thing, such as a salty solution (a18–19), does moisten the tongue in a certain way in the production of the *normal* perception of salty flavor, there is no indication in the text that Aristotle takes the implausible view that the saline solution makes the tongue itself salty in flavor. Rather, he describes this latter type of result, when it occurs, as an *abnormal* condition which would prevent the tongue from performing its standard role in the perception of flavor. He says that, in illness for instance, when the tongue actually takes on the moisture type of what is bitter, thereby coming to contain ‘bitter moisture’ and so actually becoming bitter in flavor, then it is not in the condition it is in when it normally perceives what is bitter. In its normal condition it is ready to perceive immediately what is sweet but not, so Aristotle says, when it actually contains bitter moisture and, thus, bitter flavor (422a34–b10). Like any sense organ for Aristotle, the organ of taste must maintain a certain mean condition, in this case between appropriate modes of dryness and wetness, to function properly, and it cannot, in this normal mean condition, take on the very type of moisture, or thus the flavor, of what it can taste since this would involve an abnormal departure from the mean which would disable the organ (II.11 423b27–424a10). So the moistening that the tongue undergoes in the normal tasting of, for instance, the flavor of a bitter cherry cannot be such as to give the tongue the bitter moisture of the cherry, or thus its flavor.¹³ So these standard

thing, involving this somewhat dry state of the liquid in a thing, produced when dry earthy stuff is mixed with water, the way in which flavor must act on the tongue to produce taste is by moistening it in a special way by contact with the specially qualified moisture in the flavored thing. Thus, this moistening process is not merely a necessary concomitant to the production of the perception of flavor. On the principles of Aristotelian natural science it is the *crucially essential material process* required to achieve that result given the nature of flavor and the essential requirement that the flavored thing as such—as moist in a certain way—act on the organ. On that ground the moistening is one aspect, at least, of the material cause of the perception of flavor and in that sense it stands as matter to the form, i.e. to the formal cause, of that state. (Other aspects of the material cause are considered below.)

¹³ See *DA* II.12 424a28 ff. The fact that the tongue or other organ of touch cannot, according to Aristotle, perceive the temperature of a body whose temperature it shares, does not show that in perceiving a given temperature it *must* take on that very temperature, as some have argued (Sorabji 1995, pp. 214–15). This fact only shows that in order to perceive a given temperature the tongue must be capable of being *altered or affected* by that temperature, which it could not be if it had that temperature, not that its alteration is *to* that temperature. In the latter event the tongue would lose its mean condition and its ability to continue to be acted on by and to sense that temperature, which, in normal sensing, it does not. Thus, the temperature variation that it undoubtedly undergoes in the normal detection of temperature must not move it from its mean range nor, thus, to the temperature level of what it senses, which cannot be within its mean range if it is to be sensed (II.11 423b30 ff.). Here, as so often, Aristotle seems to be very close indeed to

accounts of the material cause of perception in Aristotle have their own specific textual difficulties, in addition to their inability to provide a solution to the theoretically deeper problem of underdetermination which is our main concern here.

Since Aristotle is committed to the idea that the combination of the appropriate efficient and material causes will be sufficient to determine the presence of a given psychological or other natural entity, to make further progress in eliminating the underdetermination present in perception, when we consider the efficient cause alone, it will clearly be helpful to look more closely at what he says in discussing what goes on in us internally in our sensory system during perception. We may begin with a central passage sometimes cited in their favor by supporters of the view that in color vision, for Aristotle, our eyes literally take on the color of what we see and that this constitutes the material cause of the vision in question. This passage is found at the beginning of *DA* III.2, 425b12 ff. Here Aristotle is puzzling how it is that in vision we are able not only to *see* but also to *see that we are seeing*. This requires, he worries, that in vision we *visually* discern the thing that is doing the seeing. But, Aristotle asks, how can we visually discern the eye that is doing the seeing unless the eye which is doing the seeing has color? Aristotle's response has several parts but, as one part of it, he claims that, in a way at least, this is unproblematic since:

Even that which sees is as if it was colored (*hos kechromatistai*). For the sense organ is receptive of the [perceptible form of the] object of perception without the matter in each case. This explains why perceptions, i.e. appearances (*phantasiai*), are present in the sense organs even after the objects of perception are gone. (425b22–5)

The structure of Aristotle's argument here is not immediately transparent. But, to begin with, the passage does not easily support the view that in vision our eyes literally take on the color of what we see. Aristotle only says that our eyes come to be *as if* colored, or 'in a manner' colored as some translate here. His reason for this is that they receive the perceptible

the actual phenomenal facts. When, for instance, I detect with my finger tips the cooler temperature of my writing paper their temperature is no doubt very slightly reduced. But neither their temperature, nor that of their parts where the coolness is directly felt, is reduced to the temperature of the paper when, or so long as, I continue to feel that very, cooler, temperature of the paper. See also n. 14 below. Note that Aristotle does clearly treat the tongue as the organ of taste in *DA* II.10, 422a34 ff., and not merely as the medium of taste, as is suggested in II.11. In *PA* II.8 653b19 ff., it, and flesh in general, are treated as both organ and medium, which may be Aristotle's final view. The discussion here could be accommodated to any of these possibilities. Should the tongue be only the medium of taste, for instance, its moistening in tasting would need to be transmitted to the organ, i.e. the heart.

form of the colored thing. So, for our eyes to *receive* and to be acted on by the perceptible form, i.e. the color, of the colored thing is for them to come to be *as if* colored, or in the manner of what is colored. Just that is the condition of our eyes in color vision when they 'receive' and are acted on by the color of the colored thing. What, then, is this manner of coloration, or this as if-coloration? Aristotle here cites its presence as the explanation for the fact that 'even after' perception an item of *phantasia* remains. So the as if coloration in perception must involve an item of *phantasia* being present during the perception itself as well as after. To make sense of this let us first consider just one simple type of item of *phantasia*, one mentioned by Aristotle in *De Insomniis* 2 (459b13–18), namely the afterimage. Suppose, following Aristotle's example there, that there is an image of red in my eye which persists even after my visual perception of the sun is over. In this case it does make sense to say that my eye is in the manner of what is colored red or is as if colored red. That is the way my eye appears or presents itself to me in *phantasia* when I am aware of the afterimage. As Aristotle also says in another passage, in *De Sensu* 2: 'When the eye is pressed and altered fire *appears* to flash out [in the eye]' (437a24). That is, it *appears* to me in such cases, when these afterimages of red are present, that my eye is red though the condition of my eye is not that of being red but only that of presenting a *phantasm* or appearance of red. But if this phantasm of red is, as we have noted, the remaining 'even after' perception, of something that was present before during perception, then due to the previous presence of this very state my eye was also in the manner of what is red during the perception, whether I was then aware of this or not. This state, then, identical to the phantasmic apparitional state that continues after perception, will be the as if-coloration of my eye that results from the reception by my eye of the perceptible form of the object perceived during the perception and in virtue of this 'that which sees' will be in a way colored during the perception.¹⁴

¹⁴ In Sorabji 1995, p. 212, a different account is offered of this passage. On this account Aristotle says that in color vision the eye is as if colored (or 'in a way' colored, as Sorabji translates, but we might have expected *pos* for that), 'because the transparent fluid in the eye is colorless in itself but receives *borrowed* color during the sensory process'. On this account the as if coloration is genuine coloration, but only temporary coloration different from the normal absence of coloration characteristic of the eye fluid as such. But this would offer nothing to explain the presence of the *phantasia* or appearance of color during and 'even after' perception which the as if coloration is presumed by Aristotle to introduce. How does the temporary redness of my eye explain the non-temporary presence and continuing persistence of the *appearance* of redness? In a later paper this account is further clarified (R. Sorabji, 'Aristotle on Sensory Processes and Intentionality', in Perler 2001, pp. 52–3). Here it is added that when my eye in color vision is as if or 'in a way' red 'it looks the way a [red] body's own color looks . . . and it could excite the transparent medium [e.g. air] in such

This line of thought, on which phantasmic states are present in our sensory system during perception as well as after, is carried further in *DA* III.3, where Aristotle returns to the topic of what he calls ‘the change [*he kinesis*, in the sense organ] brought about due to the active exercise (*energeia*) of the perceptual faculty’. He there identifies this change with *phantasia* or the occurrence of *phantasms* (428b25 ff.). He expands on this claim in commenting on the range of possible error in the *phantasia* of special, common, and incidental sensibles respectively, and in explaining how each of these types of *phantasia* can be true and false. He says:

The change [*phantasia*] due to the active exercise of perception will differ for these three types of perception [in susceptibility to error]. The first type of change [*phantasia* of special sensibles] is inerrant so long as the perception [of the special sensible in question] is present. The others [*phantasiai* of common and incidental sensibles] may be false [or true] whether the perception [of the item in question] is present or absent. (428b25–9)

Here Aristotle cites instances of *phantasia* which occur *during* all types of perception, including the veridical perception of special and other sensibles as well as instances that occur in non-veridical perception. (Cf. *Peri Ideon* 82.1 ff., Harlfinger.) This text, then, poses a special problem for those who have supposed that *phantasia*, for Aristotle, arises only in non-veridical perceptual states not in veridical ones. In fact, using a bit of characteristic imaginative etymology, Aristotle then goes further in this passage and says:

Since sight especially *is* perception, *phantasia* has derived even its name from that of light (*phaos*), since without light it is not possible to see. (429a2–4)

Here Aristotle draws a comparison, or an analogy, between sight and light on the one hand and perception and *phantasia* on the other. He uses sight as a sort of model or stand-in for perception as a whole and the role played by light in sight is assigned, in perception as a whole, to *phantasia*. As light is to sight so is *phantasia* to perception. That is, Aristotle wants to claim, just as without light one cannot see, so in general without the light or illumination of *phantasia* one cannot perceive. This, he suggests, the derivation of the name would indicate. This thesis, that *phantasia* occurs during even our veridical perception and is required for all of our perception, veridical and non-veridical, is in fact quite easy to understand. Various passages make it clear that the best translation for the term *phantasia* in Aristotle’s texts is usually *appearance*. (See, e.g., *DA* III.3

a way as to permit an ophthalmologist [looking into my eye] to see it.’ Here the as if coloration of the eye in vision *is* presumed to involve the appearance of color, but not to the perceiver, only to the eye doctor. It is, however, the appearance of color to the perceiver in vision and after that Aristotle wishes to have in play here. See further below at n. 16.

428a12–15, 15–16, *De Sensu* 3 439b6 and *De Insomniis* 2 460b18–20, 3 461b30–462a8.) So Aristotle's thesis here in *DA* III.3 is simply that all perception, for us, involves and requires sensory appearance. Sight, for instance, requires the presentation to us of the visual appearance, or the look, of something. Without being presented with the look of something I cannot see it. This, arguably, is an obvious truth which holds as much for Aristotle's special and common sensibles as for his incidental sensibles, and the presentation to me of the sensory appearance of something is an item of *phantasia*.¹⁵

As commentators have always noted, Aristotle's fullest discussion of sensory appearances, of *phantasiai* or *phantasmata* as he usually calls them, is found in the *De Insomniis* where he discusses what is common to perception and dreaming. There is much further information provided there on the role of *phantasia* in perception. In chapter 1, Aristotle again introduces *phantasia* as *the change (he kinesis)* which comes about [in our sense organs] due to the active exercise of the perceptual faculty (459a17–18). He goes on to explain the origin of *phantasia* in detail there, in chapter 2, as follows:

Perceptible objects (*aistheta*) corresponding to each sense organ (*aistheterion*) implant perception in us, and the affection (*pathos*) which arises due to them [i.e. due to the action of the external sense objects acting as efficient causes on our sense organs] not only inheres in the sense organs while our senses are being actualized but also after the sense objects have gone ... Hence, the affection (*pathos*) is present in the sense organs, both deep inside and on the surface, not only while they are perceiving but also after they have ceased to do so. This is clear in cases where we perceive something over an extended period of time. For when we shift our perception, for instance from sunlight to darkness, the affection continues ... Let one thing be set down then which is clear from what has been said, that our perceptual states (*aisthemata*) remain, even after the external sense object has gone, as [themselves] perceptible objects. (459a24–7, b5–7; 460b1–3)

Here Aristotle refers to the internal *pathe* or affections in us produced by the efficient causes of external perception, i.e. by the reception of perceptible form, as *aisthemata* or perceptual states that are both present during perception and remain 'even after' it is over. (Cf. 461a26–7.) In *APo* II.19

¹⁵ Strictly, then, an item of *phantasia* is perhaps not so much an appearance, e.g. a look, as it is the sensory presentation of an appearance. The term *appearance* will be used in what follows in this sense. (As various commentators from Simplicius on have urged (*in DA* 208.7–8), not just anything that appears or is apparent (*phainetai*), e.g. that $2 + 2 = 4$, counts as an item of *phantasia*, but only a *sensory* appearance.) Also, Aristotle sometimes suggests that for some lower animals perception does not involve *phantasia* (*DA* I.3 414b15–16, III.3 428a10–11, 21–3). But in the texts considered here his claims are concerned with perception and *phantasia* in higher animals, especially us. (See 428a1–4, b10 ff.; 459a24 ff.)

also, Aristotle uses the term *aisthema* for this persisting state (99b36 ff.). However, the standard term that Aristotle uses for an *aisthema* when it remains after its external cause has departed is *phantasma* (461a18–19; Cf. *Mem* 449b30 ff.). A *phantasma* is an *aisthema*, a perceptual state, in a broad sense, since for Aristotle *phantasmata* are the products of our perceptual faculty (459a1–22). So *phantasmata* or the presentations of appearances are, again, clearly present internally in us during perception.¹⁶

As we have already noted, one example of such an affection or phantasm that occurs during perception and persists afterwards which Aristotle mentions here in *De Insomniis* 2 is what we are aware of when we close our eyes after looking directly at the sun (459b5 ff. at b13 ff.). In this case, he says, ‘if we watch carefully, the sun [still] appears in the direct line in which it was seen in sight, at first with its own color’. Then it changes color and disintegrates. (459b13–18). Here, as we have seen, Aristotle clearly has in mind an afterimage, an appearance present during perception (b5–7) which persists intact, for a time, after it. So these phantasms or appearances *may* themselves constitute, or come to constitute, the objects or contents of direct *inner* sensory awareness, as afterimages do after perception, even though, as Aristotle indicates, during veridical

¹⁶ In *DA* III.8 Aristotle distinguishes *phantasmata* from *aisthemata* in a special way. He says: ‘And for the following reason, as without having perceptual awareness no one could either learn or understand anything, so when one engages in intellectual activity one must at that time do so by means of a *phantasma*. For, *phantasmata* are just as perceptual states (*aisthemata*) are [in actual external perception] but without matter’ (432a7–10). Here Aristotle wants to explain how phantasms can be present in and help to account for intellectual activity as well as perceptual activity. For this purpose phantasms are distinguished from full states of external perception *only* by virtue of the fact that in the case of the former ‘matter’ is absent. This cannot mean, as is often supposed, that phantasms, unlike full perceptual states, are immaterial. The texts to be cited immediately below will clearly rule this out and, as we have already seen, Aristotle cites the involvement of phantasms in intellectual states as sufficient to show that those states involve a material cause (*DA* I.1 403a5–10). Rather Aristotle must mean by the ‘matter’ here the external body which must be present for actual full external perception. Full perceptual states are ‘with matter’ in this sense. (For *hule* in this use, see *DA* II.1 412a19; cf. III.2 425b23–5.) So Aristotle is here in *DA* III.8 using the term *aisthema* in a more restricted sense than he sometimes does, for a full perceptual state occurring in actual external perception. A *phantasma*, he says, is just what this is when the external body in question is removed or its presence is left out of account. (Cf. *De Insomniis* 2, 459a24–7.) This, as Aristotle says, is why *phantasmata* can figure in intellectual as well as perceptual activity where the presence of particular external objects is not required, which is what he wants to secure in this passage. Here again, then, the *phantasma* is a constituent of a full perceptual experience and such an experience is due to the combined presence of a *phantasma* or appearance and an appropriately situated external body. Aristotle also speaks of the *phantasiai* that ‘remain’ in us after perceptions as like those perceptions, i.e. like full external perceptual states (*DA* III.3 429a4–5). But this, again, does not imply that they are not components of full perceptual states. Rather, the claim that they ‘remain’ (*emmenein*) after full perceptions clearly indicates that they are.

external perception while they are present they are not as such the objects of our perceptual awareness (459b7 ff., 460b1–3, 28 ff.). Another example of such an item that Aristotle mentions is what we are aware of when we press on our lower eyelid and see double (461b30 ff.). Of the twin appearances that then present themselves, one of course was present before the eye was pressed, and remains so when the eye ceases to be pressed when it is not the object of vision or of perceptual attention. This makes it clear, again, how phantasms or appearances are present even during normal veridical perception when they are not the objects of perception or of perceptual awareness.¹⁷

In *De Insomniis* 3, Aristotle goes on to describe those internal *pathe*, or *aisthemata*, which occur in perception as 'movements present in the blood' during perception, i.e. in the blood in Aristotle's central sense organ the heart, movements, he says, which go with the blood when it later moves about the body (461b11–21). It is the return of these persisting *aisthemata*, or *phantasmata* as they are again called, to the heart

¹⁷ Some writers have supposed that the *phantasma* which is present after perception is not, and is not an element of, the very *aisthema* or sense experience present earlier, one which itself persists when the external object is removed. Rather it is something else produced by this *aisthema*. See V. Caston, 'Aristotle and the Problem of Intentionality', *Philosophy and Phenomenological Research* 58 (1998), 249–98, at p.274. However, this conflicts directly with the many passages just reviewed where Aristotle clearly claims that the very *aisthema* itself persists as a *phantasma*. In some passages, such as *De Memoria* 1, 450a27 ff., Aristotle does speak of a memory phantasm as 'like a sort of imprint of the perceptual experience (*tupon tina tou aisthemos*)' of the thing remembered (a31). But this cannot mean that the perceptual experience (*aisthema*) is what produces the (completely distinct) phantasm, since a few lines later Aristotle claims that the thing remembered, i.e. the external sense object, is the thing 'due to which that [memory phantasm] arose.' So this is the cause of the phantasm. (450b13, Cf. 459a24–7) Rather, Aristotle must mean that the memory phantasm is a sort of imprint consisting of, or whose content is that of, the sense impression, not that it is an imprint produced by the sense impression as a materially totally distinct entity. The latter is, in any case, ruled out by Aristotle's claim that the movement in the sense organs in *phantasia*, for instance just after perception, is exactly the same as the movement in the sense organs in the previous corresponding case of veridical perception (461b26–9, 460b23–5). Given this, the internal perceptual state (*aisthema*) cannot produce the *phantasma* that remains since it is just the same internal state, and no state produces itself, or another state identical to itself.

In several other passages in the *De Insomniis* Aristotle also refers to phantasms as states or movements that come about due to the occurrence of actual sense experiences (*apo tou aisthematou*). See 460b28 ff., 461a17 ff., 462a29–31; cf. *DA* III.3 428b10 ff. But, again, this does not rule it out that the phantasms in question are constituents of these full sense experiences which do not first arise without them and are due to them in that way. In fact, at 460b28 ff., Aristotle claims that during normal external waking sense experience these phantasms are not noticed, 'like minute pains and pleasures next to big ones', though in sleep, when the external causes are inoperative, they come to the fore. This indicates, again, that phantasms are present in normal external sense experience though they are not what we are usually aware of in that experience. This makes perfectly good sense if the phantasms are just the appearances present in all perceptual experience, as for instance at 460b16–27.

during sleep that then gives rise to dreams (461a8 ff., b11 ff.).¹⁸ From this it is quite clear, first of all, that these internal affections or phantasms that are generated by external sense objects in perception are states or affections with material properties. They are distinctive ‘movements in the blood’ with specific spatial locations in the sense organs and body. This is confirmed in *De Memoria* 1, where these phantasms are described as imprints or *tupoi on*, or in, the sense organs (450a26–b12, b15–29; see also *De Motu* 701b16–32). As we have seen, Aristotle describes such an affection as *the change* in the sense organ that arises due to the active exercise of perception (*De Insomniis* 1, 459a17–18, cf. *De Memoria* 450a29 ff.).¹⁹ The role of these phantasms in perception is explained further in a well-known passage at the end of *De Insomniis* 2.

The sun [sometimes] appears (*phainetai*) [in vision] to be [only] a foot across, though often something else [e.g., a belief] contradicts this appearance (*phantasia*). Also, one object [sometimes] appears to be two, because the fingers are crossed. Nevertheless, we do not say it is two since sight takes precedence over touch. But if touch stood alone then we would have judged the one thing to be two. The cause of the false judgments is that anything whatever may appear (*phainetai*) not only when a sense is altered by a[n external] perceived object [e.g.,

¹⁸ One might take it from this passage, as some have (e.g., Caston 1998), that a phantasm is not as such itself an appearance with phenomenal character but only a material state that has the power to produce such an appearance since, Aristotle says, a phantasm arising in perception may remain in us and move about our body without the original appearance continuing. But Aristotle is careful to say that in these cases the apparitional motions (*kineseis phantastikai*, 462a8–9) are only present potentially (*dunamei*, 461b17, cf. *De Memoria* 450b27–8). So phantasms in actuality are not simply entities with the power to produce contentful appearances; they *are* contentful appearances. Even phantasms present in potentiality are not simply entities with the potential to *produce* contentful appearances; they are entities with the potential to *be* contentful appearances. This is not to say, however, as we have seen, that in normal perception, the contentful appearance is the object of the perception. The object is the external thing. Nor is the appearance necessarily the object in a dream. A normal illusory dream often has no object. Still, I can sometimes focus my perceptual attention on the appearance itself, either during waking perception, or in sleep Aristotle claims, and then the appearance can be the object of my perceptual experience even if it is not the object in normal perception or dreaming (461b30 ff.). So Aristotle’s theory is not subject to the difficulties for representational theories of perception raised in H. Putnam, ‘Aristotle’s Mind and the Contemporary Mind’, in D. Sfendoni-Mentzou (ed.), *Aristotle and Contemporary Science* (New York, 2000). Rather, as we shall see further below, Aristotle’s views are perfectly compatible with the direct realist account of perception which Putnam wishes to attribute to him according to which the immediate object in normal veridical perception is the external entity itself and not some inner representation of the entity. Aristotle’s view is only that the inner representation is one crucial factor responsible for the external perception *so understood*.

¹⁹ The especially material character of phantasms is well noted by Richard Sorabji in ‘Body and Soul in Aristotle’, in J. Barnes et al., *Articles on Aristotle*, iv (London, 1979), 54. One may add, in this connection, that anyone who wants to claim that, for Aristotle, no distinctive material changes take place in the sense organs during normal perception will have serious difficulty with these texts concerning *phantasia*.

in veridical perception] but also when the sense is itself altered, if it is altered [e.g., in misperception] in just the way it is by the perceived object [in veridical perception]. (460b18–25)

Aristotle clearly says here that the internal change in the sense organs, consisting of an appearance or phantasm that is present there in misperception, is exactly the same as the change in those sense organs in a corresponding case of veridical perception. So here we can again see that this internal change, the phantasmic event with its material features, is present even during veridical perception as the change that then occurs in the sense organs themselves. This shows us, thus, that this phantasmic state is what constitutes for Aristotle the material cause of the perception in question, the internal state that arises in the organs themselves during that perception. As we have noted, Aristotle says in *DA* I.1 that the presence of *phantasia* in intellection would be sufficient to give it a distinctive material cause, and this is no less true for the case of perception. Aristotle also says further here, most importantly, that it is in virtue of the phantasmic states that occur in non-veridical perception and carry the appearances of things that our non-veridical perceptual states have the false contents that they do. That is, it is the presence of these appearances that is the crucial factor in explaining why we are able to, and do, experience non-veridical perceptual states. Later in *De Insomniis* 3, however, Aristotle goes further and applies this also to veridical perceptual content as well. There he says:

Each of these [phantasms], as was said, is a retension (*hupoleimma*) of a perceptual state (*aisthema*) present in the activity of perception. [Cf. 461a18.] It persists even when the real thing [responsible for the perceptual state] has departed, and it is true to say that it [the retained phantasm] is like Coriscus but not that it is Coriscus.

While one was [veridically] perceiving Coriscus, the authoritative discriminative part did not say that this [phantasm] is Coriscus, but rather, *because of this* (*dia touto*), [sense said] that that actual man is Coriscus. The part [i.e. the central sense faculty] that also says this when it is [veridically] perceiving . . . is moved [in dreaming] by virtue of the movements in the sense organs [i.e. by phantasms] just as when it is perceiving this. (461b21–9; cf. a18–b1)

Here Aristotle explicitly says that the material phantasms, or appearances, that occur in veridical external perception and are retained after it, are *responsible for* the contents of such veridical perception even though they are not, as those phantasms, themselves the contents.²⁰ In such cases

²⁰ Commentators often assume that the thing (*touto*, 461b25) responsible for content here is the sense experience (*aisthema*), not the phantasm that is present and remains. See, e.g., Caston 1998, whose account should be compared with the one offered here for its points of similarity as well as difference. But clearly the antecedent of *touto* in the text is

the appearance directs and focuses my perceptual awareness even though it is not the object of my perceptual awareness. That is, what I see is *determined by* what visually appears to me though the visual appearance is not itself what I see. What I see is simply the external object in question. This enables us properly to understand Aristotle's claim in *DA* III.3 that an item of *phantasia*, as 'the change [in the sense organs] that occurs due to the active exercise of perception . . . is *of* what the [corresponding] perception is of' (428b11–13, Cf. *Peri Ideon* 82.3–4).

Still, of course, such material phantasmic states, so understood, as carrying appearances and directing our perceptual awareness, are clearly not by themselves fully sufficient to determine the presence of a given veridical perceptual state since, as Aristotle says, the very same phantasmic state of our perceptual organs may be present either in a case of the veridical external perception of something or in a case of dreaming the same thing. However, it is most important to note that unlike the case with the efficient causes of perception, which are restricted to proper and common sensibles, the states of *phantasia* or appearance that arise in and give content to perception are not by Aristotle restricted to the appearance or presentation of special and common sensibles. In *DA* III.3, as we have seen, Aristotle explicitly refers also to the *distinct type* of *kinesis* or *phantasia* which occurs during perception, in the actualization of the sense organs, in the perception of *incidental* sensibles (428b25–30). In the passage just quoted from *De Insomniis* 3, where someone sees by virtue of a certain phantasm that a certain actual man is Coriscus, we have an example of incidental perception which involves a phantasm or appearance which is responsible for its content.

The significance of this is that even if, as we have seen, the efficient cause, or the causal input, in the case of an item of incidental, or other, perception underdetermines the content of that item, if we take the efficient cause together with the material cause, *understood as involving the item of phantasia or appearance in question*, the underdetermination will be eliminated. For example, an instance of *seeing* a lunar eclipse can be accounted for just when the appropriate special and common sensibles, the patterns of color, light, and movement in the sky which are in fact figuring in an eclipse, give rise as efficient cause, under normal conditions, to its *appearing* or *looking* to someone *via phantasia* that the moon has lost its light. However, if these same external patterns of color and light during an eclipse give rise, under normal conditions, to its *looking* to someone *via phantasia* simply that there are certain moving

hekaston (461b21), the remainder of a sense experience, and this is a phantasm, as Beare, in the Oxford translation, correctly has it. It makes no sense to say that a sense experience is the thing responsible for the content of that very experience.

patterns of color and light in the sky then just that is what he sees. Or, if the first of these phantasms, its looking that the moon has lost its light, should be activated by the appropriate standard efficient cause operative in sleep, such as the return of a certain potential phantasm to the heart, then the person in question will be *dreaming* that the moon is eclipsed. As we have seen, when we dream this our *material state*, the phantasmic motion in our sense organs, is the same for Aristotle as when we *see* a lunar eclipse, but the efficient cause is not (460b22–5).²¹ So if we *combine* the efficient and material causes in the appropriate way, in these various cases, we can eliminate the undetermination which remains after the specification of either cause alone, just as in the case of anger as Aristotle describes it. That is, just as we would expect on Aristotle's standard doctrine, the combination of the efficient and material causes of seeing a lunar eclipse, as specified, does give rise to the formal cause, i.e. grasping directly by use of our visual powers the moon's loss of light. This then can give rise to the final cause, namely understanding that the moon loses its light.

We can see clearly at this point that Aristotle's theory bears a close relation to certain contemporary causal theories of perception on which perception results from the combination of an appropriate causal input from an external object with an appropriate internal appearance. But Aristotle's theory should be differentiated from those contemporary causal theories of perception on which, in veridical or other perception, the direct item of perception is a sensory appearance or *sense datum*. The phantasms or appearances present in perception, on Aristotle's theory, are not the direct items of our perception though, as we have just seen, they are essential determinants of what those items are. Given this, these items of appearance do not constitute any sort of 'veil' between us and the external objects which, on Aristotle's account, we directly perceive. Also, as noted earlier, the internal appearances present in perception for Aristotle are best understood not so much as, for instance, the looks of things, as in some versions of the causal theory, as, rather, the sensory presentations of the looks of things. The looks of things, from various perspectives, can attach, on the Aristotelian view, to the things themselves.

If the sort of account sketched here is correct then Aristotle will clearly have avoided a certain standard difficulty for certain types of causal theories of perception, and of mental content in general, namely those

²¹ This explains why Aristotle says that when in sleep we hear the barking of a dog because some dog near us is actually barking we are not *dreaming* that a certain dog is barking (*De Insomniis* 3 462a24 ff.). This is because in this case the efficient cause is wrong for an instance of the natural kind dreaming. So this passage does not show that a dream for Aristotle must be illusory. A genuine internally caused dream, e.g. that a certain dog is wagging his tail, could correspond to the external facts.

on which the content of mental states is fixed simply by what they are causally or nomologically correlated with. Such theories are often criticized on the ground that it seems as though even under normal conditions and consonant with normal goals one and the same external correlate or causal input can give rise to different perceptual or other mental states depending on the subject's previous experience and on what the subject happens to be interested in and paying attention to at the time. That is, *content* in the case of perception depends crucially on what the observer perceptually is able to and does *take it* is going on at the time, i.e. on what appears to the observer, as well as on the external correlate or causal input. On the account suggested here Aristotle is fully appreciative of this as one would expect he would be given his exposition of his doctrine that all four causes are requisite to constitute a natural entity. In addition, clearly, Aristotle avoids the difficulties which beset those who try to account for perceptual and other related mental states without introducing internal appearances, or so-called *qualia*, at all. This helps us then to see something of the significance and the interest of Aristotle's general insistence that the being of a *natural* object is determined by all of its causes.

5. Some Questions for this Account

It will be useful now to consider several questions which might be raised concerning the account of the causes of perception in Aristotle that has just been sketched. One question concerns whether, in the case of perception, the presence of the formal cause alone underdetermines the presence of a given full perceptual state, in the way it does for Aristotle in the case of the eclipse or sleep or anger. This question is, of course, somewhat marginal to our present concerns. Even if, for instance, the presence of the *form* of seeing a lunar eclipse, i.e. our grasping directly by use of our visual powers the moon's loss of light, does guarantee the presence of the natural efficient and material causes of seeing an eclipse, we would still want to know how it is that the combination of the efficient and material causes of this state gives rise to the formal cause and full state, in such a way as to determine its content, in accord with Aristotle's standard views on natural production and alteration. This has been the main focus of the discussion here. Still, though Aristotle does not consider this question explicitly, one might well argue, along the lines he does in the other cases, that the form of seeing a lunar eclipse—namely grasping directly by use of our visual powers the moon's loss of light—could be present even if the efficient cause—the action of the naturally appropriate sensibles on our sense organs—is not. Suppose that my visual capacities, in grasping

directly by use of these capacities the moon's loss of light, are activated not by the natural efficient cause but by some artificial device attached to my head which is able, with normal reliability, to give me the full veridical visual experience of whatever is before me, in my normal field of vision, by the stimulation of my eyes, etc., in the way they would be stimulated for Aristotle in normal vision, but not via the natural medium. In this case, assuming that an eclipse is in my normal field of vision and that I am experiencing the appearance of it, I would be veridically grasping by the direct activation of my visual capacities the moon's loss of light, but not due to the standard efficient cause. In this case, then, on Aristotle's view, I will not be truly seeing the eclipse, even though the form of that perceptual state is present, since the presence of the proper efficient cause is also essential for genuine seeing to be present. On this scenario, it should be noted, nothing rules it out that, as we have seen, when I do genuinely see the eclipse I do, according to Aristotle, have a kind of direct visual contact with the object of my perception—the moon and its loss of light—which I lack when I am simply characterized by the form of seeing the eclipse due to such artificial means.²² Given that, this direct contact will be a constitutive feature of my full *seeing* of the eclipse though not of my simply possessing the form of seeing it.

Another question for this account arises from the use in it of states of *phantasia*, such as the phantasm or visual appearance that the moon has lost its light, as states which may occur equally in perception or in dreaming. If we consider Aristotle's treatment in the *De Memoria* of the role of *phantasia* in both perception and in memory it seems clear that the phantasm or representation (*eikon*) that perception materially introduces in the sense organ is one which is itself a possible item of direct (inner) sensory awareness, in the way an afterimage is. In the case of the afterimage such an item seems not to have the propositional completeness of a

²² This raises the question, put to me helpfully in discussion by Richard Sorabji, whether the *appearance* of a loss of light by the moon might be taken to constitute the *formal* cause of seeing a lunar eclipse, i.e. what it is, rather than the material cause. There seems to be no textual evidence to support this and Sorabji himself has emphasized, rightly, the material character assigned by Aristotle to phantasms. (See n. 19 above.) Also, an account of the form of seeing, or of *what* a seeing *is*, should involve some reference to vision. As Aristotle says in *De Insomniis* 1, seeing *is* the exercise of vision (458b3). In *DA* I.1 the formal cause is said to be an account of what something is that could be reached by dialectical inquiry (403a19–b2). An account of what a *seeing* of a lunar eclipse is, simply as experiencing the *appearance* of a loss of light by the moon, would not long survive dialectical scrutiny since, clearly, this appearance, as Aristotle himself says, could equally well be present in a dream. So, to characterize the form of seeing a lunar eclipse as the direct grasp by exercise of our visual powers of the moon's loss of light, as above, is not to identify this form with the occurrence of the appearance of the moon's loss of light. The occurrence of the latter need not involve the direct activation of our visual powers since this appearance can arise in a dream.

psychological state such as the visual appearance *that* the moon has lost its light or its appearing to me, in memory, *that* the moon did lose its light yesterday. Aristotle treats this sort of representation in memory as something which is like a drawing (*gegrammenon*) which may be viewed in itself just as a drawing (450b20 ff.). From this it might be concluded, as some have, that though the contents of states of *phantasia* are intentional they are never fully propositional in form but only serve as the vehicles for other types of states which are.²³ If this were so, then states of *phantasia*, as the material causes of perception, even taken together with the appropriate efficient causes, would not be sufficient to determine the content of a perceptual state where that content is propositional. However, there seems to be clear evidence that for Aristotle states of *phantasia* can be fully propositional in content, for instance, in cases he mentions, where the sun appears to be a foot across, or the land 'is taken' by those on a moving boat to be moving, or where 'it appears that that thing [in the distance] is a human being' (*De Insomniis* 2 460b18, 26–7, *DA* III.3 428a12–15). In the *De Motu Animalium* one of the things which *phantasia* is allowed to report or conjecture (*legei*) is 'this is drink' (701a32).²⁴ Aristotle does claim in *DA* III.8, 432a10 f., that *phantasia* or appearance is 'different from' affirmation and denial since they admit of truth and falsity. But this need only imply that an item of appearance does not *always* admit of truth and falsity, not that it never does. In III.3 428b25 ff. Aristotle in fact says that it does, which itself implies that it can be propositional in character.

In the *De Memoria*, too, while it is clear that imagination can simply involve internal sensory awareness of an image like a drawing, where one is not entertaining any proposition, it also does not seem that *phantasia* is restricted to this. Aristotle claims that a phantasm may be not an item of direct internal sensory inspection on its own but rather a portrayal or representation (*eikon*) of something we remember, i.e. an entity which carries and presents the content of what we remember. It seems clear that the appearance in this case may well be propositional in its content since the phantasm can present the content of a memory state (a *mnemoneuma*) and Aristotle clearly supposes that memory states can have propositional content (450b23 ff., 451a5–8). It is misleading to speak, as commentators often do, of such memory states as ones in which the phantasm or image itself is 'viewed *as*' an image *of* a past state of affairs, if this means that the phantasm *in itself* is the object of direct awareness and is *interpreted* in a certain way.²⁵ Aristotle does use the 'viewing *qua*' idiom (*theorein hos*,

²³ See, e.g., M. Wedin (1988), ch. 2.

²⁴ Cf. R. Sorabji, *Animal Minds and Human Morals* (London, 1993), ch. 2.

²⁵ See, e.g., M. Nussbaum (1978), Essay 5.

450b23–33) but it is clear that for him, when one does view a phantasm or image *qua*, say, the moon's having lost its light yesterday, in remembering an eclipse, one need have no direct awareness of the phantasm or image itself at all. Aristotle *contrasts* the 'viewing *qua*' case with the case where one is directly aware of the phantasm (450b30 ff.). In the 'viewing *qua*' case, he indicates, all that one need be directly aware of is what one remembers, e.g. that the moon lost its light yesterday, even though this requires and is given content by the appropriate phantasm or phantasms.

One might also ask, finally, whether the description offered here of the material cause of perception as involving phantasmic states is correct—even though Aristotle describes these states as movements with spatial location in the blood and sense organs—since phantasmic states or states of appearance have what we call intentional content (*DA* III.3 428b12–13). It is not unusual for commentators to think of Aristotle's efficient and material causes, even in the case of natural psychological states or entities, as not themselves involving ordinary intentional content. However, if we consider Aristotle's account of the causes of anger it is quite clear that the efficient cause in that case, namely the awareness of an apparent insult, is a state with intentional content. To take another example, the efficient cause of action for Aristotle is choice or deliberated desire (*EN* VI.2 1139a31 ff.). So the efficient cause of action also has intentional content. In fact, the efficient cause of action, as a type of desire, is a hylomorphic entity. It is worth noting, in this connection, that even the *form* of anger, desire for revenge, is a hylomorphic entity. So nothing prevents a hylomorphic entity such as anger from having other hylomorphic entities both as its form and as its efficient cause.

How Aristotle understands the material cause of anger—the seething of the blood or of heat around the heart—is not so clear. But there is good evidence that he regards this too as a normally *felt* state which plays its explanatory role as such in accounting for the features of anger. In *De Anima* I.1, when he illustrates his claim that the *material* cause of a psychological state may be present without the efficient cause, he mentions not only the case where 'the body is aroused (*orgai*) and in a state just as when one is angry' without any provocation. He also mentions as another example of such a material cause, the state in which someone experiences the emotions or affections (*pathe*) of fear even though nothing fearful has given rise to them (403a21–4). Aristotle clearly has in mind here a felt state which accounts for behavior as such. In *Ethics* VII.6 he construes anger as involving bodily feelings of pain (1149b20 f.). In *De Insomniis* 2, Aristotle uses the same type of language again both to describe the coward who is in a general frantic emotional state in which he is disposed to see enemies where there are none, and also the person who is in a general state of erotic desire with no particular object as yet for its cause or focus (460b3 ff.).

Here Aristotle again construes these states as ones that involve a certain intentional content such as, at least, a kind of generalized felt fright or felt desire with no actual object as the cause or focus of the fright or desire. On a par with these cases, the material cause of anger will also be a hylomorphic or psychophysical state with intentional content.

So there seems to be no objection in principle to the treatment of the efficient or the material cause of a natural psychological state, for Aristotle, as involving ordinary intentional content. Thus, a psychophysical state such as perception may have or involve as its material cause another state, i.e., an item of *phantasia*, which is itself a psychophysical state. This does not *necessarily* imply that there are not, for Aristotle, nomologically sufficient conditions, expressible in purely material non-intentional terms, for the occurrence of intentional psychological states or events, such as anger or vision or action. But it does mean that such conditions, if they exist, will not be the same as Aristotle's own efficient and material *causes* of those states. If they are not then they will not figure in *explanation*, e.g. in the explanation of the content of perception, or in the explanation of action, in the way Aristotle's own *causes* must. Given this, he will not be faced with the so-called explanatory gap problem that arises when one attempts to explain fully and account for intentional psychological states by reference to purely non-intentional material states. In terms we have already considered, this is the kind of problem which would arise should Aristotle suppose, as some claim he does, that the fact that our eyes turn red when we see red explains *why* we see red. There seems to be a wide unfilled explanatory gap here—between being red and seeing red—and thus no cogency at all to this supposed explanation. Matters are not improved on this score if we substitute for the material state in question, being red, some more complex purely material state of, for instance, the heart. As we have noted, the main alternative to this which is now prominent in the literature is the suggestion that the reason why, for Aristotle, we see red when the efficient cause of this is active is simply that our perceptual system actualizes its potential to see red and nothing more. This leaves us with, if anything, an even larger explanatory gap. This actualization of our potential does no explaining, rather it is the thing that needs explaining. So there are important philosophical advantages which accrue when Aristotle's efficient and material causes of perception are understood in the way suggested here.²⁶

This puts us in a position, finally, to raise the question: How naturalistic is Aristotle's account of perception? If we suppose that a proper naturalis-

²⁶ If the contents of perceptual states are explained by reference to states of appearance, then the question arises as to how states of appearance get their contents. This question is beyond the scope of this discussion though it is, of course, widely discussed in the literature. The discussion here, in effect, reduces two problems to one.

tic account requires that we at least be able to specify genuine efficient and material explanatory causes in purely material terms which are causally or nomologically sufficient to determine the presence, and thus the content, of specific perceptual states, then Aristotle's account, as presented here, will not be naturalistic. Many contemporary philosophers and cognitive scientists would want to require that their naturalistic accounts provide efficient and material causes which can be specified in such purely material terms. But, for reasons already briefly alluded to, none of these accounts has yet produced a generally convincing solution to the problem of underdetermination. Just as the same non-intentional external causal input is compatible with different perceptual contents, differences in what the perceiver takes perceptual note of, depending for instance on the perceiver's actual general experience and interests, so, for the same reason, it would seem that the same purely material internal state might be compatible with different phantasmic intentional contents, depending again on the perceiver's experience and interests. As we have seen, Aristotle's own naturalism on the account provided here is not at all incompatible with this possibility. He does, of course, restrict his efficient and material causes to *natural* objects, in his own sense, but for him natural objects may not only be purely material objects but also contentful hylomorphic psychophysical entities. As hylomorphic entities, the appearances or phantasms that figure in perception involve more than their own material bases and what is guaranteed to be present by those material bases. If Aristotle's account of perception is along the right lines, in the way suggested, then it may be that the underdetermination problem can only be solved naturalistically on this original version of naturalism.²⁷

Bibliography

- BOLTON, R. and LEWIS, F. (eds.), *Form, Matter and Mixture in Aristotle* (Oxford, 1996).
- BURNYEAT, M., 'Is an Aristotelian Philosophy of Mind Still Credible?', in M. Nussbaum and A. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford, 2nd edn. 1995)..
- 'How Much Happens When Aristotle Sees Red and Hears Middle C?', in M. Nussbaum and A. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford, 2nd edn. 1995).

²⁷ I am grateful to Victor Caston, Frank Lewis, Gary Matthews, Ricardo Salles, and Richard Sorabji for very helpful comments and suggestions. It is a great pleasure to dedicate this essay to Richard Sorabji, whose work has led the way in the still expanding study of the relation between philosophy and natural science in Aristotle.

- 'Aquinas on Spiritual Change in Perception,' in Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden, 2001).
- 'De Anima II.5,' *Phronesis* 47 2002, 28–90.
- CASHDOLLAR, S., 'Aristotle's Account of Incidental Perception,' *Phronesis* 18 1973, 156–75.
- CASTON, V., 'Epiphenomenalisms, Ancient and Modern,' *Philosophical Review* 106 1997, 309–64.
- 'Aristotle and the Problem of Intentionality,' *Philosophy and Phenomenological Research*, 58 1998, 249–98.
- CHARLES, D., *Aristotle on Meaning and Essence* (Oxford, 2000).
- CHERNISS, H., *Aristotle's Criticism of PreSocratic Philosophy* (Baltimore, 1935).
- *Aristotle's Criticism of Plato and the Academy* (Baltimore, 1944).
- COHEN, S. MARC, 'Hylomorphism and Functionalism,' in M. Nussbaum and A. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford, 2nd edn. 1995).
- EVERSON, S., *Aristotle on Perception* (Oxford, 1997).
- HICKS, R. D., *Aristotle: De Anima* (Cambridge, 1907).
- JOHANSEN, T., *Aristotle on the Sense Organs* (Cambridge, 1998).
- MODRAK, D., *Aristotle: The Power of Perception* (Chicago, 1987).
- NUSSBAUM, M., *Aristotle's De Motu Animalium* (Princeton, 1978).
- NUSSBAUM, M. and PUTNAM, H., 'Changing Aristotle's Mind,' in M. Nussbaum and A. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford, 2nd edn. 1995).
- NUSSBAUM, M. and RORTY, A. (eds.), *Essays on Aristotle's De Anima*, 2nd edn. (Oxford, 1995).
- PERLER, D. (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden, 2001).
- PUTNAM, H., 'Aristotle's Mind and the Contemporary Mind,' in D. Sfondonimenzou (ed.), *Aristotle and Contemporary Science* (New York, 2000).
- ROSS, W. D., *Aristotle: De Anima* (Oxford, 1961).
- SHIELDS, C., 'The First Functionalist,' in J.C. Smith (ed.), *Historical Foundations of Cognitive Science* (Dordrecht, 1990).
- SISKO, J., 'Material Alteration and Cognitive Activity in Aristotle's *De Anima*,' *Phronesis* 41 1996, 138–157.
- SORABJI, R., 'Body and Soul in Aristotle,' in J. Barnes et al. (eds.), *Articles on Aristotle*, V.4 (London, 1979).
- 'Intentionality and Physiological Processes: Aristotle's Theory of Sense Perception,' in M. Nussbaum and A. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford, 2nd edn. 1995).
- *Animal Minds and Human Morals* (London, 1993).
- 'Aristotle on Sensory Processes and Intentionality,' in Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden, 2001).
- WEDIN, M., *Mind and Imagination in Aristotle* (Chicago, 1988).
- 'Content and Cause in the Aristotelian Mind,' *Southern Journal of Philosophy*, Supplement, 1992.
- 'Keeping the Matter in Mind: Aristotle on the Passions and the Soul,' in R. Bolton and F. Lewis (eds.), *Form, Matter and Mixture in Aristotle* (Oxford, 1996).

The Spirit and The Letter: Aristotle on Perception

VICTOR CASTON

It is hard to imagine that a footnote could cause so much controversy. In his 1974 article, 'Body and Soul in Aristotle', Richard Sorabji claimed that perceiving, on Aristotle's view, involves a *physiological* process in which the sense organ 'literally takes on' the perceptible quality of the object (49 n. 22).¹ It was intended, no doubt, as a straightforward reading of Aristotle's claim that perception is a form of assimilation, where the sense organ becomes like its object.

But that is not to say it was uncontroversial. In 1983, Myles Burnyeat began to deliver a paper aimed at refuting this sort of literalism, along with the functionalist interpretation he took it to support. On Burnyeat's reading, *no* physiological or material change takes place during perception—instead, perception is purely a 'spiritual' change (to use Aquinas' term). The dispute has grown beyond all bounds. A draft of Burnyeat's paper was finally published in 1992 as 'Is an Aristotelian Philosophy of Mind Still Credible?' in a collection devoted in good part to this debate;²

It is a special pleasure to dedicate this essay to Richard Sorabji, who has over many years been both a teacher and a friend. I can think of few colleagues as stimulating or as resourceful, not to mention as decent and as generous, as him. He is someone who not only loves wisdom, but takes joy in it, and talking philosophy with him is always fresh and exciting. My years in London are some of my most treasured.

In writing this essay, I have profited greatly from the comments and criticisms of others, especially Richard and of course the editor, Ricardo Salles, who worked tirelessly to see this all through. I have also received invaluable comments from Alan Code, John Malcolm, and Bob Sharples, and audiences in Mexico City and USC. As one would expect, none of them agrees with me entirely—hence the benefit.

¹ R. Sorabji, 'Body and Soul in Aristotle' ['Body and Soul'], *Philosophy* 49 (1974), 63–89; reprinted in Jonathan Barnes, Malcolm Schofield, Richard Sorabji (eds.), *Articles on Aristotle*, vol. 4: *Psychology and Aesthetics*, (London, 1979), 42–64.

² M. F. Burnyeat, 'Is an Aristotelian Philosophy of Mind Still Credible? (A Draft)' ['Still Credible?'], in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's De anima [Essays]* (Oxford, 1995; originally published, 1992), 15–26.

and many other articles have been written on the topic since then,³ including a handful by each of the main protagonists,⁴ not to mention two full length book treatments, one supporting each side.⁵ It has developed into a set battle, on which virtually everyone in the discipline has their own entrenched views.

The stakes are high. At issue is nothing less than how psychological phenomena fit into the natural world for Aristotle, and consequently whether his approach is a viable one for our own investigations. On a literalist reading, Aristotle believes that psychological changes are always grounded in underlying physiological changes, including perception. On a spiritualist reading, in contrast, perceiving is not grounded in anything further, but instead constitutes a basic form of interaction with the world. Such a view, as Burnyeat emphasizes, is something we can no longer accept. Indeed, we can ‘scarcely even imagine what it would be like to take [it] seriously’ (‘Still Credible?’, 16).

³ e.g., H. Granger, ‘Aristotle and the Functionalist Debate’, *Apeiron* 23 (1990), 27–49; S. Broadie, ‘Aristotle’s Perceptual Realism’ [‘Perceptual Realism’], in J. Ellis (ed.), *Ancient Minds = The Southern Journal of Philosophy*, suppl. vol. 31 (1992), 137–59; H. Granger, ‘Aristotle’s Perceptual Realism’, in J. Ellis (ed.), *Ancient Minds = The Southern Journal of Philosophy*, suppl. vol. 31 (1992), 161–71; A. W. Price, ‘Aristotelian Perceptions’ [‘Perceptions’], *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 12 (1996), 285–309; J. E. Sisko, ‘Material Alteration and Cognitive Activity in Aristotle’s *De anima*’ [‘Material Alteration’], *Phronesis* 41 (1996), 138–57; D. Bradshaw, ‘Aristotle on Perception: The Dual-Logos Theory’ [‘Dual-Logos Theory’], *Apeiron* 30 (1997), 143–61; J. E. Sisko, ‘Alteration and Quasi-Alteration: A Critical Notice of Stephen Everson, *Aristotle on Perception*’ [‘Quasi-Alteration’], *Oxford Studies in Ancient Philosophy* 16 (1998), 331–52; J. Broackes, ‘Aristotle, Objectivity and Perception’ [‘Objectivity’], *Oxford Studies in Ancient Philosophy* 17 (1999), 57–113; F. D. Miller, Jr., ‘Aristotle’s Philosophy of Perception’, *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 15 (1999), 177–213; R. Woolf, ‘The Coloration of Aristotelian Eye-Jelly: A Note on On Dreams 459b–460a’ [‘Eye-Jelly’], *Journal of the History of Philosophy* 37 (1999), 385–91; J. M. Magee, ‘Sense Organs and the Activity of Sensation in Aristotle’ [‘Activity of Sensation’], *Phronesis* 45 (2000), 306–30; and there are likely others I have overlooked. For a parallel debate on Aquinas, see the references in R. Pasnau, *Theories of Cognition in the Later Middle Ages [Theories of Cognition]* (Cambridge, 1997), 42 n. 20 and his own ch. 1 §2.

⁴ R. Sorabji, ‘Intentionality and Physiological Processes: Aristotle’s Theory of Sense-Perception’ [‘Intentionality and Physiological Processes’], in Nussbaum and Rorty (eds.), *Essays*, 195–225; M. F. Burnyeat, ‘How Much Happens when Aristotle Sees Red and Hears Middle C? Remarks on *De anima* 2.7–8’ [‘How Much Happens’], in Nussbaum and Rorty (eds.), *Essays*, 421–34; R. Sorabji, ‘Aristotle on Sensory Processes and Intentionality: A Reply to Myles Burnyeat’ [‘Sensory Processes and Intentionality’], in D. Perler (ed.), *Ancient and Medieval Theories of Intentionality [Intentionality]* (Leiden, 2001), 49–61; M. F. Burnyeat, ‘Aquinas on “Spiritual Change” in Perception’ [‘Aquinas’], in D. Perler (ed.), *Intentionality*, 129–53; M. F. Burnyeat, ‘*De anima* II 5’ [‘DA II 5’], *Phronesis* 47 (2002), 28–90. (Sorabji, ‘Sensory Processes and Intentionality’ is a reply to an earlier version of Burnyeat, ‘DA II 5’ presented to the same conference.)

⁵ S. Everson, *Aristotle on Perception [Perception]* (Oxford, 1997) defends a literalist reading, while T. K. Johansen, *Aristotle on the Sense-Organs [Sense-Organs]* (Cambridge, 1998) supports a spiritualist one.

Sorabji's footnote is almost thirty years old now, and one might have hoped that some of the heat (and smoke) of battle had dissipated. But the gauntlet has been thrown down once again. In a paper that circulated in the mid-1990s, Burnyeat in effect offered the following disjunctive syllogism: either his own view is right or Sorabji's is, *tertium non datur*; but Sorabji's isn't; *ergo, etc.*⁶ I shall argue against both the disjunction and Burnyeat's conclusion. Not only is there logical space between these two alternatives, but there is excellent reason to reject each. Against spiritualism, Aristotle believes that there is always an accompanying physiological change in perception. Yet it needn't be the specific sort of change that literalism requires: it is not necessary for the organ to instantiate the exact same perceptible quality that is being perceived. In perception, the matter of our sense organs comes to share *the same proportions* that the perceptible quality exhibits. But the organ can realize this proportion in different contraries, and so without necessarily replicating the perceptible quality within ourselves.⁷

1. A Budget of Interpretations

It is impossible to assess whether a disjunction is exhaustive, much less whether either alternative is true, without a precise formulation of the positions involved. One will search the literature in vain, however, for anything like a definition.⁸ This unclarity has helped give the debate the appearance of being intractable, and even theological, in character.⁹

⁶ Burnyeat, 'DA II 5', 81–3; cf. also 46, 48, 76–7.

⁷ This line of interpretation enjoyed some currency in the late 1980s, and occasional support since then: D. Modrak, *Aristotle: The Power of Perception* (Chicago, 1987), 56–62, cf. 28; T. W. Bynum, 'A New Look at Aristotle's Theory of Perception', *History of Philosophy Quarterly* 4 (1987), 163–78; J. K. Ward, 'Perception and Λόγος in *De anima* ii 12' ['Perception and Λόγος'], *Ancient Philosophy* 8 (1988), 217–33; J. Lear, *Aristotle: The Desire to Understand [Aristotle]* (Cambridge, 1988), 109–16; A. Silverman, 'Color and Color-Perception in Aristotle's *De anima*' ['Color-Perception'], *Ancient Philosophy* 9 (1989), 271–92; M. Tweedale, 'Origins of the Medieval Theory that Sensation is an Immaterial Reception of a Form' ['Immaterial Reception'], *Philosophical Topics* 20 (1992), 215–31 at 226–30; Price, 'Perceptions'; Bradshaw, 'Dual-Logos Theory'. Cf. also J. L. Ackrill, *Aristotle the Philosopher* (Oxford, 1981), 66–7; C. Shields, 'Intentionality and Isomorphism in Aristotle', *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 11 (1997), 307–30 at 327–30. But recently it has come under withering fire: see esp. Burnyeat, 'DA II 5', 81–2, but also Sorabji, 'Intentionality and Physiological Processes', 214–15; Everson, *Perception*, 96–9. The present essay is an attempt to show that this third option deserves more serious consideration.

⁸ The closest one finds is the sort of gloss that occurs, e.g., at Everson, *Perception*, 10 and 58.

⁹ The theological motif, which I exploit below, is not entirely facetious. Burnyeat is reported to have originally characterized his position as the 'Christian view', because of the

The exact contours of spiritualism are known to be tricky, and not just for its detractors,¹⁰ especially as regards the way in which perception is still supposed to be bodily and physical. But it is wrong to think that literalism is a straightforward matter, for there are subtleties here too. By hammering out precise formulations, we shall be in a better position to appreciate what is essential to each position and what variations each allows, as well as to assess the logical relation between them. At the very least, we will have definite proposals on the table, which others can use to refine or clarify their positions.

1.1 *Literalisms*

Let us begin, then, with Literalism. Sorabji's original statement of the position occurs as part of his discussion of *De anima* 3.2, concerning how we perceive that we see. We are aware of our seeing, Sorabji claims, because we are aware of our visual *organ*:

[Aristotle] goes on to remind us that the organ is coloured during the perceptual process (425b22–5), and presumably we will be aware of its coloration. This coloration is a physiological process, which could in principle, even if not in practice, be seen by other observers, using ordinary sense perception. ('Body and Soul', 49–50; cf. 64)

In a lengthy note, he elaborates this as a 'literal taking on of colour' (49 n. 22).¹¹ In perception, the organ 'becomes like the object'¹² in the strong sense that it takes on *the exact same quality* that is being perceived. Its being observable is merely a consequence of this. If something genuinely takes on a perceptible quality, such as violet, then it should be possible to observe this, at least in principle. The intuition behind this reading is both crude and captivating: in cognition, we *replicate* the object within ourselves, thus mirroring the world we perceive. The sense organ 'is potentially what its object actually is',¹³ then, in a perfectly literal sense.

adherence of interpreters such as John Philoponus, Thomas Aquinas, and Franz Brentano, all of whom were 'committed Christians' (*apud* M. Nussbaum and H. Putnam, 'Changing Aristotle's Mind' ['Changing Aristotle's Mind'], in Nussbaum and Rorty (eds.), *Essays*, 27–56 at 51; cf. Sorabji, 'Aristotle to Brentano', 248 and 'Intentionality and Physiological Processes', 210–11).

¹⁰ Burnyeat now acknowledges that some of the formulations in his earlier 'Draft' were not sufficiently careful ('Aquinas', 146–7, 152).

¹¹ Of the many supporting references, he picks out four as especially suggesting literal coloration: *De an.* 2.11, 424a7–10; 3.2, 425b22–4, 427a8–9; 3.13, 435a22–4.

¹² *De an.* 2.5, 417a20 (ὁμοιον ἔστιν), 418a5–6 (ὁμοίωται καὶ ἔστιν οἶον ἐκεῖνο).

¹³ *De an.* 2.5, 418a3–4; 2.9, 422a7; 2.10, 422a34–b3; 2.11, 423b30–424a2.

It will be useful to formulate this original position more precisely. Like all the views we shall be considering, it only concerns the perception of ‘proper’ perceptibles (*ἴδια αἰσθητά*), qualities such as white or sweet, which are exclusive to one sense. (For simplicity, I will refer to these in what follows simply as ‘perceptible qualities’, unless otherwise noted.) According to the present view, then, all instances of the following schema will be true:

PRIMITIVE LITERALISM: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* literally takes on the quality *F* in the relevant organ at *t*.

It is worth remarking several features of this formulation, as it will provide a framework for much that follows.¹⁴ First, it is intentionally weak. It only states a *necessary condition* of perceiving, or more precisely, of *coming* to perceive. It does not, in itself, tell us what would constitute sufficient conditions for perception, much less its essence. It does not, therefore, amount to a theory of perception. Rather, it is a *thesis*, which different theories might accept in common. For Primitive Literalism leaves open the exact nature of the relation between perception and the organ’s taking on the perceptible quality. Here are several possibilities. A Primitive Literalist might be *reductionist* and hold that perceiving is *type-identical* with taking on a perceptible quality. Others might reject this, insisting that they are *distinct types*, though closely related. If so, one might differ again over the type of relation involved: the two types of event might be *coextensive*, or *covary* in some weaker way, or exhibit even looser relations. And one might differ yet again over the tokens of these types. The tokens of each event type might always be distinct from one another; or they might be *token identical*, so that any token event of perceiving is *also* a taking on a perceptible quality. One might even hold that each perceiving is *constituted* by the taking on a perceptible quality, in the way that a concrete substance is constituted by matter. All of these views have in fact been attributed to Aristotle in recent years by different interpreters. But they all share Primitive Literalism in common. It thus provides a useful way of treating these diverse interpretations: by overthrowing this one thesis, all of them will be overthrown. The logical weakness of this formulation constitutes an obvious dialectical strength.

What is it for the organ to ‘literally take on’ a perceptible quality? Many will not even see room for a question here, taking the answer to be completely straightforward: it is just for *the organ’s matter* to take on that quality. This contrasts with Empedocles’ theory of effluences, where the sense organ actually receives an influx of matter from the perceptible

¹⁴ Since the remaining formulations will all be variations on this basic schema, I will omit the initial generalization about all the instances being true for the sake of convenience. But they should all be understood as including it, along these same lines.

object. Against this, Aristotle insists that the sense organ is *transformed* by the action of the perceptible quality, so as to become like it. This suggests the following elaboration of Primitive Literalism:

FUNDAMENTALISM: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* literally takes on *F* in the relevant organ at *t*, such that the organ will be *F* in the same way that the perceived object is *F*, in virtue of having the same material disposition.

Aristotle holds, for example, that the color of objects is determined by the proportion of black to white at their surface; and this depends, in turn, on the amount of transparent material at the surface, which is itself a function of the proportion of earth and fire there.¹⁵ According to Fundamentalism, then, when I look at a wisteria plant, the amount and distribution of transparent material in my eye jelly, and hence the amounts and distribution of earth and fire, will change so as to exhibit the corresponding proportions of the wisteria. The jelly behaves, in effect, like Polaroid film. It takes on the perceptible quality of the object by undergoing changes in its own material qualities, such that it comes to possess the perceptible quality *in the same way* that the perceptible object does.¹⁶

It may come as a surprise, then, to learn that this is *not* how Sorabji understands Literalism. In fact, Literalism's first apostle has never been a Fundamentalist.¹⁷ According to Sorabji ('Sensory Processes and Intentionality', 52–3), the eye's material disposition does *not* become like the material disposition underlying the color in the visible object. Instead, the eye jelly will be colored in a similar way to other transparent bodies, such as the sea (although not exactly similar). Transparent material is not visible intrinsically (*καθ' αὐτό*), according to Aristotle, but rather 'through an *extraneous* color' (*δι' ἀλλότριον χρώμα*, *De an.* 2.7, 418b4–6), that is, the color of a visible object outside it.¹⁸ Thus although the sea appears to

¹⁵ *De sensu* 3, 439a18–b18 (esp. b8–12), 440b14–23. Cf. *De anima* 2.7, 418b9–20; *De sensu* 3, 439b25–440a6; *De gen. anim.* 5.1, 779b27–33, 780a27–36, 5.6, 786a5–13. See R. Sorabji, 'Aristotle, Mathematics, and Colour' ['Mathematics and Colour'], *Classical Quarterly*, NS, 22 (1972), 293–308, esp. 292; Sorabji, 'Sensory Processes and Intentionality', 52; Broackes, 'Objectivity', 59, 62–4. This is not what occurs in the eye jelly according to Sorabji himself, however, as we shall shortly see.

¹⁶ For a clear endorsement of Fundamentalism, see Everson, *Perception*, 84.

¹⁷ Although Burnyeat refers to this as Sorabji's 'new approach' (Burnyeat, 'DA II 5', 75 n. 123), Sorabji himself indicates that this view goes back to an unpublished commentary on *De sensu* 3–7 that he wrote in 1968/69 (Sorabji, 'Sensory Processes and Intentionality', 52 n. 4). This is confirmed by allusions in his published writings ('Mathematics and Colour', 293 n. 2; 'Intentionality and Physiological Processes', 212) to the very same doctrines he develops in Sorabji, 'Sensory Processes and Intentionality', 52–4. Cf. Woolf, 'Eye-Jelly', 386 n. 8.

¹⁸ Sorabji speaks of the color that the eye jelly takes on in perception as 'borrowed' ('Intentionality and Physiological Processes', 212) and as 'alien' ('Sensory Processes and

have a color of its own (*ἴδιον*), it in fact has one only *extrinsically* (*κατὰ συμβεβηκός*, *De sensu* 3, 439a18–b16). These extrinsic colors have the *same formal cause* as the intrinsic colors of solid objects, ‘because they can excite the actually transparent medium in the relevant way’ and so look the same. But they do *not* have the *same material basis*. Intrinsically, the eye jelly is colorless. But it can still take on colors extrinsically, through the extraneous colors of the objects seen. It is in this sense that the eye, during perception, can be said to be ‘colored *in a way*’ (*ὡς κεχρωμάτισται*, *De anima* 3.2, 425b22–3): it takes on the color merely extrinsically, not intrinsically and in its own right.

On Sorabji’s view, then, there needn’t be any change in the organ’s material disposition, at least not of the sort the Fundamentalist demands. The organ can literally take on a perceptible quality *without* its material disposition changing to become like the one underlying the perceptible quality in the object:

LATITUDINARIANISM: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* literally takes on the quality *F* in the relevant organ at *t*, even if it does not come to have the same underlying material disposition and so does *not* come to be *F* in the same way that the object perceived is *F*.¹⁹

Sorabji still considers this to be a *physiological* change. But it is a change in its *formal characteristics alone*: when I look at the wisteria, my eye jelly becomes like it in form, and *not* in matter.²⁰ Ironically, this is just how Burnyeat characterized *spiritualism*, as distinct from Sorabji’s view: ‘Receiving the form of something just means becoming like it in form. So, receiving the form of something without its matter means becoming like it in form but not becoming like it in matter’ (‘Still Credible?’, 24). On Burnyeat’s view, like Sorabji’s, there is no change in the underlying

Intentionality’, 53). But both terms are clearly renderings of *ἀλλότριον*, where the contrast seems to be between what is extraneous and what is inherent. On this point, see F. A. Lewis, ‘Aristotle on the Relation between a Thing and its Matter’, in T. Scaltsas, D. Charles, and M. L. Gill (eds.), *Unity, Identity, and Explanation in Aristotle’s Metaphysics* (Oxford, 1994), 247–77 at 262–4.

¹⁹ The ‘even if’ clause here makes two claims about having the same material disposition: (i) it is *not precluded* from ever occurring, but (ii) it is *not required* either. Thus, while this view allows some of the changes the Fundamentalist posits, it denies that they always occur and so rejects the Fundamentalist claim that they are a necessary condition of perceiving.

²⁰ In what follows, I will use ‘physiological’ in this weaker way, where it does *not* entail a material change, so as to ensure that the discussion applies equally to Sorabji’s position. This will not make a difference in general, since any material changes in an animal’s body will also count as physiological changes in this weaker sense. The difference concerns only the converse: most people assume that any physiological change is also a material change; but this is what Sorabji seems to reject. If I am right in what follows, this distinction does not in fact make a great difference to the arguments, which strictly concern the claim of literalism itself.

material qualities.²¹ And he cites with approval the same passages Sorabji does to explain the way in which the eye can be said to be ‘colored’:²² like the medium, it is colored *in a different way* from solid objects like ‘flags and fruit’ (‘Aquinas’, 133 n. 14). Is there anything more than a verbal disagreement between Sorabji and Burnyeat? Or is Latitudinarianism just a form of spiritualism?

There *is* in fact an iota of difference. On Burnyeat’s view, the eye jelly is only ‘visible in a way and coloured in a way—without *really* being coloured and, in consequence, without undergoing a *real* alteration’ (‘How Much Happens’, 425; emphasis mine). Or, to put it a little more precisely, if the color predicate in question comes to apply to the organ or to the medium at all, it will do so *in a different sense* that contrasts with the way that predicate applies to solid objects (‘Aquinas’, 133). Such coloration, he claims, is *not* observable: the eye, like the other organs, ‘must remain *perceptibly* neutral throughout’ (‘DA II 5’, 75).²³

On Sorabji’s view, in contrast, the color predicates apply to the eye jelly *in the same sense* that they do to solid objects. Although the sea’s color is apparent, it is not *merely* apparent or illusory. It is genuinely colored: it can truly be said to have a given hue in just the same sense that surrounding objects can, and so can be seen. Sorabji can allow that the eye jelly, like the sea, is colored *in a different way* than objects are colored, even in a ‘derivative way’, to use Burnyeat’s phrase: it takes on extraneous colors from the objects, while they have them intrinsically. But they will not be colored *in a different sense*. The same predicate applies *univocally* to both.²⁴

²¹ Burnyeat, ‘Still Credible?’, 22; ‘How Much Happens’, 429; ‘Aquinas’, 135.

²² And not only Burnyeat. These texts are not proprietary to any interpretation: Tweedale also appeals to these texts (‘Immaterial Reception’, 227), but while rejecting *both* Literalism and Spiritualism. He favors a third kind of view, of the sort I shall defend below, that only requires that the organ embody the ratio that defines the perceptible quality in question (226–8). See §4.4 below.

²³ Burnyeat goes on to contrast this perceptible neutrality with the ‘borrowed colors’ Sorabji attributes to the eye, on the grounds that if the eye had a borrowed color, it would lack the transparency required for vision: ‘borrowed colours are no easier to see through than inherent colours’ (‘DA II 5’, 75). But this conflicts, *prima facie*, with Burnyeat’s *approval* of the notion of borrowed color in an earlier article, as explicating the sense in which the eye and medium can be said to be colored (‘Aquinas’, 133). I am not sure how Burnyeat would reconcile these two claims. He has two options, it seems. (A) He can abandon the parallel between the eye jelly and the sea, and deny that the eye takes on borrowed colors. But he thereby forfeits the Aristotelian basis he used to explain the sense in which the eye *does* become colored and so like the object. (B) He can retain the parallel with the sea and grant that the eye, like the sea, takes on borrowed colors, while insisting that both remain *intrinsically* transparent; the borrowed colors, after all, are merely extrinsic. But this would undermine his criticism of Sorabji, since the sea is not ‘perceptibly neutral’: the sea’s borrowed color is manifest and hence difficult to see through.

²⁴ The key move here is unproblematic: ‘infertile’ can be applied univocally to both men and women—it means they are unable to sexually reproduce—but it is made true in different ways in the two cases.

Burnyeat thus denies what Sorabji affirms, namely, that the perceptible predicate applies to the organ *in the same sense* that it does to the object. The difference, that is, is just literalism itself, the claim that a certain literal, univocal *predication* is true:

CANONICAL LITERALISM: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* literally takes on the quality *F* in the relevant organ at *t*, such that it becomes true to say that the organ is *F* at *t* in just the same sense that the perceptible object is *F* (whether or not it is *F* in the same way).

This thesis also captures what is common to Fundamentalism and Latitudinarianism. Both maintain that it is literally true to say that the organ takes on the perceptible quality, and that it can be said to have that quality in just the same sense that the object does. Because of this, both also accept what is entailed by this claim, above all that the change could be observed by ordinary means, at least in principle. The two positions differ over what *makes* this predication true. In one case, it involves acquiring the same kind of material disposition found in solid objects. In the other, it does not require this, but only a shared formal characteristic, of a sort that can also be found in indefinite bodies of matter. On this point, literalists may differ. But to be a literalist at all, one must accept Canonical Literalism.

1.2 'As Matter to Form'

Burnyeat rejects Canonical Literalism. But his position is richer, and stronger, than a mere denial. The best way to appreciate the difference is to consider a further tenet of Sorabji's, to which Burnyeat also objects and which helps to explain the precise contours of his spiritualism.

In our formulations of literalism above, we left open the exact nature of the relation between perceiving and the literal taking on of a perceptible quality. But Sorabji is not neutral. He explicitly rejects the reductive claim made by Thomas Slakey²⁵ that these events are type identical. On Sorabji's view, perception *is* a physiological process. But it is more than that. That, he believes, is just the point Aristotle is making at the end of *De anima* 2.12, when he claims that 'smelling is something else besides (*para*) the process of being affected by odour' (Sorabji, 'Body and Soul', 54):

Aristotle would not agree that perception is simply a physiological process. For this 'simply' (Slakey's word) would ignore the formal cause... Aristotle would reject the view of some materialists that talk of sensations or houses could be

²⁵ T. J. Slakey, 'Aristotle on Sense Perception', *The Philosophical Review* 70 (1961), 470-84.

replaced by talk of physiological processes or bricks, without impairing our ability to describe and explain. Formal descriptions cannot be replaced by material descriptions in this way... [Perception and images] are indeed physiological processes in a way, but only in a sense of 'are' which does not mean 'are identical with', and with the proviso that they are not 'simply' physiological processes. (Sorabji, 'Body and Soul', 55–6)

Taking on the perceptible quality is only the *material cause* of perception. But perceiving, for Aristotle, must also have a formal cause. Although Sorabji does not specify a formal cause for perceiving ('Body and Soul', 64; cf. 56), both causes would have to be specified in its definition, if it is to meet Aristotle's general requirements for definitions of states of the soul (*τὰ πάθη τῆς ψυχῆς*, *De an.* 1.1, 403a3–b19), a set that appears to include perception explicitly among its number (403a7).

The claim that perceiving is a single event, which is at once a physiological process and yet also something other than that, naturally suggests a so-called 'token identity' view that rejects type identity: a single token event simultaneously instantiates two distinct types. More important, though, is the relation between these two types, of matter to form. The material and formal aspects of psychological states will be distinct and yet inseparable, each forming a necessary part of its essence. Perceiving, we might say, following the Definition of Chalcedon, is 'made known in two natures, without confusion, without variation, without division, and without separation' (*ἐν δύο φύσεσιν, ἀσυγχύτως, ἀτρέπτως, ἀδιαιρέτως, ἀχωρίστως γνωριζόμενον*). Or more mundanely:

CHALCEDONIAN ORTHODOXY: Perception has two natures, which are inseparable and irreducible, related to each other as matter to form: it is neither a purely material change nor a purely formal one, but rather 'a *logos* in matter'.

The distinction between form and matter allows Sorabji to go further than 'dual aspect' theories, and specify the relation between these two types. Perceiving *is* a physiological process, in so far as this physiological process is its material cause. For just that reason, though, the 'is' in question is not the 'is' of identity, but rather the 'is' of *composition* or *constitution* (Sorabji, 'Body and Soul', 55).

Chalcedonian Orthodoxy is a distinct and independent claim. It is not entailed by Canonical Literalism, nor does it entail Canonical Literalism. If, however, Aristotle's strictures on the definition of psychological states apply to perception (as they seem to), then Chalcedonian Orthodoxy cannot be avoided.

Burnyeat rejects the antecedent of this conditional. On his view, perception is *not* to be included in the list of the soul's *pathē* and so is not constituted by a physiological process (see below, pp. 282–3). This, he thinks, is the upshot of Aristotle's characterization of each

sense as capable of ‘taking on form without the matter’ (*De an.* 2.12, 424a17–19):

... whatever the meaning of the phrase ‘taking on form without matter’, it picks out the most basic level of interaction between a perceiver and the object perceived. Accordingly, if taking on form without matter is not the physiological process that Sorabji describes, then in Aristotle’s view there is *no physiological process* which stands to a perceiver’s awareness of colour or smell *as matter to form*. The most basic effect on the perceiver is identical with an awareness of colour or smell... Without Sorabji, the functionalist can point to *no material process* that serves for Aristotle *as the realization of perception*. (Burnyeat, ‘Still Credible?’, 15, emphasis mine; cf. ‘How Much Happens’, 421)

Burnyeat thus rejects Chalcedonian Orthodoxy. But he does this by arguing for an even stronger position, namely, that *no material or physiological process* takes place in perception *at all*;²⁶ for if no physiological process takes place, then *a fortiori* there is no physiological process that serves as the matter of perception either.²⁷ This is why Burnyeat concentrates on whether ‘the *most basic* level of interaction between a perceiver and the object perceived’ is material or not. Just what counts as *basic* for Aristotle is, in my view, the crux of the entire debate.

Rejecting Chalcedonian Orthodoxy, even in this strong way, need not cut all ties to matter and the body. In fact, Burnyeat insists that perception, for Aristotle, must take place in an embodied living thing with the appropriate organs: it is a change *in, and of, the body* (cf. ‘Aquinas’, 146–9) and presupposes various *standing material conditions* concerning the organ, the medium, and the perceptible object (‘How Much Happens’, 422–3). It is for just this reason that Aristotle regards perception as a *natural* or *physical* change. But, on Burnyeat’s view, it is not a *material* change. He denies that these terms are synonymous (‘Aquinas’, 146). Physics is the study of natural bodies, which are capable of undergoing change, and hence compounds of matter and form. But not all changes in natural bodies, Burnyeat maintains, need be changes in both matter and form. In the case of perception, Aristotle employs a ‘physics of form

²⁶ Burnyeat, ‘How Much Happens’, 429, 430; ‘Aquinas’, 130; ‘DA II 5’, 28.

²⁷ Logically, it is possible to reject Chalcedonian Orthodoxy, while allowing that there are physiological changes in perception: one would simply deny that they serve *as the matter for* perception. Burnyeat now takes this to have been Aquinas’ line—the physiological processes that do occur in perception are *concomitant* or *accidental* to the perceiving (‘Aquinas’, 136–9)—and he even shows some willingness to apply this strategy to Aristotle himself as well (cf. 134–5, 139, 142–3). But this would be a significant retreat from his earlier position. For without an explicit statement from Aristotle that such changes are merely accidental to perception, it is hard to resist the pressure of the Chalcedonian reading of *De an.* 1.1. This is why Burnyeat’s original, more extreme claim, that there are *no* physiological changes in perception *at all*, is rhetorically his most effective. It pre-emptively blocks the opening for a Chalcedonian reading.

alone' ('How Much Happens', 430, 431; 'Aquinas', 149), where there is no material change whatsoever—and hence a physics that *we* cannot accept or even ultimately understand ('Still Credible?', 16, 19, 25–6).

The position Burnyeat attributes to Aristotle is not unlike a strain of the Monophysite heresy, specifically the one championed by Eutyches. Perceiving is unquestionably a change that arises *from* two natures (ἐκ δύο φύσεων). But what results is virtually a single nature, where the contribution of the material is 'like a drop of wine absorbed by the sea'. Perceiving does *not*, that is, consist *in* two natures (ἐν δύο φύσεσιν):

MONOPHYSITISM: Although perception is a physical and bodily change, which requires certain standing material conditions, there is *no underlying physiological change* in perception and hence none that is related to it as its matter.

This position does not yet tell us what *does* occur in perception, and so doesn't properly constitute a form of spiritualism—once again, the positions seem to be logically independent. But it does bring into sharp relief one of the more distinctive features of Burnyeat's position and one of his key disagreements with Sorabji. This will be valuable as we try to formulate spiritualism more precisely.

1.3 Spiritualisms

Spiritualism is not a new position. The term itself is taken from Aquinas' characterization of perception as a 'spiritual change' (*immutatio spiritualis*).²⁸ But the idea occurs both earlier and later, Burnyeat suggests, invoking John Philoponus and Franz Brentano as allies ('Still Credible?', 18). It would be a mistake to think, however, that Burnyeat's position is just warmed over scholasticism. There are striking differences, and the contrast once again will help us to appreciate what is distinctive and novel in Burnyeat's position.

One key difference lies in their motivations. The scholastic tradition is not primarily concerned with the nature and viability of physicalism and

²⁸ Burnyeat, 'Still Credible?', 21; cf. Everson, *Perception*, 10 and Burnyeat, 'Aquinas', esp. 129. For Aquinas' view, see esp. *In DA* 2.24, 18–75 (§§551–4); *ST* 1a q. 78 a. 3; 1a2æ q. 22 a. 2 ad 3. Cf. *In DA* 1.10, ll. 189–200 (§159); 2.5, ll. 70–83 (§284); 2.14, ll. 262–82 (§418); 2.20, 44–88 (§§493–5); *ST* 1a q. 67 a. 3; q. 75 a. 3. There has been considerable debate about the nature of this change: see Sheldon M. Cohen, 'St. Thomas Aquinas on the Immaterial Reception of Sensible Forms', *The Philosophical Review* 91 (1982), 193–209; J. Haldane, 'Aquinas on Sense Perception', *The Philosophical Review* 92 (1983), 233–9; P. Hoffman, 'St. Thomas Aquinas on the Halfway State of Sensible Being', *The Philosophical Review* 99 (1990), 73–92; Tweedale, 'Immaterial Reception'; A. Simmons, 'Explaining Sense-Perception: A Scholastic Challenge', *Philosophical Studies* 73 (1994), 257–75; and Pasnau, *Theories of Cognition*, ch. 1.

with whether there are underlying physiological changes, as Burnyeat is. What leads them to posit ‘spiritual’ changes in cognition is a growing suspicion that certain puzzles are not easily solved by Aristotle’s ordinary conception of alteration. Chief among them is the ‘contraries’ problem: nothing can receive contrary forms at the same time in the same respect, as this would result in contradiction; and yet in certain cases connected with cognition, it seems as if contrary forms must be simultaneously received.²⁹

Aristotle raises this *aporia* himself in connection with our ability to distinguish sweet from bitter or white from black. To discriminate them, we must be aware of both at the same time by means of a single faculty (*De anima* 3.2, 426b12–29). But

it is impossible for the same thing to undergo contrary changes in so far as it is undivided during an undivided period of time. For if it is sweet, then perception undergoes change in this way, as does understanding, while if it is bitter [it undergoes change] in the contrary way, and if white in a different way . . . and it is impossible for it to be white and black at the same time, so that it cannot bear their forms either, if perception and understanding are this sort of thing. (426b29–427a14)

This puzzle brings the question of literalism into sharp relief. If perception and understanding involve literally taking on the form of the object—if, that is, it becomes true to say that the sense becomes *F* in just the same sense that its object is—then it will be impossible for the same thing to perceive white and black at once, as seems to be required at this stage of the *aporia* for discriminating white from black. If Aristotle does in the end require this,³⁰ the only way to avoid contradiction seems to be the one Alexander of Aphrodisias suggests: *abandon literalism*. Our sense, he reasons, must be affected by the perceptible *in some other way* (εἰ δ’ ἄλλος ὁ τρόπος τῆς ὑπὸ τῶν αἰσθητῶν κινήσεως τῆ αἰσθήσει), so that the organ does not receive the perceptible qualities ‘as matter does’

²⁹ This story is told in great detail, with translations of many of the relevant texts, in Richard Sorabji’s ‘From Aristotle to Brentano: The Development of the Concept of Intentionality’ [‘Aristotle to Brentano’], in H. Blumenthal and H. Robinson (eds.), *Aristotle and the Later Tradition = Oxford Studies in Ancient Philosophy* 1991, suppl. vol., 227–59; for the contraries problem in particular, see 229–30. Although Sorabji regards this development as innovative and important in the history of philosophy, he also considers it a deviation from Aristotle’s views. A similar narrative is told by Joseph Owens, though with a characteristically more sympathetic assessment: J. Owens, ‘Aristotelian Soul as Cognitive of Sensibles, Intelligibles, and Self’ [‘Soul as Cognitive’], in J. R. Catan (ed.), *Aristotle: The Collected Papers of Joseph Owens* (Albany, NY, 1981), 81–98, at 86–95; cf. his ‘Form and Cognition in Aristotle’ [‘Form and Cognition’], *Ancient Philosophy* 1 (1980), 17–27 at 22–5.

³⁰ An assumption that seems to be called into question by the remainder of Aristotle’s discussion (427a10–14).

(οὐχ ὡς ὕλη τῶν αἰσθητῶν τὰ πάθη δέχεται τὰ αἰσθητήρια, *De an.* 61.30–62.4 Bruns). And in fact the eye does not literally turn white or black when one looks at these colors, as we readily observe (ὁρώμεν, 62.4–5). Nor does the medium. If I am looking at a white object and you at a black one, our lines of vision may cross; but their intersection is not literally colored in either way. A similar point holds for reflections in mirrors and water (62.5–15). This distinction between two ways of being affected—(i) ‘as matter is’ and (ii) ‘in a different way’—finds natural resonances in *De anima* 2.5 when Aristotle suggests that alteration takes place ‘in two ways’ (δύο τρόπους ἀλλοιώσεως, 417b13–15) and that perception is ‘a different kind of alteration’ (ἕτερον γένος ἀλλοιώσεως, 417b6–7; cf. 3.7, 431a5–6), as well as in *De anima* 2.12 when he distinguishes between receiving form ‘without the matter’ (ἄνευ τῆς ὕλης, 424a18–19) and being affected ‘along with matter’ (πάσχειν μετὰ τῆς ὕλης, 424b3).

But what exactly does it mean to say that it changes in ‘some other way’? The negative expressions seem to leave the door wide open. The scholastic tradition takes this worry seriously by adhering as closely as possible to the ordinary model of ‘reception’ and ‘assimilation’. On their view, the sense still becomes like the object by *taking on the same form*: it is literally the same form and it is literally received. In fact, it is just on account of this, they would add, that the resulting perception is *about* the object and invariably *true*.³¹ But the form is not received in such a way that *the same predicate* will be literally true of the subject, that is, *in just the same sense* that it is true of the object. That is what happens if the sense received the form ‘as matter does’. It was just this point that led to the contraries problem in the first place and posed difficulties for Canonical Literalism.

On the proposed view, a single form can be received in two ways, with and without matter. Since both changes involve genuine reception of the very same form, the distinction must be based instead on *how* the form *inheres* in the sense. This is the view we find in Avicenna and enshrined in the subsequent tradition as a distinction between two types of inherence or ‘being’: *esse naturale* or *physicale*, on the one hand, and *esse spirituale* or *intentionale*, on the other. When a form has the first sort of being, then (depending on the type of form involved) it results in an eponymous *substance* or *accident*, which will, in general, be material.³² When it has

³¹ A point Burnyeat himself stresses in his treatment of Aquinas (‘Aquinas’, 149). But he may not be entitled to this claim himself, without the metaphysical doctrines it presupposes.

³² But not always. The distinction at issue is slightly broader than the distinction between ‘material’ and ‘immaterial being’, as Thomas shows (*ST* 1a q. 56 a. 2 ad 3). When one angel thinks of another angel, and the first angel receives the form of the second, *both* forms have immaterial being in the first angel, since angels are purely immaterial beings. Yet the form of the second angel has *intentional* being in the first, who is thinking of

the second sort of being, in contrast, it results in a *cognition of* that substance or accident or, in the case of the medium and mirrors, *transmission of information* about the object to a subject. But none of the results will be eponymous (except homonymously). Perception requires the second of these kinds of inherence:

HIGH CHURCH SPIRITUALISM: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* takes on *F* spiritually in the relevant organ at *t*—the quality *F* comes to have intentional being in the organ, even if does not come to have natural being—so that it need not be true to say that the organ is *F* at *t* in just the same sense that the perceptible object is *F*.

On this view, a spiritual change is *necessary* for cognition, whether or not it is also a sufficient condition. In fact, many scholastics would deny that it is a sufficient condition, since they believe that the perceptible form also has intentional being in the medium and mirrors, which do not perceive. Natural changes are also *not excluded* on this view: nothing prevents the sense from undergoing both sorts of changes at once. High Church Spiritualism simply denies that natural changes are a *necessary condition* for perception. All that is required is a spiritual change.

To some, this will seem little more than spells and bells. Metaphysical distinctions often arouse suspicion, especially ones as tailored to a solution as this. How, moreover, are we to understand the claim that the form is genuinely exemplified if the corresponding predicate doesn't apply? Some might find it attractive, then, that the recent Spiritualist revival eschews all such talk. Like High Church Spiritualism, it distinguishes two types of change. But it does not distinguish two modes of *being*, much less explain the reception of form in perception as a distinctive kind of exemplification.³³

This is not just a matter of emphasis. For according to recent Spiritualism, perception is to be contrasted with 'real change': 'That is what makes this [sc. a kettle or a plant's being warmed] a case of *real change*; the matter of the thing is assimilated to—becomes like—the matter of the agent . . . It follows that receiving the warmth of a warm thing without its matter means becoming warm *without really becoming warm*' (Burnyeat, 'Still Credible?', 24; emphasis mine). Now, Burnyeat's point cannot be

him, while the first angel's own form has *natural* being. Thus, if a form has material being, it also has natural being. But the converse is not true: a form may thus have natural being *and* immaterial being.

³³ Recently, Burnyeat has allowed that the predicate does apply in *some* sense, though not in the same sense that it applies to the object ('Aquinas', 133; 'DA II 5', 73–4). But he does not explain this by appealing to the kind of *being* a form has or its manner of *exemplification*, except in explicating Aquinas' view ('Aquinas', 141, 149).

that *nothing happens* during perception.³⁴ Obviously, there *is* a transition in going from not perceiving anything to perceiving something, and from perceiving one thing to perceiving another. The claim is rather that it is not really *alteration* or *assimilation*, that is, that it is not really *a certain kind of change*, but another. In vision, for example, what happens in the perceiver is ‘not a real coloration or a real assimilation, but only a quasi-alteration/assimilation/coloration’ (Burnyeat, ‘How Much Happens’, 428). He similarly regards the medium of perception as being affected in the same way as the perceiver (‘How Much Happens’, 427) and undergoing only ‘non-real alteration’ or ‘quasi-alteration’ (425, 427, 429–30). The characterization of quasi-alteration here is purely negative, as *not* being a literal exemplification of the perceptible quality. It is not explicated positively in metaphysical terms, as in High Church Spiritualism, as involving a different kind of exemplification.³⁵

What happens is described instead in exclusively *phenomenal* terms. Nothing else transpires in perception except a perceptible quality’s *appearing* to a perceiver and the perceiver’s ‘registering, noticing, or perceiving’ it.³⁶ It is ‘a matter of appearances alone’ (‘How Much Happens’, 428), about which *nothing more can be said*:

All that happens when Aristotle sees red is that (to use a more recent jargon) he is ‘appeared to redly’ by an actually red object, and is so appeared to because the object is red. This gives the sense in which he is reddened by the red object, and comes (instantaneously) to be like it. The object’s redness appears to him. He is aware of red. (‘DA II 5’, 75–6; emphasis mine)

Similarly, in the case of the medium, all that is supposed to happen is that sensible forms *appear through* the medium to a perceiver, ‘no more, no less’ (‘How Much Happens’, 425–7). End of story.

³⁴ Burnyeat actually considers this possibility in his most recent piece, but explicitly rejects it (‘DA II 5’, 56). He does maintain that ‘nothing happens’ *in the medium*, however, when a color is visible: it is ‘a static condition, a state of affairs, not an event or process’ (‘How Much Happens’, 426). The illumination of the air is likewise a mere ‘Cambridge change’, on his view, a change in its relational properties, without any underlying change in its nature or condition (‘How Much Happens’, 424–5). Johansen, in contrast, argues against it being a mere Cambridge change (*Sense-Organs*, 136–46), because Aristotle regards such changes as having the least reality (*Phys.* 5.2, 225b11–13; 7.3, 246b11–12; cf. *De sensu* 6, 446b10–13).

³⁵ Recently, Burnyeat has used more positive-sounding formulations: he speaks of coming to perceive as an ‘*extraordinary* alteration’, in contrast with ordinary (and ‘unordinary’) alterations (‘DA II 5’, 65, 74–5). But there is still no attempt to cash out this distinction in terms of exemplification or being.

³⁶ Burnyeat, ‘Still Credible?’, 24. Similarly: ‘the reception of sensible forms is to be understood in terms of becoming aware of colours, sounds, smells and other sensible qualities, not as a literal physiological change of quality in the organ’ (‘Still Credible?’, 21–2); ‘when he sees a colour or hears a sound, *nothing happens* save that he sees the colour or hears the sound’ (‘How Much Happens’, 421; emphasis mine).

Someone might object that this emphasis on the phenomenal is not so distinctive. All Spiritualists regard the changes involved as peculiar to the interaction between perceptibles and perceivers and as irreducible to topic-neutral terms. In fact, a High Church Spiritualist's appeal 'to intentional being' might well be cashed out only by referring to perception or awareness more generally. But the new Spiritualist goes further than this when he insists that the change must be described in *exclusively* phenomenal terms. This is much stronger than claiming that the effect of the perceptible on a perceiver is *identical* with perception.³⁷ Such identity, after all, is something a materialist can accept, along with irreducibility.³⁸ It is rather that there is *no other more fundamental way* of characterizing this change, according to the new spiritualism. Awareness is 'the *most basic effect*' of the perceptible quality (Burnyeat, 'Still Credible?', 15; emphasis mine): receiving form without the matter 'picks out the *most basic level* of interaction between a perceiver and the object perceived' ('Still Credible?', 15).³⁹ And this is to be understood in purely phenomenal terms: 'the effect on the organ is the awareness, no more and no less' ('Still Credible?', 22). This is Burnyeat's point when he claims the only values Aristotle could substitute into a Ramsey–Lewis sentence are the very psychological terms that such sentences are meant to eliminate.⁴⁰ When Aristotle 'sees a colour or hears a sound, *nothing happens save* that he sees the colour or hears the sound' (Burnyeat, 'How Much Happens', 421).

³⁷ As Burnyeat does. The 'key doctrinal passage' at *De anima* 3.2, 425b26–426a26 'states that the effect of the colour on the eye is identical with the seeing' ('How Much Happens', 428).

³⁸ A token identity theory, such as Davidson's Anomalous Monism, can equally insist that the effect of the perceptible is identical with the perceiving, when taken *as a token event*, while also maintaining that perceiving, *as a type*, is irreducible to any type of change described in physical terms. The point is not idle. Burnyeat takes it to be an indication of 'how badly our categories, which emanate from Descartes, fit [Aristotle's] philosophy' that Aristotle regards 'vibration' and 'hearing' as 'two descriptions of one and the same event' ('How Much Happens', 431), whereas we take one to designate something physical and the other something mental. But Aristotle's position is not out of line with our categories at all. Though Aristotle thinks a single token event is involved, he also regards the two *types* as distinct: what it is to vibrate is different from what it is to hear (*De an.* 3.2, 425b27, 426a16–17). But this is precisely the kind of claim a token identity theorist makes: the same token event can be *both* mental *and* physical, even though these are distinct types of event. Indeed, much philosophy of mind in the past thirty years or more presupposes that one and the same thing can be both mental and physical. *Our use of these terms is not Descartes'*.

³⁹ According to Burnyeat, Aristotle uses 'the qualitative language of alteration as the *lowest level* description of what happens in perception' ('DA II 5', 83). But this language, he claims, has to be reconstrued in purely phenomenal terms.

⁴⁰ Burnyeat, 'Still Credible?', 22. See also 'DA II 5', 81, n. 141.

This goes beyond what we find in the scholastic interpreters. *It rules out all non-phenomenal effects, including any physiological effects.*⁴¹ The scholastic position, in contrast, leaves room for them. In making a spiritual change a necessary condition, High Church Spiritualism does *not* exclude natural changes, which often appear in their accounts. Sometimes vision is claimed to involve no natural changes. But this is the exception rather than the rule.⁴²

In excluding all physiological change, recent Spiritualists take a more extreme position. Perception is still considered a bodily, and hence a physical, change (Burnyeat, 'Aquinas', 146–9). But it is *not* a *material* or *physiological* change. It belongs to a 'physics of form alone'.⁴³ Perceptible qualities produce perception directly, without the accompaniment, much less mediation, of any other processes. It is not simply an *irreducible* type of causal interaction. It is *basic*, that is, without any underlying physiological change. Perception, like warming and moistening, would be an interaction at the lowest level of Aristotle's natural world (cf. Burnyeat, 'DA II 5', 82–3).

It is precisely this feature of Aristotle's physics, Burnyeat argues, that we must find unacceptable. It is something we cannot understand, much less believe. It involves 'assumptions... of such a kind that we can scarcely even imagine what it would be like to take them seriously.'

⁴¹ 'There is no material or physiological processing in the Aristotelian theory of vision' ('How Much Happens', 429); 'with each of the five senses we have to do with a physics of form alone, without material processes' (431); 'Aristotelian perception involves no material processes, only standing material conditions' ('DA II 5', 28). Something similar also holds for the effect of perceptibles on the medium (426). Johansen likewise argues in this case that physiological changes are *excluded* (*Sense-Organs*, 11–12, 126, 136, 270, 282).

⁴² See Sorabji, 'Aristotle to Brentano' and also Tweedale, 'Immaterial Reception'. Burnyeat has recently argued that Thomas Aquinas holds one of the more extreme positions, like his own. Although Aquinas considers vision to be 'more spiritual' than the other senses because unlike them there are no natural changes (*In De an.* 2.14, ll. 241–86 (§§417–18); *ST* 1a q. 78 a. 3), according to Burnyeat *none* of the other natural changes which occur in other types of perception are *underlying* physiological changes for Aquinas, changes that serve as matter for the act of perceiving ('Aquinas', 131–7). Aquinas would thus reject Chalcedonian Orthodoxy across the board. This has been disputed recently by Pasnau ('What is Cognition? A Reply to Some Critics', *American Catholic Philosophical Quarterly* 76 (2002), 483–90 at 488–90; cf. his *Thomas Aquinas on Human Nature: A Philosophical Study of Summa Theologiae 1a 75–89* [*On Human Nature*] (Cambridge, 2002), 57–65), who argues that perception is a 'wholly bodily process' (*On Human Nature*, 59). But Burnyeat can accept this last claim, as stated. What he denies is that perception is a *material* process. (That, in his view, is precisely the problem with Aristotle's philosophy of mind: perception is a bodily, but not a material, process.) It is unclear whether Pasnau can claim that perception is a wholly *material* process, though, since for Aquinas vision is solely a spiritual change and spiritual being implies immaterial being. However that may be, the key point for me is that Aquinas *does* accept natural changes *in the organ*, at least in the case of touch and taste, whether or not these changes underlie perception.

⁴³ Burnyeat, 'How Much Happens', 430–31; cf. 'Aquinas', 149.

Aristotle's philosophy of mind is no longer credible because Aristotelian physics is no longer credible' ('Still Credible?', 16). If Burnyeat is right, we cannot accept Aristotle's philosophy of mind for the same reason we cannot accept New Age claims about crystals—that quartz, for example, has the power to bring clarity or amethyst creativity. It is not simply that these rocks don't *in fact* have those powers. It's that nothing *could* have the power to produce those effects, without underlying physiological changes relevant to the change in question. We don't think of such powers as *basic*. But one would have to, to believe in crystals. Or in Aristotle's theory of perception, if Burnyeat is right. Call this position, then, 'New Age Spiritualism':

NEW AGE SPIRITUALISM: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* does *not* undergo any physiological change in the relevant organ at *t*, or indeed any real alteration, but only 'quasi-alteration': it does not become true to say that the organ is *F* at *t* in the sense that the perceptible object is *F*, but only that *F* appears to *S* at *t*.

If Aristotle accepts New Age Spiritualism, Burnyeat is right to say that 'all we can do with the Aristotelian philosophy of mind and its theory of perception... is what the seventeenth century did: junk it' ('Still Credible?', 26). The critical question is whether Aristotle does accept it.

Burnyeat's interpretation is thus a *consciously* uncharitable one. He thinks that in this case, the Principle of Charity simply breaks down. Aristotle's texts leave us no space to attribute a more plausible or defensible view (Burnyeat, 'DA II 5', 82–3). The only interpretation left, he maintains, is one that acknowledges the gulf between us: Aristotle's physics recognizes as basic powers that none of us could accept or even comprehend as such. It is as beyond the pale as believing in the power of crystals.

1.4 Another Way Out?

From even this brief sketch, it should be clear that there are not two opposing positions here, but at best two broad families of positions. And it is also clear that the differences between different versions make a significant difference. They greatly affect which texts and arguments are relevant or probative, as the case may be.

A little more reflection shows that these two broad families do not jointly exhaust the field either. One can reject *both* literalism and spiritualism.⁴⁴ Canonical Literalism is committed to a very specific change—not

⁴⁴ As Burnyeat now acknowledges ('DA II 5', 82–3). But while Burnyeat concedes that there is 'logical space' for intermediate options, he denies that there is 'textual space', so

any physiological alteration will do. It must be such that the *exact same predicate* that applies to the perceptible quality comes to apply to the organ as well, and *in exactly the same sense*. New Age Spiritualism⁴⁵ rejects this, but it rejects much more. No physiological alteration *of any sort* is supposed to take place at all. It thus rejects a broader position, of which Canonical Literalism is only one species:

A BROAD CHURCH READING: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* undergoes *some* physiological change in the relevant organ at *t* such that it becomes like *F*.

This thesis is the true foil to New Age Spiritualism and the target of its criticisms, not Canonical Literalism. If a Broad Church position succeeds, New Age Spiritualism must fail, and vice versa. But the success of a Broad Church position does *not* entail the success of Canonical Literalism—there is some intervening space. It may well be that Aristotle requires material or physiological changes in perception, without requiring that the same predicate that applies to the object also applies to the organ and in just the same sense.⁴⁶

This is precisely what I shall argue in what follows. Aristotle rejects New Age Spiritualism, in favor of a Broad Church position. But he also rejects Canonical Literalism. The view he endorses commits him to physiological changes in perception, of a fairly specific sort. But they do not require the same predicate to be true in just the same sense, as Canonical Literalism does.

that effectively the choice is between Sorabji's interpretation and his own. But the logical space of interpretations is determined simply *by the text*: it is just the range of options that the text does *not explicitly rule out*. 'Textual space', therefore, cannot be narrower than logical space, unless it is a matter of *implicit* constraints on acceptable readings. But those would have to be established by ordinary means, through exegetical arguments and competing probabilities.

⁴⁵ I omit mention of High Church Spiritualism here, since it concerns a logically independent condition, namely, whether a form must be received with intentional being. But it is easy to imagine rejecting this *as well as* rejecting Canonical Literalism and New Age Spiritualism. All one needs to do is deny that Aristotle recognizes two types of exemplification; and this denial is compatible with any of the remaining positions on the presence of physiological changes. There is in fact no good textual evidence for positing two types of exemplification; and any argument for it by elimination is undercut by the options we are exploring here.

⁴⁶ A Broad Church reading, it should be noted, could even accommodate a cousin of High Church Spiritualism. As formulated above, High Church Spiritualism holds that a spiritual change is required, but natural changes are not—natural changes are permissible, but they are not required. But it would be possible to hold that *both* types of change are required, and this would count as a Broad Church reading. This sort of hybrid position should not accept the *specific sort* of natural change Canonical Literalism is committed to, however, since it is precisely this that leads to the introduction of 'spiritual changes' as a solution to the contraries problem.

2. Against New Age Spiritualism

The arguments for New Age Spiritualism are essentially negative arguments, designed to show that Aristotle is *not* committed to underlying physiological changes. Since such a position rules out any Broad Church position, including the intermediate position I shall eventually argue for, it will be crucial to meet this challenge first.

New Age Spiritualist arguments come in two strengths. One type tries to show that Aristotle's views *preclude* underlying physiological change. We shall consider two arguments of this sort: (1) the Argument from Extraordinary Alteration and (2) the Argument from the Efficacy of Sensibilia. If successful, these arguments would provide decisive evidence for New Age Spiritualism. But there is also a second, weaker type of argument for New Age Spiritualism, which attempts to show that, whether or not a commitment to underlying physiological changes is compatible with Aristotle's explicit pronouncements, it is nevertheless *at odds* with his theory. We shall consider two arguments of this sort as well: (3) the Argument from Anachronism and (4) the Argument from Silence.

None of these arguments is successful. But we do not have to rest content with a narrow judgement of *non liquet*. Because the arguments for New Age Spiritualism are all arguments *against* a Broad Church position, exposing their errors helps in building the positive case *for* a Broad Church position.

2.1 The Argument from Extraordinary Alterations

In *De anima* 2.5, Aristotle introduces perceiving as a change or modification in the perceiving subject (416b33–4). What can perceive is acted on and affected by the perceptible quality, and through this change it 'becomes like' the perceptible (417a20, 418a5–6). In so doing, the subject comes to perceive, exercising its capacity for perception. Aristotle then goes on to distinguish two kinds of transition from potentiality to actuality (417a21–b2), using knowledge as an example. To go from

i. not having knowledge

to

ii. possessing knowledge

the first state must be 'destroyed' or replaced by the second. But in going from (*ii*), the state of possessing knowledge, to

iii. actually contemplating or using knowledge

the first state is not destroyed, but rather preserved, since contemplating knowledge already possessed is ‘a progression towards itself and its own realization’ (εἰς αὐτὸ γὰρ ἡ ἐπίδοσις καὶ εἰς ἐντελέχειαν, 417b6–7). This second type of transition, from (ii) to (iii), is ‘either not a case of altering’, Aristotle remarks, ‘or a different kind of alteration’ (ἢ οὐκ ἔστιν ἀλλοιούσθαι... ἢ ἕτερον ἀλλοιώσεως, 417b6–7), a comment he repeats a few lines later, applying it explicitly to perception.⁴⁷

Some have thought that by classifying perception as the second type of transition *in contrast with* the first, Aristotle meant to *exclude* physiological change. Commenting on the above passage, Burnyeat remarks, ‘If the change involved in perception is not an ordinary alteration but comparable rather to the transition from (ii) to (iii), it *cannot be a matter of* literally and physiologically becoming red or smelly’ (‘Still Credible?’, 19; emphasis mine). Nor is literal assimilation all that is ruled out. The same passage ‘also implies that the physical material of which Aristotelian sense-organs are made does not need to undergo *any ordinary physical change* to become aware of a colour or a smell’ (‘Still Credible?’, 19; emphasis mine). And in fact no such change is involved, on Burnyeat’s reading.⁴⁸ An ordinary physical change would be a transition of the *first* sort, and according to Aristotle perceiving is *not* that sort of transition. That is, from the claim that

A. Perceiving is not an ordinary alteration

it is supposed to follow that

B. Perceiving does not involve any ordinary alteration

or even

C. Perceiving does not involve any ordinary physical change.

Johansen even offers (C) as a paraphrase of what Aristotle says: ‘Now perception is said to be an affection in this second sense, *involving no change of attributes* in the perceiver’ (*Sense-Organs*, 12, emphasis mine; cf.

⁴⁷ ‘Either one must say it is not a case of being affected, as was stated before, or there are two forms of alteration’ (ἢτοι οὐδὲ πάσχειν φατέον, ὥσπερ εἴρηται, ἢ δύο τρόπους εἶναι ἀλλοιώσεως, 417b13–15).

⁴⁸ In spite of his occasional use of weaker formulations to the effect that such changes are *not necessary* to perception (‘Still Credible?’, 19, 22, 23), Burnyeat more commonly endorses the more emphatic claim that there are *no such changes* in perception, according to Aristotle: ‘Still Credible?’, 15, 21–2; ‘How Much Happens’, 421, 423, 429, 430, 431; ‘Aquinas’, 130; ‘DA II 5’, 28. Johansen likewise shifts from claiming that such changes are not essential to Aristotle’s account (*Sense-Organs*, 41, 93, 106–7, 115, 253) to claiming that they *do not occur at all* on Aristotle’s view (11–12, 126, 136, 270, 282).

269–71). If this were right, we could make short work of the Broad Church position, and with it any form of Literalism.⁴⁹

Aristotle never states (*B*), much less (*C*), and neither of them is entailed by (*A*).⁵⁰ This is seen most easily by considering versions of Literalism which maintain that there are always *two* token changes in perception, one formal and the other material.⁵¹ The fact that *one* of these changes is not an ordinary alteration obviously does not preclude *the other* from being one. On the contrary, events of two different types might stand in various relations to one another, including the matter–form relation. But even if perception consists in a *single* token change, with both formal and material aspects, there is still no difficulty. An analogy will help. In general, we distinguish between colors and shapes, and we classify squares as shapes *rather than* colors—square is *not* a color. Have we thereby excluded the possibility of *colored squares*? Obviously not. To have a shape is not to have a color. But this does not prevent something from having both a shape *and* a color. In fact, squares are *always* colored, of necessity (cf. *De an.* 3.1, 425b8–9). So, too, in the case of perception. To perceive is to realize one’s nature; and to realize one’s nature is *not* to lose an attribute. But this does not prevent my perceiving on a given occasion *also* being the loss of an attribute; in fact, it might necessarily involve the loss of an attribute.

In classifying perception, Aristotle is concerned with the essence of perception as a *type* of event. But this does not exhaust what is involved in *token* perceivings. They may have other features, including material features. More generally, in trying to isolate the essences of things, Aristotle can happily claim that to be an *X* is to be *F* and *not* to be *G*, even if all *Xs* are *Gs*—indeed, even if all *Xs* must be *Gs* in order to be *F*. Hypothetical necessity typically constrains material characteristics not included in the definition in just this way.

These aren’t idle observations either. In the passage at issue, Aristotle uses the example of *a builder when he is building* (τὸν οἰκοδόμον ὅταν

⁴⁹ Magee (‘Activity of Sensation’, 317–18) also takes this to be a fairly straightforward inference, and adduces *De an.* 3.7, 431a4–8 as additional support. But the latter passage again does not take us beyond (*A*). The real issue is still the inference from (*A*) to (*C*).

⁵⁰ A point made by Cohen (S. Marc Cohen, ‘Hylomorphism and Functionalism’ [‘Hylomorphism’], in Nussbaum and Rorty (eds.), *Essays*, 57–73 at 63–4), and one which Burnyeat now concedes: ‘II 5 on its own *does not rule out* the involvement of some (as yet unspecified) ordinary alteration, or some non-qualitative change’ (‘DA II 5’, 82; emphasis mine). But Burnyeat still insists that Aristotle accepts (*C*): although there is logical space for Aristotle to reject (*C*), he claims, there is ‘no textual space’ (82–3). It is important to examine, then, whether this text and others do make room for it.

⁵¹ D. Charles, *Aristotle’s Philosophy of Action* (Ithaca, 1984), 213–27; R. Heinaman, ‘Aristotle and the Mind–Body Problem’, *Phronesis* 35 (1990), 83–102 at 92–8; Everson, *Perception*, 255 (cf. 95).

οἰκοδομῆ, 417b9) to help explain the sense in which the transition from (ii) to (iii) is different from other alterations. Johansen infers from this that when the builder builds '[h]e cannot really be said to change by doing so, for he is not acquiring *any* new attributes' (*Sense-Organs*, 269; emphasis mine). This is, on the face of it, an extraordinary claim about building. One could try to soften this impression in various ways, by arguing, for example, that the builder changes *other* things, rather than undergoing change *himself* (*De an.* 2.4, 416b1–2; cf. Johansen, *Sense-Organs*, 270–1); or perhaps that he is involved in *locomotion*, by moving his limbs, but *not* alteration in the strict Aristotelian sense of a change in quality (putting aside any overheating or dampening). But neither of these construals is relevant to the point in context. Aristotle is not drawing a contrast between activity and passivity, or alteration and locomotion, but between preserving and losing one's nature. Thinking and perceiving, like building, are not properly characterized as cases of being altered *because* (διό, 417b8) they are the activation of a capacity already acquired (cf. *De an.* 2.4, 416b2–3). All of these transitions are on a par.⁵² The critical question, therefore, is whether activation *as such* precludes ordinary changes. The answer is clear from the case of the builder. It simply cannot be that *all that happens* when the builder builds is his building, *without any material changes* taking place, as is alleged to occur in the case of perception—the builder cannot exercise his building capacity seated, with arms folded. Therefore, if these cases are to be treated on a par, as Aristotle plainly intends, this sort of activation cannot preclude material changes.

We can go further. Exercising one's building capacity isn't just *compatible* with ordinary changes like hammering and sawing. The capacity is exercised precisely *by* effecting such changes. To build is not the same as to saw or to hammer, but one cannot do the former except by effecting changes of the latter sort. Building is *realized* in such changes: they serve as matter to the activity of building.⁵³ The activation of a capacity, therefore, may not only *involve* ordinary changes. They may be *necessary* to its exercise,⁵⁴ and in some cases even *realize* or *constitute* it.

⁵² This is a point well made by Sisko, 'Material Alteration', 142–3; cf. Sorabji, 'Intentionality and Physiological Processes', 221. Everson (*Perception*, 93) rightly notes that Aristotle's distinction is not peculiar to *cognitive* capacities at all.

⁵³ In fact, we can say even more strongly that building *supervenes* on such activities: whenever he builds, he must perform at least one of these activities (although it need not be any one of them in particular), and each of these is such that, if he genuinely performs it, he is *eo ipso* building.

⁵⁴ This is supported by *Physics* 7.3 (version A), where Aristotle argues that a number of changes are not alterations, while allowing that they may necessarily involve alterations, including the completion or perfection of a house (246a17–18). Completion is an excellence, and as such depends upon how things stand relative to one another (ἐν τῷ πρός τι πῶς ἔχειν, 246b3–4), and relatives do not themselves undergo any sort of

In the end, Aristotle's point in contrasting the transition from (i) to (ii) with the transition from (ii) to (iii) is much more commonplace. In exercising a particular capacity *C*, I do not alter *with respect to C* in a way that destroys *that capacity*. On the contrary, exercising *C* generally preserves or even reinforces it. But from the fact that I do not alter *with respect to C*, it hardly follows that I do not alter *in any other way*. Indeed, it may be the case that in order to exercise *C*, I *must* alter with respect to other qualities. This is clearly the case with the builder, and so it cannot be ruled out in the case of the perceiver. None of the differences between these cases seem relevant to *that* difference.

2.2 The Argument from the Efficacy of Sensibilia

A second, more sophisticated objection has been put forward by Sarah Broadie, who argues that physiological changes are precluded from serving as the 'material bases of acts of perception' by Aristotle's account of *perceptible qualities* (Broadie, 'Perceptual Realism', 143). Aristotle believes in the 'efficacy of sensibilia', the view that perceptible qualities such as red or sweet are efficacious *as such*, and not in virtue of any other characteristic concomitant with them (138). What causes me to see red is just the quality red: it is a real feature of external objects and a genuine causal power in its own right. Consequently, Aristotle is not compelled 'to postulate physiological processes in order to explain sensory input from the environment' ('Perceptual Realism', 144). This much is explicitly endorsed by Burnyeat:

What is more, the warm or red object acts as cause in virtue of being warm or red. Not for Aristotle the modern idea that the object acts on the perceiver in virtue of some non-phenomenal feature (molecular motion, light reflectancy) on which its appearing warm or red depends. Aristotle's is a world in which, as I have emphasised before, colours, sounds, smells, and other sensible qualities are as real as the primary qualities (so called by us). They are real in the precise sense that they are causal agents in their own right. (Burnyeat, 'DA II 5', 45)

Perception occurs *in virtue of* the action of perceptible qualities as such, and not in virtue of any underlying 'non-phenomenal feature'.

change (b10–14). Even so, 'it may be necessary that [states, and their losses and acquisition] come about or cease *when other things alter*, just as form and shape do, for example, when hot and cold or moist and dry things alter or whatever these states primarily occur in' (ἀλλὰ γίνεσθαι μὲν ἴσως αὐτὰς καὶ φθείρεσθαι ἀλλοιουμένων τινῶν ἀνάγκη, καθάπερ καὶ τὸ εἶδος καὶ τὴν μορφὴν, οἷον θερμῶν καὶ ψυχρῶν ἢ ξηρῶν καὶ ὑγρῶν, ἢ ἐν οἷς τυγχάνουσιν οὐσαί πρώτοις, 246b14–17). This point is correctly explained by Alexander of Aphrodisias, *Quaest.* 3.2, 81.27–82.7.

But Broadie thinks we can go further. Because of this realism about perceptible qualities, Aristotle ought to avoid ‘any theory that seeks to bridge some presumed gap between awareness and the external stimulus by means of a series of micro-changes in respect of primary qualities’ (‘Perceptual Realism’, 144). Such changes, she argues, would ‘threaten to make the color *causally redundant*’ (‘Perceptual Realism’, 144; emphasis mine). If these primary quality changes directly cause perception, color’s role is not only indirect, but inessential—*any* way of bringing about these primary quality changes would equally produce a visual experience of color. This, Broadie believes, puts its causal relevance in jeopardy: if these changes are brought about by the ‘primary quality configuration of the object’s surface’, or more generally the material qualities underlying color, she concludes, then ‘the color itself *does no work at all*’ (144–5, emphasis mine). Color, in short, would be *epiphenomenal*. And that is something that Aristotle cannot accept. It would imply that colors, despite being genuine qualities of physical objects, are ‘incapable of making themselves known to percipients’, something which, she claims, is even ‘more repugnant to the intellect than a color (considered as an external quality) that gets itself seen without mediation by special physiological events’ (145), as New Age Spiritualism alleges. If perceptible qualities are to be the proper causes of perception, as Aristotle clearly takes them to be (cf. *De an.* 2.6, 418a23–5), they must produce perception directly, *without the mediation of physiological events* (Broadie, ‘Perceptual Realism’, 150–1).

This argument is a variation of a causal-explanatory exclusion argument, such as is found in contemporary debates about mental causation. It rests on one of our deeply held intuitions about explanation, which forms a key part of our scientific view of the world:⁵⁵

CAUSAL-EXPLANATORY EXCLUSION PRINCIPLE: For any given event, there cannot be two or more complete and independent causal explanations, apart from isolated cases of overdetermination.⁵⁶

Generally, we assume that when there are competing causal explanations of this sort, at most one can prevail, to the exclusion of the rest; and in those cases where we accept more than one account, we seek to show that

⁵⁵ This assumption is examined in illuminating detail in J. Kim, ‘Mechanism, Purpose and Explanatory Exclusion’, in J. E. Tomberlin (ed.), *Philosophy of Mind and Action Theory = Philosophical Perspectives* 3 (1989), 77–108; reprinted in his *Supervenience and Mind: Selected Philosophical Essays [Supervenience and Mind]* (Cambridge, 1993), 237–64, and specifically with regard to its role in debates over mental causation in Part II of his *Supervenience and Mind*.

⁵⁶ A causal explanation is *complete* if, and only if, it identifies conditions that are nomically sufficient to produce the effect. Causal explanations are *independent* if, and only if, each describes a state of affairs that could have held in the absence of the other.

they are not really in competition, either because they are not independent or because they are not both complete. If there genuinely were two complete and independent causal explanations, we would have a case of overdetermination. And even when we allow for such cases, we are still averse to thinking that they occur systematically in causal regularities. But Aristotle would be committed to systematic overdetermination, according to Broadie, if in addition to perceptible qualities he posited primary quality changes in perception. He would be introducing causal competition in *every* perceptual encounter. And such a position is inherently untenable and unstable. So, given Aristotle's realism about perceptible qualities, she argues, primary quality changes are the ones that have to go.

Now, some might quarrel whether Aristotle could accept a causal-explanatory exclusion argument, given his doctrine of the four causes; or whether such arguments are valid in general, given the possibility of token-identity views.⁵⁷ But neither complaint is quite to the point. Broadie is concerned about competition for *only one* of Aristotle's four causes, namely, the efficient cause. His explanatory pluralism, therefore, is neither here nor there. So long as Aristotle does not allow two complete and independent *efficient* causes of a single event (except in isolated cases of overdetermination), he accepts the relevant version of her assumption. As for token identity views, Aristotle does allow that Polyclitus is the efficient cause of a statue as well as the sculptor, since that is who the sculptor happens to be. But he draws a distinction. Polyclitus is an efficient cause only *per accidens*, whereas the sculptor is the cause 'properly described' (τὰ οἰκείως λεγόμενα, *Physics* 2.3, 195a27–b6); and Aristotle demands that we always seek the 'most exact' cause of each thing (δεῖ τὸ αἴτιον ἑκάστου τὸ ἀκρότατον ζητεῖν, 195b21–5). Thus, so long as he holds that there can be at most one *proper* efficient cause of each thing, he would again accept the relevant version of the exclusion principle, as Broadie requires: color alone, and not its underlying material qualities, would be the proper efficient cause of seeing.

The more pertinent question is why this sort of argument would rule out 'special physiological changes' *in the subject*. Causal-explanatory exclusion arguments focus, as the name suggests, on competition between *causes*. Its primary relevance, then, is to the perceptible *object* that brings perception about, and not what occurs in the subject. Yet it is clear that we would never draw the same kind of conclusions about the object. From a causal-explanatory exclusion argument, we could not conclude that color has *no material basis* in the object, for example, or that the effect of color on the medium involves *no underlying material change*. The

⁵⁷ Both objections are raised by Broackes ('Objectivity', 105–7).

most we would be entitled to infer is that such underlying material features are not, as such, the *proper cause* of seeing, not that there *aren't* any such features. Now, grant this more limited conclusion and extend it to the perceiving subject. One could infer that just as color alone is the proper efficient cause of seeing, so seeing alone is the proper effect of color. *Still nothing follows about the presence of underlying material structures or changes.*⁵⁸ This is clear, once again, from the case of building. In *Physics* 2.3, in fact, Aristotle uses it to make clear the canonical form of explanation, where efficient cause and effect are both described in proper terms. Building, he says, is due to a builder in virtue of his building expertise (195b21–3). Yet in this case there can be no doubt that there are material changes underlying this causal interaction, in both agent and patient (see above, pp. 267–8). They are, moreover, systematically related: each underlies, respectively, the proper cause and the proper effect of the interaction. This is, after all, the intended benefit of Aristotle's distinction between the formal and material aspects of things. We can cite one aspect as having primacy in a given explanatory context, without having to deny or exclude the presence of the other. Aristotle is thus free to insist that perceptible qualities are responsible for bringing about perception, while *also* allowing that there are underlying physiological changes. The New Age Spiritualist needs a much stronger argument, if he is to preclude such changes.

Someone might try to up the ante as follows, then. Given Aristotle's causal realism about perceptible qualities, he ought not to posit underlying physiological changes. For if there were any such changes, it would be *these*, and not color, that would have explanatory primacy. A lower level would not just be a causal competitor, it would *edge out* any higher competition. Causal responsibility, it might be claimed, always resides *on the lowest level*. Therefore, if color is to be a proper efficient cause of vision, it must not only be *irreducible* to underlying material qualities, it must be *basic*—Aristotle must recognize it as one of the *fundamental* powers in the cosmos. Higher orders of phenomena, in contrast, can be called 'causes' only by courtesy: to use Jaegwon Kim's apt oxymoron, they are capable of 'epiphenomenal causation' at best.⁵⁹ For it is the

⁵⁸ As Nussbaum and Putnam ('Changing Aristotle's Mind', 36) rightly point out, 'it is one thing to hold that perception cannot be explained "from the bottom up," quite another to hold that it is not accompanied by or realized in any material transition.' They accept the former, but deny the latter.

⁵⁹ See J. Kim, 'Epiphenomenal and Supervenient Causation', in P. A. French, T. E. Uehling, Jr., and H. K. Wettstein (eds.), *Causation and Causal Theories = Midwest Studies in Philosophy* 9 (1984), 257–70; reprinted in his *Supervenience and Mind*, 92–108. Unlike nineteenth-century epiphenomenalists, who regarded mental events and bodily events as distinct, but parallel tokens, Kim is concerned primarily with cases of token identity, where the mental supervenes on the physical. He later comes to view 'epiphenomenal causation'

lower orders that are actually doing all the work. But the inefficacy of higher-order phenomena inevitably undercuts their claim to reality.⁶⁰ If Aristotle wants to preserve the efficacy of color and other perceptible qualities, then he must either (a) *reduce* them, by taking them to be *identical* with underlying physiological changes or (b) *eliminate* underlying changes entirely, taking perceptible qualities instead to be *basic*. Causation, on this view, is always on the lowest level. Hence, colors must have nothing underneath them if they are to be real.

Such a view comports well with certain late twentieth-century views on the Unity of Science. But nowhere do we find Aristotle inclined towards such a view. To the contrary. Like nineteenth- and twentieth-century emergentists,⁶¹ Aristotle insists that in objects of increasing complexity, there are genuinely new, irreducible causal powers. But he does *not* regard them as basic. They depend crucially on the elemental powers that underlie them, while remaining distinct and efficacious in their own right. Nor is this a stance he invokes just to solve 'special' problems concerning life and consciousness. It is evident already in his treatment of *chemical* qualities, just as it is for nineteenth-century emergentists like Mill and Lewes. For Aristotle, the class of basic qualities is extremely small. There are only four: hot, cold, moist, and dry (*De gen. et corr.* 2.2). They do not suffice to explain all the behavior of even simple chemical compounds, which differ from each other precisely with regard to their causal powers. In *Meteorology* 4.8–9, Aristotle discusses *eighteen* pairs of such powers (see esp. 385a12–18), all of which go beyond the efficacy of elemental qualities.⁶²

with increasing suspicion, as a threat not only to mental causation, but mental realism, and advocates a return to a form of reductionism: see esp. J. Kim, 'The Myth of Nonreductive Materialism', *Proceedings and Addresses of the American Philosophical Association* 63 (1989), 31–47, reprinted in his *Supervenience and Mind*, 265–84, and J. Kim, 'The Nonreductivist's Troubles with Mental Causation' ['Nonreductivist's Troubles'], in J. Heil and A. Mele (eds.), *Mental Causation* (Oxford, 1993), 189–210, reprinted in his *Supervenience and Mind*, 336–57.

⁶⁰ As Samuel Alexander wryly observed (*Space, Time, and Deity*, 2 vols. (London, 1934; originally published, 1920), 2.8), to hold that there are inefficacious higher-order phenomena 'supposes something to exist in nature which has nothing to do, no purpose to serve, a species of *noblesse* which depends on the work of its inferiors, but is kept for show and might as well, and undoubtedly would in time, be abolished'. For an excellent discussion of the connection between mental realism and mental causation, see Kim, 'Nonreductivist's Troubles', 348–51.

⁶¹ For an invaluable and illuminating discussion of emergentism, see B. P. McLaughlin, 'The Rise and Fall of British Emergentism' ['British Emergentism'], in A. Beckermann, H. Flohr, and J. Kim (eds.), *Emergence or Reduction? Essays on the Prospects of Nonreductive Physicalism* (Berlin, 1992), 49–93.

⁶² The ability and inability, respectively, to (i) solidify, (ii) melt, (iii) soften in heat, (iv) soften in water, (v) bend, (vi) break, (vii) shatter, (viii) be crushed, (ix) be molded, (x) be compressed, (xi) be drawn out into threads, (xii) be beaten out, (xiii) be divided; (xiv) be cut; (xv) stick together; (xvi) be compacted, (xvii) burn, and (xviii) smoke.

But these powers are not independent of the elemental qualities either. Which capacities an object has *follows from* (ἀκολουθεῖ, *Mete.* 1.3, 340b16–17) its particular makeup of elemental qualities. In this sense, these higher powers can be said to *come from* the elemental qualities present (ἐκ τούτων, *De gen. et corr.* 2.2, 329b32–34; cf. 329b34–330a29), and so an object's possessing this or that ability can thus be *traced back* (ἀνάγονται) to its elemental qualities, though not *reduced* to them, as some translations misleadingly suggest (*De gen. et corr.* 2.2, 330b24–26).⁶³ The lower-level qualities *determine which* higher-level powers an object has, and to that limited extent have a certain role within explanatory accounts. But they do so *without usurping the explanatory primacy* of the higher-level powers.

Perception need not be any different. Broadie is right to insist on the fact that Aristotle's explanations are in terms of higher-level powers, like perceptible qualities, and higher-level effects, like perceiving. But this does not rule out the *presence* of lower-level qualities and changes involving them. On the contrary, they may be systematically related, as the underlying material cause.

Neither of these arguments for New Age Spiritualism—the Argument from Extraordinary Alteration and the Argument from the Efficacy of Sensibilia—succeeds, then. Both are formulated in exceptionally strong terms. They aim to show that Aristotle's own doctrines *rule out the possibility* of underlying physiological changes in perception and so establish New Age Spiritualism. Given the strength of this claim, it is not surprising that both fail. The doctrines in question are fully compatible with such changes.

In comparison, the next two objections are more moderate. Neither attempts to show that Aristotle's texts are *incompatible* with a Broad Church reading. At most they undermine its plausibility, by raising doubts about our motivations and about the textual evidence. But even that would represent a significant gain for New Age Spiritualism. If a Broad Church reading is anachronistic or something Aristotle never articulates, it remains a notional possibility at best. Such an option might be available to Latter Day Aristotelians, who only have to avoid contradicting the Master's *ipsissima verba*. But it would strain the Principle of Charity unduly. A Broad Church reading requires more than logical space, if it is to be an attractive interpretation of Aristotle.

⁶³ A point rightly noted by Johansen (*Sense-Organs*, 181, esp. n. 8) concerning the relation of hot, cold, moist, and dry to other tangible qualities.

2.3 The Argument from Anachronism

The first objection intimates that any Broad Church reading—any reading that requires an underlying physiological change—is guilty of a form of anachronism. In my opinion, it is this objection which is primarily responsible for the allure New Age Spiritualism has had among interpreters of Aristotle. And it deserves to be stared down, in full candor.

The objection runs like this. Our own perspective has been inalterably shaped by the rejection of Aristotelian science in the early modern period. Yet we cannot appreciate what is distinctive about his philosophy of mind, and why it is forever closed to us, until we consider what it would have been like to be an Aristotelian *before Descartes*. Here is the finale of Burnyeat's first paper:

But what the details of the theory of perception teach us is how closely the failure of the functionalist interpretation of Aristotle is bound up with the fact that Aristotle has what is for us a deeply alien conception of the physical. If we want to get away from Cartesian dualism, we cannot do it by travelling backwards to Aristotle, because although Aristotle has a non-Cartesian conception of the soul, we are stuck with a more or less Cartesian conception of the physical. To be truly Aristotelian, we would have to stop believing that the emergence of life or mind requires explanation. We owe it above all to Descartes that that option is no longer open to us...new functionalist minds do not fit into old Aristotelian bodies. (Burnyeat, 'Still Credible?', 26; cf. 16)⁶⁴

This criticism is not only aimed at functionalist interpretations, which might easily be suspected of anachronism. For the assumption that is alleged to be anachronistic is just the claim that there is some change that *constitutes* or *realizes* perception, which can be identified in *topic-neutral* terms (Burnyeat, 'Still Credible?', esp. 22–3). Such an assumption is not limited to Canonical Literalism, but equally belongs to any Broad Church reading. It does not turn on the specific physiological changes that Canonical Literalism demands.

The 'emergence of life or mind' is central to Brodie's diagnosis too. We find New Age Spiritualism perplexing, she suggests, because we are deeply committed to the 'Paradigmatic Priority of Inanimates', the view that interactions between inanimate objects are paradigmatic for the physical in general and that perception in particular 'results from a process whose initial stages at least can be explained by principles governing the behavior of inanimate things' ('Perceptual Realism', 150). Our faith in the Paradigmatic Priority of Inanimates is made all the more

⁶⁴ See also Burnyeat, 'How Much Happens', 431; 'Aquinas', 131, 146–9, 151; 'DA II 5', 78, 81.

natural by our belief in their Chronological Priority: we take it for granted that both life and consciousness appeared relatively late in the history of the world (148–9). But, Broadie notes, Aristotle doesn't accept the Chronological Priority of Inanimates. The species of living things are permanent features of his world—at no time were there only inanimate objects in the sublunary world. Consequently, Aristotle did not have the temptation to view inanimates as paradigmatic either. He is committed to the substantial natures of living things, which form a basic and irreducible part of the physical world. What we take to cry out for further explanation is for him a feature that simply must be acknowledged and accepted.

It can hardly be denied that our outlook is imbued with the prevailing notions of our time, which are profoundly influenced by the views of Descartes and Darwin. But that should not be allowed to poison the well. The key issue is not whether interpreters' motivations are impure, but whether the concerns they ascribe to Aristotle are peculiarly modern. And in this case, they simply aren't.

Aristotle is well acquainted with the Chronological Priority of Inanimates. He alludes to Empedocles' view that biological species originated from haphazard combinations of parts and ultimately the four elements.⁶⁵ In fact, living things make a fairly late appearance on the world stage in many Presocratic cosmogonies. Anaximander, for example, thinks the first living things were formed in the sea, well after the heavens and the earth were formed (DK 12 A 11 and 30). Anaxagoras and Democritus also accept a marine origin of life.⁶⁶ Others, such as Empedocles and Archelaus, adopt a slightly different view, according to which life first originates within the warm, moist earth.⁶⁷ The belief in an origin of life is also widespread in ancient Greek culture generally, as reflected in myth and literature, enough to provide the basis for W. K. C. Guthrie's Messenger Lectures, *In the Beginning: Some Greek Views on the Origins of Life and the Early State of Man* (Ithaca, NY, 1957).

The Paradigmatic Priority of Inanimates, even in its most extreme form, also forms part of the furniture of Aristotle's intellectual world. The suggestion that matter is nothing but extended substance, which possesses nothing more than shape, orientation, and motion, does not need to wait for Descartes. It is what ancient atomists like Democritus

⁶⁵ *Physics* 2.8, 198b29–32. Cf. DK 31 A 72, B 35.9–17, B 57, B 59, B 61, B 62, and B 73.

⁶⁶ Anaxagoras: DK 59 A 42.12 (although A 1.9 has it occurring in moist earth). The Atomists: DK 68 A 139; cf. 67 A 22.

⁶⁷ Empedocles: DK 31 B 62. Archelaus: DK 60 A 1.17, 4.5. In philosophical authors, this account can also be found in Plato *Menexenus* 237d–238a; Epicurus fr. 333 Usener; Lucretius 5.805–15; and Diodorus Siculus 1.7.4–6 (Diels regards the latter as deriving from Democritus' *Mikros Diakosmos*; see DK vol. 2, p. 136).

famously maintained, ‘a single account that applies to all bodies’ (περὶ πάντων ἐνὶ λόγῳ, *De gen. et corr.* 1.8, 324b34–325a2).⁶⁸ These physical principles are completely fundamental to his theory, even if he admits a special type of ‘soul’ atom.⁶⁹ For Democritus’ account of life and consciousness, from breathing to the various phenomenal qualities we experience in perception, consistently refers to the basic, geometrical properties of atoms and their resulting motions, including spherical soul atoms.⁷⁰ Aristotle can thus complain that ‘most of the natural philosophers’ (cf. *De sensu* 4, 442a29–30) ‘trace proper perceptibles back to these [sc. the common perceptibles], as Democritus does to white and black. For he says the one is rough and the other smooth, and traces back flavors to shapes’ (442b10–12). Democritus need not *identify* individual colors with textures or flavors with shapes—in fact, it’s not clear to what extent he even acknowledges their reality (DK 68 B 9). But he does explain our experience of these qualities by referring to the shapes, motions, and arrangements of atoms. This is clear from Theophrastus’ summary: ‘None of the other perceptibles has a nature, but rather each is a state of the sense when it undergoes alteration, and things appear to us as a result. Not even cold or hot have a nature. Instead, *the arrangement [of atoms], by shifting, produces our alteration*’ (*De sens.* 63, 517.8–12 *Doxogr. Gr.*). Nor is this strategy peculiar to the atomists. Plato’s *Timaeus* also explains the phenomenal features of experience by appealing to the geometrical properties of matter, as Aristotle is quick to point out.⁷¹ Here, as with Democritus, we find the Paradigmatic Priority of Inanimates with a vengeance, where the lowest level is characterized solely in quantitative terms (so-called ‘primary qualities’).

There are also less extreme forms of Paradigmatic Priority, which do not insist on a purely quantitative approach. Empedocles, for example, offers a qualitative chemistry based on four elements, and he explains the characteristics of compounds such as blood, bone, flesh, sinews, and claws, by appealing to the proportion of elements contained in them.⁷²

⁶⁸ See esp. Aristotle *Metaph.* A.4, 985b4–22 (= DK 67 A 6); *De gen. et corr.* 1.2, 315b33–316a1; 1.8, 325b17–19, 326a1–3, a15. Also DK 68 B 9, A 37–8, 124–5.

⁶⁹ *De an.* 1.2, 403b31–404a9, 405a8–13; 1.3, 406b15–25 (= DK 67 A 28; 68 A 101, 104). Also *Aet. Plac.* 4.3.5 and 7 (= DK 67 A 28; 68 A 102).

⁷⁰ On life and respiration, *De an.* 1.2, 404a9–16; *De resp.* 4, 471b30–472a18 (= DK 67 A 28; 68 A 106). On perceptible qualities and the experiences they produce, see DK 68 B 9; *De gen. et corr.* 1.2, 315b33–316a1; Theophr. *De sens.* 61–8, 516.25–519.12; 73–8, 520.24–522.25 *Doxogr. Gr.* (= DK 68 A 135); Theophr. *De plant.* 6.1.6–2.4 (= DK 68 A 129–31); and also DK 68 A 124–5. On other mental states, see DK 68 B 7, 9, and 33; also Theophr. *De sens.* 58, 515.22–5 *Doxogr. Gr.* (= DK 68 A 135) and DK 67 A 30.

⁷¹ e.g. *De gen. et corr.* 1.8, 325b24–8. For the analysis of perceptible properties, see *Tim.* 61d–67e; cf. Theophr. *De sens.* 83–6, 524.20–525.27 *Doxogr. Gr.*

⁷² DK 31 A 78, B 96, 98; cf. B 23.

Plants, for example, are said to grow upwards because of the fire they contain while their roots grow downwards because of the earth (*De an.* 2.4, 415b28–416a2). In Aristotle's view, this is indicative of Empedocles' general approach to all substances, animate or inanimate.⁷³ Any chance cause, he believes, might have brought about these compounds, including living compounds, so long as the elements are in the right proportions.⁷⁴ The idea that the same kinds of material explanation are to be offered for both animate and inanimate phenomena alike is a familiar and recurrent view.

The difficulty is not, therefore, to understand what it would be like to be an Aristotelian before Descartes, but to comprehend how someone could be a New Age Spiritualist *after Empedocles and Democritus*. Aristotle is not in a position to 'stop the question "What makes this a living thing?" before it can arise' (Burnyeat, 'Still Credible?', 26), because by his time these sorts of questions had *already* been raised. He cannot pretend to be innocent of these concerns. If Aristotle were a New Age Spiritualist, he would have been taking a self-conscious and deliberate stand, in reaction to his predecessors, a stand that would have required reasons and argument.

These texts are not news, and in his most recent articles Burnyeat has explicitly acknowledged the relevance of Aristotle's predecessors, at least in passing. The late appearance of life is one of the 'key tenets' of ancient atomism, he notes, which has since become 'an important part of the modern scientific outlook' ('Aquinas', 151). He also acknowledges that several of Aristotle's predecessors explain perception by appealing to 'microscopic effluences and particles' ('DA II 5', 35; cf. 37 n. 28). But Burnyeat doesn't see this as compromising the main thrust of his position, because he takes Aristotle to be 'vehemently opposed' to the emergence of life ('Aquinas', 151) and to offer 'objections of principle against those who account for perception, or for other cases of being affected, by appeal to what happens at the microscopic level' in *De generatione et corruptione* 1.8 ('DA II 5', 36).⁷⁵

But these are not minor concessions. The terms of the argument have shifted significantly. If positing underlying physiological changes were peculiarly modern, it would have been understandable why, in the

⁷³ *De gen. et corr.* 2.6, 333b9–11; *Metaph.* A.10, 993a17–22; *De an.* 1.5, 409b32–410a6 (includes DK 31 B 96; cf. also Simplicius' introduction to the fragment). His appeal to microscopic 'pores' and what fits into them may have been more limited—Aristotle, at any rate, criticizes him for only using it in connection with perception and mixture (though the latter surely plays a large role in Empedocles' system).

⁷⁴ *De caelo* 3.2, 300b25–31 (= DK 31 B 57); *De gen. et corr.* 2.6, 333b4–16; *De part. an.* 1.1, 640a19–23 (= DK 31 B 97).

⁷⁵ Magee also takes the objections in *De gen. et corr.* 1.8 to be quite general ('Activity of Sensation', 325).

arguments we considered earlier, Aristotle had not explicitly ruled out such changes. Being premodern, he would not have been aware of our concerns and so could easily be excused for not addressing them. But now it is admitted that they *are* a prominent feature of his intellectual landscape, of which he is well aware. So if Aristotle is a New Age Spiritualist, he must consciously reject these views. The question is therefore our earlier one: in his criticisms of his predecessors, does Aristotle *rule out* underlying material changes? If he has ‘objections of principle’ against any such underlying changes, we can eliminate a Broad Church reading straight away.

If one examines Aristotle’s criticisms of Democritus, Empedocles, and others, one will find objections to specific microphysical processes and to certain general patterns of explanation. But none of them has any direct bearing on the question at issue. *De generatione et corruptione* 1.8 does offer a battery of arguments, but they concern details peculiar to Democritus’ and Empedocles’ theories. Aristotle finds Democritus’ theory inconsistent on the question of whether atoms are free of qualities and incapable of producing or undergoing alterations, as well on questions about their size and intrinsic differences (326a1–b6). The mechanism of passageways or ‘pores’ that Empedocles appeals to in his account of perception runs into a different sort of trouble, having to do with Empedocles’ denial of the void (325b1–10, 326b6–28).⁷⁶ In neither case do we have a general criticism of underlying material changes, or any that could be easily generalized. More to the point, there is nothing here that affects the question of whether there can be underlying material changes given Aristotle’s theory of elements, which, as one might expect, is designed to avoid both sets of objections against his predecessors.⁷⁷

The one general objection which Aristotle repeatedly makes against his predecessors is that they regard the material nature of things as providing the *primary*, or even *sole*, explanation, and so leave the final cause entirely out of account.⁷⁸ But Aristotle does not go to the other extreme, advocating that one *only* give a teleological explanation and allowing no role to the material. On the contrary, he accepts both, insisting only on the *primacy* of teleological explanation. In *De generatione animalium* 5.8, he argues against Democritus that the front teeth fall out *both* because it is

⁷⁶ Theophrastus criticizes Empedocles’ appeal to pores in perception, arguing that as inanimate things have pores too, they should also perceive, thus erasing the distinction between the two: *De sens.* 12, 502.25–503.4 *Doxogr. Gr.*

⁷⁷ Elsewhere Aristotle offers other criticisms of Democritus and Empedocles—e.g., *De gen. et corr.* 1.2 and 2.6; *De caelo* 3.7–8; *De sens.* 4, 442a29–b24—but they likewise depend upon specific details of their systems.

⁷⁸ See *Phys.* 2.8 and *De gen. an.* 5.8 for criticisms along these lines of Empedocles and Democritus, respectively.

better and as a necessary consequence of the materials: it happens on account of the end, while *also* being necessary due to the material and efficient causes (789a8–14, b2–8, b12–15). If we take this as indicative of Aristotle's general explanatory stance, and apply it to the case of perception, what we would expect is that he would *not* rule out underlying material qualities and the changes they undergo. He would insist merely that they do not bear the *primary* responsibility for perception. The explanation of why perception occurs will instead be primarily (though not exclusively) in terms of the perceptible quality, our perceptual ability, and the end of perception. Precisely, we might add, what one would expect from an emergentist.

The rhetoric of anachronism should therefore be abandoned. To persist in it, when the real issue concerns the extent of Aristotle's disagreement with his predecessors, would be little more than a bait-and-switch. What Aristotle objects to in the 'bottom-up' approach of his predecessors is not that there is a bottom, but that they do not leave room for 'top-down' explanation, much less give it the pride of place he thinks it deserves. His insistence on the primacy of 'top-down' explanation, then, is not incompatible with a commitment to underlying physiological changes. What he rejects is a view that regards *all* causal explanation as stemming *from the lowest level*. But a Broad Church position is not committed to such a causal claim, only the ontological one that there *are* underlying physiological changes. Emergentists combine just this sort of ontological commitment with a 'top-down' explanatory approach.

2.4 *The Argument from Silence*

This brings us to the last argument, which concerns textual evidence (or lack of it). If Aristotle held a Broad Church position, we would expect him to say something about underlying physiological changes, either in general or by way of example. But, it is suggested, Aristotle is *silent* about such changes, and what he does say about perception leaves little room for them. The sense organs are simple in structure, without moving parts, and their sensitive portions are composed entirely out of homoeomerous material (Burnyeat, 'How Much Happens', 422–3). Of the four basic types of change Aristotle recognizes—generation, growth, locomotion, and alteration—the only change that seems appropriate to such organs is the last, and in this case he regards it as a distinct 'kind of alteration', or perhaps in an even more qualified vein as 'an alteration *of a kind*' (*ἀλλοίωσις τινς*).⁷⁹ But this, Burnyeat argues, leaves no 'textual

⁷⁹ Burnyeat, 'Still Credible?', 19; 'DA II 5', 34–7, 74, 76–7, 81–3.

space' for any underlying changes, even if there is 'logical space' ('DA II 5', 82–3).

This, I believe, is the strongest argument New Age Spiritualist interpretations have. And, as an argument *ex silentio*, it only goes so far. It establishes at most a *lack* of evidence for a thesis, which is not the same as *possessing* evidence against it, much less possessing evidence for the opposing thesis. Still, the embarrassment to a Broad Church position would be costly enough. In the absence of alternative explanations, that would count somewhat in favor of a New Age Spiritualist reading.

It is doubtful, though, that Aristotle is silent. He says several things that on the face of it commit him directly to underlying physiological changes in perception. This shifts the burden of proof considerably. To establish *silence*, it would have to be shown that these passages *cannot* coherently be read in this way, which would be a very high bar to clear indeed. What has been offered in the literature falls well short of that. We are given *alternative* readings to show that certain passages *need not* be read in a Broad Church way. But in that case the issue concerns the competing probabilities of rival readings, not silence. The *mere possibility* of an alternative reading does not constitute an argument against a Broad Church interpretation, much less an argument for a New Age Spiritualist one. What would have to be shown is that this alternative reading is *more probable*.

In three key cases, though, the comparison does not even seem close. The alternative readings strain, even at a grammatical level. Aristotle is not silent. The most that could be argued is that he does not voice a Broad Church position loudly or emphatically or often enough. But poor elocution—if indeed it is—is an even frailer reed than silence.

2.4.1 *The body always Undergoes Something* (De an. 1.1)

The first text appears explicitly to endorse a general commitment to underlying physiological changes. In the first chapter of the *On the Soul*, Aristotle sets out the following puzzle:

The states of the soul (τὰ πάθη τῆς ψυχῆς) also pose a difficulty. Do they all belong in common to that which has [a soul] too, or is any exclusive to the soul itself? For we have to come to grips with this, even though it isn't easy. In most cases, it seems, [the soul] does not undergo or produce anything without the body, such as getting angry, growing bold, wanting, and *perceiving in general*. Understanding is most likely to belong exclusively. (I.1, 403a3–8)

But in the discussion that immediately follows, Aristotle shows reservations as to whether even understanding is an exception, conceding that it may have some connection with the body after all (a8–15). He then

restates his earlier generalization with approval: ‘It is in fact likely that *all* the states of the soul (τὰ πάθη τῆς ψυχῆς) occur together with a body— aspiration, gentleness, fear, pity, boldness, as well as joy, loving and hating—since the body undergoes something in conjunction with these’ (a16–19). A similar claim is reiterated twice more. After three examples involving anger and fear (a19–24), Aristotle infers that ‘the states are clearly accounts in matter’ (λόγοι ἐν ὕλῃ, a24–5). This, in turn, has direct consequences for how such states should be defined (a25–b16). After a comparison of the different types of definition employed by natural science, mathematics, and first philosophy, Aristotle sums up the results of the discussion: ‘The states of the soul (τὰ πάθη τῆς ψυχῆς), we were saying, cannot be isolated from the natural matter of animals, in so far as they are just this sort of thing, as anger and fear are, and not like a line or a surface’ (b17–19). The passage as a whole is plainly programmatic. Aristotle is trying to make as general a claim as he can about the soul’s relation to the body and about the consequences this has for the proper form of definition for psychological states, as involving both matter and form. He countenances only one possible exception, the understanding; and even here he thinks there may be a connection with the body. If this is right, then Aristotle seems to be committed to underlying physiological changes in perception and quite possibly for every type of mental state in general. The passage appears to voice support, directly and explicitly, for both a Broad Church position and Chalcedonian Orthodoxy.

Burnyeat dismisses this as a ‘widespread illusion’ (‘DA II 5’, 82 n. 143). But how are we to be cured of this impression? Johansen suggests that the passage’s central claims are in fact much vaguer and weaker than have been thought. Aristotle is only claiming that ‘there is no mental process, with the possible exception of thought, which is not a process *of the body*’ (*Sense-Organs*, 11; emphasis mine). For a New Age Spiritualist, these will all be *bodily* processes. But they need not be, or involve, *material* ones (cf. Burnyeat, ‘Aquinas’, 146–9; cf. p. 14 above).

Some of Aristotle’s formulations could be read in this weaker way, as merely requiring embodiment: his first claim, for example, that none of these states occurs ‘without a body’ (οὐθὲν ἄνευ σώματος, 403a6) and later claims that they will always occur ‘together with a body’ (μετὰ σώματος, a17; cf. a15).⁸⁰ But his subsequent elaboration of the thesis cannot. He says that in all these cases the body undergoes something *in conjunction with* these states (ἅμα γὰρ τούτοις πάσχει τι τὸ σῶμα, a18–19). What the

⁸⁰ Sisko (‘Quasi-Alteration’, 351, esp. n. 26) thinks that the second of these claims may be stronger than the first; but even so, he still thinks it may only apply to emotions, as Burnyeat claims. My point is that it would not matter even if *both* were to be read in the weaker sense Johansen advocates. The clear and unambiguous reference to bodily change is in the succeeding lines, 403a18–19.

body undergoes, therefore, must be something that can be distinguished from *the state as a whole*—otherwise, there is nothing for its change to be in conjunction with (*ἅμα τούτοις*). The type of bodily change at issue *cannot be identical*, therefore, with the type of mental change, even if it should turn out on Aristotle's view that a single token event instantiates both types. If perception falls within the scope of 'all the states of the soul' at 403a16, as it does earlier at a3–7, then there will be a change which the body undergoes that is *not simply* the perceiving, but rather some underlying aspect of it.

The only way to avoid this conclusion is to deny the antecedent. Which is precisely what Burnyeat does.⁸¹ He argues that perception is *not* included within the scope of 403a16 and a24–5. Instead, Aristotle has in mind *πάθη* only in the narrow sense of *affections*, or even *passions* (in the sense of emotions), and not the broader sense used at 403a3, where it stands for *states* or *conditions* of the soul, including perception.⁸² The turning point is said to occur at 403a10–11, where Burnyeat claims these *πάθη* have been 'divided' into the soul's acts or affects (*τῶν τῆς ψυχῆς ἔργων ἢ παθημάτων*). After that, *πάθη* refers only to the *second* of these subdivisions; in particular, at 403a25 'no explicit stand is taken on the *erga* [i.e., acts] of the soul' ('How Much Happens', 433 n. 38).

This is a hard reading. Suppose that the phrase 'acts or affects' at a10–11 does introduce a sharp distinction and that the remarks about *πάθη* in the subsequent lines (403a16–25) are restricted to affects. Nothing yet follows. Burnyeat's reading requires a further tacit assumption, namely, that perception belongs among the soul's *acts* (*ἔργα*) and so is not covered by his remarks about *πάθη* and bodily processes. But this would be a very strange assumption for Aristotle to make, either for dialectical purposes or in the context of his own views. The most natural way to understand the contrast between 'acts and affects' is as parallel to the contrast found earlier in the passage between acting on something and being affected (cf. *πάσχειν* . . . *ποιεῖν*, 403a6–7). But perception falls on the wrong side of this divide. According to the *endoxa* or received views Aristotle considers, perception is a type of *being affected* or *acted upon* (*πάσχειν*).⁸³ It is a view he also endorses himself consistently throughout the corpus.⁸⁴ Aristotle

⁸¹ Burnyeat, 'How Much Happens', 433, esp. n. 38; 'Aquinas', 129–30; 'DA II 5', 82 n. 143.

⁸² On this broader use of *πάθος*, see H. Bonitz, *Index Aristotelicus*, 2. Aufl. (Graz, 1955; originally published, 1870), 556a60–b43.

⁸³ *De an.* 1.5, 410a25–6; 2.4, 415b24; 2.5, 416b33–5. This is something Burnyeat emphasizes himself at points (e.g., 'DA II 5', 71).

⁸⁴ *De an.* 1.5, 410a25–6; 2.4, 415b24; 431a4–6; *De insomn.* 2, 459b4–5; *De motu anim.* 7, 701b16; *Physics* 7.2, 244b7–12. Other passages confirm this indirectly. The argument of *De an.* 3.2, 425b25–426a25, for example, relies crucially on the assumption that the functioning of the perceptual capacity is the functioning of a *patient* (426a4–5, a9–11). The

does place careful qualifications on just how this passivity should be understood.⁸⁵ But none of them implies that perception is a case of *acting* or *producing* (ποιεῖν) instead. This is confirmed by his treatment of the understanding. Aristotle does recognize a type of understanding as active or productive in *De anima* 3.5. But he contrasts it explicitly with another type of understanding (430a11–17) that is passive and acted upon, *just like perception in general* (3.4, 429a13–18).

It might be argued, more tentatively, that Aristotle uses the phrase ‘acts or affects’ to mark a different contrast, between the kind of ἐνέργεια that perception is said to be in *De an.* 2.5 and ‘ordinary’ affections. But it is dubious that such a technical distinction, which requires so much effort on Aristotle’s part to tease out, could be presupposed so early on here, in a dialectical discussion; and that it would be introduced, without any further indication, by such non-technical language as ‘acts or affections’. This is what, in American football, is referred to as a Hail Mary pass. But not even such extreme measures will make sense of the remainder of passage.

The problem is that the New Age Spiritualist must read πάθη as shifting its sense several times in course of the passage. It is not just that its meaning would have to narrow suddenly at a16–25, without warning or explanation. It is that πάθη occurs *four more times* later in the passage, where it plainly has the broader meaning of *state* (403b10, 12, 15, 17). We also find the same kind of disjunction, ἔργα καὶ πάθη, followed again by πάθη by itself (b12–15), where it would be absurd to think πάθη shifts to a narrower sense. The natural scientist and the mathematician are both concerned with *states* of matter that are not isolable (τὰ πάθη τῆς ὕλης τὰ μὴ χωριστά, a10, a14). But the natural scientist is concerned with all ‘acts and states’ of a specific kind of body and matter (τοῦ τοιοῦδι σώματος καὶ τῆς τοιαύτης ὕλης ἔργα καὶ πάθη, a12), while the mathematician is concerned with them in abstraction, in so far as they are not the *states* of a specific kind of body (ἧ δὲ μὴ τοιοῦτου σώματος πάθη, a15). Aristotle’s claim about the scope of mathematics is not intelligible if πάθη is construed narrowly, either as affections or as passions. Mathematics obviously does not study how bodies are acted upon or our emotions, but the quantitative characteristics of bodies in general. But these closing remarks, concerning the scope of crafts, natural science, mathematics, and first philosophy (403b9–16), flow directly from the earlier discussion about the proper form of definition for the πάθη of the soul (403a25–b9). To make sense

argument in *Metaph.* Γ.5, 1010b30–1011a2 likewise assumes that external objects are agents that *produce* perception (ποιεῖ τὴν αἴσθησιν) in the subject.

⁸⁵ *De anima* 2.5, 417b2–7, b12–16. Cf. 3.4, 429a29–b5.

of the programmatic aims of the passage as a whole, we must construe $\pi\acute{\alpha}\theta\eta$ consistently throughout, in its broad sense, as a *state*.

Perception, then, should be counted as one of the $\pi\acute{\alpha}\theta\eta$ of the soul at 403a16–19 and a24–5. If so, Aristotle is committed to underlying physiological changes for every state of the soul, *including perception*. The only possible exception he leaves room for is understanding; and even this loophole may be closed.⁸⁶

2.4.2 The Organ's Qualities Affect Sensitivity (De an. 2.11)

In a passage at the end of *De anima* 2.11, Aristotle discusses how the constitution of the organ of touch affects its sensitivity, in a way that has implications for the kind of changes involved. The organ of touch is unique among the senses. In the other senses, the material is *neutral* with respect to the range in question: the eye jelly, for example, is colorless, the air in the ear silent. Touch, in contrast, inevitably possesses some of the qualities along its own range. For ‘the differentiae of bodies as such’ ($\alpha\iota\ \delta\iota\alpha\phi\omega\rho\alpha\iota\ \tau\omicron\upsilon\ \sigma\acute{\omega}\mu\alpha\tau\omicron\varsigma\ \eta\ \sigma\acute{\omega}\mu\alpha$)—the elemental qualities hot, cold, moist, and dry—are themselves tangible (423b27–9). Consequently, all bodies have them, including the organ of touch. But then touch will have ‘blind spots’:

For to perceive is to be affected in a certain way, so that the agent makes it the sort of thing it is itself in actuality, since it is [that sort of thing] in potentiality. For this reason we do not perceive what is similarly hot and cold or hard and soft, but only excesses, due to the sense being like a kind of mid-point in the opposition among perceptibles. Because of this, it discriminates between perceptibles, since what is midway is able to discriminate: for it is related to each of them as the other extreme is. And just as that which is going to perceive light and dark must be neither of these in actuality, but both in potentiality (and similarly in the other cases), so in the case of touch, [that which is going to perceive] must be neither hot nor cold. (424a1–10)

The passage does not say anything explicitly about underlying physiological changes in perception, only about standing material conditions in the organ. But Aristotle’s argument turns on the kinds of change the organ of touch *can* undergo given its constitution, and the kinds of change it *must* undergo if we are to perceive certain tangible qualities. To perceive an object, the organ must in some sense become the sort of thing the perceptible acting on it is (424a1–2). But if the organ has a particular perceptible quality as part of its constitution, it cannot *become*

⁸⁶ For related criticisms of Burnyeat’s reading, with which I am sympathetic, see Sorabji, ‘Sensory Processes and Intentionality’, 56–9 and M. Nussbaum and H. Putnam, ‘Changing Aristotle’s Mind’, 42–5.

the right sort of thing, for the simple Eleatic reason that it *already* is that sort of thing and so there would be no change or transition.⁸⁷ Hence (δῖό, a2), we cannot perceive any tangible object which is *similarly* (ὁμοίως) hot, cold, moist, or dry, that is, similar to the constitution of our own organ (a2–3). This is the Literalist’s strongest evidence.⁸⁸ Aristotle seems to be assuming that in the case of touch, if a subject is to perceive a tangible quality *F*, the organ must come to be *F*, in just the same sense that the object is. That would be why a given constitution blocks a particular content.

This cannot be Aristotle’s argument, though, if he is a New Age Spiritualist. On that view, our organ does not undergo any physiological change when we perceive, and so it should be irrelevant whether the organ of touch, for example, can *become* warm or not. Why are there blind spots, then, on a New Age Spiritualist’s view? Johansen suggests that the point does not concern physiological changes, but changes in perception

⁸⁷ Melissus *apud* Simpl. *In Phys.* 103.17–20; cf. DK 30 B 1. Gorgias: *apud* Sext. *Emp. Adv. math.* 7.71 (= DK 82 B 3); cf. *MXG* 979b26–33. It might also be in Parmenides (DK 28 B 8.12–13), if Karsten’s emendation of ἐκ τοῦ ἐόντος (followed by Reinhardt and Tarán) is to be accepted.

⁸⁸ Even so, it is not decisive: the point cannot be extended to the senses generally, much less the understanding. (On the senses, see §3.1 below; on the understanding, see my ‘Aristotle’s Argument for Why the Understanding is not Compounded with the Body’, *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 16 (2000), 135–75.) All Broad Church readings are committed to a weaker blind spot principle, though, because all hold that the organ must become like the perceptible quality through some physiological change. We might put this schematically as follows. When I perceive a quality *F* at *t*, my organ becomes like *F* by taking on *G* (allowing different Broad Church readings to specify *G* differently). If so, then I cannot come to perceive *F* at *t* if my organ is already *G* in the period leading up to *t*, because it could not then take on *G* at *t*. Literalism is just a special case of this more general position, where *G* is always identical with *F*. Nonliteralists do not require this: *G* need not be identical with *F* in every case. Thus, a nonliteralist might accept that *G* = *F* in the case of the tangible qualities—or at any rate, in the case of *hot, cold, moist, and dry* (cf. Philop. *In De an.* 432.33–433.1)—without inconsistency. But even if a nonliteralist insists that *G* is *never* identical with *F*, he could make still sense of Aristotle’s observation by supposing that being hot or cold or moist or dry *necessitate* having the relevant *G*. An organ with a certain temperature could not then come to perceive that temperature, since being *F* it would already be *G* and so could not come to be *G*, as is required. Both responses concede that in the case of touch there is a tight linkage between *F* and *G*. But both deny that this must be extended to perception in general.

A brief comment should be added here about Aristotle’s requirement that all the organs be *neutral* (424a7–10), since Sorabji has enlisted this as support for Literalism (‘Intentionality and Physiological Processes’, 215). Aristotle’s point is *not* that the organs must be *qualityless*, since we know that the organ of touch will have *some* temperature (a2–4, cf. 423b27–9), and hence a blend of hot and cold. It is rather that the sense must be ‘like a kind of mid-point’, and not either of the extremes, if it is to discriminate qualities along the range, including both endpoints (424a4–7). It is ‘both in potentiality’ (δυνάμει δ’ ἄμφω, a9) in the ways the senses generally are by being receptive of form ‘without the matter’. On the relevant sense of being potentially *F*, see §4.1 below.

(*Sense-Organs*, 215–17). If we are already *perceiving* a given quality, such as the warmth of the organ of touch, then we cannot *come to perceive* that quality in anything else.⁸⁹ ‘There is nothing in this explanation of the blind spot phenomenon’, Johansen concludes, ‘that lends support to a literalist interpretation’ (217).

Two features of this reading are worth noting. First, on this reading there are *no blind spots*, strictly speaking: the organ of touch will not be insensitive to any tangible qualities. On the contrary, it is actually perceiving the very quality to which it is allegedly blind. It just does not perceive it in an *external* object. Second, what blocks the perception of an external quality is *another perception*, namely, the perception of our own constitution, and not our constitution *per se*. Our constitution affects what we can perceive *only indirectly*, in so far as we are *perceiving* it. This would become evident if the perception of the organ were not continuous, but intermittent: the fact that the organ has a quality *F* as part of its constitution would not prevent it from perceiving *F* in other things, namely, at times when it was not perceiving *F* in the organ. The constitution of the organ thus plays no *direct* role in blocking perceptions. Neutral material conditions are thus *not essential* for perceiving the full range of qualities. They are required for perceiving other things only when there is a concurrent perception of the organ itself.

It is also a hard reading. The passage does not mention a *perception* of the organ at all. And for good reason. Aristotle takes it for granted that we do *not* perceive our own organs. In fact, our inability to do so is something that an adequate theory should be able to explain: ‘There is a difficulty as to why there is not also perception of the senses themselves and why, without something external, they do not produce perception, although there is within them fire, earth, and the other elements, of which there is perception in their own right or of what is concomitant to them.’ (2.5, 417a2–6)⁹⁰ Aristotle answers this by saying that the perceptual capacity must not have a perceptible quality ‘in actuality, but only in potentiality’, and so requires something that actually has the quality to affect it (2.5, 417a6–9), which in the case of perception will be external (417b19–20). But if this is right, then blind spots cannot arise via the indirect route Johansen suggests.

Aristotle’s explanation of the blindspot phenomenon is more direct. The tangible qualities of the organ of touch prevent our perceiving the

⁸⁹ By framing the question in terms of *coming* to perceive, the New Age Spiritualist can thus take advantage of the Eleatic argument, and so evade Cohen’s criticism (‘Hylo-morphism’, 66).

⁹⁰ A passage of which Burnyeat is well aware (‘DA II 5’, 39–40). As he rightly points out, the claim is just an instance of a more general principle that nothing naturally unified can affect itself: *Metaph.* 9.1, 1046a28; *Phys.* 8.4, 255a12–15.

same qualities *because* (διό, 424a2) the organ must itself take on certain qualities if we are to perceive them, and it can't if it already has them. The organ's material constitution has direct bearing on the sorts of physiological changes it can undergo and, as a result, what it can perceive.

2.4.3 *The Eye's Moisture is Affected by Visible Objects* (De gen. an. 5.1)

In *De generatione animalium* 5.1–2, Aristotle speaks even more directly about the material constitution of sense organs and how they affect perception. In the first chapter, he discusses the constitution of the eyes. Differences in eye color correlate with differences in our capacity for day and night vision. Both characteristics are due to the same cause, namely, the amount of *moisture* (τὸ ὑγρὸν) contained by the eye:

For some eyes have more moisture, others less, than is commensurate with the change, while others have a commensurate amount. Those eyes that have more moisture are brown-eyed, those that have less blue-eyed . . . (b34) We should take the same thing to be responsible for the fact that blue eyes are not sharp-sighted during the day, while brown eyes are not during the night. For due to having less moisture, blue eyes are changed more by light and visible objects *in so far as they are moist* and *in so far as they are transparent*. But vision is the change of this part in so far as it is transparent and not in so far as it is moist. Brown eyes are changed less due to having more moisture, since night light is weak, while at the same time the moisture is in general hard to affect at night too. (779b26–780a7)

The eye is both moist and transparent. But the two aspects are different: to see is for the eye to change in so far as it is transparent, and not in so far as it is moist. Still, the eyes are affected by visible objects in *both* respects, 'in so far as they are moist *and* in so far as they are transparent' (ὑπὸ . . . τῶν ὄρατῶν ἢ ὑγρὸν καὶ ἢ διαφανές, 780a3). It is simply incorrect to claim that what we find mentioned in these chapters are 'all static material conditions' that 'facilitate or impede accuracy of perception without adding to the processes that take place at the moment of perceiving' (Burnyeat, 'How Much Happens', 423).

One could not in fact ask for clearer evidence of a token identity view. When a visible object affects the eyes, they undergo a single change with two aspects—that is precisely why Aristotle has to speak of the change the eyes undergo 'in so far as' (ἢ) they have one characteristic or the other. This description also supports Chalcedonian Orthodoxy (see p. 254 above), since transparency seems to be a formal or 'higher-level' characteristic, while *being moist* is indisputably a material characteristic, indeed

an *elemental* one and thus at the lowest level in Aristotle's system.⁹¹ The fact, moreover, that he explains vision by reference to one of these aspects, namely, the higher-level one, is typical of his overall explanatory strategy. And it is evident here that it does *not preclude* the presence of an underlying material change or such changes having explanatory relevance. It is 'because the moisture is moved and affected a great deal' (διὰ τὸ πάσχειν τι μᾶλλον καὶ κινεῖσθαι τὸ ὕγρὸν) by extremely bright things that we temporarily cannot see, whether our vision is strong or weak (780a12–14). Too much moisture results in night blindness, as occurs in brown eyes, because at night the eyes' moisture is hard to affect or move (δυσκίνητον, a6), while too much dryness results in cataracts (a14–25). None of these explanations appeal to transparency, or the purity or clarity of the moisture, but rather the overall amount and balance of elemental qualities like moist and dry. Nor is moisture invoked to explain only failures or incapacities. Differences in vision are explained in part by whether the amount of moisture is *commensurate* (σύμμετρον) with the *commensurate change* (τῆς συμμέτρον κινήσεως), or excessive or deficient (779b26–8). These elemental conditions and the changes they permit are relevant to what type of vision is produced by visible objects, even if vision is a change in the eyes *qua* transparent.⁹²

Much to his credit, Johansen recognizes the difficulty this passage poses for the Spiritualist interpretation. His solution is to treat the καὶ in the key phrase ἢ ὕγρὸν καὶ ἢ διαφανές at 780a3 as 'corrective': instead of translating the phrase 'in so far as they are moist *and* in so far as they are transparent', he argues it should be construed 'qua moist, *or rather* qua transparent' (*Sense-Organs*, 106). This is an exceptionally hard reading. From a phrase that straightforwardly says '*A and B*', we are supposed to understand 'not *A*, but rather *B*'.⁹³ The context, in any case, rules it

⁹¹ One might be tempted to think of the effect on the eye jelly *qua* transparent as the material change underlying vision, as Broackes does ('Objectivity', 66–7; cf. 62–4), since the transparent is a characteristic of the organ's matter, and the effect that visible objects have on it is an effect common to certain inanimate objects, like the visual medium. But I suspect a New Age Spiritualist would view transparency as a *formal* characteristic, specified only *by reference to perception*: it is that feature of matter in virtue of which something *appears through* it and is seen. The effect of the visible object on the organ in so far as it is moist, in contrast, cannot be sidelined in this way.

⁹² On the continuum between normal and dysfunctional cases, see Sisko, 'Material Alteration', 146.

⁹³ Johansen (*Sense-Organs*, 106, n. 125) cites H. W. Smyth, *Greek Grammar* (Cambridge, Mass., 1980; originally published, 1920), §2870 and J. D. Denniston, *The Greek Particles*, 2nd edn. (Oxford, 1950; originally published, 1934), 292 I(8). But the exempla they cite all involve numerical estimates or obvious rhetorical heightening effects, and so bear little resemblance to the present context. Aristotle's phrase would have to be rendered something like: 'in so far as they are moist, nay, *transparent!*' But this would make irrelevant the subsequent line (780a3–4), as we shall see.

out. The sentence that immediately follows this phrase—namely, that vision is the change in the eyes ‘in so far as they are transparent *and not in so far as they are moist*’ (ἡ διαφανές, ἀλλὶ οὐχ ἡ ὑγρόν, 780a3–4)—is contextually relevant only if visible objects affect the eyes in *both* respects. This second line is not only *compatible* with an underlying physiological change, as Johansen concedes (*Sense-Organs*, 106–7). It *presupposes* such a change.

Johansen ultimately takes this second line to show that *even if* there are such changes, they are not part of the *explanation* of what vision is (*Sense-Organs*, 107). But this addresses a different question. *All* parties to the debate accept Aristotle’s ‘top-down’ approach to explanation, which does not restrict itself to basic, elemental qualities, but appeals primarily to higher-level qualities, such as transparency.⁹⁴ The critical question is whether such a strategy *excludes* underlying physiological changes. And plainly here it does not. In fact, such changes can have explanatory *relevance*, even if this falls short of full causal responsibility. Aristotle often appeals to underlying qualities when discussing variations in performance and behavior. They help to explain how well formal qualities and changes are implemented. It is thus an integral part of the overall story of even the ‘purest’ sense, vision.

It is worth noting that John Philoponus, who is often touted as a star witness for spiritualism, accepts such changes as well. To be sure, he does say that the *sense* is acted on by the form alone, which is received ‘cognitively’ (γνωστικῶς, *In De an.* 438.6–10 Hayduck). But Philoponus also insists that the *sense organ* is affected by perceptibles, in two ways in fact, both as a body and as a sense organ (439.15–17). This is not only the case with touch, where flesh and the internal organ grow hotter or colder (432.33–5, 438.13–15). As a sense organ, the eye is also affected by colors, which cause its contents to coalesce or disperse; and as a body, it is affected by the fire present in them, which heats it (439.18–20). The fact that the *sense* receives a form only ‘cognitively’ does not preclude underlying material changes taking place in the *organ*. *Philoponus thus rejects New Age Spiritualism*. At the same time, he also rejects Canonical Literalism. He asserts that in every sense except touch, the matter of the organ does *not* come to be *F* in the same sense that the perceptible object is *F*. Even in the case of touch, this only happens with the hot, cold, moist, and dry, and *not* the heavy, light, viscous, crumbly, rough, and smooth (432.33–433.1). He heads for the middle ground between these two positions, as shall we.

⁹⁴ See, e.g., Nussbaum and Putnam, ‘Changing Aristotle’s Mind’, 36; Sorabji, ‘Intentionality and Physiological Processes’, 223.

2.4.4 Activities 'Common to Body and Soul' (De an. 3.10)

The most that can be said against a Broad Church reading is that for Aristotle underlying physiological changes do not seem to have the *thematic centrality* that they do for us. Even if one grants the programmatic and general claims made in *De anima* 1.1, it is striking that he does not speak about physiological changes in perception *more frequently* in that treatise. Contrast discussions of passions or action, where reference to the body is unavoidable. According to Burnyeat, this shows that cognition is special.⁹⁵ If sensible forms cause themselves to be known, he urges, 'they had better do it with the least possible involvement of matter' ('How Much Happens', 433).

A great deal depends here on context, though. Aristotle distinguishes among his own psychological works according to how much or how little they are concerned with the material side of things. He contrasts those writings that are 'about the soul' (περὶ ψυχῆς) with those that are about 'states common to body and soul' (κοινὰ τῆς ψυχῆς καὶ τοῦ σώματος), where perception is explicitly included in the second group, as common to body and soul.⁹⁶ Given that he speaks about perception in both works, we should therefore understand the difference as one of *emphasis* or *focus*. The *De anima* concerns the soul itself, without much focus on the body at all, whereas the *Parva Naturalia* and *De motu animalium* have more to say about its role.⁹⁷

In any event, Aristotle does discuss the body in purely cognitive cases, such as memory and recollection. Differences in the ability to retain memories depend on the material quality of the central organ, in particular the extent to which it is hard, soft, moist and dry (*De mem. et remin.* 1, 450a32–b11). These qualities are invoked to explain how well the central organ 'takes the impression' of a memory and how long it retains it in the soul (ἐν τῇ ψυχῇ, 450b10–11), by referring to the way in which these elemental qualities promote or hinder the material changes involved. A more striking example, perhaps, is recollection, which is not a passive process like memory, but a kind of reasoning (συλλογισμὸς τις) and so found only in humans (2, 453a8–14). Aristotle is explicit about the

⁹⁵ Burnyeat, 'Still Credible?', 23; 'How Much Happens', 433; 'Aquinas', 129–30; 'DA II 5', 80 n. 138.

⁹⁶ *De sens.* 1, 436a7–8, b2–7; *De somno* 1, 454a9–11; *De an.* 3.10, 433b20. See Nussbaum and Putnam, 'Changing Aristotle's Mind', 41–2.

⁹⁷ Nussbaum and Putnam, 'Changing Aristotle's Mind', 37. C. H. Kahn ('Sensation and Consciousness in Aristotle's Psychology', *Archiv für Geschichte der Philosophie* 48 (1966), 43–81, reprinted in Jonathan Barnes, Malcolm Schofield, and Richard Sorabji (eds.), *Articles on Aristotle*, vol. 4: *Psychology and Aesthetics* (London, 1979), 1–31) examines at length the differences between these treatises, concluding that they are due to methodological considerations and questions of emphasis.

involvement of material changes: ‘The person engaged in recollection and performing a search *moves something bodily* (σωματικόν τι κινεῖ) in which the state resides’ (2, 453a22–3, cf. a14–15). This process can be disrupted, he goes on, in people who have ‘moisture around the perceptive region’ (ὕγρότης . . . περὶ τὸν αἰσθητικὸν τόπον), since the moisture, once moved, is not easily stopped (453a23–6). Similar causes are used to explain our inability to put an immediate stop to passions like anger or fear, or to get a phrase or tune out of our heads (453a26–31). The movements of moisture in our body also affect the *content* of mental states. Dream material is derived from waking experiences, but subsequently distorted by the turbulence of the bloodstream, caused by the rising heat from digestion (*De insomn.* 3, 461a8–24, b18–20). In all of these cases, our cognitive activity is affected by underlying material changes, especially as regards the elemental qualities hot, cold, moist and dry, and not only when things go wrong (cf. Johansen, *Sense-Organs*, 92), as the examples of memory, recollection, and night vision show. They help to explain the range of differences in performance, whether successful or unsuccessful.

Our survey of New Age Spiritualist arguments leads us to the following conclusions, then. A Broad Church reading is neither precluded by Aristotle’s doctrines nor anachronistic. It is also something about which he is not silent. On the contrary, there are texts that commit him to underlying physiological changes in perception and hence to a Broad Church position. He cannot be a New Age Spiritualist.

3. Against Canonical Literalism

Aristotle is committed to a Broad Church position. But is he further committed to *Canonical Literalism*? Canonical Literalism requires quite specific changes: whenever a subject comes to perceive a perceptible quality *F*, the relevant organ takes on the *exact same* quality, so that it becomes true to say the organ is *F* in just the same sense that the object is. Aristotle never says as much explicitly, of course—if he had, there could hardly have been such controversy. But it is naturally suggested by the model of assimilation, which forms the centerpiece of Aristotle’s theory of perception and understanding. Cognitive capacities, on his view, are capacities to *become similar* to the objects we have cognition of. They must be different from their objects to begin with, but potentially such as their objects actually are; and through the action of these objects they come to be actually like them. Talk of assimilation does not *entail* total similarity. But this is the simplest interpretation, and that weighs

somewhat in Canonical Literalism's favor. Why introduce qualifications if Aristotle himself does not?

3.1 Aristotle vs. Empedocles

The answer is that Aristotle *does* introduce qualifications, qualifications that on examination *preclude Canonical Literalism*. At two points, Aristotle severely criticizes Empedocles' theory of cognition, according to which 'like is known by like'. The move is significant, since superficially the theory has much in common with his own view. But this seems only to motivate Aristotle to more vigorous opposition, so as to distinguish his own view more, much as it had with Empedocles' *harmonia* theory of the soul (*De an.* 1.3). In the present case, Aristotle is equally emphatic: 'his theory necessarily leads to many impossibilities' (*ἀναγκαῖον δὲ συμβαίνειν πολλὰ καὶ ἀδύνατα τῷ λόγῳ*, *De an.* 1.5, 409b23–8).

Aristotle begins by pointing out that we not only have a cognition of the elements, but complexes of them, for example 'god or man or flesh or bone' (409b28–410a1). And it does no good to know each of the elements that make them up, without also knowing how these complexes are composed from them. Aristotle cites Empedocles himself, who emphasizes the importance of the proportions of elements in a compound like bone (DK 31 B 96). But then, Aristotle argues, Empedocles' theory requires more than just elements inside of us:

For each [element] will know what is like it, but none will know bone or man unless these are also present within. That this is impossible hardly needs to be said, though. For who would worry whether there is a *stone* or a *human* in the soul? Similarly, what is *good* and what is *not good*? The same holds for the other cases as well. (410a8–13)

Aristotle doesn't take the trouble to explain what is absurd about having a stone in one's soul. He thinks it's obvious. We can quickly rule out two narrow readings of the absurdity. First, it is not that we would have the object of cognition *itself* in our soul—that when I feast my eyes on an object, such as a stone, I literally consume *it*. It would be equally absurd if I were to have *any* stone in my soul or, more generally, an inner *replica* of every object I perceive or understand. Nor would Empedocles be open to this charge: he doesn't think we swallow objects whole.⁹⁸ But he is open to the charge that we *reproduce* every object within ourselves, and that's the point Aristotle is pressing here. Second, the absurdity cannot be that we would have a replica of the object *in the soul*, as opposed to the body.

⁹⁸ At most he thinks we imbibe *parts* of them, viz. the effluences constantly streaming off bodies that find their way into our sense organs: DK 31 A 86, 92.

That would rest on a tendentious distinction between soul and body that might easily be sidestepped. Aristotle's opponent could simply reply that the replica is in the body or the entire person, not 'in the soul'. Construed in either of these ways, Aristotle's objection would be of limited effectiveness against views of this sort. But in context he clearly intends a broad criticism of the view that 'like is known by like'.

One thing that is plainly absurd is the idea that inside of us we might have a foreign material like stone or a large physical object such as a human. Along these lines, Themistius exuberantly adds: 'And who would wonder whether a plane tree is present inside? Or a fig tree?' (*In De an.* 33.19–20 Heinze). But as Aristotle's subsequent example shows, the absurdity extends well beyond compound substances (410a11–13). Sinners cannot become good simply by entertaining pious thoughts, nor can judges become bad just by thinking about criminal acts. But that *is* what would happen, if the objects we cognize were always replicated within us. Aristotle adds a related criticism to this, concerning each of the categories. How, if like is known by like, are we to know the different kinds of being—what a substance is, or a quantity or a quality, and so on (410a13–22)? The more we reflect on specific cases, the more implausible it seems to require total similarity in every cognition. In general, no part of us becomes the kinds of things we have cognition of.

Later in the *De anima*, after he has provided his own detailed accounts of perception and understanding, Aristotle returns to this theme. He clarifies the sense in which perception and understanding 'are' their objects:

Now, in summarizing what has been said about the soul, we should say once more that the soul is, in a way, all the things there are. For the things there are can either be perceived or understood; and knowledge is in a way the things that can be known, perception the things that can be perceived. But we must examine in what way this is so. Knowledge and perception are subdivided by their objects: [knowledge and perception] in potentiality by [their respective objects] in potentiality, and in actuality by [their respective objects] in actuality. The part of the soul that can perceive and the part that can know are in potentiality these things, namely, that which can be known and that which can be perceived. But they are necessarily either the things themselves or their forms. Yet surely they are *not the things themselves*. For the stone is not in the soul, but rather its form. (431b20–432a1)

In claiming that the soul is 'all the things there are', Aristotle is quick to guard against two misunderstandings. The first would be that the soul at a given moment was actually all the things there are. In fact, it is all things *only* in potentiality, in so far as it can cognize each in turn. And even then, it will be these things only 'in a way' ($\pi\omega\varsigma$, 431b21, 23). It would be a mistake to think that in perceiving or understanding a given object, the

soul becomes that thing itself, since that would produce the absurdity of having a stone within us. The faculty ‘becomes’ its object *only* in so far as it has *the form* of its object ‘in the soul’.

Thus, whatever it means to have the form of an object in the soul, it cannot result in a *replica* of the object within us—Aristotle explicitly rejects that here. But Canonical Literalism is committed to just that.⁹⁹ We can put this more precisely. For any general term ‘*F*’,

(R) An *F* produces a *replica* if, and only if, it produces another instance of *F*.

But Canonical Literalism holds that whenever a perceptible quality *F* acts on the appropriate sense organ and someone perceives it, it becomes true to say that the organ is *F* in just the same sense that the object is—it contains another instance of *F*. According to Canonical Literalism, then, perception *always* results in a replica of the perceptible quality. But Aristotle *denies* that there is always a replica in perception. Therefore, he must reject Canonical Literalism as well.

It is worth stressing this point. Aristotle plainly thinks that one *can* have the form of *F* ‘in one’s soul’ while avoiding the absurdity of replicas—to his mind, that is just the advantage of his theory over Empedocles’. But if a replica doesn’t result, it must be because the organ has received the form of *F* in such a way that the ordinary consequences of being *F* do not follow. But then the predicate ‘*F*’ does *not* apply *in just the same sense* that it does to the object, as Canonical Literalism requires. For if the predicate did apply univocally, everything entailed by ‘*F*’ would hold in both cases equally and we would have a replica. To avoid replicas, then, one must deny that the predicate is applied univocally; and in doing so, one thereby rejects Canonical Literalism.

3.2 A Disanalogy between Perception and Understanding?

Literalists have not in general discussed Aristotle’s criticisms of Empedocles, so it is difficult to know how they might respond.¹⁰⁰ Sorabji is an exception, although even his remarks are brief and offered only in passing. He takes the example of the stone not to be about perception, but under-

⁹⁹ As Thorp picturesquely puts it, when I see, smell and hear a donkey, there will be ‘une petite poupée’ of the donkey, which brays and stinks, in a place close to my heart (‘Le mécanisme de la perception chez Aristote—étude de quelques problèmes’ [‘Mécanisme de la perception’], *Dialogue* 19 (1980), 575–89 at 575). But while Thorp regards such a theory as obviously false (576), he also thinks it is Aristotle’s: ‘il faut donc qu’il y ait, pour Aristote, une poupée du monde extérieur près du cœur’ (583).

¹⁰⁰ For example, Everson fails to mention either *De anima* 1.5 or 3.8 in his book-length study (*Perception*).

standing, and thinks that it shows how the two are *disanalogous*. On his view, Aristotle draws a ‘first tentative comparison’ between perception and understanding in *De anima* 3.4, insofar as both involve the reception of form. But he thinks Aristotle begins to move away from such talk almost immediately, so that by the time he reaches the example of the stone in *De anima* 3.8, he ‘realizes that the desired analogy is only partial’ (‘Intentionality and Physiological Processes’, 213). This, Sorabji contends, leads Aristotle to modify his account of understanding. His solution to the problem of the stone depends on a ‘*non-physiological* application of the word “form”, confined to the case of thought’ (214; emphasis mine).

The exact import of this last phrase is unclear. It obviously implies that there isn’t any *physiological* exemplification of the form of a stone and so no part of the body of which it becomes true to say that it is a stone in the sense that the stone itself is. But physiology isn’t quite to the point. Exemplifying the form of the stone *nonphysiologically* doesn’t help, if it remains true that some part of me is a stone in the same sense that the stone itself is. Sorabji’s point must be more general: when we think of a stone, there isn’t any change, physiological or otherwise, such that part of us literally becomes a stone—we don’t come to have a replica of the object inside of us. That this is absurd ‘hardly needs saying’, Aristotle rightly observes (410a10). But then *Sorabji rejects any extension of Canonical Literalism to the understanding*.

This is a significant concession. In making it, Sorabji accepts that (i) a literalist approach commits one to replicas; (ii) in some cases this leads to absurdities Aristotle is keen to avoid; and finally (iii) the way he avoids such consequences is by abandoning a strict literalist approach. How, then, can Aristotle still accept Canonical Literalism? Literalism may always lead to replicas, on Sorabji’s view, but it doesn’t always lead to absurdities. In the case of understanding, replicas would be absurd, and so Aristotle rejects literalism. But in the case of perception, Sorabji thinks, they are not. If so, then Aristotle can remain a Canonical Literalist, within its original prescribed limits. Replicas, according to Sorabji, are a problem *only* for the understanding. This is one of the key disanalogies between the two faculties.

There are of course differences in Aristotle’s treatment of perception and understanding. But in his criticisms of Empedocles, Aristotle does not oppose or contrast them in any way. To the contrary. His argument in the passage from *De anima* 3.8 rests on an extended, systematic parallel between perception and knowledge (431b22–8); and in *De anima* 1.5, he consistently pairs verbs of perceiving and knowing throughout,¹⁰¹

¹⁰¹ αἰσθάνηταί τε... καὶ ἕκαστον γνωρίζῃ, 409b24–5; γινώσκειν τὴν ψυχὴν καὶ αἰσθάνεσθαι, b30–1; γνωρίζει ἢ αἰσθήσεται, b31; cf. αἰσθάνεσθαι δὲ τὸ ὁμοιον τοῦ ὁμοίου καὶ γινώσκειν τῷ ὁμοίῳ τὸ ὁμοιον, 410a24–6.

without marking any general difference between them. Far from ‘tentatively’ advancing the analogy in *De anima* 3.4 and then quietly sidelining it, Aristotle appeals to the analogy both earlier and later, and on precisely the point at issue. He is not marking a contrast here between perception and understanding. Replicas are raised as a difficulty for cognition in general, not just the understanding.

The best Sorabji can do, it seems, is to make an argument from silence. None of Aristotle’s *examples* of replicas involve proper perceptibles. The only cases he explicitly mentions are of compound substances, nonperceptible qualities, and the categories. The elastic clause at the end of the passage, moreover—‘the same holds *for the other cases* as well’ (τὸν αὐτὸν δὲ τρόπον καὶ περὶ τῶν ἄλλων, I.5, 410a11–13)—is nonspecific. It needn’t be completely general, Sorabji might argue; it is only a vague gesture at more of the same kind of examples. This leaves some logical space. Aristotle doesn’t state explicitly that replicas of proper perceptibles are absurd, and so he might have been able to accept Canonical Literalism after all, within its original limits, as a doctrine about perception.

Silence is a very slender reed on which to support Canonical Literalism. Aristotle’s choice of examples is easily explained, given the rhetorical context. For purposes of *reductio*, one needs to pick manifest absurdities, and a compound like a stone is exactly the right prescription, as are qualities like good and not good. He can then comfortably generalize to quite different cases: ‘the same goes for the other cases as well’. Such rhetorical exigencies do not signal any disanalogy between perception and understanding.

If Aristotle *had* permitted replicas in perception, moreover, it would have undermined his critique of Empedocles dialectically. Aristotle attacks the principle that ‘like is known by like’, by extending it beyond the elemental cases Empedocles explicitly mentions to cases he doesn’t discuss, such as compounds and qualities, and then Aristotle argues that replicas in these cases are unacceptable. His strategy gives us a reason to reject Empedocles’ principle only if what is sought is a *fully general* account of cognition that applies to all cases equally; and Aristotle has a credible alternative, if the likeness principle he proposes in *De anima* 3.8 is meant to be fully general and so avoids replicas across the board. But if Aristotle splits the question and offers two different principles—one for perception, which entails replicas, and another for understanding, which avoids them—then Empedocles is off the hook. For Empedocles could help himself to the same strategy. He could claim that his likeness principle, and hence any commitment to replicas, applies only to the perception of elements, and then offer some other story for composites and qualities. After all, the only explicit evidence Aristotle can find in Empedocles concerns replicas of the elements; Empedocles is silent about

the rest. But then neither theorist would have a fully general likeness principle—the two theories would be on all fours in this regard. For Aristotle's critique to be fair, he must offer as general a theory as he demands from Empedocles. Given that he faults Empedocles for the generality of his account, Aristotle cannot himself have a gerrymandered solution, which requires replicas in perception and rejects them in understanding. His own account must be equally uniform and general.

A little reflection suffices to show that Aristotle would have found replicas in perception absurd too. Replicas of common and accidental perceptibles are problematic in just the way that replicas of stones or humans are. It would be just as absurd, and for just the same reasons, to require that a six-meter length or Diaries' son be present inside of me when I perceive such things. Replicas of proper perceptibles, in contrast, are more like replicas of the qualities good and not good. It is not so much that an animal couldn't replicate such qualities. It is rather that the central sense organ, the heart, would have to be able to instantiate all of them, perhaps in quick succession, just by having a perception of them. Aristotle would have to believe that 'the fleshy tables of the heart' not only become as hard as the hard surface I am touching¹⁰² or as rare and yielding as the air I wave my hand through, but likewise exhibit a play of colors as I look out on the world, emit an odor when I smell my morning coffee, and echo at full volume the lecture I am listening to.¹⁰³ The difficulty of observing the central organ¹⁰⁴ does not lessen this imagined absurdity, any more than it does in the case of the stone.

Nor is the problem simply a mechanical one. The burlesque that would have to play out in the chambers of the Aristotelian heart would not differ, in relevant respects, from the inner theater that Gilbert Ryle so relentlessly ridiculed in Descartes. It raises a quite general worry about the type of account being offered. As Theophrastus rightly objects against Empedocles, it invites a *homuncular regress*:

¹⁰² In any case, Aristotle actually *denies* that something hard is produced by something hard: *De gen. et corr.* 1.5, 320b21. (I would like to thank Istvan Bodnar for pointing this out.)

¹⁰³ Cf. Philop. *In De an.* 432.33–433.1 C. Freeland, 'Aristotle on the Sense of Touch', in Nussbaum and Rorty (eds.), *Essays*, 227–48 at 232; J. Barnes, 'Aristotle's Concept of Mind', *Proceedings of the Aristotelian Society* 72 (1971–2), 101–10, reprinted in Jonathan Barnes, Malcolm Schofield, Richard Sorabji (eds.), *Articles on Aristotle*, vol. 4: *Psychology and Aesthetics* (London, 1979), 32–41 at 38. Thorp ('Mécanisme de la perception', 583, n. 13) suggests that *De motu an.* 8, 702a7–10 shows the central organ is capable of such changes. Some changes, no doubt. But not enough to permit 'à la poupée [du monde extérieur] de se dissoudre et de se reconstruire au rythme du mouvement des yeux', as well as the full range of flavors, odors, and sounds.

¹⁰⁴ Sorabji, 'Body and Soul', 49, n. 22; 'Intentionality and Physiological Processes', 209–10; but cf. 'Intentionality and Physiological Processes', 222.

As regards hearing, it is absurd [for him] to think, when he appeals to internal sounds, positing an inner sound like that of a bell, that it is clear how [animals] hear. For on account of [the inner sound], we hear outer sounds. But on account of what will we hear *it* when *it* sounds? For the very same point still has to be answered.¹⁰⁵

Theophrastus in effect presents Empedocles with a dilemma. If one *hears* inner sounds in the same way as outer sounds, that is, by means of a still more interior sound, a vicious regress threatens. If, on the other hand, an inner sound does *not* have to be heard in this way—and according to Aristotle’s theory we do *not* hear the movement of air in our ear, when we are hearing properly (420a15–18)—why was an inner *sound* posited, a *replica*, in the first place? Perception requires a change through which the subject becomes in *some* way similar to the object. But why must the result *look* like, *sound* like, *smell* like, *taste* like, and *feel* like the object? Why would an exact replica be *required* if we do not have to perceive or be aware of it at all?

4. An Analogical Reading

Aristotle, as we have seen, rejects New Age Spiritualism: he is committed to physiological changes in perception, and hence to a Broad Church position. But he also rejects the specific physiological change that Canonical Literalism requires. If having a cognition of *F* required that some part of us become *F*, in just the same sense that the object is, there would always be a replica inside us, which Aristotle finds completely absurd. That leaves us with the remainder of a Broad Church reading, the complement to Canonical Literalism, which only requires a certain *likeness* to the object:

AN ANALOGICAL READING: If a subject *S* comes to perceive a perceptible quality *F* at time *t*, then *S* undergoes some physiological change in the relevant organ at *t* such that it becomes like *F*, even if it does not become true to say that the organ is *F* in just the same sense that the perceptible object is *F*.

This is no different from a Broad Church reading, except that it explicitly states that replicas are *not required*, thus ruling out Canonical Literalism. On an Analogical reading, then, there may be *some* cases where a change results in a replica of a perceptible quality—the best textual evidence would be in the case of the hot, cold, moist, and dry. But in general there will not be a replica in perception (if ever). What is essential in all

¹⁰⁵ *De sens.* 21, 505.12–15 *Doxogr. gr.*, reading τὸ γὰρ αὐτὸ in l. 15 with the MSS, rather than Wimmer’s correction, τοῦτο γὰρ αὐτὸ, printed in both Diels and Stratton.

cases is that there will be a relevant set of characteristics that is shared with the object, in virtue of which the resulting state will be about that object, whether or not there is a replica. The organ need be the same as the object merely in an *analogical* sense (cf. *Metaph.* Δ .9, 1018a13).¹⁰⁶

Aristotle distinguishes perception and understanding from other sorts of changes, where a replica *is* required, as cases where the form is received ‘without the matter’. These changes essentially involve the *transmission of information* or *content*. The resulting state is *about* the object, by means of a more limited kind of likeness, through a kind of transduction or transposition of characteristics found in the object. Such appeals to likeness naturally arouse suspicion. If the sense organ does not become exactly like the object, but only in a certain respect, a great deal hangs on how the *relevant* respect is determined; and, as the present controversy demonstrates, Aristotle does not spell this out for perception. But he *does* spell it out in connection with what he calls *phantasia*, a form of representation closely related to perception; and in this case the representation exemplifies the *proportions* of the perceptible object. Given the link between representation and perception, then, it is reasonable to look for proportions in perception as well. It turns out proportions in fact play a key role in Aristotle’s account of perceptible qualities.

4.1 Receiving Form without the Matter

It is important to keep in mind that Aristotle usually *does* require replicas in changes. Not only does ‘man beget man’, but hot things make other things hot, cold things cold, and so on (*De gen. et corr.* 1.7, 324a9–14).¹⁰⁷ This can be the case even when living things are altered by perceptible qualities, as when a plant is warmed or cooled (*De an.* 2.12, 424a32–b1).¹⁰⁸ The plant takes on warmth in such a way that it can be said to be warm in the same sense that the sun is (even if not to the same degree).

¹⁰⁶ Irwin (*Aristotle’s First Principles* (Oxford, 1988), 307–11) argues along similar lines that while the sense organ must *express* the form of the object, in the sense that we could infer from it what such an object would have to be like, it need not *realize* this form. In particular, the similarity with the object does not consist in my matter’s coming to have the causal powers of the object (308), such as, presumably, the ability to look like the object.

¹⁰⁷ Cf. *Metaph.* Z.7, 1032a24–5, b11–12; Z.9, 1034a21–30 (though cf. 1034b1–4); Δ .3, 1070a4–6. For an excellent survey of this principle more generally, and the restrictions and extensions Aristotle adds, see §3 (‘The principle of causal synonymy’) of I. Bodnar, ‘Aristotle, Physics’, *The Stanford Encyclopedia of Philosophy* (forthcoming), <<http://plato.stanford.edu/>>.

¹⁰⁸ Against Everson, who claims that plants are ‘not affected by temperature *even in the standard way*’: being mostly earthy, he argues, they could not be heated without losing their nature as plants; instead they only receive an influx of warm matter and are ‘not affected by the form at all’ (*Perception*, 87–9). Taking the warming of plants to be such an exceptional

Yet while plants get warm, they don't *feel* it. Aristotle contrasts changes like these, where something is 'affected with the matter' (πάσχειν μετὰ τῆς ὕλης, 424b1–3), with perceiving, where the perceptible forms are received 'without the matter' (ἀνευ τῆς ὕλης, 424a18–19).¹⁰⁹ This sort of change, he explains, involves a more limited likeness, which expressly *falls short* of replication:

Concerning every sense in general, we need to appreciate that the sense is that which can receive perceptible forms without the matter, just as wax receives the ring's signet without the iron or gold: it takes on the golden or brazen signet, but not in so far as [the ring] is gold or bronze. Similarly in this case, the sense of each [perceptible] is affected by what has color, or flavor, or sound, though not in so far as it is said to be each of these, but in so far as it is this sort of thing and in accordance with its *logos*. (424a17–24)

It is easy to mistake what is distinctive about this sort of change. At first glance, Aristotle's point might seem to be that the wax becomes like the ring *only in a certain respect*: in receiving the impression, the wax does not become another *metal ring*; rather, it only takes on the same surface contours.¹¹⁰ But that feature, of changing only in a certain respect, is not at all distinctive. *All* accidental change is like that. If I heat water on an electric stove, the water becomes like the heating element only in so far as both are hot, and not in other respects: it does not become red, or metallic, or hard, much less a kettle or a heating element (except in the extended sense that it is something that can heat other things). Plants, too, become like the sun, but only in so far as they become hot. In both cases, there is a replica, but it is only a replica of the heat, not the heating element or the sun. In general, an agent can make a patient like itself in one respect, while differing in all sorts of other ways. The limited likeness involved can be characterized schematically as follows:

(LL) If x is affected by y in so far as y is F , then x becomes F .

Such a principle only guarantees likeness in the relevant respect. But that is all that is involved in the replicas produced by ordinary accidental changes like warming. If the signet ring example is just an illustration of

change shows what difficulties the literalist interpretation is in; and it completely unhinges the contrast Aristotle is drawing in this chapter. But for my purposes, the crucial point remains intact. Plants *are* heated and cooled (καὶ γὰρ ψύχεται καὶ θερμαίνεται) and so *replicate* the agent; and yet they fail to perceive this, despite being animate and affected by perceptibles (τὰ φυτὰ οὐκ αἰσθάνεται ἕχοντά τι μόριον ψυχικὸν καὶ πάσχοντά τι ὑπο τῶν ἀπτόων, 424a32–b1).

¹⁰⁹ See also *De an.* 3.2, 425b23; 3.12, 434a30; *De part. an.* 2.1, 647a7, 28.

¹¹⁰ I ignore the fact that the depressions and projections will be reversed in the case of the wax, which is clearly not intended to be part of the *tertium comparationis*.

(LL), we lose the contrast Aristotle is trying to draw between receiving forms *with* the matter and *without* the matter.

Now, taking on an impression *is* an ordinary alteration for Aristotle. It is the kind of thing he can unproblematically explain using his standard account of alteration,¹¹¹ and it is perfectly in line with (LL). If taking on an impression was all Aristotle was after, he could have made his point as effectively with a stick and clay: when the round end of the stick is pressed into the clay, it takes on a cylindrical impression, but it does not become wooden. But it is obvious that such an example wouldn't have worked. Something essential has been lost. The wax does not merely take on an impression of the surface contours. What it takes on, Aristotle says twice, is the ring's seal or *signet* (τὸ σημεῖον, 424a20, a21).¹¹² This goes beyond the kind of likening that occurs with the stick, and not just because the signets on rings are pictorial (as ancient Greek signets overwhelmingly are). A signet produces a *sealing*, an impression that establishes the identity of its owner and consequently his authority, rights, and prerogatives. When a sealing is placed on a document, especially for legal or official use, it authorizes the claims, obligations, promises, or orders made therein.¹¹³ A sealing thus differs from other impressions in that it *purports to originate from a particular signet*. The wax thus receives the 'golden or brazen signet' (λαμβάνει τὸ χρυσοῦν ἢ τὸ χαλκοῦν σημεῖον, a20–1) which is representative of the office or person to whom the signet belongs. But

¹¹¹ In the *Categories*, Aristotle characterizes alteration as a change in quality (14, 15b12), and *shapes* as a kind of quality (8, 10a11–26). It is true that in *Physics* 7.3, he argues that certain changes of shape are not alterations, namely, those which result in *substances* (245b9–246a9; cf. 1.7, 190b5–6). But this scruple about substantial change does not affect the cases at issue here, which involve accidental change.

¹¹² Cf. Plato *Tht.* 191d. On the meaning of σημεῖον, see J. Spier, 'Emblems in Archaic Greece', *Bulletin of the Institute of Classical Studies* 37 (1990), 107–29 at 107; cf. L. Lacroix, 'Les "blasons" des villes grecques', *Études d'archéologie classique* 1 (1955–6), 91–115 at 92–3; J. Boardman, *Greek Gems and Finger Rings: Early Bronze Age to Late Classical [Greek Gems]* (London, 1970), 428–9. On classical finger rings, see Boardman, *Greek Gems*, 212–34.

¹¹³ In addition to sealing private correspondence, legal documents, and official public documents, sealings were used to indicate possession, identity (in voting) and also in sacrifice. For a good, brief summary of the uses of signets, with literary references, see D. Plantzos, *Hellenistic Engraved Gems* (Oxford, 1999), 18–22; also G. M. A. Richter, *The Engraved Gems of the Greeks, Etruscans, and Romans*, 2 vols., vol. i: *Engraved Gems of the Greeks and the Etruscans: A History of Greek Art in Miniature* (London, 1968), 1–4 and esp. Boardman, *Greek Gems*, 13–14, 235–8, 428–30. Possession is not limited to letters or objects either. A fourth-century BC Athenian clay impression of a signet, depicting a man and a woman embracing, has the legend: ΕΧΩ ΤΕ ΚΑΙ ΦΙΛΩ ΑΡΙΣΤΟΤΕΛΗ[Ν], A. Christodouloupoulou-Proukake ('Πήλινο σφράγισμα δακτυλιοθήτου από την Αθήνα', *Αρχαιολογική Έφημερίς* (1977), 164–70) examines the possibility that this might have belonged to Aristotle's mistress, Herpyllis, and concludes that while there is no conclusive evidence in favor of such an identification, it cannot be ruled out either. (I would like to thank Seth Schein for translating this article for me.)

although the signet is received, it is *not replicated*, for it is ‘not received in so far as [the ring] is gold or bronze’ (ἀλλ’ οὐχ ἢ χρυσὸς ἢ χαλκός, a21). What results is a *sealing*, not another golden or brazen signet. The latter is part of the power of one’s position or office and can be used repeatedly. The former is just a one-off effect.

High Church Spiritualism is right to this extent, then. When a form *F* is received without the matter, *F* is received and exemplified *in a different way*; consequently, the patient will be actually *F* in a different way as well. When *F* is received without the matter, no part of the patient need become a *replica* of *F*: it need not become true that the patient is *F* in the same sense that the agent is, as occurs in ordinary alteration, where the patient is affected ‘with the matter’. High Church Spiritualism is also right to regard receiving form without the matter as essentially involving the *transmission of information* or intentional content, where this need not involve cognition or consciousness, as the example of the wax makes clear. But Spiritualism is wrong to think that a different kind of being is required, or that material changes are somehow unnecessary. Although receiving form without the matter differs from ordinary changes, it is not unrelated to them. It is not merely *compatible* with such changes; it *requires* them. This is clear again from the example of sealing wax. The wax receives the signet *by* undergoing an ordinary change, by receiving the surface contours of the signet and replicating *them*.

In receiving form without the matter, strict replicas are no longer a necessary condition. Such reception typically involves a kind of *transduction*, where information is transmitted in a different form.¹¹⁴ When something receives the form of *F* ‘without the matter’, it does so by receiving some distinct, but relevantly related form, *G*:

TRANSDUCTION: If some *x* receives *F* without the matter from some *y*, then for some relevantly related *G* (where $G \neq F$),

- i. *x* receives *G* with the matter from *y* and so becomes a replica of *G*
- ii. *x* receives *F* by receiving *G* with the matter.

To say that *F* is received by receiving ‘the relevant *G*’ is of course only a promissory note, which must be cashed out if the theory is to make any genuinely substantive claims. But for Aristotle, the relevant characteristic will still be something *shared* by the agent, related to its being *F*, so that the patient will genuinely become like *F*. But it needn’t become a replica

¹¹⁴ For an illuminating examination of transduction, see Z. W. Pylyshyn, *Computation and Cognition: Toward a Foundation for Cognitive Science* (Cambridge, Mass., 1984), ch. 6. Although many of the details are specific to his computationalism, the general contours of the discussion are still of relevance.

of *F*. What is required, rather, is that it becomes a replica of *G*, so that it becomes *G* in just the same sense that the agent is *G*.¹¹⁵

Apply this to the case of the wax and signet ring.¹¹⁶ The wax impressed by a signet ring does *not merely* take on surface contours, as it would from a stick. It transmits information about the owner of the ring, by receiving his signet. But the wax does not do this by becoming another signet—it receives the signet ‘without the matter’. Instead, it becomes a sealing; and it does this by receiving the surface contours of the signet ‘with the matter’ and replicating them. The form of the signet is thus genuinely received, but in a transduced form: the wax receives *F* by becoming *G*, not by becoming *F*. The only literal similarity required between the wax and the signet is due to the underlying change that occurs with the matter, of taking on the surface contours of the ring.

One might be tempted to regard the reception of *F* in such cases as *nothing more* than the reception of *G*—receiving *F* is either reducible to receiving *G* or altogether eliminable, and our talk of receiving *F* ‘without the matter’ is a mere *façon de parler*, because all that is *really* going on is the reception of *G*. But that is just to assume that a form is genuinely received *only if* it is *replicated*; and that is precisely what Aristotle is calling into question here. Receiving form without the matter is a genuine type of reception. It just isn’t a replication of that form. It is true that in receiving *F* by receiving *G*, there is only a single event involved: receiving *F* and receiving *G* are, in Aristotle’s phrase, ‘one and the same in number’. But they are still two distinct types of reception. They differ, to use another phrase of Aristotle’s, ‘in being’—what it is to *be* each differs. Receiving *G* is a perfectly ordinary reception with the matter, while *F* is received without the matter, *by* receiving the relevant *G*. Receiving *F* without the matter is therefore *not reducible* to receiving *G*. It is merely *how F* is received, the mechanism *by which F* is received.

Again, we can apply this to the case of the signet ring. There is genuinely such a thing as sealing a document, and it is *not simply* impressing

¹¹⁵ Transduction may be a special instance of a more general pattern of how forms are transmitted. Alan Code has suggested to me (in conversation) that there may be a similar pattern in sexual reproduction, going in the *opposite* direction. Although ‘man begets man’, on Aristotle’s view, he does it by means of seed; and while the seed is a part of a living human being, Aristotle emphatically denies that it is a human being itself. Rather, it is something that can produce a human being, in virtue of the actual motions present within it. Here the agent has some relevant characteristic $G \neq F$, such that it can produce an *F* by acting on the patient. As in the case of perception, a form *F* is transmitted by means of actual characteristics distinct from it.

¹¹⁶ As should be evident, I take the wax and signet ring to be a *genuine* example (*οἶον*, 424a19) of receiving form without the matter, as it was for scholastic commentators, such as Philoponus (*In De an.* 444.17–26, cf. 437.19–25). Even Aquinas describes it as a ‘fitting example’ (*conveniens exemplum*, *In De an.* 2.24, §554).

shapes into wax, any more than signing a document is *simply* making a scrawl.¹¹⁷ There are not two separate acts here: there is not a distinct and separable act of signing in addition to making a scrawl, or a sealing in addition to the impressing. Rather, one does one *by* doing the other: one cannot seal a document without making an impression, or sign it without making a scrawl. The two are distinct types of act, even if a single event instantiates them both.

The fact that some relevant characteristic *G* is shared by agent and patient gives a literal sense to the claim that ‘the perceptive part is in potentiality the sort of thing the perceptible is *already* in actuality’ (τὸ δ αἰσθητικὸν δυνάμει ἐστὶν οἷον τὸ αἰσθητὸν ἤδη ἐντελεχείᾳ, *De an.* 2.5, 418a3–4), *without* conceding Literalism. The way in which something is potentially *F* depends on the way in which it would be actually *F*; and there is a sense in which the organ genuinely becomes like the object through perception (418a5–6). If so, then there should be a way (πῶς, *Phys.* 7.2, 244b11) in which the eye can be said to ‘whiten’ (λευκαίνόμενον, 244b8), even if it does not become literally white. It becomes the same ‘by analogy’ (*Metaph.* Δ.9, 1018a13), *analogically* white, if you will.¹¹⁸ It is like white in a relevant respect, even if it does not become true that it is white *in the same sense* that the perceptible object is. It is only in an analogical sense that ‘whitened’, ‘heated’, ‘sweetened’, and other predicates can in general be ‘said equally both of what is inanimate and animate, and again in what is animate, both of the non-perceptual parts and the senses themselves’ (ὁμοίως τό τε ἄψυχον καὶ τὸ ἔμψυχον λέγοντες, καὶ πάλιν τῶν ἐμψύχων τά τε μὴ αἰσθητικά τῶν μερῶν καὶ αὐτὰς αἰσθήσεις, 244b8–10).¹¹⁹

When Aristotle moves from sealing wax to perception in the opening of *De anima* 2.12, he makes a similar qualification. Though the sense is affected by an object with ‘a color, or flavor, or sound’, it does not do so ‘in so far as it is said to be *each of these*’ (ἀλλ’ οὐχ ἢ ἕκαστον ἐκείνων

¹¹⁷ Although with some signatures (such as my own), it is admittedly more difficult to see the difference.

¹¹⁸ Ward appeals to similar terminology, when she suggests that ‘the sense-organ resembles the sensible object analogically, but not qualitatively. In this respect, the senses may be said to represent the same information as the sensible object, without becoming qualitatively “such as” the object . . .’ (*Perception and Λόγος*, 230 n. 10). I would take issue with the opposition she draws between the analogical and the qualitative, since on my view the patient becomes qualitatively like the object in certain respects. But there may be only a verbal disagreement here, since she does not treat these as dichotomous in the rest of her article.

¹¹⁹ Everson rightly draws attention to this passage (*Perception*, 134–7), but fails to take any note of the qualifying hedge ‘in a way’ (πῶς) in the claim that the senses alter (244b10–11), a criticism rightly made by Sisko, ‘Quasi-Alteration’, 345–6. Compare similar hedges at *De an.* 3.8, 431b21, 23. New Age Spiritualist defenses depend crucially on this sort of qualification: see, e.g., Burnyeat, ‘DA II 5’, 36–7, 74, 78–9.

λέγεται, 424a23)—that is, not in so far as the object is said to be crimson, or spicy, or shrill¹²⁰—‘but rather in so far as it is *this sort of thing* and in accordance with its *logos*’ (ἀλλ’ ἢ τοιονδί, καὶ κατὰ τὸν λόγον, a24). The sense organ receives a particular perceptible quality, such as crimson, by being acted on by a crimson object. But it is affected not in so far as the object is crimson, but in so far as it has a more general feature by which it is crimson—the *proportion*, as I shall argue below (§§4.3–4), that characterizes crimson and so is part of its *form* and *account*. The phrase ‘in accordance with its *logos*’ expresses all three of these senses, but especially the first, which is crucial in the immediate sequel to our passage. Aristotle characterizes the sense as a kind of proportion (424a26–8), which, like the tuning of an instrument, can be damaged by extreme changes that destroy the balance of the sense organ (a28–32; cf. 3.2, 426a27–b7). To receive the form of crimson ‘in the soul’, then, does not entail that any part of our eye comes to be crimson—at least not in the same sense that the object is—any more than some part of us comes to be a stone when we perceive it. But this sort of reception does entail that there will be *some* relevantly related predicate that is literally true of both the crimson object and some part of our eyes, and in just

¹²⁰ Since these phrases have been construed in very different ways, it will help to be more explicit about how I construe the various phrases in the passage (translated above, p. 301). I take the object that has (τοῦ ἔχοντος) a given color, flavor, or sound in a22 to be the implicit subject of ‘is said to be’ (λέγεται) in a23, and ‘each of these’ (ἕκαστον ἐκείνων) to be the predicate, parallel to ‘this sort of thing’ (τοιονδί) in the next clause. The plural ‘these’ (ἐκείνων) refers back to the set of perceptible qualities just listed in a22. If so, then the distinction is between being affected by objects in so far as they are a given color, flavor, etc., and in so far as they are ‘this sort of thing’ (τοιονδί), that is, in so far as they have a related characteristic that is not identical with the color, flavor, etc. To read it as a contrast more favorable to the literalist, between being affected by objects *as such* and being affected by them *as colored*, ‘these’ (ἐκείνων) would have to refer back not to color, flavor, and sound, but to a singular expression, ‘what has’ (τοῦ ἔχοντος) them; also ‘each’ (ἕκαστον) would have to serve as the subject of ‘is said to be’ (λέγεται), as R. D. Hicks argues (*Aristotle, De anima* (Cambridge, 1907), 416 *ad loc.*). But Hicks admits that in addition to having to supply the plural ‘objects’, one would have to take ‘each’ not only as a subject, but implicitly again as a predicate, in order to give the proper antithesis with ‘this sort of thing’ (τοιονδί) in a24. One is not likely to find such clumsiness preferable unless one is already committed to literalism. Those who are not, such as Ward and Silverman, are apt to read ‘these’ (ἐκείνων) in the way I have suggested, as referring back to the perceptible qualities just mentioned (Ward, ‘Perception and *Λόγος*’, 220–1; Silverman, ‘Color-Perception’, 289, n. 9). But after that, we diverge. They think that ‘each of these’ (ἕκαστον ἐκείνων) is the subject of ‘is said to be’ (λέγεται) and that the subsequent contrast is between being affected by the object in so far as it has a *determinable* characteristic, like color, and in so far as it has a *determinate* characteristic, like crimson. I fail to see how this contrast would be relevant to the wax example or the argument in context. In contrast, I take Aristotle to be speaking generally about determinate perceptible qualities, like crimson, spicy, and shrill.

the same sense. Such a change is *necessary*, though *not* sufficient, for perception and understanding.¹²¹

The image of the signet ring has wider ramifications. Other images in the tradition, such as inscribing words on the tablets of the heart,¹²² also convey the themes of signification and intentional content. But the appeal to signet rings adds an epistemological dimension, due to the *legitimizing* function of seals. They are used to verify that a document and its contents have the authority of the person from which it originates, and so that its claims and commitments have his backing and sanction. In the case of perception, this amounts to the suggestion that our perceptions have *the backing of the world* and so provide us with a warranted basis from which to operate. Through perception, objects in the world give their *stamp* and *authority* to the messages the senses report about the differences among objects (*πολλὰς εἰσαγγέλλουσι διαφοράς*, *De sens.* 1, 437a2).¹²³

4.2 Phantasia and Understanding

Aristotle also uses sigillary language to explain memory traces. Memory on his view requires quasi-perceptual representations (*φαντάσματα*), which are produced from perceptual stimulations (*αἰσθήματα*) in such a way as to be like them. In fact, they are even said to be ‘like perceptual stimulations but *without the matter*’ (*ὥσπερ αἰσθημάτων ἔστι πλὴν ἄνευ*

¹²¹ I take the opening of *De anima* 2.12 to offer a *necessary* condition of perception, something that holds of all perception, but *not* a *sufficient* condition, something that belongs only to perception or even only to cognition. As the wax example shows (and possibly also the medium), it is possible to receive form without the matter in the absence not only of cognition and consciousness, but even life. Cf. Philoponus *In De an.* 444.17–20; Sorabji, ‘Intentionality and Physiological Processes’, 218–19. Those who take it as a sufficient condition are forced to claim that the comparison with wax sealings is nothing more than an analogy, and a bad one at that, which ‘limps’: J. Owens, ‘Aristotle: Cognition a Way of Being’, *Canadian Journal of Philosophy* 6 (1976), 1–11, reprinted in John R. Catan (ed.), *Aristotle: The Collected Papers of Joseph Owens* (Albany, 1981), 74–80 at 77–8; Owens, ‘Soul as Cognitive’, 91; cf. F. Brentano, *Die Psychologie des Aristoteles, insbesondere seine Lehre vom NOΥΣ ΠΟΙΗΤΙΚΟΣ* (Mainz, 1867), 81.

¹²² e.g., Aesch. *Supp.* 179, *P. V.* 789, *Ag.* 80, *Choe.* 4501, *Eum.* 275. (For close discussion, see D. Sansone, *Aeschylean Metaphors for Intellectual Activity = Hermes Einzelschriften*, Heft 35 (1975), ch. 4.) Cf. also Pind. *O.* 10.2–3; Soph. *Phil.* 1325, *Trach.* 683; and of course Plato *Phil.* 38e–39c.

¹²³ The problem with the metaphor, of course, is the existence of counterfeit seals, as Solon well appreciated (cf. *D. L.* 1.57; *Diod. Sic.* 1.78). Alan Code has suggested to me (in conversation) that Aristotle might not have regarded this as an insuperable objection. The fact that there are counterfeits does not undermine the authority perception has ‘all or for the most part’. In any case, it is clear that Aristotle did not give these implications the consideration that the Stoics later would.

ἔλης, *De an.* 3.8, 432a9–10; cf. 3.7, 431a15). In this case, it is the perceptual stimulation which acts as a signet:

For it is clear one must take the state, the possession of which we call memory, to be like a kind of picture (οἶον ζωγράφημα τι), which occurs due to perception in both the soul and the part of the body that has it. For the change that occurs is imprinted (ἐνσημαίνεται), like a kind of impression (οἶον τύπον τινὰ) of the perceptual stimulation, just as signatories produce with their rings (οἱ σφραγιζόμενοι τοῖς δακτυλοῖς). (*De mem. et remin.* 1, 450a27–32; cf. b2–3, 5, 10–11)

This passage contains obvious echoes of Plato's *Theaetetus*, where the imagery is used to explain memory and ultimately false belief (esp. 191CE, 194C–195A). But the systematic connections with Aristotle's own use of the imagery in perception are more significant. In general, representations will be similar to perceptual stimulations *in content*: they are 'of what perception is of' (ὡν αἰσθησίς ἐστιν, *De an.* 3.3, 428b12–13). And this is because representations are similar *as changes* to the perceptions they come from (ὁμοίας ταῖς αἰσθήσεσι), and so can affect the animal in similar ways (429a1–6; 428b10–17). But the memory traces 'stamped' from perceptual stimulations are *not replicas*: while they are of perceptions, of what we have previously seen or heard or experienced before, they are not perceptions themselves.¹²⁴ They are essentially of what is no longer present, and so involve a backwards reference to another experience, while perception concerns only what is present.¹²⁵ Unlike the most basic perceptions, which are always true, representations are capable of falsehood.¹²⁶ They are weaker than perceptions and cannot compete with fresh perceptual stimulations.¹²⁷ Representations thus differ quite generally from perceptions.

Aristotle intends understanding to be explained along the same lines as perception. It, too, involves becoming like its object without necessarily producing a replica:

[The understanding] must, therefore, be unaffected and yet able to receive the form and potentially be this sort of thing, though not it. Its situation is similar [to that of perception]: just as that which can perceive is related to the things that can be perceived, so the understanding is related to the things that can be understood. (*De anima* 3.4, 429a15–18)

¹²⁴ *De mem. et remin.* 1, 449b22–3, 450a19–21.

¹²⁵ *De mem. et remin.* 1, 449b13–15, 450a25–7, b11–20.

¹²⁶ *De an.* 3.3, 427b11–12, 428b17–30.

¹²⁷ *De insomn.* 3, 460b32–461a7; *De div. per somnum* 1, 463a8; 2, 464a16–17. Cf. *Rhet.* 1.11, 1370a28. For a full discussion of the nature and content of *phantasia*, and its relation to perception, see my 'Aristotle and the Problem of Intentionality' ['Problem of Intentionality'], *Philosophy and Phenomenological Research* 58 (1998), 249–98.

The understanding is capable of becoming, *not* the object of understanding itself, but only this *sort* of thing (τοιούτων ἀλλὰ μὴ τοῦτο, 429a16). If the object of understanding were a concrete individual, such as a zebra, then Aristotle would only be denying that my understanding is able to become *that* individual zebra; at most, it would become the *same type* of thing the object is. But it is just as absurd to think that my understanding, or any part of me, ever becomes a zebra, whether or not it is the same zebra as I am thinking about. More likely, the expressions ‘this sort of thing’ (τοιούτων) and ‘it’ (τοῦτο) refer back to the *form* mentioned in the previous clause (τοῦ εἶδους, a15–16), and so to objects of understanding in a narrower sense: not to any individual zebra, that is, but to the essence or form of zebras, what it is to be a zebra. But then Aristotle denies that our understanding literally becomes such *forms* and so replicates them. It can only become ‘the sort of thing’ these forms are. Aristotle’s point here is parallel to the one in *De an.* 2.12, when he claimed the sense was affected not by a color as such, but only by this sort of thing (τοιονδί, 424a24). This is as it should be. For if any part of me could exemplify what it is to be a zebra, it would become a zebra. Just as in perception, my understanding’s ability to become the ‘sort of thing’ the form of zebra is is more limited. It is a matter of me exemplifying *certain* characteristics the form of zebra has, without necessarily exemplifying *all* of them. Becoming like it in a certain way allows me to *understand* what zebras are, rather than having to *become* one—that predicate need never apply to any part of me. Nothing like Canonical Literalism can hold for the understanding.¹²⁸

If we apply the model of transduction to the understanding, we arrive at the following. When we understand *F*, our understanding receives the

¹²⁸ One might object that replicas *do* occur in one important set of cases. In the case of objects ‘without matter’ (τῶν ἀνευ ὕλης, *De an.* 3.4, 430a3), Aristotle claims that ‘what understands and what is understood are the same’ (τὸ αὐτὸ ἐστι τὸ νοοῦν καὶ τὸ νοούμενον, a3–6; cf. *De an.* 3.5, 430a19–20; 3.7, 431a1; *Metaph.* A.9, 1075a2–5). Which objects he has in mind is never made clear; for all we know, they may be separate substances or intelligences. But I take the point here to be roughly this. As with perception, the activity of the understanding and the activity of its object are ‘one and the same’ (cf. *De an.* 3.2, 425b26–426a26). But unlike perceptible objects, or even objects of understanding that *have* matter, there is *nothing more* to the objects in question *than this activity*. Hence, in such cases, the activity of understanding will be one and the same as the object itself, and not merely its activity. This ‘sameness’ needn’t yield replicas, however, even in this restricted set of cases, since Aristotle states (and never retracts) that what it is to understand and what it is to be understood—their being—are *not* the same (*Metaph.* A. 9, 1074b38), just as the activity of perception and of the perceptible also ‘differ in being’ (*De an.* 3.2, 425b27, 426a16–17). If that’s right, then only accidental sameness is at issue, in which case we cannot validly infer that the understanding is *F* just because its object is—such an inference is what Aristotle rejects as the ‘fallacy of accident’ (*De soph. el.* 24; *Phys.* 3.3). But even if replicas were allowed in this limited range of cases, it still would not give us the equivalent of Canonical Literalism for the understanding, since replicas would not result in *every* case of understanding.

form of *F* without the matter, that is, without necessarily replicating *F*—the understanding need not be *F* in the same sense in which the object is. The understanding receives *F*, moreover, by our undergoing ordinary changes: for some relevant *G* (where this in general will be distinct from *F*), we receive *G* with the matter and so have replicas of *G* within us. If our earlier surmise about proportions is correct, this may well involve taking on some of the proportions of the object, and at least in the most rudimentary cases, of basic perceptual concepts (cf. *De an.* 3.8, 432a11–14).¹²⁹ That this is in fact Aristotle's view is clear from a digression in *De memoria*, where he argues that precisely this sort of proportional model underlies thoughts.

4.3 *Phantasia and Proportions*

In remembering an earlier event, we are often able to judge when it happened, at least roughly. Aristotle explains this by appealing to our general ability to judge or estimate magnitudes:

For a person does not think of things that are large and far away by thought extending to that place, as some say vision does (since a person will think in a similar way even if they do not exist), but rather by a proportional change. For in it there are similar shapes and changes. How will it differ when a person thinks of larger things from when he thinks that they are smaller things? For everything inside is smaller, just as things outside are likewise proportional. Perhaps just as something else in the person can be taken to be proportional to the forms, so too [there is something proportional] to the distances. (*De mem. et remin.* 2, 452b11–16)

Aristotle holds that since we can think about things whether they exist or not, we must do so by means of something inside each of us (*ἄλλο ἐν αὐτῷ*, 452b16). In fact, we do it by means of a proportional

¹²⁹ Aristotle distinguishes the *most basic* form of understanding, which he regards as always true (or, at any rate, never false), from complex thoughts that involve additional operations he calls 'combination and division' (*De an.* 3.6, 3.8; *Metaph.* Θ.10; cf. *De interp.* 1). These operations seem to refer to predication and negation in propositional thoughts; but they are presumably involved in the construction of complex concepts as well. Yet even if the appeal to proportions is restricted to the most basic concepts, it may place substantive constraints on what can be understood. Aristotle not only seems to accept such a restriction (*De mem. et remin.* 1, 449b30–450a14), but even worries whether we can ever understand anything that is 'separate from magnitude' (*De an.* 3.7, 431b18–19). It is obviously possible to form a complex concept about items separate from magnitude (as I did in formulating this sentence). But it might not be possible to have *the most basic kind* of understanding of them, if all the basic or primitive concepts are drawn directly from perceptions and quasi-perceptual representations, and the latter always involve magnitudes.

change (τῆ ἀνάλογον κινήσει, b11–12) that *models* the complex relations among objects over time: in particular, their shapes (σχήματα, b12), forms (εἶδεσιν, b15), distances (ἀποστήμασιν, b16), and changes (κινήσεις, b13). Just as these different magnitudes stand in various proportions to one another, so do various features of the change inside of us. We can even judge a given set of objects to have a larger *absolute* size, if the representation includes a part proportional to our distance from the objects (b13–16). The ‘proportional change’ to which these magnitudes belong is presumably a quasi-perceptual representation (φάντασμα), since such representations always underlie thoughts on Aristotle’s account, especially thoughts about continuity, time, and magnitude.¹³⁰

Two points are immediately salient here. The first is that given the size of the large, distant objects in question, *strict replicas* are a nonstarter. They would involve the same absurdity Aristotle urges against Empedocles. Hence, the appeal to proportions. Second, Aristotle need not even be committed to *scale models*, where the proportions exhibited by the model are along the same *dimensions* as the proportions they represent—length by length, height by height, duration by duration—differing only in their absolute value. Any change inside a human will inevitably be smaller than objects that are ‘large and far away’. But in fact the same proportions may be preserved by magnitudes along different dimensions. A phonograph record, to take Wittgenstein’s example (*Tractatus*, 4.014; cf. 4.01), preserves the proportions of the music’s auditory and temporal magnitudes in *spatial* magnitudes in the record’s grooves. What is essential for Aristotle is simply this: the magnitudes of an object are represented by the magnitudes of a representation, that is, by the magnitudes of an internal bodily state, where all that need be shared in common are the *proportions* between their respective magnitudes.

Representations will thus be ‘like’ their objects in very definite respects. The resulting similarity is fairly abstract. A representation will possess the same *relation structure* as its object, including the relations between its magnitudes—it is a *homomorph*, if you will, of the object represented. If scale models are *not* required, moreover, then the models may not even bear a superficial resemblance to the objects, as quite diverse things might exemplify the same set of proportions. This is important, since the representations in question are not tiny objects, but changes that travel in the bloodstream and can be stored in the area around the heart.¹³¹ The fact

¹³⁰ *De mem. et remin.* 1, 449b30–450a14; *De an.* 3.7, 431a14–17, 431b2; 3.8, 432a4–10. For a discussion of the textual issues in the passage, see J. E. Sisko, ‘Space, Time and Phantasms in Aristotle, *De memoria* 2, 452b7–25’, *Classical Quarterly* 47 (1997), 167–75.

¹³¹ *De mem. et remin.* 1, 450a27–b11 (cf. a10–12); 2, 451b16–452a10 (cf. 452a12–b7), 453a4–26; *De insomn.* 3, 461b11–24; cf. 2, 459a23–b7; 3, 460b28–461b1.

that such changes embody these proportions, Aristotle believes, enables us to have the corresponding thoughts about large and far away objects.

Aristotle need not intend this as a full account of the content of such representations. Proportions alone would seriously underdetermine their content, since too many things share the same proportions. But he clearly is saying something about the way such representations are *realized*, at least in humans, about the *mechanism* that enables us to have such thoughts.¹³² And that is all we need for present purposes, since we are not trying to give a full account of the content of perceptions here (or of representations). All we are trying to determine is the character of the *underlying material changes* involved. This passage establishes that they share a set of proportions in common.¹³³

4.4 *Perceptible Qualities and Proportions*

Representation, as we have seen, is not only generated from perception, but is a similar sort of change and so has similar content (see above, p. 308). Hence, it is reasonable to look for proportions in perception too. But, it may be objected, this is where the analogy fails us. There is a straightforward sense in which proportional models can be used for common sensibles, like extension, time, and change, all of which have a quantitative aspect. Proper perceptibles, in contrast, are essentially qualitative for Aristotle, and he would resist any attempt to reduce quality to quantity. How, he asks rhetorically at one point, can states like white, sweet, and hot be *numbers* (*Metaph.* N.5, 1092b15–16)? That's the sort of thing that Academics and Atomists believe, not sensible Aristotelians. And Aristotle explicitly rejects Democritus' attempt, as we have seen, to reduce the proper perceptibles to common perceptibles, like shapes (*De sens.* 4, 442b10–14).

Qualities are *not reducible* to quantities, to be sure. But Aristotle thinks that some qualities have quantitative aspects, in so far as they are defined by a *proportion* of constituent qualities along the same range.¹³⁴ This

¹³² The material realization is nonetheless quite important, since a given realization will possess causal powers that, in the relevant context, help to account for its particular content. Again, the example of the phonograph record is illuminating: the proportions of its grooves are not, in and of themselves, sufficient to pick out the musical content of the record—there are conceivably many other things, besides the musical performance, that share the same proportions. But in the context of the playback system (e.g., turntable, amplifier, and speakers), they bear a very direct relation to the music, which they are capable of reproducing.

¹³³ For a more extensive analysis of this passage, see my 'Problem of Intentionality', 260–3.

¹³⁴ For an excellent, close discussion of Aristotle's use of mathematics in perception, see Sorabji, 'Mathematics and Colour'.

point is most obvious where there are differences in degree (*μᾶλλον καὶ ἥττον*). Aristotle takes intermediate *temperatures* straightforwardly to exhibit proportions of the two extremes.¹³⁵ Presumably other tangibles, at least moist and dry, are no different. *Sounds* can also be treated successfully in this way, as Aristotle well knows and accepts.¹³⁶ Pitch is defined relatively, in terms of an interval, which can be expressed as a ratio. Originally, this was understood as a ratio of the lengths of two sections of a string, such that each section produced one of the pitches, or of features of other means of sound production.¹³⁷ But attempts were made, as early as Archytas (DK 47 B 1) and Plato (*Tim.* 67AC, 79E–80B), to see this as a function of a physical quantity belonging to the transmitted sound itself, such as speed.¹³⁸ In fact, because of this approach's success in music (*De sensu* 3, 439b30–440a6), Aristotle seems happy to apply proportions in the much more striking cases of *colors* and *flavors*.¹³⁹ And while he does not expressly say so, he might not have been averse to treating *odors* in this way as well, given his view that the differences between odors are close to that between flavors and that they are therefore ordered analogously between their contraries.¹⁴⁰

Now, qualities in the different modalities—crimson and spicy, for example—might turn out to share the same numeric ratio. Aristotle believes that, just as in music, there are only a determinate number of whole number ratios among colors (3, 439b30–440a2) and flavors (4, 442a12–16). He acknowledges, moreover, that qualities in the different modalities are similar to one other ‘by analogy’ (*κατ’ ἀναλογίαν*, *De gen. et corr.* 2.6, 333a28–30).¹⁴¹ But they will not be the same *qualities*, because proportions are always proportions *of* something: the numbers that stand

¹³⁵ *De gen. et corr.* 2.7, 334b8–16, esp. b14–16.

¹³⁶ See, e.g., *An. post.* 2.2, 90a18–23; *De an.* 3.2, 426b3–7; *De gen. anim.* 5.7, 786b25–787b20; *Metaph.* A.2, 997b21; A.5, 985b32; I.1, 1053a15–17.

¹³⁷ For a clear and accessible introduction to the use of ratios in Greek harmonics, see the introduction to A. Barker (ed.), *Greek Musical Writings*, 2 vols., vol. i: *Harmonic and Acoustic Theory* (Cambridge, 1989), esp. 5–8. The monochord, whose two sections were used to measure the ratios, appears to have been the invention of a fifth-century theorist, Simos (see M. L. West, *Ancient Greek Music [Greek Music]* (Oxford, 1992), 240–1). But ancient testimonia link the discovery of the ratios to other methods of sound production: a smith's differently weighted hammers, strings held taut by different weights, cymbals of different thickness, and vessels filled with different amounts of liquid. For an exacting and critical discussion, see West, *Greek Music*, 234.

¹³⁸ Aristotle disagrees with the specific reductionist analysis Archytas and Plato offer, but not the relevant physical quantity, much less the general project: *De an.* 2.8, 420a26–b4.

¹³⁹ Colors: *De sens.* 3, 440b14–26. Flavors: *De sens.* 4, 442a12–31. *Metaph.* I 2, 1053b28–1054a13.

¹⁴⁰ *De sens.* 4, 440b28–30; 5, 443b3–20.

¹⁴¹ He also calls them *σύστοιχα* (*De sens.* 6, 448a16–17), presumably because they will occupy the same position in their respective orders or lists.

in proportion to one another are the amounts of *constituents* in the mixture.¹⁴² Perceptible qualities are thus defined as proportions of a specific pair of contrary qualities along the same range. So while crimson and spicy might share the same numeric proportion, they will still be proportions of different contraries: one is a proportion of white and black, the other a proportion of sweet and bitter.

There are two ways, then, in which something might take on the proportions of a given perceptible quality, such as crimson. It might exemplify them (i) in the same contrary qualities as the perceptible quality—so, in the case of crimson, in the amounts of white and black. Or it might exemplify them (ii) in some other set of contrary qualities. The first case results in a *replica* of the perceptible quality, since we have the *same* proportion of the *same* contraries.¹⁴³ But not in the second case. The same proportion is received, but in *different* contraries, and so it need not produce a replica of the perceptible quality. What results instead will depend on the specific contraries that exemplify the proportion. These may be (a) proper perceptibles in a different modality, such as hot and cold, or (b) a pair of contraries that are not proper perceptibles at all, such as being viscous and being runny. In either case, (a) or (b), the proportion of the perceptible quality can be received without producing a replica, and hence without the matter.

If perception involves exemplifying the proportions of the perceptible quality in this second way, (ii), then there is a clear and precise sense in which the organ becomes like the object and has its form within it, without receiving the matter and hence without producing a replica. And it derives from Aristotle's own approach to qualities and the structure of their respective quality-spaces. The organ takes on the defining ratio of the perceptible quality, without exemplifying it in the same contraries. For each kind of sense organ, there will be a specific set of contraries that exemplify the proportions in the relevant modality—no any set will do.¹⁴⁴ It might be the case that in vision, for example, the proportion of white to black will be embodied in the proportions of proper perceptibles like hot and cold, or qualities that are not proper perceptibles, like runny or viscous. In either case, we do not end up with a

¹⁴² See esp., *Metaph.* I 2, 1053b28–1054a13, which specifically mentions proportions of colors and sounds. The same assumption also underlies Aristotle's critique of Pythagorean and Platonic appeals to numbers as the being of things: *Metaph.* N. 5, 1092b16–22; cf. A. 9, 991b13–20.

¹⁴³ A point well made by Bradshaw, 'Dual-Logos Theory', 156.

¹⁴⁴ This is comparable to the representation of *absolute* distances in the proportional models of 'large and far away' objects (*De mem. et remin.* 2, 452b13–16), or of *absolute* elapsed time of remembered events (b17–22). In each case, there will be some specific correlation between magnitudes in the subject and those represented, which itself is not a function of proportions, but some primitive feature of this particular mechanism.

replica of the object perceived.¹⁴⁵ Which contraries Aristotle might have chosen is not as pertinent as the general story: the proportions of perceptible contraries are mapped on to the proportions of specific contraries in the respective organs, thus allowing transduction. The resulting states of the organ are thus *not* ‘abstract ratios’, such as could be represented purely in numbers or with barcodes.¹⁴⁶ They *concretely embody* the proportions of the qualities of the object in their own contraries. This is essential to their role as *underlying* material changes, when the perceptible form is received without the matter.¹⁴⁷

When lavender is left in a room, the air, like my nose, is affected by it precisely in so far as it is fragrant. Both the air and my nose take on the same proportions as define the fragrance. ‘What, then,’ Aristotle asks, ‘is smelling besides being affected in a certain way?’ (*De an.* 2.12, 424b16–17). Unlike the air, which exemplifies this proportion in the same contraries, in my nose the proportion is exemplified in some other pair of contraries. Hence, I smell lavender, while the air becomes fragrant (b18). By taking on its proportion in this way, in a functioning organ of smell, I receive its fragrance without the matter.

5. Conclusions

It should be plain from the opening survey that, contrary to what Mrs Thatcher once claimed, there *is* an alternative. We are not confined

¹⁴⁵ Even if the proportion is embodied in proper perceptible qualities, and so would be in principle observable, it still will not mirror or replicate the particular object in question. The fact that there will be some changes in the organ in response to a perceptible object, that exhibit some correspondences to its perceptible features, isn’t absurd in the way that replicating the object is. On the contrary, Aristotle’s commitment to underlying material changes and to some kind of similarity require him to accept some story such as this.

¹⁴⁶ As Silverman, for example, claims (‘Color-Perception’, 279; cf. 290, n. 16); some things Price says are also suggestive of this (‘Perceptions’, 295). Ward, ‘Perception and *Λόγος*’, in contrast, seems to draw all the right distinctions at 222, but then go awry on 227, when she claims that if we are to speak precisely what affects the sense is not a sensible quality, such as a color, but a ratio (e.g., 3:2). On the reading I have defended, the organ is instead affected by *the sensible quality* and receives it; but it does so by embodying the same ratio in a pair of contraries, even if they are not the same contraries as are present in the sensible object.

¹⁴⁷ If the *De insomniis* passage about menstruating women staining mirrors red (2, 459b23–460a26) is in fact genuine—something that might reasonably be questioned, since the passage is not only poorly connected to the context, but makes claims about vision and menstruation at odds with Aristotle’s views elsewhere (L. Dean-Jones, *Women’s Bodies in Classical Greek Science* (Oxford, 1994), 229–30)—then the reciprocal *action* posited between subject and object (*ὡσπερ καὶ ἡ ὄψις πάσχει, οὕτω καὶ ποιῆ τι*, 459b27; *ἀντιποιεῖ*, 460a25) would be the transmission of this ratio. Since, however, these proportions will be exemplified in different sets of contraries, it need not result in literal coloration in both cases, against Woolf, ‘Eye-Jelly’.

to the two dominant parties. And there is reason to think that both are mistaken. Aristotle seems committed to there being *some* physiological change in perception, without its necessarily resulting in a *replica* of the perceptible quality. That is just what it is for a form to be received without the matter: information about the object is transmitted by preserving only certain aspects of its form, thus effecting a transduction. For Aristotle, proportions provide the relevant, information-bearing feature in a range of cases. In explaining how we can think of certain things, he appeals to the proportions of the underlying representations; and in accounting for the quality-space of proper perceptibles, he likewise appeals to proportions, the proportions of the perceptible contraries that define each sensory range. By exemplifying the same proportions as the perceptible quality perceived, but in a different set of contrary qualities, the sense organ can come to be relevantly like the perceptible quality, without replicating it.

Sorabji's Latitudinarianism comes *extremely* close to this view. He, too, insists on an underlying physiological change in all perception, and takes this to consist in exemplifying the defining ratio of the perceptible quality in question. He denies, moreover, that the proportions of material elements in the organ change in such a way that the quality *F* is exemplified in the same way that it is in the object. The main difference is that, for Sorabji, this results in another instance of the same perceptible quality, such that it will be true to say that the organ is *F* in just the same sense as the object, along with any of its consequences, such as observability. But if Aristotle is opposed to replicas in cognition as a general rule, as I have argued, this is precisely what should be jettisoned. All Sorabji has to lose is Canonical Literalism itself.

Bibliography

- ACKRILL, J. L., *Aristotle the Philosopher* (Oxford, 1981).
 ALEXANDER, S., *Space, Time, and Deity*, 2 vols. (London, 1934; originally published, 1920).
 BARKER, A. (ed.), *Greek Musical Writings*, 2 vols., vol. I: *Harmonic and Acoustic Theory* (Cambridge, 1989).
 BARNES, J., 'Aristotle's Concept of Mind', *Proceedings of the Aristotelian Society* 72 (1971–2), 101–10; reprinted in Jonathan Barnes, Malcolm Schofield, and Richard Sorabji (eds.), *Articles on Aristotle*, vol. 4: *Psychology and Aesthetics* (London, 1979), 32–41.
 BOARDMAN, J., *Greek Gems and Finger Rings: Early Bronze Age to Late Classical* (London, 1970).
 BODNAR, I., 'Aristotle, Physics', *The Stanford Encyclopedia of Philosophy* (forthcoming), <<http://plato.stanford.edu/>>.

- BONITZ, H., *Index Aristotelicus*, Zweite Auflage (Graz, 1955; originally published, 1870).
- BRADSHAW, D., 'Aristotle on Perception: The Dual-Logos Theory', *Apeiron* 30 (1997), 143–61.
- BRENTANO, F., *Die Psychologie des Aristoteles, insbesondere seine Lehre vom ΝΟΥΣ ΠΟΙΗΤΙΚΟΣ* (Mainz, 1867).
- BROACKES, J., 'Aristotle, Objectivity and Perception', *Oxford Studies in Ancient Philosophy* 17 (1999), 57–113.
- BROADIE, S., 'Aristotle's Perceptual Realism', in J. Ellis (ed.), *Ancient Minds = The Southern Journal of Philosophy*, suppl. vol. 31 (1992), 137–59.
- BURNYEAT, M. F., 'Is an Aristotelian Philosophy of Mind Still Credible? (A Draft)', in Nussbaum and Rorty (eds.), *Essays*, 15–26.
- 'How Much Happens when Aristotle Sees Red and Hears Middle C? Remarks on *De anima* 2.7–8', in Nussbaum and Rorty (eds.), *Essays*, 421–34.
- 'Aquinas on "Spiritual Change" in Perception', in D. Perler (ed.), *Intentionality*, 129–53.
- 'De anima II 5', *Phronesis* 47 (2002), 28–90.
- BYNUM, T. W., 'A New Look at Aristotle's Theory of Perception', *History of Philosophy Quarterly* 4 (1987), 163–78.
- CASTON, V., 'Aristotle and the Problem of Intentionality', *Philosophy and Phenomenological Research* 58 (1998), 249–98.
- 'Aristotle's Argument for Why the Understanding is not Compounded with the Body', *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 16 (2000), 135–75.
- CHARLES, D., *Aristotle's Philosophy of Action* (Ithaca, 1984).
- CHRISTODOULOPOULOU-PROUKAKE, A., 'Πήλινο σφράγισμα δακτυλιόλιθου ἀπὸ τῆν Ἀθήνα', *Ἀρχαιολογικὴ Ἐφημερίς* (1977), 164–70.
- COHEN, SHELDON M., 'St. Thomas Aquinas on the Immaterial Reception of Sensible Forms', *The Philosophical Review* 91 (1982), 193–209.
- COHEN, S. MARC, 'Hylomorphism and Functionalism', in Nussbaum and Rorty (eds.), *Essays*, 57–73.
- DEAN-JONES, L., *Women's Bodies in Classical Greek Science* (Oxford, 1994).
- DENNISTON, J. D., *The Greek Particles*, 2nd edn. (Oxford, 1950; originally published, 1934).
- EVERSON, S., *Aristotle on Perception* (Oxford, 1997).
- FREELAND, C., 'Aristotle on the Sense of Touch', in Nussbaum and Rorty (eds.), *Essays*, 227–48.
- GRANGER, H., 'Aristotle and the Functionalist Debate', *Apeiron* 23 (1990), 27–49.
- 'Aristotle's Perceptual Realism', in J. Ellis (ed.), *Ancient Minds = The Southern Journal of Philosophy*, suppl. vol. 31 (1992), 161–71.
- GUTHRIE, W. K. C., *In the Beginning: Some Greek Views on the Origins of Life and the Early State of Man* (Ithaca, NY, 1957).
- HALDANE, J., 'Aquinas on Sense Perception', *The Philosophical Review* 92 (1983), 233–9.

- HEINAMAN, R., 'Aristotle and the Mind-Body Problem', *Phronesis* 35 (1990), 83-102.
- HICKS, R. D., *Aristotle, De anima* (Cambridge, 1907).
- HOFFMAN, P., 'St. Thomas Aquinas on the Halfway State of Sensible Being', *The Philosophical Review* 99 (1990), 73-92.
- IRWIN, T., *Aristotle's First Principles* (Oxford, 1988).
- JOHANSEN, T. K., *Aristotle on the Sense-Organs* (Cambridge, 1998).
- KAHN, C. H., 'Sensation and Consciousness in Aristotle's Psychology', *Archiv für Geschichte der Philosophie* 48 (1966), 43-81; reprinted in Jonathan Barnes, Malcolm Schofield, and Richard Sorabji (eds.), *Articles on Aristotle*, vol. 4: *Psychology and Aesthetics* (London, 1979), 1-31.
- KIM, J., 'Epiphenomenal and Supervenient Causation', in P. A. French, T. E. Uehling, Jr., and H. K. Wettstein (eds.), *Causation and Causal Theories = Midwest Studies in Philosophy* 9 (1984), 257-70; reprinted in his *Supervenience and Mind*, 92-108.
- 'Mechanism, Purpose and Explanatory Exclusion', in J. E. Tomberlin (ed.), *Philosophy of Mind and Action Theory = Philosophical Perspectives* 3 (1989), 77-108; reprinted in his *Supervenience and Mind: Selected Philosophical Essays*, 237-64.
- 'The Myth of Nonreductive Materialism', *Proceedings and Addresses of the American Philosophical Association* 63 (1989), 31-47; reprinted in his *Supervenience and Mind*, 265-84.
- 'The Nonreductivist's Troubles with Mental Causation', in J. Heil and A. Mele (eds.), *Mental Causation* (Oxford, 1993; originally published, 1993), 189-210; reprinted in his *Supervenience and Mind*, 336-57.
- *Supervenience and Mind: Selected Philosophical Essays* (Cambridge, 1993).
- LACROIX, L., 'Les "blasons" des villes grecques', *Études d'archéologie classique* 1 (1955-6), 91-115.
- LEAR, J., *Aristotle: The Desire to Understand* (Cambridge, 1988).
- LEWIS, F. A., 'Aristotle on the Relation between a Thing and its Matter', in T. Scaltsas, D. Charles, and M. L. Gill (eds.), *Unity, Identity, and Explanation in Aristotle's Metaphysics* (Oxford, 1994), 247-77.
- McLAUGHLIN, B. P., 'The Rise and Fall of British Emergentism', in A. Beckermann, H. Flohr, and J. Kim (eds.), *Emergence or Reduction? Essays on the Prospects of Nonreductive Physicalism* (Berlin, 1992), 49-93.
- MAGEE, J. M., 'Sense Organs and the Activity of Sensation in Aristotle', *Phronesis* 45 (2000), 306-30.
- MILLER, F. D., Jr., 'Aristotle's Philosophy of Perception', *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 15 (1999), 177-213.
- MODRAK, D., *Aristotle: The Power of Perception* (Chicago, 1987).
- NUSSBAUM, M. and PUTNAM, H., 'Changing Aristotle's Mind', in Nussbaum and Rorty (eds.), *Essays*, 27-56.
- NUSSBAUM, M. C. and RORTY, A. O. (eds.), *Essays on Aristotle's De anima* (Oxford, 1995; originally published, 1992).
- OWENS, J., 'Form and Cognition in Aristotle', *Ancient Philosophy* 1 (1980), 17-27.

- ‘Aristotelian Soul as Cognitive of Sensibles, Intelligibles, and Self’, in J. R. Catan (ed.), *Aristotle: The Collected Papers of Joseph Owens* (Albany, NY, 1981), 81–98.
- ‘Aristotle: Cognition a Way of Being’, *Canadian Journal of Philosophy* 6 ([1976] 1981), 1–11; reprinted in John R. Catan (ed.), *Aristotle: The Collected Papers of Joseph Owens* (Albany, NY, 1981), 74–80.
- PASNAU, R., *Theories of Cognition in the Later Middle Ages* (Cambridge, 1997).
- *Thomas Aquinas on Human Nature: A Philosophical Study of Summa Theologiae Ia 75–89* (Cambridge, 2002).
- ‘What is Cognition? A Reply to Some Critics’, *American Catholic Philosophical Quarterly* 76 (2002), 483–90.
- PERLER, D. (ed.), *Ancient and Medieval Theories of Intentionality = Studien und Texte zur Geistesgeschichte des Mittelalters*, Band 76 (Leiden, 2001).
- PLANTZOS, D., *Hellenistic Engraved Gems* (Oxford, 1999).
- PRICE, A. W., ‘Aristotelian Perceptions’, *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 12 (1996), 285–309.
- PYLYSHYN, Z. W., *Computation and Cognition: Toward a Foundation for Cognitive Science* (Cambridge, Mass., 1984).
- RICHTER, G. M. A., *The Engraved Gems of the Greeks, Etruscans, and Romans*, 2 vols., vol. i: *Engraved Gems of the Greeks and the Etruscans: A History of Greek Art in Miniature* (London, 1968).
- SANSONE, D., *Aeschylean Metaphors for Intellectual Activity = Hermes Einzelschriften*, Heft 35 (1975).
- SHIELDS, C., ‘Intentionality and Isomorphism in Aristotle’, *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 11 (1997), 307–30.
- SILVERMAN, A., ‘Color and Color-Perception in Aristotle’s *De anima*’, *Ancient Philosophy* 9 (1989), 271–92.
- SIMMONS, A., ‘Explaining Sense-Perception: A Scholastic Challenge’, *Philosophical Studies* 73 (1994), 257–75.
- SISKO, J. E., ‘Material Alteration and Cognitive Activity in Aristotle’s *De anima*’, *Phronesis* 41 (1996), 138–57.
- ‘Space, Time and Phantasms in Aristotle, *De memoria* 2, 452b7–25’, *Classical Quarterly* 47 (1997), 167–75.
- ‘Alteration and Quasi-Alteration: A Critical Notice of Stephen Everson, *Aristotle on Perception*’, *Oxford Studies in Ancient Philosophy* 16 (1998), 331–52.
- SLAKEY, T. J., ‘Aristotle on Sense Perception’, *The Philosophical Review* 70 (1961), 470–84.
- SMYTH, H. W., *Greek Grammar* (Cambridge, Mass., 1980; originally published, 1920).
- SORABJI, R., ‘Aristotle, Mathematics, and Colour’, *Classical Quarterly*, NS, 22 (1972), 293–308.
- ‘Body and Soul in Aristotle’, *Philosophy* 49 (1974), 63–89. Reprinted in Jonathan Barnes, Malcolm Schofield, and Richard Sorabji (eds.), *Articles on Aristotle*, vol. 4: *Psychology and Aesthetics*, (London, 1979), 42–64.

- SORABJI, R., 'From Aristotle to Brentano: The Development of the Concept of Intentionality', in H. Blumenthal and H. Robinson (eds.), *Aristotle and the Later Tradition = Oxford Studies in Ancient Philosophy* 1991, suppl. vol., 227–59.
- 'Intentionality and Physiological Processes: Aristotle's Theory of Sense-Perception', in Nussbaum and Rorty (eds.), *Essays*, 195–225.
- 'Aristotle on Sensory Processes and Intentionality: A Reply to Myles Burnyeat', in D. Perler (ed.), *Intentionality*, 49–61.
- SPIER, J., 'Emblems in Archaic Greece', *Bulletin of the Institute of Classical Studies* 37 (1990), 107–29.
- THORP, J., 'Le mécanisme de la perception chez Aristote—étude de quelques problèmes', *Dialogue* 19 (1980), 575–89.
- TWEEDALE, M., 'Origins of the Medieval Theory that Sensation is an Immaterial Reception of a Form', *Philosophical Topics* 20 (1992), 215–31.
- WARD, J. K., 'Perception and *Λόγος* in *De anima* ii 12', *Ancient Philosophy* 8 (1988), 217–33.
- WEST, M. L., *Ancient Greek Music* (Oxford, 1992).
- WOOLF, R., 'The Coloration of Aristotelian Eye-Jelly: A Note on *On Dreams* 459b–460a', *Journal of the History of Philosophy* 37 (1999), 385–91.

The Discriminating Capacity of the Soul in Aristotle's Theory of Learning

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Introduction

Richard Sorabji, who has inspired and fostered my philosophical work and career for many years, has remarked that among ancient philosophers, Aristotle most expanded perceptual content to compensate for the denial of reason and belief to animals.¹ He has also claimed that Aristotle introduced the idea that perception is a kind of discriminating as part of his attempt to distinguish belief from perception.² I offer this essay to Richard as a set of further considerations concerning the significance of discrimination in Aristotle, both perceptual and intellectual.

The Problem of Learning

After Plato any discussion of learning has to solve the problem Plato framed in the *Meno*:

And how, Socrates, will you look for that of which you do not at all know what it is? What will you put forth as the subject of inquiry without knowing it? And if you happen to find what you want, how will you know that this is the thing which you did not know?—I know, Meno, what you mean; but just see what a controversial argument you are introducing. You argue that a human being cannot look for what he knows nor for that which he does not know; for he will not go looking for what he knows: he already knows it, and in that case he has no need to

¹ R. R. K. Sorabji, 'Intentionality and Physiological Processes: Aristotle's Theory of Sense-Perception', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford: Clarendon Press, 1992), 196; R. R. K., Sorabji, *Animal Minds and Human Morals. The Origins of the Western Debate* (London: Duckworth, 1996), 17–20.

² Sorabji, *Animal Minds*, 35–6; see 58 for the expansion of the term to incorporate judgement instead of mere discrimination.

look for it; nor will he go looking for what he does not know, for he will not know what he is looking for either.³

How is it possible to seek new knowledge from a state in which this knowledge is not somehow present to the learner? For if a piece of knowledge is already present to the learner, there is no reason to start looking in the first place. If it is *not* present to the learner, he will not be able to start an investigation, let alone recognize new information as the answer he was looking for. If knowledge acquisition—which we all experience—is to be explained, we must have a genuine starting point of the investigation as well as the means to make progress and gain new insight.

Both Plato and Aristotle accept that learning starts from knowledge that has been present to the learner, though they differ as to what kind of knowledge this is. In consequence, they also differ about the ways in which we are capable of gaining new insight.

Plato's discussions focus on the progress from ordinary belief to philosophical knowledge.⁴ He claims that full knowledge of the Forms is present in the learner's mind, although the soul's incarnation has made him unaware of this precious knowledge. Therefore Plato redefines learning as remembering, or recollecting, a piece of knowledge that is present in the learner's mind all along. Sense perception, teaching, and dialectic serve as triggers of recollection because, e.g., they help recognize a Form on the basis of similarities and dissimilarities among several instances of that Form.

Aristotle rejected the Platonic Forms and the corresponding type of innate knowledge and recollection. By way of summary of the more detailed examination that follows, one might say that for Aristotle pre-existent knowledge consists in cognition that is present in the learner's soul as a result of sense perception or teaching. In order to advance on that cognition the soul possesses at least two different capacities of discrimination, one perceptual and the other intellectual. The former is innate, and therefore ready to use from birth; the latter is acquired, and continuously updated to the latest state of knowledge the learner has acquired. If this account is true, the discriminating capacities of the soul are part and parcel of Aristotle's answer to the Meno problem, and hence deserve more attention than they normally receive in modern treatments of Aristotle's epistemology, psychology, and science.⁵

³ Plato, *Meno* 80e–81a.

⁴ D. Scott, *Recollection and Experience. Plato's Theory of Learning and its Successors* (Cambridge: Cambridge University Press, 1995), 13–85, has persuasively argued that Plato hardly discusses everyday learning.

⁵ See, e.g., the brief remarks by D. K. W. Modrak, *Aristotle: The Power of Perception* (Chicago: University of Chicago Press, 1987), 117–19; R. Polansky, 'Analogy and

Learning in Aristotle

Aristotle explicitly refers to the problem of Plato's *Meno* in the first chapter of the *Posterior Analytics*.⁶ This chapter starts with the claim that 'every discursive teaching and learning occurs from pre-existent cognition'.⁷ Aristotle stresses that this claim applies in the sciences and the crafts, as well as in deductive reasoning and induction, which together exhaust all kinds of learning.⁸ In some cases acquaintance with the starting point of reasoning is assumed as being acquired from people who already know it (e.g., the mathematical axioms or any principle taught by a teacher), in other cases—perhaps including that of the teacher himself—acquaintance with particulars is presupposed in order to yield knowledge of universals (induction).

In the first two chapters of the *Posterior Analytics* the concept of pre-existent cognition receives further specification in four steps. In the first step (71a11–17) Aristotle distinguishes three varieties of pre-existent cognition, i.e.

- (1) knowing that something exists or is the case, e.g. that the proposition 'it is true that every statement is either an affirmation or a negation' is the case ($\delta\tau\iota \ \xi\sigma\tau\iota\upsilon$);
- (2) knowing what a term signifies ($\tau\acute{\iota} \ \tau\acute{o} \ \lambda\epsilon\gamma\acute{o}\mu\epsilon\nu\acute{o}\nu \ \xi\sigma\tau\iota, \ \tau\acute{\iota} \ \sigma\eta\mu\acute{\alpha}\iota\nu\epsilon\iota$), e.g. the term 'triangle';⁹
- (3) knowing both (1) and (2), e.g. in the case of a monad one has to know both what the term signifies and that it exists.¹⁰

In a second step (71a17–24) Aristotle modifies the concept of pre-existent cognition to the extent that at least in one case the 'pre-existent' cognition occurs in conjunction with the cognition of a new fact. This is not a rare

Disanalogy of the Soul's Faculties in Aristotle's *De Anima*, *Boston Area Colloquium in Ancient Philosophy* 15 (1999), 74–78. It is startling that two recent studies of perception in Aristotle hardly mention the discriminating capacity of the senses; see S. Everson, *Aristotle on Perception* (Oxford: Oxford University Press, 1997), and T. K. Johansen, *Aristotle on the Sense-Organs* (Cambridge: Cambridge University Press, 1997).

⁶ The 'problem in the *Meno*' is mentioned at *APo* I.1 71a29. A similar discussion, without the solutions provided in the *Posterior Analytics*, prefaces Aristotle's search for first principles in *Metaph.* I.9 992b18–993a10.

⁷ *APo* I.1 71a1–2: Πᾶσα διδασκαλία καὶ μάθησις διανοητικὴ ἐκ προϋπαρχούσης γίνεται γνώσεως.

⁸ See esp. *APo* I.18 81a38–b9 and *Metaph.* I.9 992b30–3.

⁹ In *APo* II.8 such 'nominal definitions' serve as the starting point of the search for definitions.

¹⁰ Note that 'what the term signifies' turns out to be a nominal definition in *APo* II.2.

case since it happens for instance whenever a learner who already has pre-cognition of the universal proposition ‘every triangle has angles that sum to two right angles’, cognizes *at the same time*

- (a) that the proposition applies to a certain particular, and
- (b) that the particular is a triangle.¹¹

Aristotle explains (71a29–b8) that in this way the problem of the *Meno* is avoided because *universal* knowledge of a proposition is not the same as the corresponding knowledge of the particular. Absurdity would arise only if what is learned is already known *in the same way* and *in the same respect* in which it is learned. Apparently, the distinction between universal knowledge and its application to a particular case is deemed sufficient to avoid the problem.¹²

In *Posterior Analytics* I.2 Aristotle provides two further steps of clarification. True understanding (*ἐπιστήμη*) of an item requires (a) knowing its cause, (b) knowing that that cause *is* its cause, and (c) that this cannot be otherwise.¹³ Indeed, the premisses of a genuine proof have to be, among others, more familiar than (*γνωριμώτερα*) and prior to (*πρότερα*) the conclusion.¹⁴ Priority is explained as knowing beforehand (*προγγνωσκόμενα*) not only in the sense of grasping these premisses but also in the sense of knowing that they are the case.¹⁵

Immediately a further, and famous, distinction is introduced to explain that the relevant type of priority comes in two modes. Some items are prior *for us*, i.e. closer to sense perception. Others are prior *by nature*, i.e. furthest removed from sense perception, viz. universals (71b33–72a5).¹⁶ This distinction is operative every time when a teacher starts his teaching from what the learner already knows. But in one specific context Aristotle employs the distinction to rescue his solution of the *Meno* problem.

¹¹ This, I believe, is the force of *ἐπαγόμενος*: the operation that brings the particular under the relevant universal concept (‘triangle’). Aristotle seems to claim that this act of cognition actualizes *at the same time* the universal proposition concerning triangles although it is epistemologically *prior* to it.

¹² On this issue see, e.g., M. Ferejohn, ‘Meno’s Paradox and *De Re* Knowledge in Aristotle’s Theory of Demonstration’, *History of Philosophy Quarterly* 5/2 (1988), 99–117; M. Gifford, ‘Aristotle on Platonic Recollection and the Paradox of Knowing Universals: *Prior Analytics* B.21 67a8–30’, *Phronesis* 54/1 (1999), 1–29.

¹³ *APo* I.2 71b11–12.

¹⁴ *APo* I.2 71b19–23.

¹⁵ See J. Barnes, *Aristotle. Posterior Analytics, translated with a Commentary*, 2nd edn. (Oxford: Oxford University Press, 1993), 95–6 for the claim that Aristotle here identifies priority ‘in knowledge’ with familiarity.

¹⁶ See further, e.g., *APr.* II.23 68b35–7; *APo.* I.13 78a26–b3, I.25 86a38–9; *DA* II.2 413a11–16; *EE* 1216b32–5; *Metaph.* VII.3 1029b3–12, VII.16 1040b19–21; *Phys.* I.1 184a16–26, I.5 188b30–6, 189a4–8; *Top.* 105a16–19, 129b3–29, 141a26–b22, 159a9–14.

Principles, e.g., the immediate propositions from which proofs start out, such as definitions, constitute a special class of objects because nothing is prior to them by nature, so that they lack explanation proper. To this special class Aristotle devotes *Posterior Analytics* II.19.¹⁷ In that chapter Aristotle once more rejects innate knowledge of the Forms, or in his terms: the presence of ‘dispositions’ (ἐξέις), which are more exact than proofs and yet remain unnoticed (99b25–7). There are no causes or universals prior to first principles from which they can be explained (99b29–30). But if we do not possess the principles in any form, i.e. if we do not have any pre-existent cognition of them, we cannot grasp or learn them either. In Aristotle’s words: such dispositions cannot come to be in our souls when we are ignorant and do not have any disposition at all (μηδεμίαν ἔχουσιν ἐξίω).¹⁸ This is the way in which Aristotle clearly signals that his solution to the Meno problem is at stake in this special case. Hence, the necessity (ἀνάγκη) that there be a kind of capacity (δύναμις) which is less honourable, i.e. less exact than the dispositions which constitute knowledge of principles.¹⁹

In *Posterior Analytics* II.19 Aristotle identifies the required capacity as sense perception (αἴσθησις), which is called an ‘innate discriminating capacity’ (δύναμιν σύμφυτον κριτικὴν), and which is present in all animals.²⁰ This phrase stresses two issues: innateness and discrimination. The innateness involved is the innateness of a *capacity* in the animal *soul* as opposed to the innateness of the knowledge of Forms, or *dispositions*, in the human *mind*. Now we see the work which the distinction between ‘prior for us’ and ‘prior by nature’ has to do: if there is nothing which is prior by nature, as in the case of principles, we cannot but learn them by starting from what is prior for us: viz. sense perception. Since we possess sense perception from birth, we possess the capacity to acquire the starting point of any inquiry from birth. In this way Aristotle supports his claim that indeed *all* teaching and learning proceeds from pre-existent cognition in some form or other, which was part of his solution of the Meno problem.

Let us now proceed to the second issue which our phrase in *Posterior Analytics* II.19 99b35 introduces, the issue of discrimination. It is usually,

¹⁷ For useful treatments of this chapter compare e.g. J. Lesher, ‘The Meaning of *Nous* in the *Posterior Analytics*’, *Phronesis* 18 (1973), 44–68; M. F. Burnyeat, ‘Aristotle on Understanding Knowledge’, in E. Berti (ed.), *Aristotle on Science: The Posterior Analytics*, (Padua: Editrice Antenore, 1981), 97–139; C. Kahn, ‘The Role of *Nous* in the Cognition of First Principles in *Posterior Analytics* II 19’, *ibid.* 385–414; D. K. W. Modrak, *Aristotle’s Theory of Language and Meaning* (Cambridge: Cambridge University Press, 2001), 95–114. The closest parallels of *APo* II.19 are *Metaph.* I.1 and *Phys.* I.1, for which see below p. 329.

¹⁸ *APo* II.19 99b30–2.

¹⁹ The argument requires a lesser ἐξίς, but Aristotle suggests a δύναμις. On the relationship between this lesser ἐξίς, which is at once a δύναμις, see below pp. 330–36.

²⁰ *APo* II.19 99b32–5, cf. 100a10–11.

and rightly, stressed that according to Aristotle's theory of sense perception as developed in *De anima* II–III, the sense organs are passive capacities ready to receive their proper objects which bring these capacities to actualization. This recipient capacity is important to safeguard the objectivity of knowledge,²¹ especially in an epistemological framework where the innate knowledge of Forms cannot serve as a standard. Consequently, Aristotle's theory of perception has drawn the attention of modern scholars with an interest in the functionalist debate.

However, sometimes the stress on the recipient capacity of the sense organs tends to obscure the fact that sense perception is not only recipient but also discriminatory. This discriminatory power is necessary if a human being is to be capable of discovering principles starting from sense data. Only the soul's *discriminating* capacities can help us achieve a level of exactness that is not somehow established in our human mind at birth. The reception of perceptual information alone does not solve the Meno problem, if only because the greater part of the understanding we achieve goes far beyond the raw material of perceptual content.

In the sequel I shall approach the issue of discrimination in three steps. First, I survey the terminology Aristotle employs to refer to discrimination. Second, I intend to show that the concept of discrimination is present in the most celebrated accounts of learning in the Aristotelian corpus. Finally, in a more detailed survey I intend to show that in the *De anima* discrimination and reception are equally constitutive of perception as well as thought. Moreover, it will be seen that in the *De anima* Aristotle provides us with a series of clues as to how the process of discrimination works.

The Terminology of Discrimination

Theodor Ebert has done important philological work on the Greek verb *κρίνειν* and its derivatives.²² His conclusion is that in Aristotle's psychological works *κρίνειν* nearly always refers to *discriminating*, and only rarely to *discerning* in the sense of discriminating something *from* a background.²³ '*S* discriminates *x* from *y*' means that either a subject of

²¹ This point is rightly stressed by M. F. Burnyeat, 'De anima II.5', *Phronesis* 47/1 (2002), 58.

²² T. Ebert, 'Aristotle on What is Done in Perceiving', *Zeitschrift für philosophische Forschung* 37 (1983), 181–98. Relevant occurrences of the term comprise *APo* II.19 99b35; *DA* II.11 424a5, III.2 426b10, III.3 427a20, III.4 429b13; *Sens.* 442b12, 447b25, 27; *De insomm.* 460b17, cf. b22.

²³ Ebert, 'Aristotle', 192–3. At 185–190 he convincingly argues that the common translation 'to judge' (as in logical judgement) is an unwarranted intrusion based on a mistaken understanding of the judicial uses of *κρίνειν*, which has affected modern interpretations of

cognitive behaviour (an animal or a human being) or an organ or faculty by which such subjects cognize (sense organs or the mind) establish that x is different from y . Ebert notes that Aristotle is careful to supply faculty words as subjects of $\kappa\rho\acute{\iota}\nu\epsilon\iota\nu$ or to put in an instrumental dative containing or standing for a faculty word. This is important because each faculty ranges over a specific type of cognition, and thus restricts the range of expressions that can serve as instances for x and y . As we shall see below in more detail, the eye discriminates different colours; the touch discriminates different grades of temperature or hardness and softness, etc. Moreover, Ebert stresses that a cognitive faculty can be defined not just by its relation to a class of objects of cognition, but also by its correlation to types of difference between cognitive objects.²⁴ Thus the so-called 'common sense' accounts for the fact that we can make a distinction between what is white and what is sweet;²⁵ mind accounts for the fact that we are capable of discriminating between a composite and its essence.²⁶

Apart from $\kappa\rho\acute{\iota}\nu\epsilon\iota\nu$ and its derivatives Aristotle uses other terms to signal the same activity. Prominent among them is division ($\delta\iota\alpha\acute{\iota}\rho\epsilon\iota\varsigma$), a term Aristotle inherited from Plato, and refined and adapted to suit his own aims.²⁷ It is in terms of division that Aristotle describes his analysis of sense data, which ultimately yields principles. In *Physics* I.1 the progress from what is 'prior for us' to what is 'prior by nature' is described in terms of both division ($\delta\iota\alpha\acute{\iota}\rho\epsilon\iota\varsigma$) and marking off ($\delta\iota\omicron\rho\iota\sigma\mu\acute{o}\varsigma$), and the principle which is the result of such operations is often a definition ($\delta\acute{\rho}\omicron\varsigma$, $\delta\acute{\rho}\iota\sigma\mu\acute{o}\varsigma$).²⁸ During the process the apprehension of differences

Aristotle's psychology. See e.g. Narcy, ' ΚΡΙΣΙΣ et ΑΙΣΘΗΣΙΣ ', (*De anima* III, 2), in G. Romeyer-Dherbey and C. Viano (eds.), *Corps et âme: Sur le De Anima d'Aristote* (Paris: Librairie philosophique J. Vrin, 1996), *passim* and Polansky, 'Analogy and Disanalogy', 62n15, 75 despite the latter's awareness of the issue.

²⁴ For this theme see R. R. K. Sorabji, 'Aristotle on Demarcating the Five Senses', *Philosophical Review* 80/1 (1971), 55–79.

²⁵ *DA* III.2 426b12–19; III.7, 431a20–b1.

²⁶ *DA* III.4 429b10–13.

²⁷ Classic discussions of Aristotle's use of division are H. F. Cherniss, *Aristotle's Criticism of Plato and the Academy*, i (Baltimore: Johns Hopkins Press, 1944) 1–82; D. M. Balme, 'Aristotle's Use of Division and Differentia', in A. Gotthelf and J. G. Lennox (eds.), *Philosophical Issues in Aristotle's Biology* (Cambridge and New York, 1987), 69–89.

²⁸ See *Phys.* I.1 184a15, 23; b11–12, 14; cf. I.7 190b22 $\delta\iota\acute{\alpha}\lambda\upsilon\sigma\iota\varsigma$. For the interpretation of this chapter and further parallels see R. Bolton, 'Aristotle's Method in Natural Science: *Physics* I', in L. Judson (ed.), *Aristotle's Physics: A Collection of Essays*, (Oxford: Clarendon Press, 1991), 1–29; F. A. J. de Haas, 'Modifications of the Method of Inquiry in Aristotle's *Physics* I.1. An Essay on the Dynamics of the Ancient Commentary Tradition', in C. H. Leijenhorst, C. H. Lüthy, and J. M. M. H. Thijssen (eds.), *The Dynamics of Aristotelian Natural Philosophy* (Leiden: Brill, 2002), 36–47. For another link between $\delta\acute{\rho}\omicron\varsigma$ and discrimination see below, pp. 336–7.

(*διαφοραί*; also *ἕτερος*) plays a crucial role.²⁹ The principles reached are described as not further divisible into ‘parts’ (*ἀδιαίρετος, ἀμερής, ἀμέριστος, ἀδιάφορος*).³⁰ Aristotle often signals that his investigation in *De anima* II–III—which we shall analyse in some detail below—is a search for differences, e.g., between sense perception and the varieties of thought, between imagination and thought, between different objects of sense perception and of thought, etc.³¹ Thus the study of the soul itself testifies to its discriminating powers. Moreover, it is no coincidence that for Aristotle the crucial part of the definition (*ὀρισμός*) is the differentia (*διαφορά*). The wider ramifications of the issue of discrimination will have to remain in the background here.

Discrimination and Learning

The footnotes to the previous section already indicate that in three celebrated accounts of learning in the Aristotelian corpus, i.e. *Posterior Analytics* II.19, *Metaphysics* I.1, and *Physics* I.1, Aristotle refers to discrimination as an integral part of the process of learning.³²

In *Posterior Analytics* II.19 Aristotle first expounds the familiar series of perception, memory, and experience, until a principle of generation or understanding comes to be from a number of experiences (99b36–100a13). This series emphasizes the stages of the actualization of the recipient capacities of the soul: ‘Such is the soul that it is capable of undergoing this’ (*δύνασθαι πάσχειν τοῦτο*, 100a13–14).³³ In a further attempt to describe the same process Aristotle informs us how an initial complex universal yields to analysis into its indivisible parts, in which we may recognize the same principles once again (100a14–b5). From a first universal that comes to rest in the soul, e.g., ‘human being’, one of its parts, e.g., ‘animal’, may come to a stand later on. This process of discrimination apparently coincides with the process of reception, of which it is an alternative description, and it is performed, at least

²⁹ Cf., e.g., *APo* II.19 100a1; *Metaph.* I.1 980a27.

³⁰ See, e.g., *APo* II.19 100a16, b2; *Phys.* III.5 204a20–8; *Metaph.* V.6 1016a17–b31 (the chapter on unity); XII.7 1073a5–7. These issues are pursued in rich detail in *Metaph.* I, which I cannot go into here.

³¹ See, e.g., *DA* 427a17, 427b26.

³² For discussion of these texts in the context of a challenging account of learning in Aristotle see Scott, *Recollection*, 95–132. However, Scott hardly refers to the *De anima* and does not mention the discriminatory powers of the soul. In my opinion these omissions undermine his claim that Aristotle is only dealing with ‘higher learning’ for philosophers, and is not interested in ordinary concept formation.

³³ I take it that *δύνασθαι* picks up primarily the *δύναμις κριτική* we encountered earlier in the chapter (*APo* II.19 99b35).

initially, by sense perception itself. We shall have to see whether at later stages of this process intellectual, as opposed to perceptual, discrimination has a role to play. For although sense perception provides raw material in the sense of complex unities, Aristotle states that further acts of discrimination occur. It is unlikely that the soul is able to perform these further acts of discrimination simply because sense perception adds more raw material. After all, every human being witnesses countless changes, but only a few effectively grasp the principles of change.

In *Metaphysics* I.1 Aristotle also lists perception, memory, experience, knowledge, and art (τέχνη). An example of art is the judgement that a medical treatment 'has done good to all persons of a certain constitution, marked off in one class (κατ' εἶδος ἐν ἀφορισθείσι), when they were ill of this disease'. Hence this advanced stage of knowledge is characterized by an act of discrimination, or marking off a particular kind from others. In this way discrimination is tantamount to the grasp of unities. This fundamental theme, which pervades Aristotle's epistemology and metaphysics as it did Plato's, is too broad to deal with here.

In *Physics* I.1 knowledge is presented as knowledge of causes and principles, which are at the far end of the human learning process. Sense perception provides us with immediate access to reality. We can make progress only when the complex information gained from sense perception (τὰ συγκεχυμένα) is subjected to division and marking off (διαίρεσις, διορισμός). Analogously, a definition spells out (διαίρει) the constitutive parts of a thing. A word which denotes the same item does so without distinguishing these parts (ἀδιορίστως). Again, a child learns to distinguish (διορίζει) its father and mother from all men and women it encounters. In short: progression in terms of knowledge occurs by means of discrimination of initial sense data.

In all cases mentioned Aristotle discusses the *further* refinement of an initial grasp that, on closer scrutiny, itself presupposes an act of discrimination. Apparently the child already distinguished men and women before it acquired the ability to pick out its father and mother;³⁴ apparently we grasp particular animals, and particular kinds of animal before we grasp that *animal* is a constitutive part in all of these.³⁵ Only sense perception can be responsible for this initial grasp, and indeed Aristotle states that human beings are so fond of the sense of sight because it makes us know (ποιεῖ γνωρίζειν) and brings to light many differences (πολλὰς δηλοῖ διαφοράς).³⁶ Differences generate knowledge because they enable us to mark off unities.

³⁴ *Phys.* I.1 184b3–5.

³⁵ *APo* II.19 100b1–3.

³⁶ *Metaph.* I.1 980a26–7.

Discrimination in the *De anima*

Against this background it is hardly surprising that the concept of discrimination plays a constitutive role in Aristotle's psychology as developed in the *De anima*. For if Aristotle's epistemology and theory of learning are to be convincing, the soul must not only be capable of receiving forms but also of making the discriminations Aristotle describes. Indeed, at the start of *De anima* III.3 spatial movement and discrimination are identified as the two defining characteristics of the soul:

Since they define the soul most of all by two differentiae, <i.e.> by <imparting> spatial movement and by theoretical thought, practical thought, and sense perception, and since it seems that theoretical and practical thought are as it were a kind of sense perception (for in both³⁷ the soul discriminates and cognizes some being), and the ancients claim that thinking and perceiving is the same . . .³⁸

Sense perception and thought have both discrimination and cognition in common. For Aristotle this explains—at least in part—the Presocratic identification of perception Plato refuted in the *Theaetetus*.³⁹ It is significant that perception and thought are considered two operations by which the *soul* discriminates and cognizes. For in *DA* III.8 432a1–3 the soul is called an instrument of instruments, wielding thought as the form of forms, and sense perception as the form of sensibles. Moreover, from the summary at the start of *De anima* III.9 it is clear that throughout III.3–8 Aristotle will be concerned with soul's capacity of discrimination by means of sense perception and thought:

Since the soul of living beings is defined by two capacities (*δυνάμεις*), one the discriminatory capacity (*τὸ κριτικόν*), which is the work (*ἔργον*) of thought (*διάνοια*) and sense perception (*αἴσθησις*), and further by imparting spatial movement, let so much be defined with respect to sense perception and thought (*νοῦς*), and let us investigate with respect to the capacity of imparting movement (*τὸ κινεῖν*) what it is of the soul, whether it is a single part of it, being separate either in magnitude or in definition, or the soul as a whole, and . . .⁴⁰

Since the *De anima*, and especially the chapters III.3–8, are usually interpreted with an eye to the recipient capacity of the soul rather than to its discriminating capacity, it would be rewarding to evaluate these

³⁷ i.e. in the two kinds of thought versus sense perception. In the next quote *νοεῖν* and *φρονεῖν* are covered by the term *διάνοια*.

³⁸ *DA* III.3 427a17–21. See also *DA* II.2 413a22–5, 414a12–13. All translations from the *De anima* are derived from D. W. Hamlyn, *Aristotle's De Anima Books II and III* (Oxford: Clarendon Press, 1968), with modifications.

³⁹ Plato *Tht.* 151d–172c, 177c–187b; cf. *DA* III.3 427b6–17.

⁴⁰ *DA* III.9 432a15–20.

chapters more thoroughly in terms of their contribution to understanding discrimination. Within the confines of this essay I can only touch upon some of the key passages. With due respect to Aristotle's strategy in the *De anima*, we must begin our search for the characteristics and mechanics of soul's discriminating capacity with the study of the individual senses.

Perception

In II.6 we learn that each sense has its proper object over which it has jurisdiction, and never errs.⁴¹ For example, vision does not err in telling us *that* something is a colour, although it may well err about e.g. what the coloured thing is, or where. The latter are the so-called incidental objects of perception.⁴² Two or more senses in combination perceive the common objects (movement, rest, number, form, magnitude, and unity).⁴³ A learner can trust only the perceptions of the proper and common objects which perception cognizes *per se*. In *De anima* II.7–11 Aristotle discusses each of the senses in considerable detail. In this sustained discussion a number of general rules are formulated. Although they are not all worked out for each sense, Aristotle makes clear he believes they apply generally to all senses.⁴⁴ They are familiar features of Aristotle's psychology:

1. The sense is affected by its proper object which causes the sense to become similar to the object as specified under (3).⁴⁵
2. In sense perception each organ covers a range which is limited on two sides by what is imperceptible to it, on the one hand (i) because the coordinate power of the object is too weak or virtually absent, on the other (ii) because the coordinate power of the object is too strong and thus destroys the *logos* or perceptual capacity of the organ;⁴⁶ in thought no such limits exist.

⁴¹ *DA* II.6 418a11–17. At *DA* II.6 418a14 *ἐκάστη γὰρ κρίνει περὶ τούτων* has the meaning 'each decides about them' *sc.* its proper sensibles'. As Ebert, 'Perceiving', 189–90, rightly points out, here 'to decide about' has to be more powerful than 'judges about', for the senses also 'judge about' the common sensibles. However, in the case of common sensibles it is always possible to appeal to another sense to override the first: none of them decides the case.

⁴² *DA* II.6 418a20–5. For an influential though controversial study see S. Cashdollar, 'Aristotle's Account of Incidental Perception', *Phronesis* 18 (1973), 156–75.

⁴³ *DA* II.6 418a17–20.

⁴⁴ Most of these rules are summarized in *DA* II.12.

⁴⁵ See e.g. *DA* II.5; II.11 424a1–2.

⁴⁶ See e.g. *DA* II.12 424a28–32, translated below. The *λόγος*, which is harmed when ill-treated, is illustrated by means of the vulnerable harmony and pitch of the strings of a lyre, which is affected when the strings are struck too hard. See also the analysis of actual sound and hearing as *συμφωνία*, *DA* III.2 426a27–b7. P. Rodrigo, 'Comment dire la sensation?—*logos* et *aisthēsis* en de Anima III,2, *Études phénoménologiques* VIII/16 (1992), 59–60,

3. The organ is able to receive forms without matter (each sense organ its own kind of sensible form); in other words the organ is affected in accordance with the *logos* of the perceptible object.⁴⁷
4. The organ does not receive the form without the intervention of a medium, and is affected either after,⁴⁸ or at the same time as,⁴⁹ this medium.⁵⁰

In *DA* II.12 Aristotle distinguishes between the sense organ and perception:

The primary sense organ (*αἰσθητήριον πρῶτον*) is that in which such a potentiality (*δύναμις*) [*sc.* to be affected by sensible forms] resides. These then are the same, although what it is for them to be such is not the same. For that which perceives must be a particular extended magnitude, while what it is to be able to perceive and perception (*αἴσθησις*) are surely not magnitudes, but rather a *certain logos and capacity* (*δύναμις*) of that thing [*sc.* the organ].⁵¹

The organ and perception are the same, though their being is different: the organs are particular magnitudes, whereas perception or what it is to be able to perceive are not. They are a *certain logos* and a capacity of the organ because perception consists in being affected in terms of *logos* (*κατὰ τὸν λόγον*). On what I take to be the most natural interpretation of this passage the capacity (*δύναμις*) of the organ still refers to its receptive capacity (*τὸ δεκτικόν*), which has been the topic from the beginning of the chapter onwards (423b17–24). But at the same time perception is identified as a *logos*, which is a feature of the organ. Is this *logos* in any way different from the receptive capacity? Aristotle continues:

It is clear from this too why excess in the objects of perception destroys the sense organs (for if the movement is too violent for the sense organ its *logos* is destroyed—and this we saw perception to be—just as the consonance and pitch of the strings are destroyed when they are struck too violently).

It is also clear why plants do not perceive, although they have a part of the soul and are affected by tangible objects, for they are cooled and warmed. The reason is that they do not have a mean, or a first principle of a kind such as to

72–5, identifies these passages as Aristotle's final words against the definition of soul as *harmonia*.

⁴⁷ See, e.g., *DA* II.12 424a17–25.

⁴⁸ As in sight, hearing, and smell.

⁴⁹ As in taste and touch.

⁵⁰ Esp. *DA* II.11 423b7–8. M. F. Burnyeat, 'Aristote voit du rouge et entend un "do": combien se passe-t-il de choses? Remarques sur *De anima*, II, 7–8', in G. Romeyer-Dherbey and C. Viano (eds.), *Corps et âme: Sur le De anima d'Aristote* (Paris: Librairie philosophique J. Vrin, 1996), 157–8 suggests that the medium is responsible for the separation of the sensible form from the object in which it exists.

⁵¹ *DA* II.12 424a24–8.

receive the forms of objects of perception; rather they are affected by the matter as well.⁵²

When the movement that the organ suffers by the object exceeds a certain limit, the *logos* perishes. Here the *logos* is pictured as a ratio or harmony of the extremes that define the object range.⁵³ For Aristotle this explains why plants do not perceive, although they do have souls and are affected by the tangibles hotness and coldness. It is because they lack a mean (*μεσότης*), i.e. the principle (*ἀρχή*) that enables them to receive sensible forms.⁵⁴ As a result they can only be affected by form and matter together: they simply become hotter and colder.⁵⁵ We now begin to see that the presence of a *logos*, here glossed as a 'mean', is a condition for the particular kind of reception in terms of *logos* that perception consists in. This suggestion can be confirmed from chapter II.11, which also informs us about the discriminatory role of this 'mean':

It is the distinctive qualities of body, *qua* body, which are tangible. The qualities that I speak of as distinctive are those that determine the elements, hot and cold, dry and wet, of which we have spoken earlier in our account of the elements. Their sense organ, that of touch, in which the perception (*αἴσθησις*) called touch primarily resides, is the part that is potentially such as they are. For perceiving is a kind of being affected; hence, that which acts makes that part, which is potentially as it is, such as it is itself actually.

For this reason we do not perceive anything which is equally as hot or cold, or hard or soft, but rather excesses of these, perception (*αἴσθησις*) being a sort of mean between the opposites present in objects of perception. And *that is why it discriminates* objects of perception. For *the mean is capable of discriminating* (*κριτικόν*). And just as that which is to perceive white and black must be neither of them actually, although both potentially (and similarly too for the other senses), so in the case of touch that which is to perceive such must be neither hot nor cold.⁵⁶

In other words, at least in the case of touch the organ is at once receptive *and* discriminatory: its receptivity is necessary to explain its being affected by a sensible form, but since this receptivity is receptivity in terms of *logos* it presupposes a certain *logos* or disposition of the sense organ in terms of the distinctive qualities of bodies (hot and cold, dry and wet).⁵⁷ This *logos* determines what is sensed as hot or cold, and thereby serves as a mean by

⁵² *DA* II.12 424a28–32. ⁵³ See n. 46 above.

⁵⁴ I consider it less likely that the mean and the principle that enables them to receive sensible forms are two different items, although this interpretation is grammatically possible.

⁵⁵ *DA* II.12 424a32–b3.

⁵⁶ *DA* II.11 423b27–424a10. On touch see C. Freeland, 'Aristotle on the Sense of Touch', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays in Aristotle's De Anima* (Oxford: Oxford University Press, 1992), 227–48.

⁵⁷ Touch is called a mean at III.13 435a21–4.

which to divide the range to which the incoming sensible form belongs, so as to determine whether it is, e.g., hotter or colder than the organ's disposition. Only what *differs* from the mean towards either extreme of the range is perceived at all. Otherwise neither affection nor discrimination will occur, i.e. there will be no perception.

Now we can understand even better why, e.g., too much heat will ruin perception. One aspect of perception is the *logos* of the organ which is the mean: under extreme conditions the organ will be affected wholesale by, e.g., heat so that it will not be able to preserve its own balance of hotness and coldness. It thereby loses its ability to discriminate, and perception is destroyed.

Touch differs from vision, hearing, and smell by the fact that the latter function at a distance through a medium. Aristotle provides hints about the discriminatory dispositions of each of the sense organs. For in the case of hearing, where air is the medium, he speaks of air enclosed in the ear, which is 'enclosed so as to be immovable in order that it may accurately perceive all the differences of the movement'.⁵⁸ This description draws attention to a perfect receptive capacity: the inner air, as medium of the object of hearing, can be imprinted with the incoming sound without any interference. At the same time the text speaks of a resounding of the inner air which remains independent from the noise in the outer air (or water) and may thus serve as a mean by which to discriminate the noises that are passed on to it.⁵⁹

In the case of vision, where the transparent is the medium, the eye jelly (*κώρα*) is also transparent and therefore able to receive the visible form in the same way as the transparent in the surrounding air or water does.⁶⁰ Aristotle believes that light is nothing but actual transparency, which exists in air or water as a disposition (*ἐξίς*). Hence the transparency of the eye jelly is itself an actuality that may serve as a mean to distinguish the differences of vision. These range from brightness through colours to darkness, all of which are modes of transparency according to Aristotle.⁶¹ In this case, too, 'that which is to perceive white and black must be neither of them actually, though both potentially'. In other words, it must be somewhere between the two opposites, as a mean.

⁵⁸ *DA* II.8 420a9–11.

⁵⁹ Burnyeat, 'Aristote voit', 161 with n. 28 reads these lines as confirming the receptive capacity of the ear only. The issue does not affect my account, for on Burnyeat's reading the state of immobility of the inner air will have to serve as the mean by which differences in the incoming sounds are discriminated.

⁶⁰ *DA* II.1 413a2–3; II.8 420a13–15; III.1 425a3–4; *Sens.* 438b5–15.

⁶¹ *DA* II.7; III.5 430a15–17; *Sens.* III 439a24–7. For a summary of the details see, e.g., Burnyeat, 'Aristote voit', 153–5.

The case of taste is different. Though tasting is a kind of touch, flavours inhere in the moist only. The receptivity of the organ thus consists in the fact that the flesh of the tongue is easily moistened and is therefore capable of mixing with the moist in which flavours inhere. After experiencing strong flavours the remaining moisture influences the taste of new food or drink presented to the organ. This also suggests that the flavour in the tongue's moist flesh serves as a mean to distinguish flavours.⁶²

Finally, Aristotle states that the case of smell is unclear to us due to its relative weakness and inaccuracy in human beings as opposed to other animals.⁶³ Nevertheless, he clearly indicates that *all* senses discriminate.⁶⁴ Hence we may add a further rule to our list:

5. Perception consists in a capacity to receive sensible forms in terms of *logos*. This capacity thus presupposes a certain *logos* or disposition of the organ, which serves as a mean relative to the extremes of the range covered by each of the senses; the organ has the further capacity to discriminate properties on its range by using the mean as a standard, but only if these properties differ from the mean.⁶⁵ Receptivity and discrimination thus coincide.

At first sight this rule might seem to conflict with the position defended by Myles Burnyeat against Richard Sorabji in their debate on the physiological processes involved in perception, if any.⁶⁶ If perception is concerned with quasi-alterations and forms only, as Burnyeat holds, how can the disposition of the medium discriminate? For if perception does not involve alteration, there is nothing to compare with the mean. On the other hand, it seems to me paramount that the mean disposition of the organ be preserved as the standard by which to discriminate every new instance of a colour, a sound, etc. For the senses preserve their potentiality to perceive despite previous acts of perception, which involved both reception and discrimination. Hence, if the mean must remain the same in order to guarantee discrimination, then the air in the ear, the water in the eye, and the flesh cannot themselves change under the influence of the object.

Nevertheless, it remains a striking feature of Aristotle's theory of perception that that which is able to perceive (*τὸ αἰσθητικόν*), residing as

⁶² *DA* II.10 422b5–10; II.11 423b17–26.

⁶³ *DA* II.9 421a7–22.

⁶⁴ See *DA* III.2 426b8–12, III.9 432a15–16 (quoted above p. 330).

⁶⁵ Esp. *DA* II.11 424a2–10.

⁶⁶ S. M. Cohen, 'Hylomorphism and Functionalism', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays in Aristotle's De Anima* (Oxford: Oxford University Press, 1992), 57–73 discusses the debate and its significance. See further Sorabji, 'Intentionality'; id. 'Aristotle on Sensory Processes and Intentionality: A Reply to Myles Burnyeat', in D. Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden: Brill, 2001), 49–61, and Burnyeat, 'Aristotele voit', 149–67; Burnyeat, '*De anima* II.5', 28–90.

it were 'behind' the senses, can compare the incoming sensible form with the mean disposition in the sense organs. When the organ is influenced by the form of the sensible object it receives, it cannot but employ its discriminating *logos* at the same time: it is both at once. Reception and discrimination are one and the same event, though the being of each is different, as the different descriptions bring out. If this is correct, the result we have reached so far is that the event called perception is a meeting of *logoi*, in which the received *logos* is measured against the *logos* of the organ.

In *De anima* III Aristotle continues his account of perception with the common sense.⁶⁷ In this context the theory of the mean is further developed. The discrimination of the common sensibles motion, rest, form, magnitude, number, and unity—which, Aristotle argues, cannot have an organ of their own—requires that the perceptual information of different senses, e.g., bitter and yellow, comes together in a single act of cognition. Since bitter and yellow are present only to taste and vision it must be perception that discriminates them. The perception of common objects shows that the senses function as a single faculty, which is also indicated by the fact that each cognizes the proper objects of the others accidentally, and that we perceive that we perceive.⁶⁸

This single faculty is able to discriminate between, e.g., bitter and yellow. In order to achieve this discrimination both bitter and yellow must be present to one and the same thing or faculty. It is impossible to *discriminate* two things when they remain separate in separate faculties. Moreover, an act of discrimination must take place at a single undivided moment of time. In this respect Aristotle acknowledges an interesting parallel between saying, thinking, and perceiving. To say, think, or perceive now that *x* is different from *y* entails the simultaneous presence of (representations of) *x* and *y* in an indivisible instant of time.⁶⁹

This raises a difficulty: neither perception nor thought can experience contrary movements, i.e. receive contrary forms (e.g., bitter and sweet) at the same time without violating the law of non-contradiction. Aristotle derives the solution to this problem from an analogy with the mathematical point, which can be used as a limit once or twice in order to achieve the same mathematical division. It can be used once as the point at which

⁶⁷ See, e.g., D. K. Modrak, 'Koine Aisthesis and the Discrimination of Sensible Differences in *de Anima* III.2', *Canadian Journal of Philosophy* 11/3 (1981), 405–23; J. Brunschwig, 'Les multiples chemins aristotéliens de la sensation commune', *Revue de métaphysique et de morale* 96/4 (1991), 455–74; Rodrigo, 'Logos et aisthesis', 47–78; Narcy, 'ΚΡΙΣΙΣ et ΑΙΣΘΗΣΙΣ', 239–56.

⁶⁸ DA III.1 425a14–b11. Note that 'perceiving that we perceive' entails the discrimination between the subject and its activity, and may be construed as another instance of discrimination.

⁶⁹ The parallel is taken up again at DA III.7 431a8 ff. Cf. *Sens.* 7, 449a8–20.

a line is split into two half-lines, or as the point at which two half-lines meet as in a common limit.⁷⁰ It can be used twice as the limit of each of the two halves respectively.

In the same way, the discriminating faculty (τὸ κρίνον) exists as one and instantaneous when discriminating bitter and sweet in a single instant, whereas it exists as two things, or separately (κεχωρισμένως), when it is used as the limit of two different things in two different moments: in the separate perceptions or thoughts of bitter and sweet, or bitter and yellow, respectively.⁷¹ Indeed, it cannot be otherwise if the act of discriminating bitter and yellow is attributed to the faculty of perception (one in place, time, and number) which is also responsible for the different acts of perception of bitter and yellow respectively, in different organs (two in place, time, and number). Indeed, in *De anima* III.7 Aristotle flatly denies that there is any fundamental difference between discriminating opposites (which always belong to the same genus), and items that do not belong to the same genus (unified merely by analogy). We should note, however, that the discrimination of bitter and sweet (on a single range, perceived by a single organ) is different in kind from the discrimination of bitter and yellow (on different ranges, perceived by different organs). So it is clear now that discrimination comes in at least two kinds, both performed by the same discriminating faculty, albeit in different modes of being. This discriminating faculty is nothing other than perception.⁷²

Thought

In *De anima* III.3 Aristotle argues for a distinction not only between perceiving and thinking,⁷³ but also, within the province of thinking, between the imagination (φαντασία) and the kinds of ‘supposal’ (ὑπόληψις), viz. understanding, opinion, and practical thought.⁷⁴ Across these two distinctions Aristotle posits a distinction between

⁷⁰ The notion of limit (ὄρος) is emphasized in a passage that further elucidates the common sense, *DA* III.7 431a20–431b1, esp. 431a22.

⁷¹ Note that the λόγος of perception is called the *limit* and *unity* where the perception ends. See below pp. 330–39 for the significance of this terminology.

⁷² This interpretation of Aristotle’s psychology may be confirmed from a tantalizingly corrupt passage in *DA* III.7 431a17–20: ‘And just as the air makes the pupil such and such, and this in turn something else, and the organ of hearing likewise, and the last thing in the series is one thing, and a single mean, although what it is for it to be such is plural’. Then follows the specification of the nature of the common sense referred to above. The intricacies of this passage fall outside the scope of this essay.

⁷³ *DA* III.3 427a17–b26.

⁷⁴ *DA* III.3 427b24–9. Note the distinction between rational and perceptual imagination at *DA* III.3 427b14–15, III.10 433b29.

non-discriminating and discriminating capacities: the imagination turns out to be non-discriminating,⁷⁵ whereas perception, opinion, understanding, and comprehension (*νοῦς*) are discriminating.⁷⁶

The discriminating capacity of the mind is discussed in rich detail in *DA* III.4–8, so once again I shall have to be selective.⁷⁷ Since we know that there is a difference between physical or mathematical magnitudes (composites) and what it is for them to be, i.e. their essence, the mind must somehow perform this act of discrimination, as well as think each of them separately. Aristotle suggests it must perform these two acts either by different faculties or by itself in different modes. Here we recognize the same options that Aristotle discussed with respect to sense perception.⁷⁸ The mind is able:

- (a) To think essences separately. These primary objects of thought (*πρῶτα νοήματα*)⁷⁹ are like the proper objects of sense perception in that thought (*νόησις*) is never wrong with respect to them.⁸⁰
- (b) To think a composite as such in a single thought. Aristotle provides examples of thinking physical and mathematical form/matter composites, and of thinking propositional composites which combine subject and predicate or subject and the verb ‘to be’, together with time. In these cases the mind combines two or more objects of thought into a single unity; this operation is liable to error.⁸¹
- (c) To discriminate the elements of a composite in a single thought.⁸²
- (d) To think a composite qua composed of its elements in the total time needed to think each separately.⁸³

With respect to (b) and (c) it is interesting to note that Aristotle claims that the combination (*σύνθεσις*) involved in thinking, e.g., a proposition can also be called division (*διαίρεσις*).⁸⁴ This is understandable as soon as we realize that thinking such a combination requires the simultaneous

⁷⁵ *DA* III.3 428a1–b9. Imagination differs from perception as well as from supposal. Rather, since the *φαντασία* contains images derived from sense perception, it corresponds to the objects of the senses. The *φαντάσματα* it contains and sets before the mind when we so wish are to the mind what the *αἰσθήματα* are to the senses. Cf. *DA* III.7 431a14–17, b2; III.8 432a7–14.

⁷⁶ *DA* III.3 428a3–5. Aristotle uses the expression *νοῦν κριτικόν* at *DA* III.12 434b3.

⁷⁷ Notably, and I hope understandably, I shall refrain from detailed discussion of *DA* III.5 here.

⁷⁸ See pp. 333–7.

⁷⁹ *DA* III.8 432a12.

⁸⁰ *DA* III.6 430a26–7, b27–30. These include essences, which are not propositional in structure (there is no *τι κατά τινος*).

⁸¹ *DA* III.4 429b10–22; III.6 430a27–b6; III.7 431b12–17.

⁸² *DA* III.4 429b10–22.

⁸³ *DA* III.6 430b13–14.

⁸⁴ *DA* III.6 430b3–4: *ἐνδέχεται δὲ καὶ διαίρεσιν φάναι πάντα.*

presence of all items combined in a single act of thought in a single moment. In the same way division, or discrimination, requires the presence of all items discriminated in a single act of thought in a single moment. It is conceivable that for Aristotle combination and division are the same psychological event but differ in being, and (hence) in description. If so, and if combination is liable to error, so is division. We have seen that Aristotle calls the search for principles ‘division’, and he criticizes his predecessors’ search for principles because their divisions were wrong. Here we may find the psychological explanation both of the process of division and of its liability to error.

Aristotle is careful to point out that the requirement of a thought being a single act in a single moment of time does not rule out that something divisible (e.g., length) can be thought as an undivided unit (case (b) above). Everything divisible can be regarded as potentially and actually divided, or, alternatively, as potentially and actually undivided. Thus it is possible to *think* a divisible entity *qua* actually undivided, and to do so in an undivided moment of time.⁸⁵

In this way Aristotle repeats in the context of thought what he stated in the context of sense perception. The same faculty can think one concept after another (several in time and number), but it can also discriminate them (one in time and number). In the first case the items are thought as being actually divided, and therefore they require more than a single thought, and more than a single moment of time. The divisibility of the continuum allows for time to be divided along with, e.g., the lengths thought.⁸⁶ In the second case they are thought as being actually undivided, whether they are potentially divisible or not. For some concepts, viz. the primary objects of thought, are not divisible at all. They are the psychological counterparts of the results of analysis as described in the methodological passages we noted earlier: indivisible, and without parts. In this respect there is no difference between quantitative and formal indivisibility.

In a further move Aristotle refines his theory of the mean to do duty in practical thought in *De anima* III.7:

Perceiving, then, is like mere assertion and thought; when something is pleasant or painful, <the soul> pursues or avoids it, as it were asserting or denying it; and to feel pleasure or pain is to be active with the perceptive mean (τῆ ἀίσθητικῆ μεσότητι) towards the good or bad as such. Avoidance and desire, as actual, are the same thing, and that which can desire (τὸ ὀρεκτικόν) and that which can avoid (τὸ φευκτικόν) are not different either from each other or from that which can perceive (τὸ ἀίσθητικόν); but what it is for them to be such is different.

⁸⁵ *DA* III.6 430b6–20.

⁸⁶ *DA* III.6 430b9–13.

To the thinking soul images serve as sense perceptions. And when it asserts or denies good or bad, it avoids or pursues it. Hence the soul never thinks without an image.

Here the same thing in different modes of being is said to perceive, to desire, and to avoid. What is more, it does so by being active with the perceptive mean: the mean discriminates the good from the bad and thus determines avoidance and desire.⁸⁷ The second paragraph exploits the analogy with thought. Images replace sense perception (for this reason they are indispensable to the thinking soul); assertion or denial of good or bad may result in pursuit or avoidance.⁸⁸ This is important because further on Aristotle claims that truth and error belong to the same genus as good and bad, and therefore the discrimination between truth and error occurs along the same lines, and by the same kind of discrimination.⁸⁹

If the parallel between perception and thought is to be complete, and if thought is capable of its own kinds of discrimination, we should ask for the mean in the case of thought. Is there a λόγος or ἐξέλις that can be considered the counterpart of the receptivity of intellect? We have already seen that the mind is by nature potentiality, but Aristotle also tells us that *after* learning or discovery this potentiality is not a first but a second potentiality. Second potentiality corresponds to the disposition (ἐξέλις) of actual knowledge, which is identical with the intelligible form that the mind contemplates in the images present in the imagination.⁹⁰

I suggest that this disposition, which comes to be in the mind in a rudimentary form as soon as it is presented with images derived from sense perception, is soul's intellectual mean. It is a disposition that is less precise than principles, as *Posterior Analytics* II.19 required. It provides the first and last chapters of the *Posterior Analytics* with an explanation of how apart from and following perceptual discrimination the human mind can come to know intelligible objects by an ongoing process of discrimination exercised upon images in the imagination, independent of perception. To be sure, these intelligible objects pre-exist in images derived from sense perception. Such images can be retrieved at will from memory, so that the level of analysis attained earlier can be retrieved as what is prior for us, and subjected to further attempts at discrimination in order to arrive—hopefully—at what is prior by nature. Thus we might add two final rules to our psychology of discrimination:

⁸⁷ Desire is further analysed in *DA* III.9–11.

⁸⁸ They do not *determine* avoidance or pursuit, because there is a complex division of labour between thinking and acting, see, e.g., *DA* III.9 432b26–433a8.

⁸⁹ *DA* III.7 431b10–12.

⁹⁰ *DA* II.5 417a21–b2, b9–16; III.4 429a21–4, b5–9; III.7 431a1–2, b2–5; III.8 431b20–432a6.

6. Unlike the mean of perceptual discrimination, which consists in a disposition of the sense organ and thus exists from birth, the corresponding disposition of the mind (*νοῦς*) only comes to be after sense perception has supplied images (*φαντάσματα*) on which it can operate.
7. Unlike the perceptual mean, the intellectual mean is continuously modified as knowledge increases. Only when the intellect has grasped first principles does the mean constitute a reliable standard of discrimination.

Hence, in the beginning learning has to start by applying only the receptive and discriminatory capacity of sense perception. But as soon as a concept has actualized the first potentiality of the mind, its disposition, however inaccurate at first, cannot but serve as a mean in discriminating the differences that exist in new or retrieved images. For as in sense perception, in the mind, too, reception and discrimination are two sides of the same coin: a single event (thinking) in a single place (the mind) in a single moment of time, though different in being.⁹¹ By trial and error the disposition called understanding is improved, which means that the mind's discriminating capacity is improved. In the end only the grasp of essences, which are no longer open to discrimination because they are indivisible, has the kind of infallibility we saw in the case of perception of the proper objects of each sense. Perception, i.e. both the reception and the discrimination of perceptible forms, remains at the beginning of the process of learning to support it throughout, even if the mind both receives and discriminates intelligible forms that the senses only pick up incidentally.

Unlike perceptual discrimination, intellectual discrimination does not occur without conscious effort. Perception depends on perceptible objects, as thought depends on images. But we have already seen that whereas we have no mastery over our encounters with perceptible objects, we are able to retrieve at will whatever we stored in our memory, as the highly developed skill of mnemonics testifies.⁹² But if we choose not to retrieve images, we choose not to supply our receptive/discriminating intellect with any material, so that we fail to learn or to discover anything beyond what we already know. Hence derive the differences in understanding between human beings, which only intellectual pursuit can change.

⁹¹ The reader will be aware that this interpretation can also be used to shed some light on the intricacies of the active and passive intellect of *De anima* III.5, but for reasons of space I shall save that infamous chapter for another occasion.

⁹² *DA* III.3 427b17–20.

So far we have seen that the concept of discrimination is present in the most celebrated accounts of learning in the Aristotelian corpus. In addition, it is a constitutive part of the psychology of perception as well as thought. In the case of perception the organ's disposition is responsible for both the receptivity and the discriminatory power that together constitute perception. In the case of thought, the dispositional knowledge acquired at any stage of the continuous learning process determines both the receptivity and the discriminatory power that together constitute thinking. While learning continues neither the perceptual nor the intellectual mean are dispositions of a higher epistemological standing than knowledge of principles.

Of course I am well aware that more is needed to give full support to this interpretation of Aristotle. There are several modes in which learning can proceed from pre-existent knowledge, and several modes in which the mind is able to apply this mean. We need a further analysis of the significance of degrees of unity for the analysis of acts of thought, and an analysis of how the logic of the *Analytics* capitalizes on the psychology of *De anima* and vice versa. A considered answer to these questions would turn this essay into a book. Here I intend only to draw attention to the significance of discrimination, both perceptual and intellectual, for Aristotle's theory of learning.⁹³

Bibliography

- ANDIC, M., 'Commentary on Polansky', *Boston Area Colloquium in Ancient Philosophy* 15 (1999), 87–100.
- BALME, D. M., 'Aristotle's Use of Division and Differentia', in A. Gotthelf and J. G. Lennox (eds.), *Philosophical Issues in Aristotle's Biology* (Cambridge and New York: Cambridge University Press, 1987), 69–89.
- BARNES, J., *Aristotle. Posterior Analytics, translated with a Commentary*, 2nd edn. (Oxford: Oxford University Press, 1993).
- BOLTON, R., 'Aristotle's Method in Natural Science: *Physics* I', in L. Judson (ed.), *Aristotle's Physics: A Collection of Essays* (Oxford: Clarendon Press, 1991), 1–29.
- BRUNSCHWIG, J., 'Les multiples chemins aristotéliens de la sensation commune', *Revue de métaphysique et de morale* 96/4 (1991), 455–74.
- BURNYEAT, M. F., 'Aristotle on Understanding Knowledge', in E. Berti (ed.), *Aristotle on Science: The Posterior Analytics* (Padua: 1981), 97–139.

⁹³ Thanks are due to Keimpe Algra and Ricardo Salles, who provided useful comments on earlier versions of this essay, and especially to Marije Martijn, who saved me from a number of errors. Of course all mistakes that remain are mine.

- 'Aristote voit du rouge et entend un "do": combien se passe-t-il de choses? Remarques sur *De anima*, II, 7–8', in G. Romeyer-Dherbey and C. Viano (eds.), *Corps et âme: Sur le De anima d'Aristote* (Paris, 1996), 149–67.
- 'De anima II.5', *Phronesis* 47/1 (2002), 28–90.
- CASHDOLLAR, S., 'Aristotle's Account of Incidental Perception', *Phronesis* 18 (1973), 156–75.
- CHERNISS, H. F., *Aristotle's Criticism of Plato and the Academy*, i (Baltimore: Johns Hopkins Press, 1944).
- COHEN, S. M., 'Hylomorphism and Functionalism', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays in Aristotle's De Anima* (Oxford, 1992), 57–73.
- DE HAAS, F. A. J., 'Modifications of the Method of Inquiry in Aristotle's *Physics* I.1. An Essay on the Dynamics of the Ancient Commentary Tradition', in C. H. Leijenhorst, C. H. Lüthy and J. M. M. H. Thijssen (eds.), *The Dynamics of Aristotelian Natural Philosophy* (Leiden, 2002), 31–56.
- EBERT, T., 'Aristotle on What is Done in Perceiving', *Zeitschrift für philosophische Forschung* 37 (1983), 181–98.
- EVERSON, S., *Aristotle on Perception* (Oxford: Oxford University Press, 1997).
- FEREJOHN, M., 'Meno's Paradox and *De Re* Knowledge in Aristotle's Theory of Demonstration', *History of Philosophy Quarterly* 5/2 (1988), 99–117.
- FREELAND, C., 'Aristotle on the Sense of Touch', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays in Aristotle's De Anima* (Oxford: Oxford University Press, 1992), 227–48.
- GIFFORD, M., 'Aristotle on Platonic Recollection and the Paradox of Knowing Universals: *Prior Analytics* B.21 67a8–30', *Phronesis* 54/1 (1999), 1–29.
- HAMLIN, D. W., *Aristotle's De Anima Books II and III* (Oxford: Clarendon Press, 1968).
- JOHANSEN, T. K., *Aristotle on the Sense-Organs* (Cambridge: Cambridge University Press, 1997).
- KAHN, C., 'The Role of *Nous* in the Cognition of First Principles in *Posterior Analytics* II 19', in E. Berti (ed.), *Aristotle on Science: The 'Posterior Analytics'. Proceedings of the Eighth Symposium Aristotelicum held at Padua from September 7 to 15, 1978* (Padua: Editrice Antenore, 1981), 385–414.
- LESHER, J., 'The Meaning of *Noûs* in the *Posterior Analytics*', *Phronesis* 18 (1973), 44–68.
- MODRAK, D. K. W., 'Koine Aisthesis and the Discrimination of Sensible Differences in *de Anima* III.2', *Canadian Journal of Philosophy* 11/3 (1981), 405–23.
- *Aristotle: The Power of Perception* (Chicago: University of Chicago Press, 1987).
- *Aristotle's Theory of Language and Meaning* (Cambridge: Cambridge University Press, 2001).
- NARCY, M., 'ΚΡΙΣΙΣ et ΑΙΣΘΗΣΙΣ (*De anima*, III, 2)', in G. Romeyer-Dherbey and C. Viano (eds.), *Corps et âme: Sur le De anima d'Aristote* (Paris, 1996), 239–56.
- POLANSKY, R., 'Analogy and Disanalogy of the Soul's Faculties in Aristotle's *De Anima*', *Boston Area Colloquium in Ancient Philosophy* 15 (1999), 57–86.

- RODRIGO, P., 'Comment dire la sensation?—logos et aisthèsis en *de Anima* III,2, *Études phénoménologiques* VIII/16 (1992), 47–78.
- SCOTT, D., *Recollection and Experience. Plato's Theory of Learning and its Successors* (Cambridge: Cambridge University Press, 1995).
- SORABJI, R. R. K., 'Aristotle on Demarcating the Five Senses', *Philosophical Review* 80/1 (1971), 55–79.
- 'Intentionality and Physiological Processes: Aristotle's Theory of Sense-Perception', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford: Clarendon Press, 1992), 195–225.
- Animal Minds and Human Morals. The Origins of the Western Debate* (London: Duckworth, 1996).
- 'Aristotle on Sensory Processes and Intentionality: A Reply to Myles Burnyeat', in D. Perler (ed.), *Ancient and Medieval Theories of Intentionality* (Leiden: Brill, 2001), 49–61.
- WEDIN, M. V., 'Aristotle on the Mechanics of Thought', in A. Preus and J. P. Anton (eds.), *Essays in Ancient Greek Philosophy V: Aristotle's Ontology* (New York: SUNY, 1992), 245–71.

Alexander of Aphrodisias on the Nature and Location of Vision

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The so-called second book of the treatise *On the Soul* (*De anima*) by Alexander of Aphrodisias is a collection of short discussions on a range of topics, more or less closely connected with psychology. Since 1887 it has commonly been known by the title *Mantissa* given to it by its editor Ivo Bruns, *Mantissa* originally being an Etruscan word meaning a make-weight, something the trader puts in to balance up the scales.¹ One sequence of discussions in the *Mantissa*, §§9–14, consists of a series of refutations of non-Aristotelian theories of vision, followed in §15 by an exposition of Aristotelian doctrine and in §16 by a discussion of the Aristotelian account of colour. I have attempted to say something about the relations of these texts to one another, and also to Alexander's

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¹ I have recently completed a new edition of the Greek text of this collection, and an annotated English translation, *Alexander of Aphrodisias: Supplement to On the soul* (London: Duckworth, 2004). I am grateful to Gerald Duckworth and Co. for permission to reproduce material from that translation here and also from R. W. Sharples, *Alexander of Aphrodisias: Quaestiones 2.16–3.15* [*Quaestiones*] (London: Duckworth, 1994) in the same series. The founding and direction of the Aristotelian Commentators series is one of Richard Sorabji's many outstanding contributions to the study of ancient philosophy, and especially of the philosophy of late antiquity. For this reason, and also because its subject matter is an issue—the underlying physical mechanism of vision in Peripatetic theory—in which he has a particular interest, it is a particular pleasure to present this essay to him as part of his Festschrift, in thanks for many years of friendship and support.

commentary on Aristotle's *On Sensation* (*De sensu*), in an earlier paper.² Vision is also discussed by Alexander in the first book of his treatise, *De anima*, which, unlike the *Mantissa*, is a single and self-contained discussion, structured in a similar way to Aristotle's own treatise *De anima*.³ The topic of vision was one in which Alexander's teacher Sosigenes had a special interest, writing a work *On Vision* in at least eight books.⁴

I

The final paragraph of *Mantissa* §15 uses the claim that the intervening air does not itself become coloured when we see a coloured object⁵ to explain how people can see things of different colours when their lines of sight intersect diagonally:

T1. Since seeing comes about in this way, not by an affection and alteration of what intervenes, but by a relation,⁶ the difficulty is also resolved which some people raise, how it is possible for those who see different or even opposite things, being positioned diagonally to one another, to see [them]. For it will seem that the air in between receives opposite colours at the same time, in that the colours

² R. W. Sharples, 'Alexander and pseudo-Alexanders of Aphrodisias, *scripta minima*. Questions and Problems, *Makeweights* and Prospects' ['Alexander and pseudo-Alexanders'], in W. Kullmann, J. Althoff, and M. Asper (eds.), *Gattungen wissenschaftlicher Literatur in der Antike* (ScriptOralia 95) (Tübingen: Gunter Narr, 1998), 383–403.

³ Apart from placing motion before intellect: P. Accattino and P. L. Donini, *Alessandro di Afrodisia, L'anima [L'anima]* (Rome: Laterza, 1996), p. viii. Alexander's surviving treatise *De anima* is to be distinguished from his *commentary* on Aristotle's *De anima*, a commentary which is known only through secondary quotations.

⁴ Alexander, *In meteor.* 143.12–14, cf. Themistius, *In de an.* 61.23–4; P. Moraux, *Der Aristotelismus bei den Griechen*, ii (Berlin: de Gruyter, 1984), 359.

⁵ Which is not to say that the air may not *sometimes* become coloured by the proximity of an intensely coloured object: at *Mant.* 145.25 ff., we read 'certain colours appear also in the intervening transparent, since it itself receives the forms and acts as a messenger. At any rate certain things seem to be coloured by the colours of what is placed alongside them. What is placed on red or purple appears like this in colour, if such colours are placed alongside, since the colours are transmitted through the air, but are not seen there.' Such cases are, however, the exception.

⁶ The treatment of light as a relation is Alexander's standard doctrine, used to explain the allegedly instantaneous nature of illumination and vision. Illuminating and ceasing to be illuminated depend on the presence or absence of the light source just as being or not being on the right may depend on the movement of the person on the left: *Mant.* 143.4 ff., 144.29 ff.; Alexander, *In sens.* 133.24, 134.11, *De an.* 43.3. F. M. Schroeder, 'The Analogy of the Active Intellect to Light in the *De Anima* of Alexander of Aphrodisias' ['Analogy'], *Hermes* 109 (1981), 215–25 at 217. In other words, becoming illuminated is what philosophers would now call a Cambridge change, and this can be used to explain the instantaneous nature of illumination and vision (*Mant.* 143.23 ff.; *In sens.* 133.24). The doctrine also explains how the divine ether is not affected, though we see the stars through it, and how the moon is not affected through being illuminated by the sun (*Mant.* 144.29 ff.). Cf. J. Christensen de Groot, 'Philoponus on *De anima* 2.5, *Physics* 3.3, and the Propagation of Light', *Phronesis* 28 (1983), 177–96 at 181.

collide with each other, that is in that the cones from⁷ those seeing things [positioned] diagonally intersect each other. This is solved by the fact that the air is not coloured, but through the relation to it of what is seen the colour appears in it in a straight line with what is seen. For nothing prevents the same thing from having a different relation not preserving the same relation to different things, just as nothing prevents the same thing from being half of one thing and twice another. (Alexander, *Mant.* 147.16–25)⁸

Clearly, if the air *did* become coloured, and I see a blue object with my line of sight intersecting that by which you see a red object, the blue object would look purple to me and the red object purple to you. (The colour examples are mine, in terms of a modern theory of colour mixing; the *Mantissa* does not give any specific examples of colours here.)

Richard Sorabji has referred in passing to this text in discussing the development of the concept of intentionality and of the understanding of vision in other than material terms.⁹ He points out that in this passage of the *Mantissa* the argument, that different lines of sight can pass through the same point because no actual coloration is involved, is only applied to the *medium*, the air or the water between us and the object, whereas Alexander in his treatise *De anima* (61–2) uses it to explain not only this but also, and primarily, how the *faculty of sight* can see different colours simultaneously through not being coloured itself.¹⁰

This seems at first, as Sorabji notes, to be a pseudo-problem. Aristotle himself raises the problem of how the *common sense* can be characterized in conflicting ways,¹¹ but there seems no reason why the *organ of sight* could not be partly white and partly black when we see objects of the two colours simultaneously. Alexander himself, as Accattino and Donini (*L'anima*, 232) point out, allows as much at *DA* 64.4–6, to be discussed further below. And one of the texts attributed to Alexander seems at first sight to be drawing a contrast between the *eye itself* being black in one part and white in another, on the one hand, and the common sense being able to sense different things because it does not do so in terms of a physical change.

T2. It is impossible for affections from opposites to come to be simultaneously in the same part of the same sense-organ. For when we look simultaneously at a

⁷ Bruns' conjectural supplement, based on comparison with Alexander, *In sens.* 30.17.

⁸ A similar objection is raised, not in terms of colour but in terms of physical collision, in the preceding discussion of the ray theory of vision (130.2; cf. Alexander, *In sens.* 30.12 ff.).

⁹ R. Sorabji, 'From Aristotle to Brentano: the Development of the Concept of Intentionality' ['Development'], in H. J. Blumenthal and H. Robinson (eds.), *Aristotle and the Later Tradition (Oxford Studies in Ancient Philosophy, suppl. vol.)* (Oxford: Clarendon Press, 1991), 227–59 at 228–30.

¹⁰ Alexander, *De an.* 61–2; Sorabji, 'Development', 229 and n. 9.

¹¹ Aristotle, *De an.* 3.2 427a5.

white and a black thing, [considering] in which part of the *κώρα*¹² the appearance of each of them comes to be, [then], as we see happening also in the case of mirrors, <they do not appear simultaneously in the same parts>. (Alexander, *Quaest.* 3.9 97.1–4)

In fact, however, this passage is drawing a contrast *not* between sense-organs and the common sense, but rather between what physically happens in *any* sense-organ, including that of the common sense, on the one hand, and what happens in the faculty of judgement on the other.¹³ For it continues by raising the problem of the physical composure of opposites in the organ of the *common* sense, that is the heart:

T3. . . . nor is it possible for these [impressions] to be transmitted to that to which they are transmitted, which is as I said the *ultimate* sense-organ, in such a way as not to come to be in *separated* parts of it. (Alexander, *Quaest.* 3.9 97.5–7)

That the reference of ‘the ultimate sense-organ’ is to the organ of the common sense is shown by the fact that at 96.31–4 reference has been made to affections from *all five* sense-organs being transmitted to ‘the ultimate sense-organ’, which must therefore be the organ of the common sense. So in T2 + T3 a distinction is being drawn between being affected physically and judging, rather than between the special senses and the common sense.

Sorabji further notes that, since T1 applies the problem of conflicting colours to the sense-organ itself while other texts in Alexander do not, it is forced to solve the resulting problem by interpreting vision in a non-materialistic way. That the other texts do not use this particular argument in the same way as T1 removes one reason for supposing that they might be treating vision non-materialistically, but it does not itself prove that they are not doing so.

An earlier part of *Mantissa* §15 refers to the reflected image that appears in the *κώρα*:

T4. The colour does not appear as being in the air, but it is in the *κώρα*, because some transparent things are just transparent, while others, in addition to being transparent, are also reflective, through their smoothness and density being able to hold and collect together the reflection. So the things which are just transparent do not preserve in themselves what is seen in such a way that it appears in

¹² R. Sorabji, ‘Body and Soul in Aristotle’, *Philosophy* 49 (1974), 63–89 (reprinted in J. Barnes, M. Schofield, and R. Sorabji (eds.), *Articles on Aristotle*, vol. 4 (London: Duckworth, 1979), 42–64) has conclusively shown (at 72 n. 22) that in Aristotle, and in the writings attributed to Alexander, the Greek word *κώρα*, which normally means the pupil, applies rather to the more or less fluid contents of the eye; cf. T. K. Johansen, *Aristotle on the Sense-Organs [Aristotle]* (Cambridge: Cambridge University Press, 1998), 56 n. 61. The translation of this and the next passage are taken with modifications from Sharples, *Quaestiones*, 61.

¹³ Cf. Accattino and Donini, *L’anima*, p. xviii.

them (and like this are [all] those transparent things that are rare, [such] as air), but as many as share in a certain density and solidity, these display in themselves and preserve the image and shadow from what is seen. And like this among transparent things are mirrors and glass and transparent stones and, indeed, water; for it is more solid and dense than air and more able to hold and collect together the images and shadows from the things that are seen. And it has been shown that the *κόρη* too is watery. (Alexander, *Mant.* 142.21–32)

In not adding any indication that this image is simply a reflection, and plays no part in the process of vision itself, this passage differs both from Aristotle's *De sensu* (438a5–12) and from Alexander's commentary on it (24.26–7, 25.4–5), both of which explicitly stress that the reflection is incidental as far as vision is concerned.¹⁴ However, we still have only an argument from silence; the absence of an explicit statement that the image in the pupil does not play a part in vision does not necessarily mean that the author of the *Mantissa* passage thought it did play a part.¹⁵

II

There is, however, another feature of *Mantissa* §15 which has a bearing on where, and so also on how, vision actually takes place. For the continuation of T4 is:

T5. . . it has been shown that the *κόρη* too is watery, and the passage (*πόρος*) which penetrates from [the *κόρη*] to the primary [organ] of sense is like this [i.e. watery], and reports the form and colour from the thing that is seen to the [organ] of sense. (Alexander, *Mant.* 142.31–143.1)¹⁶

It seems likely that 'the primary [organ] of sense' here means the organ of the common sense,¹⁷ which is in some passages called rather the *ultimate*

¹⁴ Sorabji, 'Development', 230 and n. 14.

¹⁵ E. K. Emilsson, *Plotinus on Sense-Perception [Plotinus]* (Cambridge: Cambridge University Press, 1988), 99 and n. 20 notes that Alexander draws an analogy between the reception of colour by the sense-organs and reflection in mirrors (*De an.* 62.13–15, *Mant.* 146.25–6). But that is a different point.

¹⁶ Cf. Alexander, *In sens.* 59.11–14.

¹⁷ Cf. Alexander, *De an.* 50.16, of passages between the *πρώτον αἰσθητικόν* and the ears; 60.6; 65.8, where the common sense is called the 'first sense'; 68.6; 69.22; and above all 97.6, where the *πρώτον αἰσθητικόν* is explicitly identified with the heart. L. Block, 'Aristotle on the Common Sense: a Reply to Kahn and Others' ['Reply'], *Ancient Philosophy* 8 (1988), 235–49 at 240 notes that Aristotle himself in the *Parva naturalia* (450a12, 451a17, 458a28) speaks of the organ of the common sense as the primary sense-organ, while in *De an.* he applies this expression rather to the organs of the individual senses (422b23, 424a25). C. H. Kahn, 'Sensation and Consciousness in Aristotle's Psychology' ['Sensation'], *Archiv für Geschichte der Philosophie [AGPh]* 48 (1966), 43–81 at 64–5 n. 50 explains this, and the description in *De an.* of the organ of the common sense as 'ultimate' (cf. the next note) by the different emphases of the two treatments, the *Parva naturalia* complementing that in *De*

sense-organ.¹⁸ And it might then be thought that the reference is to vision taking place in the eye and the *πόρος* transmitting its *consequences* to the organ of the common sense in the heart. But Alexander in the *de Sensu* commentary imposes upon us the alternative of either interpreting *πόρος* as a structure *within the eye* or else supposing that vision itself takes place in the heart. He does so in discussing a passage of Aristotle's *De sensu* which has achieved some notoriety.

In *De sensu* 438b8–16, Aristotle argues that the organ of sight is not on the surface of the eye, on the grounds that if it were there would be no need for the inside of the eye to be transparent:

T6. The soul, or the [faculty] of the soul which is capable of sensation, is not located on the surface of the eye, but clearly inside; and for this reason it is necessary for the inside of the eye to be transparent.¹⁹ And this is also clear from [actual] occurrences: for there have been cases where people have been struck on the temple in battle in such a way that the *πόροι* of the eye were cut off, and darkness seemed to come upon them as if a light had been put out, since the transparent, the so-called *κόρη*, had been cut off, like some sort of lamp.

It is not immediately clear whether the reference to people wounded in battle in such a way that the transparent is cut off is alluding to 'everything going dark' temporarily, or to permanent blinding. But more important for our present purpose is the fact that Johansen has invoked this passage in support of the claim that sensation for Aristotle takes place, not just inside the eye as opposed to on its surface, but in the heart rather than in the eye (or in the other organs specific to the individual senses), and that in the case of vision there are transparent channels extending from the eyes to the heart which enable this to occur.²⁰

an. (below, n. 24). Cf. also Kahn, 'Sensation', 60 and nn. 36–7; Block, 'Reply', 245; Emilsson, *Plotinus*, 98. An alternative would be to suppose that *κόρη* does after all here mean the pupil, or perhaps better the aqueous humour at the front of the eye, and that the 'primary organ of sense' refers only to the primary organ of vision, located perhaps at the back of the eye in the retina; the 'passage' would then be from the front of the eye to the back. But this is open—if indeed we suppose that the theory of vision in *Mant.* §15 and that in the commentary *In sens.* are broadly similar—to a similar objection to that raised below against the location of the faculty of vision in the lens.

¹⁸ Cf. T3 above, Aristotle, *De an.* 3.2 426b16, 3.7 431a19, Alexander, *De an.* 63.15–16, and Alexander, *In sens.* 168.3. Kahn, 'Sensation', 64–5 n. 50 and 67 n. 57).

¹⁹ 'Transparent' is actually a mistranslation of *διαφανής*, which in the *De sensu* should rather be rendered 'illuminable'. The Greek for 'transparent' is strictly *δίοπτρος*. I have discussed Aristotle's use of the term *διαφανής*, and the problematic discussions of it attributed to Alexander, at Sharples, 'Alexander and pseudo-Alexanders', 397–9; cf. Schroeder, 'Analogy', 220–1. But nothing seems to hang on this point for the present discussion, and the transparent is for Alexander as it were the limiting case of the illuminable; so I shall use the former term for convenience.

²⁰ Johansen, *Aristotle*, 67–95 and especially 91. Aristotle himself in *De sensu* does not explicitly indicate that the contents of the *πόροι* themselves are transparent, except in so far as the same term 'cut off' (*ἀποτέμνειν*) is applied first to the *πόροι* and then to the transparent

Rubarth has raised the following objections to Johansen's view: (i) in Aristotle's *De anima* recollection and after-images are both explained in terms involving the eyes,²¹ (ii) vision can only occur along straight lines, which will not be the case with the supposed channels from the eyes to the heart, and (iii) on Johansen's view the account of vision in Aristotle's *De anima* and *De sensu* will not be an explanation of the real mechanism of vision at all, since that will take place in the heart after information has travelled there from the eye.²²

A possible response to (i) would be to note that Block argued that Aristotle's view in *De anima* that sensation takes place in the eye and the other organs of the special senses was *superseded* in the *Parva naturalia* by a view that made the common sense in the heart the only sense.²³ However, Kahn's argument that the differences between these texts are to be explained, not by a change of view on Aristotle's part, but rather in terms of the development of his theory in the course of the two works, designed as two parts of a continuous exposition, seems persuasive.²⁴ A more appropriate response, then, would be to note that the location of sensation in the heart does not involve the denial that the eyes play any part in

κώρα, which is not conclusive since A may be cut off from B whether A and B are similar in kind or not. For perception in the heart cf. G. E. R. Lloyd, *Aristotelian Explorations* (Cambridge: Cambridge University Press, 1996), 131: 'all modes of perception, without exception, are the work of the common sensorium located "inside", that is at the heart.'

²¹ S. M. Rubarth, review of Johansen, *Aristotle*, in *Bryn Mawr Classical Review*, <http://ccat.sas.upenn.edu/bmcr/1999/1999-09-24.html> at n.2; Aristotle, *De an.* 1.4 408b17–18, 3.2 425b24–5. (Actually Aristotle in these passages refers only to 'the sense-organs'; presumably Rubarth's point is that the plural is significant, indicating a reference to the eyes and the other sense-organs rather than to the heart.)

²² Johansen distinguishes (explicitly, *Aristotle*, 204) between the *seat of perception*, which he locates in the region of the heart (78, 81) and the *organ of* (e.g.) *sight*, which he locates in the eye (119, 198, 201, 204, 246, 287). Rubarth's point might be expressed by saying that for Johansen the eye is the 'organ of sight' only in the sense that it is a necessary intermediary. Johansen, *Aristotle*, 201 remarks that at *PA* 2.8 653b25–7, Aristotle says that, as one might regard the organ of touch as the primary organ of touch in the heart together with the flesh as the medium (cf. *De an.* 2.11 422b34–423a17, 423b17–26), so one might regard the organ of sight as the *κώρα* plus the (external) transparent medium—not, we may note, as the seat of perception in the heart plus the *κώρα* (and *πόροι*). Alexander speaks of the eyes as sense-organs (see below, T8, T9, and n. 44) even though regarding the heart as the 'primary', or 'ultimate' sense-organ (above, nn. 16–17).

²³ L. Block, 'The Order of Aristotle's Psychological Writings' ['Order'], *American Journal of Philology* 82 (1961), 50–77, and id., 'Three German Commentators on the Individual Sense and the Common Sense in Aristotle's Psychology', *Phronesis* 9 (1964), 58–63. At 'Order', 60–1 Block agrees with Jaeger's late dating of Aristotle's biological works, at least in their present form; but holding such a view need not commit one also to Jaeger's view that empirical scientific interests replaced metaphysics in Aristotle's thought. Neither Johansen nor Rubarth mentions the possibility that Aristotle's position changed between *DA* and *De sensu*.

²⁴ Kahn, 'Sensation', especially 50 ff., 64 ff. A developmental hypothesis such as Block's is in any case not one that would have occurred to Alexander in his attempt to interpret Aristotle.

the process at all. Kahn, while arguing that the heart is the *primary* location of sensation for Aristotle²⁵ and that it would be ‘simply incredible’ to explain vision with reference to the eyes alone,²⁶ repeatedly insists that the specific faculty of vision is in the eye.²⁷

Rubarth’s point (ii) certainly shows that the process involved inside the body cannot be entirely like that occurring outside it, but does not in itself rule out the claim that sensation proper occurs only in the heart.²⁸ And while (iii) is a valid objection to the theory reconstructed by Johansen, this does not conclusively show that Aristotle—or, as we shall see, Alexander—may not have held such a theory. As often, the Principle of Charity needs to be weighed against the apparent implications of the evidence.

Alexander discusses T6 in a section of his commentary which is of considerable interest, in spite of its characteristically turgid and complex grammatical structure:

T7. (1) After saying ‘But as things outside are not seen without light, so too is it with what is inside’ he adds the reason for what is inside too needing to be transparent, [namely] that the soul and the *faculty of sight* are not in the eye. For if it was on the surface of the eye, there would be no need for what is inside to be transparent; the outside would be sufficient. (2) But since it is not here (for it would be similar in the case of the other sense-organs too, and in this way no joint perception would occur, with different parts of the soul in different places and set over different [organs], and we would not be able to judge by means of the different sense-organs that the things we perceive are different from one another, as [Aristotle] said in [his] *De anima* . . .),—(3) since we see that it is not like this²⁹ (and there is evidence that the seeing soul is not on the surface of the eye, and that

²⁵ Cf. especially Kahn, ‘Sensation’, 67, 77.

²⁶ Ibid. 65–6, against Block’s account of *DA*.

²⁷ Kahn, ‘Sensation’, 67, 69. Emilsson, *Plotinus*, 165 n. 3 comments that ‘as Kahn interprets the relevant passages in the *Parva Naturalia*, Aristotle’s views look very much like those of Alexander of Aphrodisias.’ In fact, though, Alexander goes further than Kahn, for the latter, even though attributing the central role in vision to the heart, is prepared to speak of the faculty of sight being located in the eye, while Alexander apparently is not: see below, at n. 34. Putting the point another way, Kahn apparently does not follow Alexander in T7 below in interpreting ‘the [faculty] of the soul which is capable of sensation’ in T6 as equivalent to the faculty of sight.

²⁸ It may be noted that at *In sens.* 19.17–18 Alexander, in interpreting Aristotle’s explanation at 437a23–b10 of the flashing effect seen when the eye is moved rapidly in darkness, says that vision requires the eye to be *in a straight line* with the ‘little veins’ that transmit the visual effect to the ‘primary sense-organ’ (cf. n. 17 above). But that is not the same as making the implausible claim that the passages are themselves straight. Galen, *Us. Part.* 10.13 (vol. 2, p.105.17–19 Helmreich) says (inaccurately) that the optic nerve goes in a straight line from the eye to the *brain*: R. E. Siegel, *Galen on Sense Perception [Galen]* (Basel: S. Karger, 1970), 99.

²⁹ Rather than, with J. A. Towey, *Alexander of Aphrodisias: On Aristotle On Sensation [Alexander]* (London: Duckworth, 2000), 44, ‘This state does not exist when we see’.

what extends up to that faculty is transparent and that sight occurs through it when it is illuminated, also from [certain] results: for when certain people have been wounded, he says, ‘on the temple in battle in such a way that the *πόροι* of the eye were cut off’, [that is, the *πόροι* in which the transparent [is located], (4) darkness seemed to come upon them suddenly as if a light had been put out, since the *κόρη* had been cut off *from the transparent after the κόρη*, [which] it illuminates like some sort of lamp; through it *everything inside right up to the faculty of sight* was illuminated by the light outside. The blow, destroying this continuity and preventing it from being illuminated, as it were extinguished the light in it),—(5) if [then] we do not see with the surface of the eye, for this reason too it is necessary for what is inside to be transparent, *what extends as far as the perceptive soul*. (Alexander, *In sens.* 36.7–37.5)

Where Aristotle says that the faculty of sight is not on the *surface* of the eye, Alexander, as Ross notes in his commentary on the Aristotle passage, says explicitly that it is not in the eye at all: ‘the soul *and the faculty of sight are not in the eye*.’³⁰ Aristotle’s argument about the transparency of the contents of the eye, which Alexander faithfully gives in the second part of (1), does not indeed in itself show that sight is not in the eye *at all*; it might still be in the *κόρη*, if with Sorabji we regard vision as an alteration in the *κόρη*, or, if with Johansen we regard the *κόρη* as functioning as a medium,³¹ behind the *κόρη* but still within the structure of the eye. But in (2) Alexander goes on to argue that if perceptive soul was in each of the sense-organs no comparison of the reports of the different senses would be possible;³² and the italicized words in (4) and (5) also strongly suggest that sight takes place through an effect in the transparent extending beyond, or behind, the eye. In other words, just as we can only see things through air or water, as the *external* medium, when they are illuminated and their transparency actualized,³³ just so we can only see *through* our optic nerve and our eyeball, as it were, when their potentially transparent contents are illuminated, *from outside*. Moreover, Alexander does not just deny that the (perceptive) soul is in the eye,³⁴ or insist (with Kahn,

³⁰ W. D. Ross, *Aristotle: Parva Naturalia [Aristotle]* (Oxford: Clarendon Press, 1955), 192. Cf. Alexander, *In sens.* 34.3: it is not the *κόρη* or the eye that sees. Johansen, *Aristotle*, 91 n. 104 notes Alexander’s support for his interpretation of Aristotle. Kahn, ‘Sensation’, 75 n. 74 says that Alexander is right to refer T6 to the soul in the heart.

³¹ For which Johansen, *Aristotle*, 67 n. 71 notes also Aristotle, *De an.* 3.7 431a17–20.

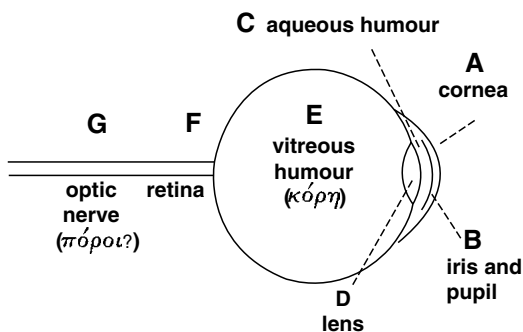
³² The reference of ‘as [Aristotle] said in [his] *De anima*’ in (2) is presumably, as Towey, *Alexander*, 170 n. 174 notes, to Aristotle’s discussion of the *common* sense in his *De an.* 3.2; but that indicates nothing about the location of the *specific* sense of sight. Nevertheless, the same passage is apparently invoked at Alexander, *In sens.* 34.3–5 in support of the claim in T6 that what perceives is not on the surface of the eye but ‘somewhere else’; cf. Towey, *Alexander*, 169 n. 158.

³³ Aristotle, *De an.* 2.7 419a6ff.; Alexander, *In sens.* 59.5f., *De an.* 42.19ff., *Mant.* 141.36ff., *Quaest.* 1.2 6.15ff. Cf. Schroeder, ‘Analogy’, 217.

³⁴ Which Aristotle had not himself claimed: Kahn, ‘Sensation’, 75 n. 74.

nn. 26–7 above) that sensation takes place primarily in the central sense-organ; he denies that the *faculty of sight* is to be located in the eye at all.

The conclusion that Alexander does not locate sight in the eye could be avoided if we suppose that the *πόροι* are located in the eye itself rather than behind it.³⁵ Neither T6 nor T7 gives the *πόροι* an explicit location; that they extend behind the eye is an inference from the fact that the commentary on *De sensu* refers to them in the context of arguing that sight is not in the eye at all. The *κόρη* is referred to in the *Mantissa* as *watery*, and since the distinction between the aqueous humour (C, between the cornea A and the lens D) and the vitreous humour (E, in the eyeball behind the lens) was already familiar, not least to Galen, we might suppose Alexander to understand by *κόρη* the aqueous humour rather than the vitreous. It may not be irrelevant that the iris, and hence the pupil (B) to which the term *κόρη* had traditionally referred, being between the cornea (A) and the lens (D), are precisely in the region filled by the aqueous humour (C). In that case the transparency of the aqueous humour could be an argument, not for the faculty of sight not being in the eye at all, but just for its being inside the eye rather than on the surface. If the *κόρη* is the part of the aqueous humour between the cornea and the pupil, the *πόροι* could be the route through the aqueous humour between the pupil and the faculty of sight in the lens—where Galen also held that it is located.³⁶ And in that case Alexander would be attributing to Aristotle the plausible claim that vision is impaired, temporarily or permanently, when a blow affects the pupil (or the cornea?) and cuts off illumination from the lens.



³⁵ I owe the suggestion that follows to Heinrich von Staden.

³⁶ Galen, *Meth. Med.* 2.6 (vol. 10, p. 118.15–17 Kühn); id., *Us. Part.* 10.1 (vol. 2, p. 55.17–19 Helmreich); Siegel, *Galen*, 58–9.

There is however an insuperable problem with interpreting Alexander thus: to do so removes any connection between the discussion of the *πόροι* in the passage in the commentary on *De sensu* and the argument, suggested by other texts too but most clearly indicated in this very passage itself, that sight takes place in the organ of the common sense rather than in the eye. As Johansen (*Aristotle*, 84–5) argues, the suggestion that *πόροι* are needed for illumination to pass through the transparent surface of the eye itself stands in need of justification. And at *In sens.* 19.17–18 (above, n. 29) Alexander refers to the *πόροι* as something distinct from the eye which can move relative to them.

The identity of the *πόροι* or passages referred to by Aristotle in T6 is indeed disputed. Lloyd interprets them as structures *behind the eye* (my emphasis) which may or may not be identical with the optic nerve, noting that three separate pairs of such *πόροι* are referred to at *HA* 1.16 495a11 ff.³⁷ Ogle argues that *πόροι* here and at *GA* 744a10 refers to the optic nerve in the case of the eye but to other structures in the case of the other sense-organs.³⁸ Ross (*Aristotle*, 192–3) argues against this that *πόροι* *always* means ‘openings’ rather than ‘nerves’, supporting this by reference to *GC* 324b26–32. This passage however relates to theories like that of Empedocles; it is not clear what Ross thinks the ‘openings’ are in the case of the eye for Aristotle himself.

Aristotle himself in *De insomniis* 3, speaks of movements from the senses being transmitted to the organ of the common sense through the *blood*,³⁹ but that is not most naturally understood in terms of an effect in the transparent—unless indeed we are to suppose that the blood can be thought of as ‘transparent’ *simply* on the grounds that it can transmit visual information. Aristotle does note that passages from the eye extend as far as the blood-vessels around the brain,⁴⁰ and Alexander’s statement in T7 §§4–5 could be reconciled with Aristotle’s text (and with the evident fact that the optic nerve does not itself extend to the heart, which was well known in Alexander’s time, as Heinrich von Staden points out to me) if we supposed that transmission through the

³⁷ G. E. R. Lloyd, ‘The Empirical Basis of the Physiology of the *Parva Naturalia*’, in G. E. R. Lloyd and G. E. L. Owen (eds.), *Aristotle on Mind and the Senses* (Cambridge: Cambridge University Press, 1978), 215–39 at 219–20. (Reprinted in G. E. R. Lloyd, *Methods and Problems in Greek Science* (Cambridge: Cambridge University Press, 1991), 224–47.) Cf. Johansen, *Aristotle*, 74–5.

³⁸ W. Ogle, *Aristotle: De Partibus Animalium* (Oxford: Clarendon Press, 1911), in his note on *PA* 656b16. So too Kahn, ‘Sensation’, 66 n. 55.

³⁹ Cf. A. L. Peck, *Aristotle: Generation of Animals [Generation]* (London: Heinemann and Cambridge, Mass.: Harvard University Press (Loeb Classical Library), 1942), 592–3; A. Preus, ‘On Dreams 2, 459b24–460a33, and Aristotle’s *ἄπυς*’, *Phronesis* 13 (1968), 175–82 at 180.

⁴⁰ Aristotle, *PA* 2.10 656b17; Peck, *Generation*, 592.

transparent in the *πόροι* as far as the blood-vessels is followed by transmission through the blood-vessels to the heart, *and* if we also allow that the perceptive soul referred to at the end of T7 §5 is present in the blood-vessels as well as in the heart.⁴¹

On the other hand, it may be that we should not emphasize a distinction between the *πόροι* and the veins;⁴² Alexander at *In sens.* 41.2–4 refers to a *πόρος* extending from the heart to the brain and thence to the ‘sight’, in a way that would not be natural if veins extending from the heart to the brain, and *πόροι* from the brain to the eye, were regarded as distinct.⁴³ Johansen (*Aristotle*, 92) notes that the effect of blood in *De insomniis* is to distort to a greater or lesser extent the images that it transmits; it is as he says unclear what the contents of the *πόροι* are, but it seems reasonable to suppose, with Peck (*Generation*, 593), that they are or contain *σύμφυτον πνεῦμα*, in the case both of the *πόροι* and of the certainly blood-filled veins, and that this *πνεῦμα* is thought of as transparent.⁴⁴ It may be remarked that Alexander’s older contemporary Galen refers to a *πνεῦμα*, which is like light (*ἀγνοειδὲς πνεῦμα*) in the optic nerve,⁴⁵ but in his view the illumination comes *from* the brain to the eye, which is the reverse of what we find in T7.⁴⁶ Galen justifies his theory by citing the circular patches of light allegedly seen on the noses of bright-eyed animals such as lions, which implies illumination from within; Aristotle had cited the flashing of eyes rather to explain why

⁴¹ One might note here the observation of Block, ‘Order’, 51 (cf. id., ‘Reply’, 239) that the claim that perceptive soul is ‘in’ the heart should be understood not so much in terms of its being contained there, as of its functions originating from there. S. Everson, *Aristotle on Perception* (Oxford: Clarendon Press, 1997), 141–2, citing *Somm.* 2 455a33 ff., argues that ‘individual sense organs have the capacity for perception . . . because they are connected to the controlling sense organ, the heart’.

⁴² Cf. Johansen, *Aristotle*, 92 n. 110.

⁴³ Cf. also the reference to ‘little veins’ at Alexander, *In sens.* 19.17–18 (above, n. 28).

⁴⁴ Johansen, *Aristotle*, 75–7 notes that at *HA* 2.6 743b32 ff. *πόροι* conveying moisture from the brain are involved in the original formation of the eyes, and speculates (76 f. n. 90) that the connection of *πόροι* with visual problems in [Aristotle], *Probl.* 31.5 may be linked with this. But I am not sure why he suggests that ‘an opening [my emphasis] of the *πόροι* through a blow to the head’ might ‘cause a gathering of water in the head’ (rather than allowing it to pass to the eyes). Would it not rather be a *closure* of the *πόροι* as a result of a blow that might have such an effect?

⁴⁵ Galen, *PHP* 7.4.4, 7.4.18. I am indebted to Rebecca Flemming for this reference.

⁴⁶ *Ibid.* 7.5.20, 7.7.24; cf. G. Simon, *Le regard, l'être et l'apparence dans l'optique de l'antiquité* (Paris: Editions du Seuil, 1988), 33. Galen’s theory should not, however, as Heinrich von Staden points out to me, be regarded as one of vision by the emission of rays from the eye; it is rather that the *πνεῦμα* which is like light affects the external air in the form of a cone, more as in the Stoic theory of vision. None of the texts under discussion that are attributed to Alexander and discuss the theory of vision in order to establish a doctrine—rather than in order to refute opponents—mentions *πνεῦμα* at all. (I am grateful to Philip van der Eijk for prompting me to investigate this point.)

people mistakenly explain sight by the eye's being composed of fire (*Sens.* 437a22).⁴⁷

III

Whatever we make of the reference to *πόροι*—and the possibility remains that Alexander may not himself have had a very clear conception of exactly how they function—the claim that sight takes place in the organ of the common sense rather than in the eye is consistent, as Towey notes, with what Alexander maintains elsewhere.⁴⁸ For at this point we need to go back to Alexander's own treatise *De anima* and what it says about the location of sensation. Accattino and Donini (*L'anima*, xviff.) note the greater emphasis on the common sense in the heart in Alexander, as compared with Aristotle's own *De anima*,⁴⁹ and see it as a result of Alexander's considering not only Aristotle's *De anima* but also the *Parva naturalia*—as he was right to do, on Kahn's view of the relation between these two texts—and the biological works.⁵⁰ At *De anima* 39.18–22, Alexander seems to locate sensation in the heart, the organs of the special senses having a purely intermediary function:

T8. This experience [sense-perception] comes about in the first body that possesses perceptive soul, through certain organs which are of a different nature from the things perceived, but are able to be a medium for them because [they] have the power to be affected by them; when these are affected they pass on that

⁴⁷ The *Mantissa* argues, against the theory that we see by the emission of rays of light from the eye, that in that case we ought to see better in the dark when many of us gather together (128.7–10).

⁴⁸ Towey, *Alexander*, 170 n. 74.

⁴⁹ Cf. Towey, *ibid.*, citing Alexander, *De an.* 63.6–64.11. Galen, on the other hand, wants to attribute to vision the apprehension not just of colour but of what to Aristotle would be classed rather among the common sensibles. I am grateful to Heinrich von Staden for this point.

⁵⁰ So too Block, 'Reply', 240. Todd Ganson has suggested to me that the location of sensation in the heart may also be seen as appropriate given Alexander's emphasis on sensation as judgement, for which he compares Emilsson, *Plotinus*, 121–2 and 169 n. 23, who cites Alexander, *De an.* 78.13 and 84.5–6; cf. also R. W. Sharples, 'The Criterion of Truth in Philo Judaeus, Albinus and Alexander of Aphrodisias', in P. M. Huby and G. Neal (eds.), *The Criterion of Truth: Essays in honour of George Kerferd* (Liverpool: Liverpool University Press, 1989), 231–56 at 240 and 252–3 nn. 60, 61, 63 for the same view in Alexander's commentaries on Aristotle, and R. Salles, 'Compatibilism: Stoic and Modern', *AGPh* 83 (2001), 1–23 at 5, on the interpretation of *κρίνειν*. Emilsson, *Plotinus*, 104–5 regards Alexander's emphasis on the common sense in the heart as an attempt to explain the unity of sensation, and compares Alexander's account of the unity of sensation unfavourably with that given by Plotinus.

affection to it. It is situated in the region of the heart, which is where the ruling principle of the soul is in general, as the subsequent argument will show.

The occurrence of the Stoic term ‘ruling principle’ (ἡγεμονικόν) may suggest that post-Aristotelian psychological theories have had an influence here. However, at *De an.* 60.15,⁵¹ Alexander refers to each sense being in its sense-organ, presumably the special organ of each sense;⁵² and at 62.18–20 he refers to the common sense apprehending different perceptibles through different organs. *De an.* 64.4–65.2 refers to the organs of the individual senses being affected in different parts and transmitting these effects to ‘the ultimate sense organ’, that is, the heart:

T9. For in these cases too [i.e. perceptions of opposites by a single sense] the sense-organ will receive the affections of the opposed perceptibles simultaneously in different parts of itself, since it is not possible for opposite affections to occur simultaneously in the same thing. But when this is affected in different parts by the opposed perceptibles and, according to the way in which it is affected, passes on the affections to the ultimate organ of sense, and this too is similarly affected in [different] parts, the power, which is the same and single, perceives and judges the opposites simultaneously out of the whole sense-organ and each of its parts. For it is not the case that, as in being affected it is impossible for opposites to be present together in the same thing, so it is also in the judgement of them. For the judgement which judges opposites about opposites is not itself opposite, and what was impossible was for opposites to occur simultaneously concerning the same thing. For what is opposite in judgement is not to say that opposites are opposites, but to say that the same thing is the opposites simultaneously. And for this reason it is impossible for [them] to be present together to the one who judges so that he says that the same thing is white and black simultaneously, but to judge that opposites are opposite is not impossible. *The faculty of perception judges simultaneously that opposites are opposites, when the ultimate organ of sense, of which it is the power, is affected in different parts and reports the forms of the opposed perceptibles to it.*⁵³ For the same power, if the sense-organ is affected according to some one perceptible and by one, judges this, but if according to several, [it judges] these. The things whose forms are apprehended simultaneously by the organ of sense are judged simultaneously by [the power or faculty]; and how it is possible for the sense organ simultaneously to receive different and opposed forms has been stated already.

⁵¹ Echoing Aristotle 426b8: Accattino and Donini, *L'anima*, 225.

⁵² A. P. Fotinis, *The De Anima of Alexander of Aphrodisias* (Washington, DC: University Press of America, 1979), 71 actually renders ‘Each sense is seated *too* in its [own] sense organ’; but ‘too’ is not in the Greek.

⁵³ This must from the context refer to the common sense-organ (the heart) passing on information to the perceptive soul, and not to the peripheral sense-organs passing on information to the common sense-organ as at 64.8 above, in spite of what both the parallel with that passage and Aristotelian hylomorphism might suggest. The reference to an organ *reporting* (the Greek is διαγγέλλειν) to its *own* faculty seems uncomfortably dualistic for Aristotle’s and Alexander’s view of the relation between soul and body.

As in T3 above, the important contrast is not between the special organs and the heart, but between, on the one hand, the fact that *both* types of organs, if physically affected in different ways, must be so in different parts, and on the other hand the fact that the *faculty* of perception can judge different properties together. But what is important for our present purpose is that the faculty of perception is linked particularly with the common sense-organ, the heart.⁵⁴ And significantly, the judgement—which *is* the sensation—both of the qualities perceived by different senses *and* of the opposites *perceived by a single sense*, takes place in the common sense.⁵⁵

At 96.25, in the final section of *De anima* concerned with the location of the soul, Alexander argues that it is necessary for perceptive soul not to be scattered, and that since dissection shows—he claims—that the heart is the principle of touch and taste, the other senses too must be linked to the heart through the head.⁵⁶ He was not, indeed, the first Peripatetic after Aristotle to emphasize a single central location for sensation. For Strato of Lampsacus, the third head of the Lyceum, already said that all sensation was felt in the ruling part of the soul, rather than in the bodily extremities (fr. 110–11 Wehrli). Strato's theory of the soul was influenced by contemporary physiological discoveries, for Erasistratus investigated the function of the nerves by dissection and argued that they contained 'psychic' *πνεῦμα* extending from the brain. Unlike Aristotle and Alexander, Strato located the seat of the ruling principle not in the heart but in the space between the eyebrows; Alexander is aware, as we have just seen, that the organs of sight, hearing and smell are linked to the brain—or at least to the head; in *De anima* he only makes specific mention of the brain in a negative context, when attacking those who locate the ruling principle of the soul there (99.31). But he manages to square this anatomical knowledge with the Aristotelian position by regarding the head as a purely intermediary stage in the linking to the heart.

IV

Returning finally to *Mantissa* §15, another feature deserves comment. As is well known, Alexander defines soul as the faculty that supervenes on the mixture of the bodily elements (*De an.* 24.21–3), and this has often

⁵⁴ Cf. also *DA* 63.15–16 and 97.6–7; above, nn. 17–18.

⁵⁵ For the linking of the two problems, of qualities apprehended by different senses and of contrary qualities apprehended by a single sense, see Accattino and Donini, *L'anima*, p. xviii and also 228.

⁵⁶ The anatomical detail derives from Aristotle, notably *GA* 743b37ff., as is noted by Accattino and Donini, *L'anima*, 305.

been seen as the expression of an un-Aristotelian materialism. For Alexander's *De anima* itself, that interpretation seems at least open to doubt; it is not clear that Alexander in fact sacrifices the Aristotelian priority of form to matter.⁵⁷ But in discussing the mechanism of vision the *Mantissa* says, literally translated:

Τ10. The κόρη, too, is one of the things that are transparent, and it indeed along with the intervening air which is illuminated, and itself no less than it, receives the light, if it (the κόρη) too is taken to be transparent, and through the modification by the colours, by which it is modified in some similar way to the external transparent,⁵⁸ comes to be seeing and perceptive soul. (142.16–20)

Bruns⁵⁹ objects that the κόρη itself cannot be said to become sensitive soul; his worry, as his reference to the commentary on *De sensu* (76.3 Thurot = 36.9 Wendland = T7 above) shows, is not the implied materialism, but the location of sensation in the κόρη. He therefore suggests either taking the first part of the sentence as a nominative absolute—he says, as far as δεχομένη in 142.18; τρεπομένη in 142.19 would have to be a relative clause dependent on the nominative absolute—or reading <ῆς> τῆ τροπή: in either case the sense of the last clause will no longer be '[the κόρη] comes to be seeing and perceptive soul' but rather that, by change in the κόρη, 'seeing and perceptive soul comes to be'. But, even if the pupil is no longer said itself to come to be perceptive soul, it is striking that perceptive soul is still said to be *produced* as the result of a material process.

There is at least one other passage in the *Mantissa* which seems to have a more materialistic emphasis than Alexander's *De an.* itself, namely 104.28–34:

T11. The body and its blending are the cause of the soul's coming-to-be in the first place. This is clear from the difference between living creatures in respect of their parts. For it is not the souls that fashion their shapes, but rather the different souls follow on the constitution of these being of such a sort, and change with

⁵⁷ Cf. R. W. Sharples, 'On Body, Soul and Generation in Alexander of Aphrodisias', *Apeiron* 27 (1994), 163–70; P. Accattino, 'Generazione dell'anima in Alessandro di Afrodisia, *de anima* 2.10–11.13?', *Phronesis* 40 (1995), 182–201; V. Caston, 'Epiphenomenalisms, Ancient and Modern', *Philosophical Review* 106 (1997), 309–63 at 347–54). At *De an.* 24.11–17 Alexander describes soul as final cause, significantly doing so immediately before distancing his own theory from that of soul as ἀρμονία. I am grateful to Robert Bolton for drawing my attention to this point.

⁵⁸ H. Gätje, 'Zur arabischen Überlieferung des Alexander von Aphrodisias', *Zeitschrift der deutschen morgenländischen Gesellschaft* 116 (1966), 255–78 at 272 suggests διαφανεῖ <διάκωνος>: 'by which it is modified, acting as a messenger in a similar way to the external transparent'.

⁵⁹ Ivo Bruns, *Supplementum Aristotelicum* 2.1 (Berlin: Reimer, 1887), 142 ad loc.

them. For the actuality and that of which it is the actuality are related reciprocally. And that difference in soul follows on a certain sort of blending in the body is shown also by wild animals, which have an [even] more different sort of soul deriving from the blending in their body being of a certain sort.⁶⁰

But the relation of the *Mantissa* texts in general to Alexander's own thought is a subject for further investigation in the forthcoming works mentioned in n. 1 above and elsewhere.

Bibliography

- ACCATTINO, P., 'Generazione dell' anima in Alessandro di Afrodisia, *de anima* 2.10–11.13?' *Phronesis* 40 (1995), 182–201.
- and DONINI, P. L., *Alessandro di Afrodisia, L'anima* (Rome: Laterza, 1996)
- BLOCK, L., 'The Order of Aristotle's Psychological Writings', *American Journal of Philology* 82 (1961), 50–77
- 'Three German Commentators on the Individual Sense and the Common Sense in Aristotle's Psychology', *Phronesis* 9 (1964), 58–63
- 'Aristotle on the Common Sense: a Reply to Kahn and Others', *Ancient Philosophy* 8 (1988), 235–49
- BRUNS, I., *Supplementum Aristotelicum* 2.1 (Berlin: Reimer, 1887)
- CASTON, V., 'Epiphenomenalisms, Ancient and Modern', *Philosophical Review* 106 (1997), 309–63
- CHRISTENSEN DE GROOT, J., 'Philoponus on *De anima* 2.5, *Physics* 3.3, and the Propagation of Light', *Phronesis* 28 (1983), 177–96
- EMILSSON, E. K., *Plotinus on Sense-Perception* (Cambridge: Cambridge University Press, 1988)
- EVERSON, S., *Aristotle on Perception* (Oxford: Clarendon Press, 1997)
- FOTINIS, A. P., *The De Anima of Alexander of Aphrodisias* (Washington, DC: University Press of America, 1979)
- GÄTJE, H., 'Zur arabischen berliefierung des Alexander von Aphrodisias', *Zeitschrift der deutschen morgenländischen Gesellschaft* 116 (1966), 255–78
- JOHANSEN, T. K., *Aristotle on the Sense-Organs* (Cambridge: Cambridge University Press, 1998)
- KAHN, C. H., 'Sensation and Consciousness in Aristotle's Psychology', *Archiv für Geschichte der Philosophie* 48 (1966), 43–81
- LLOYD, G. E. R., 'The Empirical Basis of the Physiology of the *Parva Naturalia*', in G. E. R. Lloyd and G. E. L. Owen (eds.), *Aristotle on Mind and the Senses* (Cambridge: Cambridge University Press, 1978), 215–39. (Reprinted in G. E. R. Lloyd, *Methods and Problems in Greek Science* (Cambridge: Cambridge University Press, 1991), 224–47
- *Aristotelian Explorations* (Cambridge: Cambridge University Press, 1996)

⁶⁰ Cf. R. W. Sharples, 'On being a $\tau\acute{o}\delta\epsilon\ \tau\iota$ in Aristotle and Alexander', *Méthexis* 12 (1999), 77–87 at 81–2.

- MORAUX, P., *Der Aristotelismus bei den Griechen*, ii (Berlin: de Gruyter, 1984)
- OGLE, W., *Aristotle: De Partibus Animalium* (Oxford: Clarendon Press, 1911)
- PECK, A. L., *Aristotle: Generation of Animals* (London: Heinemann and Cambridge, Mass.: Harvard University Press (Loeb Classical Library), 1942)
- PREUS, A., 'On Dreams 2, 459b24–460a33, and Aristotle's ὄψις', *Phronesis* 13 (1968), 175–82
- ROSS, W. D., *Aristotle: Parva Naturalia* (Oxford: Clarendon Press, 1955)
- RUBARTH, S. M., review of JOHANSEN, T. K., *Aristotle on the Sense-Organs*, in *Bryn Mawr Classical Review*, <http://ccat.sas.upenn.edu/bmcr/1999/1999-09-24.html>
- SALLES, R. 'Compatibilism: Stoic and Modern', *Archiv für Geschichte der Philosophie* 83 (2001), 1–23
- SCHROEDER, F. M., 'The Analogy of the Active Intellect to Light in the *De Anima* of Alexander of Aphrodisias', *Hermes* 109 (1981), 215–25
- SHARPLES, R. W., 'The Criterion of Truth in Philo Judaeus, Albinus and Alexander of Aphrodisias', in P. M. Huby and G. Neal (eds.), *The Criterion of Truth: Essays in honour of George Kerferd* (Liverpool: Liverpool University Press, 1989), 231–56
- *Alexander of Aphrodisias: Quaestiones 2.16–3.15* (London: Duckworth, 1994)
- 'On Body, Soul and Generation in Alexander of Aphrodisias', *Apeiron* 27 (1994), 163–70
- 'Alexander and pseudo-Alexanders of Aphrodisias, *scripta minima. Questions and Problems, Makeweights and Prospects*', in W. Kullmann, J. Althoff, and M. Asper (eds.), *Gattungen wissenschaftlicher Literature in der Antike* (ScriptOralia 95) (Tübingen: Gunter Narr, 1998), 383–403.
- 'On being a τὸδε τι in Aristotle and Alexander', *Méthexis* 12 (1999), 77–87
- *Alexander of Aphrodisias: Supplement to On the Soul* (London: Duckworth, 2004)
- SIEGEL, R. E., *Galen on Sense Perception* (Basel: S. Karger, 1970)
- SIMON, G., *Le regard, l'être et l'apparence dans l'optique de l'antiquité* (Paris: Éditions du Seuil, 1988)
- SORABJI, R. 'Body and Soul in Aristotle', *Philosophy* 49 (1974), 63–89 (reprinted in J. Barnes, M. Schofield, and R. Sorabji (eds.), *Articles on Aristotle*, vol. 4 (London: Duckworth, 1979), 42–64)
- 'From Aristotle to Brentano: the Development of the Concept of Intentionality', in H. J. Blumenthal and H. Robinson (eds.), *Aristotle and the Later Tradition* (*Oxford Studies in Ancient Philosophy*, suppl. vol.) (Oxford: Clarendon Press, 1991), 227–59
- TOWEY, J. A., *Alexander of Aphrodisias: On Aristotle On Sensation* (London: Duckworth, 2000)

Ethics

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Plato's Stoic View of Motivation

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According to a common interpretation of Plato's *Republic*, the views on virtue and motivation expounded there might seem blatantly opposed to that of the Stoics. Two important differences could be summarized as follows:

1. Whereas orthodox Stoics believe that all motivating desire requires assent and evaluative attitudes, Plato presents in the *Republic* a picture that allows for irrational, pre-evaluative, or even pre-propositional motivational appetites.
2. While orthodox Stoics still allow that one could have pre-passions (*propatheiai*), or mere appearances (*phantasiai*), these do not amount to motivational factors in the absence of judgement; yet for Plato appearances do involve judgement, and seem capable of motivating someone.

I shall here argue that these differences are only apparent, and that Plato in the *Republic* is closer to the Stoics than is usually believed. The title of this essay is deliberately provocative, as I do not think that there is an exact correspondence between these two theories. Yet, in two fundamental senses, Plato may be called a Stoic. First, he requires that all desires (including, and above all, appetitive ones), insofar as they motivate one's actions, should involve assent as a reflexive attitude. Second, even when he presents an analysis of appearances that is on the surface different from the Stoics', the consequences of such an analysis for a description of virtuous versus non-virtuous action are basically the same.

I. Assent, Desire, and Motivation

At *Rep.* IV 437c2–6 Plato has Socrates make the following contention about desire:¹

¹ Unless otherwise stated, translations of Plato are my own and are based on Burnet's Oxford Classical Text. Text and translations of the Stoics, wherever indicated by the

‘In every case . . . the soul of the one having a desire (*epithumontos*):

- (i) strives for/goes after (*ephiesthai*) that which it desires (*epithumēi*), or, to put the same thing differently ($\bar{\epsilon}$),
- (ii) is led towards (*prosagesthai*) that which it wants (*boulētai*) to come to be to it, or again,
- (iii) to the extent to which it wishes (*ethelei*) something to be procured to it, it assents (*epineuein*) to this for itself (*pros hautēn*) as if someone were asking a question, desiring (*eporegomenēn*) the coming to be of it . . .’

In this passage, the soul of the desiring (*tēn tou epithumontos psuchēn*) is presented as the subject of various states, such as striving (*ephiesthai*), wanting (*boulesthai*), wishing (*ethelein*), desiring (*eporegesthai*). Clauses (i) and (ii) seem entirely coordinate, insofar as both of them describe desire in terms of going after, or trying to get, *its object*. In this sense, while the text uses the apparently disjunctive $\bar{\epsilon}$, it seems more appropriate to interpret this particle as having an epexegetic function, that is, as presenting each new clause as an explication of the previous one. Clause (iii) approaches the same matter rather differently, for now we are told that, to the extent the desiring soul goes after or wishes its object, it assents to this *for itself*. In other words, clause (iii) introduces a *reflexive* instance in Plato’s analysis of desire. But what is the object of the assent?

On one reading the assent is simply about the object of the desire (say, a cake). At the same time, the context might seem to suggest something stronger, as assent is introduced as a sort of response to a question. Who asks the question? It is unlikely that the object (for example the cake) should. Instead, it seems more likely that it should be the soul doing so in the form of a desire that can then be confirmed by some kind of reflection. Thus, we can imagine the original inclination that the soul may have for the object as posing a question to the mind, to which the mind must answer positively for that inclination to have motivational force and lead the agent into action. In this way one could read clause (iii): ‘to the extent the soul wishes (*ethelei*) something to be procured to it [as a first-order desire] it assents to this . . . desiring the coming to be of it’ as a second-order attitude which involves an assent to the soul’s *ethelein* (as the referent of *touto* at c5). This reading has the advantage that it enables us to make good sense of why the text should say that the soul gives assent *pros hautēn*: it is precisely because the soul, so to speak, asks the question, that it gets an answer for itself.²

abbreviation (LS), are from A. A. Long and D. N. Sedley, *The Hellenistic Philosophers*, vols. 1 and 2 (Cambridge, 1987). The text of Epictetus’ *Discourses* has been quoted on the basis of the Teubner edition by H. Schenkl (Stuttgart, 1965).

² The assent itself, if it is about the original inclination, can (with the *eperegomenēn* of 437c5) in turn be taken as a second-order desire to realize that inclination. How having a desire and desiring the effective realization of a desire are logically distinct notions is

So, it seems clear that, while clauses (i) and (ii) would seem to present desires as first-order mental states (insofar as they are directed to an object outside themselves), clause (iii) qualifies this picture by claiming that, to the extent one has a first-order desire, one also has a second-order mental attitude, or a desire that involves a relation of the soul to itself, namely, one of 'assent'.

Now, how should one read 'to the extent to which it wishes something to be procured to it' (*kath'hoson ethelei ti hoi poristhēnai*) at 437c4? In its weaker version, the text is simply saying that *if* a person wishes something, then the soul gives assent, in which case wishing is sufficient for assent, and therefore assent is necessary for wishing. But it seems possible to read the *kath'hoson* at c4 as making a claim about the coextensivity of assent and desire: that is, *if and only if* one wishes something for oneself, one assents to that. Under this—stronger—picture, the soul's assent is both necessary and sufficient for the soul to have a desire. And this might even—though not necessarily—be taken to suggest some form of identity between the two. In either case (given that assent was shown above to presuppose reflexivity) the text can be seen to suggest that all seemingly first-order desires *are* (on the strongest reading), or at least *involve* (on the weaker reading), second-order attitudes.³

exemplified by Frankfurt: someone may, for instance, have a desire for drugs and yet desire not to have such a desire. While the former is a first-order desire, the latter is a desire of the second order. Cf. H. Frankfurt, 'Freedom of the Will and the Concept of a Person', *Journal of Philosophy* 68 (1971), 5–20. On the Platonic reading I am presenting, the mind would work rather more complicatedly than in Frankfurt's description, insofar as all seemingly first-order desires would involve assent and perhaps therefore the desire to realize them. Thus, while Frankfurt believes one may be motivated by merely first-order desires, Plato would instead establish a strong connection between motivation and second-order desires, or at least second-order mental attitudes, as we shall see below. For the possibility that the Stoics too may have viewed the passions as involving a second-order desire to realize their first-order desires see the following verses by Cleanthes which represent a conversation between reason and passion: 'What is it, Passion, that you want (*bouleī*)? Tell me this. | I want, Reason? To do everything I want (*pan ho boulomai poiein*). | A royal wish; but tell me it again. | Whatever I desire (*epithumō*) I want to happen' (Galen, *On Hippocrates' and Plato's doctrines* 5.6.34–7 [LS 65 I]). There is discussion, however, concerning the extent to which the Stoics allow second-order desires in their theory: see e.g. T. Brennan, 'Reservation in Stoic Ethics', *Archiv für Geschichte der Philosophie* 82 (2000), 149–77 at 170–1 and R. Salles, 'Compatibilism: Stoic and Modern', *Archiv für Geschichte der Philosophie* 83 (2001), 1–23 at 20. In any case, it seems clear that the Stoics treat assent as an attitude by which the mind approves of another mental state (the impression or appearance). To this extent at least assent in the Stoics, as in Plato, involves a relation of the mind to itself, and thus can be described generically as a second-order mental state. (I distinguish a second-order desire—or desire for a desire—from a second-order mental state in that the latter does not need to involve two mental states which are specifically identical. Examples of second-order mental states in a generic sense: I fear my ignorance; I love my knowledge; I hate this mental representation.)

³ Or even second-order desires, if one takes the text as allowing for the stronger reading presented in n. 2. For the purposes of the present essay, though, no more is needed than the admission that all desires involve some kind of reflexive and evaluative judgemental attitude.

Further, it seems clear also that Plato is in this passage treating (all) desires in question as motivating. Clauses (i) and (ii), in fact, describe desires as tending to the object, or inclining the agent to action. If this is so, then the claim in the text above is that all motivating *epithumiai* are, or at least involve, second-order attitudes. Moreover, it seems also clear that the desires in question are at least those pertaining to the lowest part of the soul, given that the passage refers to ‘thirst, hunger, and the appetites as a whole’ (437b7–8). Even if one grants that Plato in the *Republic* uses ‘*epithumia*’ ambiguously (both for desire in general, accompanying each of the parts of the soul, cf. e.g. IX 580d8, VI 485d6, and for the specific desires of the lowest—or ‘appetitive’—part of the soul: see e.g. IV 439d7) it seems quite striking that in this context he should contend that *appetitive* desires are, or involve, second-order attitudes.

In this regard, interpreters such as Irwin have tried to downplay the fact that Plato should use terms of ‘wanting’ (*boulesthai*) or ‘willing’ (*ethelein*) in his description of the appetitive part, on the assumption that such desires could not be part of the agent’s ‘will’, if by ‘will’ one means a rational faculty.⁴ Yet this contention runs the risk of being question-begging. Prima facie, there is nothing in the text of *Rep.* IV 437c to exclude that desiring an object through the lowest part of one’s soul is not only a motivating desire, but also a self-reflective one, which would imply that the soul is capable of forming volitions and second-order judgemental attitudes which do not need to be rational but can anyhow count as an expression of the agent’s ‘will’ in some sense.⁵

Of course, one could object to the above conclusion by invoking apparent counter-evidence. Plato’s vocabulary at *Rep.* IV 437c can only

⁴ Cf. T. Irwin, *Plato’s Ethics* (Oxford, 1995), 205–8.

⁵ For one view on the concept of ‘will’ in antiquity and a summary of the state of the question see R. Sorabji, *Emotion and Peace of Mind* (Oxford, 2000), 319 ff. Sorabji points out that in the Platonic tradition *boulēsis* is a desire for the good in opposition to *epithumia* as a desire for pleasure (320, quoting *Charm.* 167e); yet I have argued that *epithumia* too desires the good in some sense (despite common readings of *Rep.* IV 437d–438a), and does involve ‘willing’: see on this my ‘*Akrasia* in the *Republic*: Does Plato Change His Mind?’, *Oxford Studies in Ancient Philosophy* 20 (2001), 107–48 at 117–21, and also below, pp. 371–2. The notion of ‘will’ is in turn associated with freedom of choice and responsibility (Sorabji, *Emotion and Peace of Mind*, 321). In this regard, note that at *Rep.* X 617e ‘responsibility’ (*aitia*) is attributed to everyone making a choice, which includes even those driven by the lower parts of their souls. Certainly, in other contexts Plato uses the notion of ‘will’ (*boulēsis*) more restrictively, as a desire for the real good in opposition to the apparent good (cf. *Gorgias* 466a ff., where real freedom or ‘power’—*dunamis*—is conceived along similar lines, as the capacity to do only good things), and it is in this restricted sense that he may claim that no one does wrong willingly. Thus, at *Rep.* IX 577d–e we are told that the tyrant least of all does what he wants (*boulēthēi*)—if what he wants can be described counterfactually as what he would choose if he really knew what is good. Plato’s allowance of this more restricted notion of will, however, does not eliminate the broader notion, according to which the tyrant is still responsible for his actions.

be loose, the objection contends, in the face of the fact that at some other places the appetitive part of the soul is described in beast-like terms. Thus, at IX 588c and 588e–589b it is compared to a many-headed beast, and at IV 439b we read: ‘Therefore if ever something drags the soul when thirsty in the contrary direction, then that would be some other thing within it than the very thing that is thirsting and dragging it like a beast to drink (*agontos hōsper thērion epi to piein*)’. In this regard, Terry Penner has described the lowest part of the soul as consisting of, or including, ‘brutely irrational’ drives;⁶ a description that is very far from the reflexive, second-order attitude that *Rep.* IV 437c suggests.

Yet one should notice that the description of the lowest part of the soul in beast-like terms need not necessitate Penner’s conclusion. First, it could certainly be argued that Plato is only *comparing* the lowest part of the soul to a beast, it not being yet quite clear in what exact terms he means the comparison. However, even if we take such a comparison to imply that the lowest part of the soul, if left to itself, behaves in pretty much the way an animal would behave (since, after all, the lowest part is obviously present in humans and animals alike), it is far from clear that Plato would want to deny some level of reflexive awareness to animals themselves. Thus, for example, in *Rep.* X swans are allotted the capacity to choose a new form of life for themselves (620a), and in *Rep.* II the dog is called a lover of learning insofar as ‘it distinguishes what belongs to it from what is alien to it by means of acquaintance or lack of recognition respectively’ (376b).⁷ Second, his talk of ‘driving’ (*agein*) at IV 437b does not suggest an unreflexive attitude any more than the talk of the best people’s desires being ‘driven’ (or led, *agontai*) by calculation does at IV 431c, or the soul’s being ‘driven’ intensely upwards in its cognitive ascent by the study of mathematics at VII 525d.⁸

Further, it cannot be contended (as Cooper seems to do)⁹ that at least some appetitive desires are mere biological urges involving no further

⁶ T. Penner, ‘Plato and Davidson: Parts of the Soul and Weakness of Will’, *Canadian Journal of Philosophy*, suppl. vol. 16 (1990), 35–74 at 35. See also his ‘Thought and Desire in Plato’, in G. Vlastos (ed.), *Plato II* (Garden City, NY, 1971), 96–118.

⁷ See also my ‘Plato and the Environment’, *Environmental Ethics* 20 (1998), 115–33 at 122–4. The Stoics too attribute second-order mental attitudes to animals: see Hierocles 1.34–9, 51–7, 2.1–9 (LS 57C). According to Sorabji, in this respect ‘the Stoics may have been influenced by Plato, who had previously stressed self-consciousness as distinguishing animals from plants’ (citing *Timaeus* 77b–c). Cf. R. Sorabji, *Animal Minds and Human Morals* (London, 1993), 99.

⁸ Similarly, at VI 485c–d we are told about the philosophical soul’s *erōs* or *epithumiai* ‘flowing intensely’ towards knowledge, where Plato would be far from implying that these desires are merely instinctual.

⁹ Cf. J. Cooper, ‘Plato’s Theory of Human Motivation’, *History of Philosophy Quarterly*, 1 (1984), 3–21 at 9–10: some examples in *Rep.* IV ‘might suggest that Plato limits the appetitive desires just to the basic recurrent biological urges, and indeed only to that part of

operation of the mind—much as the text sometimes talks of one’s having an appetite through ‘passions’ and ‘diseases’ (IV 439c–d). For the description of IV 437b–c seems clearly all-encompassing, insofar as it refers to hunger, thirst, and the desires generally (*holōs tas epithumias*, b7–8), and points out that in every case (*aei*), when the soul has an *epithumia*, this involves assent.

But, if it *is* true that even appetitive desires are self-reflective, one might be particularly puzzled about what distinguishes appetite from the other parts of the soul. In fact, it has standardly been thought that it is pre-eminently reason that can formulate second-order judgements about what is good for the whole soul and each part (including itself)—cf. IV 442c—and recent literature has been drawing attention to the fact that *thumos* itself has to do with second-order beliefs about self-worth (see e.g. 440a–d).¹⁰ Certainly, it is this latter circumstance that has provoked some degree of skepticism about whether Plato has any good philosophical grounds for distinguishing *thumos* from reason.¹¹ But if we now consider that the appetitive part also involves second-order attitudes (or even evaluations),¹² the question seems to arise more dramatically: Does the soul ‘assent’ to a seemingly unmediated appetitive desire through reason, or through the appetitive faculty itself?

As a matter of fact, IV 437c talks of ‘the soul of the one having a desire’ as the subject of second-order mental attitudes, which is ambiguous enough to suggest that the faculty nodding assent to a tendency need not be the appetitive part, and might well be the faculty of reason. Yet this conclusion seems precluded by the whole thrust of the argument, which is precisely to show how the assent given by the soul in this case may be contradicted by the ‘dissent’ given by the soul in a similar case: a circumstance which, through the Principle of Opposites of IV 436b–c, demands that the soul should both assent and dissent thanks to different *parts* of itself. Thus, whereas reason might dissent from drinking, appetite may still assent to it (cf. 437b with 439a–b). In both cases, however, it makes sense to speak of the (whole) soul as the

them which is primitive and unmodified by the effects of experience. . . . There seems no doubt that hunger and thirst, understood as simple urges for food and drink, arise wholly from physiological causes (cf. *dia pathēmatōn te kai nosēmatōn paragignetai*, 439d1–2), without any intervention from or detour through reason, not even through these equivocal processes of noticing and remembering.’

¹⁰ See e.g. A. Hobbs, *Plato and the Hero* (Cambridge, 2000), 58–9. Cf. Cooper, ‘Plato’s Theory of Human Motivation’, 14–16.

¹¹ For arguments against *thumos* see especially Penner, ‘Thought and Desire in Plato’, 109–13; ‘Plato and Davidson’, 44.

¹² See my ‘*Akrasia in the Republic*’, 125–35 and below, p. 371.

subject of assent, *insofar as* it has an appetite; and of dissent, *insofar as* it exercises reason.¹³

But if this is so, then what distinguishes reason from appetite—or even *thumos*—is not the fact of having second-order, or even evaluative, attitudes (if ‘assenting’ at 437c can also be translated as ‘approving’).¹⁴ It is rather, as I have argued elsewhere, its capacity to make holistic judgements about what is good for the person all things considered.¹⁵ Further, given that desire accompanies all parts of the soul, it can be said that ‘assent’ is a necessary condition for motivation. This includes not only the obvious cases of a person acting out of rational deliberation, or pride, but the less obvious cases of an agent seemingly being ‘driven’ by physiological forces. On this picture, Penner’s description of my going for this chocolate bar because of some particular chemical processes in my stomach driving me to do so becomes inadequate,¹⁶ since particular chemical processes in my stomach seem by themselves *insufficient* to motivate action, unless ‘assent’ is added to them. But if so, then Plato’s picture of the human personality in the *Republic* turns out to be far removed from that of humans as mere ‘victims’ of irrational forces, and becomes closer to a—more optimistic—view of humans applying higher or lower

¹³ See again 437c2, where it is *tēn . . . psuchēn* that is treated as the subject experiencing *epithumiai*, and nodding assent *to the extent* that it has those desires. This might suggest that Plato’s metaphysics of the soul in the *Republic* is more monistic than it may seem at first blush. After all, Socrates himself declares it to be difficult (*chalepon*) to decide whether we learn, get inflamed or have an appetite with different things within ourselves, or whether it is with the whole soul (*ē holēi tēi psuchēi*) that we do each of those things (436a–b). His Principle of Opposites (436b–c) later invoked to explain psychic conflict is perfectly consistent with the same thing (*tauton*) doing or suffering opposites in different respects (that is, not ‘in the same respect’, *kata tauton*, 436b8). For a defence of the view that Plato’s soul division in the *Republic* is not meant to postulate three ontologically separate entities see my ‘La racionalidad humana como tarea en la filosofía de Platón’, *Nova Tellus* 7 (1989), 59–79 (esp. 65–71). Further, even though the tripartite scheme is functionally useful for Plato to explain practical conflict in the non-virtuous, one should also remember that virtue is a state of psychic unity: the just person is the one who, from being many, becomes one (*hen*), 443e1.

¹⁴ Cf. LSJ *ad epineuein*. So assent in the Stoics conveys approval: see Gellius 19.1.18 [LS 65Y(2)], who translates *sunkatattithetai* as *adprobat*. See also below, p. 378.

¹⁵ See my ‘*Akrasia* in the *Republic*’, 120–1. This might seem to present such an activity of reason as a third-order capacity, if the lower parts of the soul already involve second-order mental attitudes. This picture, it might be objected, runs the risk of generating a regress: where to draw the line between a second-order, third-order, or *n*-order mental capacity? I believe the objection fails. There is in principle nothing wrong with a third-order mental capacity as long as it fulfils a function distinct from second-order ones and necessary to explain facts that the mere postulation of second-order capacities would not be able to explain. In the picture I have presented, the role of reason would be to evaluate further the truth and advantage of the self-reflective value judgements of the lower parts of the soul, and no other faculty would be needed beyond it.

¹⁶ Penner, ‘Plato and Davidson’, 40–1, contrasts this view with Socratic intellectualism, which he sets against Plato’s supposed acceptance of irrational desires on p. 43.

levels of self-awareness to all of their motivating desires.¹⁷ In this regard, Plato's picture in the *Republic* comes not only closer to the view of motivation expressed in the earlier, or 'Socratic', dialogues (as I have argued elsewhere),¹⁸ but also to that of the Stoics, as I now wish to point out.

2. Plato and the Stoic Model of Motivation

We find the Stoics sometimes using, like Plato, the term '*epineuein*' for assent,¹⁹ as well as the semantically similar *sunkatathesis*.²⁰ In any case, this attitude of assent can still be described as one in which the mind is in relation to itself.²¹ Chemical processes in my stomach, on this picture, can

¹⁷ One may wonder whether this implies *a fortiori* a rejection of *akrasia*. Note, however, that the picture presented so far is still consistent with an admission of *akrasia* in the *Republic*, as it leaves open the possibility that, much as one assents to a desire if it is to motivate someone, such a desire may not be based on a belief about what is overall good for the person, and may even override a belief of that kind held by reason. This picture, however, is also consistent with a denial of *akrasia* in the *Republic*, if it is granted that every voluntary action guided by one's lower psychic parts is not only the result of an assent by those parts, but necessarily involves the—higher order—assent of the faculty of reason as the one that always takes, whether rightly or wrongly, the executive decision to act. For an interpretation along these lines see my '*Akrasia in the Republic*', 116 ff. Whether the Stoic theory of motivation succeeds in denying the existence of *akrasia* is itself a vexed question (for passages that might suggest its existence, cf. Stobaeus 2.89,4–90,6 [LS 65A(6)–(8)], Galen, *On Hippocrates' and Plato's doctrines* 4.2.10–18 [LS65J] and see Sorabji, *Emotion and Peace of Mind*, 303). Note, however, that orthodox Stoic theory would like to explain apparently akratic action as a quick oscillation in one's rational judgement (Plutarch, *On moral virtue* 446f [LS 65G(1)]; see also M. Nussbaum, *The Therapy of Desire* (Princeton, 1994), 383–4). Similarly, I have argued that the text of the *Republic* offers an account which is consistent with diachronic belief *akrasia* (i.e. reason adhering to opposite beliefs at different times) but not with synchronic *akrasia* (i.e. reason having belief or knowledge about the good but the agent's acting according to an opposite part of the psyche *at the same time*). This applies even to the story of Leontius (IV 439e–440a), which describes only a simultaneous conflict between *thumos* and appetite, and leaves open the possibility that reason may have allied with desire when he chooses to look at the corpses, much as that provokes the anger of his *thumos*. For a fuller account see my '*Akrasia in the Republic*', 137–9. Pace Sorabji, who claims that 'Plato robs himself of the device later used by the Stoics of saying that there is a rapid oscillation in Leontius' evaluations. For it is at the very moment of looking that he curses his eyes' (*Emotion and Peace of Mind*, 308).

¹⁸ See my '*Akrasia in the Republic*', *passim*.

¹⁹ This is the case especially in Epictetus: see *Discourses* I.5.3, I.17.22; I.28.2, II.26.3; III.3.2.

²⁰ See e.g. Plutarch, *Against Colotes* 1122a–f (LS 69A) and n. 24 below; Epictetus, *Discourses* I.28.1.

²¹ Particularly if the *phantasia* to which the mind assents can be taken as a mental representation. This is still different from the stronger and more specific claim that assent is a second-order desire, to which I am not necessarily committing either Plato or the Stoics: see above, n. 2.

at most qualify as an appearance (*phantasia*), but do not by themselves count as a 'desire'.²² In his illuminating treatment of this issue, Richard Sorabji points out that for the Stoics appearances without assent do not amount to beliefs or judgements, and it is beliefs or judgements that are required for emotions and motivation. He complains, however, that Plato had not distinguished between appearance (*phantasia*) and belief (*doxa*), insofar as appearance is belief combined with sense perception (he cites *Rep.* 603a for appearances being treated as one kind of belief).²³ Yet is Plato claiming that an appearance (even if judgemental) is sufficient at all times to motivate action? If he is not, then his analysis need not be as far removed from the Stoics as those initial differences may suggest.

Certainly, in the *Protagoras* Plato had had Socrates oppose the power of appearances to the power of knowledge. Whereas appearances could have power over a person without knowledge,²⁴ and thus motivate her to regrettable action, knowledge 'would make this appearance powerless by revealing the truth' (356d–e).²⁵ He gives the example of measurement: some magnitudes seem larger or smaller than they are, but knowledge shows the actual facts (356c–e). The claim is not so much that knowledge annihilates the appearances (the moon continues to look smaller than a human foot even when one discovers that it is not). Rather, the claim is that knowledge annihilates appearances' power to motivate action. In a parallel passage in the *Republic*, Plato talks of how things *look* in a certain way even when measurement reveals the opposite (X 602c). Certainly, he continues to maintain that appearances cause beliefs contradictory to those given by measurement, so that there arises internal conflict in the soul: this is the reason why imitative poetry should be rejected, insofar as, by causing epistemological turmoil, it is most likely to lead the person to practical conflict. On this picture, then—and unlike the *Protagoras*'—appearances *would* seem to be motivating even in the presence of measurement. Yet this picture would be really opposed to the *Protagoras*' only if we were told in the *Republic* that the contradiction

²² Cf. Gellius 19.1.17–18 (LS 65Y).

²³ See Sorabji, *Emotion and Peace of Mind*, 41. Such a suggestion may be found in the *Republic* insofar as the text establishes a connection between things appearing (cf. *phainetai*, 602e5) different from what measurement reveals and the soul forming a belief (*doxazein*, 602e8; cf. *to doxazon* 603a1) contrary to measurement. In later dialogues (and as Sorabji recognizes), *phantasia* is treated more explicitly as belief combined with sense perception: see *Sophist* 264a–b.

²⁴ Similarly, according to Plutarch, *Against Colotes* 1122c [LS 69A(4)], falsehood is engendered when the soul assents precipitately or 'yields' to the appearance out of weakness. Even though the passage appears in a context referring to the Academics' suspension of judgement, this kind of consideration seems to have been available to the Stoics: see Long and Sedley, *The Hellenistic Philosophers*, i. 258.

²⁵ The word for appearance is *phantasma*: *Prot.* 356d8; cf. *Rep.* X 598b3, 5, 599a2.

persists in the presence of knowledge²⁶, which is far from clear. Even more, the epistemological considerations of *Rep.* VI–VII seem to preclude that knowledge, or *epistēmē*, could coexist with contradictory beliefs in the knowledgeable person's belief system (cf. e.g. 534b–c). It seems fairly obvious that knowledge of *p* precludes believing that not-*p*, and that having a false belief about *p* is sufficient for lacking knowledge of *p*. So the passage at *Rep.* X cannot be referring to 'measurement' as a kind of 'knowledge' in the strong epistemic sense. Instead, it must be referring to measurement in a more ordinary sense, involving only a doxastic attitude; this 'measurement', presumably, would involve going by standards which do not necessarily find internal justification in the person who is guided by them. This description becomes particularly suitable for the moral context in which the passage is inserted, since it is contended that mimetic poetry has the effect of corrupting even 'decent' people, where 'decent' (*epieikēs*, 603e3) must surely exclude the philosophers, or those who are instead supposed to be judges of the edifying power or otherwise of that kind of art.²⁷

But then, if the passage in *Rep.* X does not include all cases of measurement, and certainly excludes those cases where measurement would be accompanied by knowledge, we may wonder how the knowledgeable—or, for that matter, truly virtuous²⁸—person would react to the problem posed by the appearances, and here is where the implications of the text come close to the theory of virtue and motivation later developed by the Stoics.

According to the Stoics, a virtuous person (who is also truly knowledgeable) can still have 'appearances' without having a belief; as long as they do not receive the assent of reason, the virtuous person can perfectly well have them without that blemishing (or contradicting) his virtue.²⁹ In

²⁶ For interpretations along these lines cf. A. Nehamas, 'Imitation and Poetry in Republic X', in *Virtues of Authenticity* (Princeton, 1999), 265–6; Penner, 'Thought and Desire in Plato', 100, 104 n. 6.

²⁷ Cf. *Rep.* X 595b: all such poetry 'seems to be a damage to the thought of all its listeners who do not have knowledge of what these things really are as an antidote'.

²⁸ For the philosopher as the only truly virtuous person in the *Republic* (if wisdom is necessary for the other virtues), see Irwin, *Plato's Ethics*, 229–31; compare J. Annas, *An Introduction to Plato's Republic* (Oxford, 1981), 306; J. Cooper, 'The Psychology of Justice in Plato', *American Philosophical Quarterly* 14 (1977), 131–57 at 152–3. Likewise, moral knowledge is necessary and sufficient for virtue in the Stoics: cf. Stobaeus 2.59.4–60.2 (LS 61H); Plutarch, *On Stoic self-contradictions* 1034c–e & 1046e–f (LS 61C & F). On this, see also Sandbach, *The Stoics* (Bristol, 1994), 41–5; A. A. Long, 'The Early Stoic Concept of Moral Choice', in F. Bossier et al. (eds.), *Images of Man in Ancient and Mediaeval Thought* (Leuven, 1976), 78–92 at 84–6; G. B. Kerferd, 'What Does the Wise Man Know?', in J. M. Rist (ed.), *The Stoics* (Berkeley, 1978), 125–36.

²⁹ Cf. Gellius 19.1.18 [LS 65Y(2)]: 'the wise man does not . . . assent to those impressions [or appearances, *phantasias*] nor does he add an opinion to them, but he rejects and belittles them'.

Plato, appearances would cause beliefs.³⁰ Yet, for the virtuous person, they need not *contradict* the assessments given by knowledge. Even when the propositions 'X is small' and 'X is not small' contradict each other, the propositions 'X looks small' and 'X is not small' do not. While it is conceivable that even for the knowledgeable and/or truly virtuous person the former judgement will be triggered by appearances, and the second one he formed through knowledge, it still seems necessary that the person should have knowledge in the first instance to form the judgement 'X looks small' as opposed to 'X is—really—small'. This view in fact finds support in the passage of *Rep.* VII where Plato suggests that the guardians who have seen the Good and come back to the cave will 'recognize the images and of what they are images' (520c).³¹ That is, a true philosopher will not be confused by images because he will be aware of their status as mere images through a causal understanding of them. But if this is so, then Plato's view in the *Republic* becomes similar to that of the Stoics in the sense that, in both cases, the virtuous person can have appearances without that contradicting the evaluative assessments of reason,³² even if Plato should believe that those appearances involve doxastic judgements and the Stoics do not. In what follows I shall consider a possible objection to the Platonic model presented thus far.

3. The *Republic* on Lawless Desires and the Virtuous Person

I have suggested that the virtuous person would in Plato never be merely motivated by appearances. I have also suggested that for Plato all desires are motivating desires, and that all of them involve assent. Now, if this is the case, one might object that, in *Rep.* IX, it is suggested that 'lawless desires' are 'present in everyone' (571b); how can that apply to the virtuous person? If all desires are motivating, and lawless desires are present in everyone, then conceivably lawless desires would in principle

³⁰ cf. e.g. X 598b–c, 602e.

³¹ Contrast this with Plato's critique of the sight-lovers, who mistake the appearance for true reality (V 475d–480a, esp. 476a–c). Strictly speaking, opinion (*doxa*) only entitles us to form judgements of the type 'x appears (*dokei*) so and so', as opposed to 'x is (*esti*) so and so', if being *simpliciter* is the object of knowledge only.

³² The Stoics indeed require that the kind of appearance whose assent may motivate someone to action should be about 'what is appropriate' in the sphere of action (*to kathēkon*, see e.g. Stobaeus 2.86, 17–18 [LS 53Q(1)]; cf. J. Annas, *Hellenistic Philosophy of Mind* (Berkeley, 1992), 96–8). In that sphere, an example analogous to the one given above (which seems to be Socrates' preferred kind in the *Protagoras* when comparing a moral value—pleasure—to physical magnitudes, 356a–e) might be the apparent contrast between 'this food *smells* good' and 'this food *is* not good'. Granting both propositions are true, the fool might be motivated by the first appearance, from which he may well infer he ought to have the food, while the virtuous person would not.

have the power to motivate a virtuous person, in which case she would not be virtuous. Three strategies in this respect seem available to Plato:

- (I) to describe virtue as a state of *repression* of lower desires which, if left unchecked, would drive the agent in undesirable ways (this is congenial with the view of the *Republic* represented by Penner among others);³³
- (II) to describe those lawless desires as mere appearances to which the virtuous person would never assent (in the Stoic fashion, much as the Stoics would not call those appearances ‘desires’, nor would they probably allow their existence in the virtuous person);³⁴ or
- (III) to deny that virtue proper should consist in repression of lower desires, and thus deny that those desires could exist at all in the virtuous person (a view most congenial with the Stoic one).³⁵

While III however seems *prima facie* to contradict the text, I shall argue that this is the most plausible view and indeed consistent with it. I shall do so after showing the problems with (I), and how Plato keeps away from (II) while still maintaining consistently that all desires are motivating, and involve second-order attitudes. Let us begin by looking back to the text.

³³ See T. Penner, ‘Socrates in the Early Dialogues’, in R. Kraut (ed.), *The Cambridge Companion to Plato* (Cambridge, 1992), 121–69 at 130. There he characterizes the knowledgeable person in the *Republic* as one who is ‘strong against temptation’, and whose emotions have been ‘checked’. See also N. White, *A Companion to Plato’s Republic* (Indianapolis, 1979), commenting on 571a–572b: Plato wishes to say that lawless desires ‘are unnecessary, in the sense that life can be lived without any actual *satisfaction* of them, even if the desires themselves cannot be completely eliminated’ (219, his italics). Similarly, Kraut believes that in the *Republic* ‘Plato agrees that no one is completely free of the impulses that the immoralist champions (571b–572b)’: see R. Kraut, ‘The Defense of Justice in the *Republic*’, in *The Cambridge Companion to Plato*, 311–37 at 325.

³⁴ See, for instance, Aetius 4.12.4–5 [LS 39B(5) and (6)]. The Stoics’ examples of unassented appearances that could still occur in the virtuous person are instead rather different, such as pallor or trembling, and do not suggest anything intrinsically lawless: see Gellius, 19.1.17 [LS 65Y(1)]; Seneca, *De Ira* 1.16.7; Cicero, *Tusculan Disputations* 3.83. (But see *Laws* II 654e–655a, where Plato seems to have gone further than the Stoics by denying that the virtuous person undergoing hardship (*ponois*) should experience, like the cowardly one, any physiological concomitants as judged by the colour of her complexion.) There is discussion, however, about whether the Stoics can consistently preserve a commitment to such pre-passions—which might otherwise seem to be real passions—within a monistic psychology: see B. Inwood, *Ethics and Human Action in Early Stoicism* (Oxford, 1985), 177–80. For a discussion of the mind’s relation to representations or *phantasiai*, and the correct use of representations, in Stoic philosophy see A. A. Long, ‘Representation and the Self in Stoicism’, in his *Stoic Studies* (Cambridge, 1996), 264–85, esp. 275–82. Compare also M. Frede, ‘The Stoic Doctrine of the Affections of the Soul’, in M. Schofield and G. Striker (eds.), *The Norms of Nature* (Cambridge, 1986), 93–110.

³⁵ Cf. e.g. Stobaeus 2.155, 5–17 (LS 65W). For some points of conceptual agreement that may exist here between Plato and the Stoics beyond terminological discrepancies, see J. M. Rist, *Stoic Philosophy* (Cambridge, 1969), 26.

I shall start by presenting Grube's translation, which offers, on what I shall argue are controversial points, a possible reading:³⁶

[A] Some of our unnecessary pleasures and desires seem to me to be lawless. They are probably present in everyone, but they are held in check by the laws and by the better desires in alliance with reason. [B] In a few people, they have been eliminated entirely or only a few weak ones remain, while in others they are stronger and more numerous.

—What desires do you mean?

—[C] Those that are awakened in sleep, when the rest of the soul—the rational, gentle, and ruling part—slumbers. Then the beastly and savage part, full of food and drink, casts off sleep and seeks to find a way to gratify itself. You know that there is nothing that it won't dare to do at such a time, free of all control by shame or reason. It doesn't shrink from trying to have sex with a mother, as it supposes, or with anyone else at all, whether man, god, or beast. It will commit any foul murder, and there is no food it refuses to eat. In a word, it omits no act of folly or shamelessness. . . . [D] Our dreams make it clear that there is a dangerous, wild, and lawless form of desire in everyone, even in those of us who seem to be entirely moderate or measured.—(571b–d and 572b)

The first section—which I have differentiated as [A]—seems to support interpretation (I) above: unmediated, beast-like desires from the appetitive part of the soul are strong enough to motivate everyone regardless of reason, so virtue must involve repression ('holding in check', *kolazein*). This interpretation, however, is problematic for various reasons. First, it contradicts [B], where we are told of the possibility of lawless desires being eliminated altogether (*pantapasin apallattesthai*, 571b). Second, it also contradicts the view of virtue presented in *Rep.* IV, as harmony or community of opinion (*homodoxia*) between all parts of the soul (IV 442c10–d3, 443d3–e2, 444d13–e1), which seems to exclude the possibility of brutally 'irrational' drives being present in the virtuous soul.³⁷ Rather, such a view presupposes that the evaluative beliefs of the lower parts of

³⁶ See *Plato. Republic*, translated by G. M. A. Grube and revised by C. D. C. Reeve (Indianapolis, 1992).

³⁷ It should be clear by now that the lower parts of the soul are *not* irrational either in the sense of (1) being incapable of forming judgements (*pace* R. C. Cross and A. D. Woozley, *Plato's Republic* (London, 1964), 124) or in the sense of (2) being incapable of forming evaluative judgements (*pace* Penner, 'Plato and Davidson', 52; 'Socrates', 129; and those mentioned in n. 38 below). Another sense in which they might be called irrational is in the Stoic one: as (3) 'contrary to reason' (see Stobaeus 2.89, 4–9 [LS 65A(6)]). In this latter sense, the lower parts of the soul in Plato can be called 'irrational' insofar as they have the capacity to oppose reason, in the context of explaining psychic conflict (cf. *alogiston*, *Rep.* IV 439d7 and X 604d9). But, if the lower parts of the soul cannot by definition oppose reason in the virtuous person, one would have to concede that they have ceased to be 'irrational' at least in that sense. They can still, however, be called *alogiston* in a further,

the soul (about who should rule, 442c–d) are in agreement with the views of reason.³⁸

How, then, can Plato maintain [A] and [B] at once without incurring contradiction? I suggest that this can be done by translating [A] rather differently: what the text is actually saying is that lawless desires ‘perhaps come to be in everyone (*kinduneuousi . . . enignesthai panti*)’. This means that those lawless desires are likely to originate in everyone without necessarily continuing to be present in everyone. How this is so can be understood in the light of *Rep.* VIII 559a–c, which suggests that repression of unnecessary desires—defined as ‘those whose presence does no good and some of which do even the opposite’, 559a—³⁹ might be part of someone’s education in the progress towards virtue: ‘it is possible to remove (*apallattesthai*) [this kind of desire] from most people, if it is held in check (*kolazomenē*) and educated (*paideuomenē*) from childhood’ (559b; cf. VII 519a–b). Thus, for example, a child may be punished when he is found wishing to take his brother’s candy, and such punishment might in the best of cases have the effect—if also accompanied by persuasion, cf. *Rep.* VIII 554d2—of altering that form of behaviour in the child so that, when he grows up, that desire does not even arise in him.⁴⁰

How, though, can we make sense of [D], ‘our dreams make it clear that there is a dangerous, wild, and lawless form of desire in everyone (*panti*), even in those of us who seem to be entirely moderate or measured’? This piece of text might actually lend some basis to interpretation (II): lawless desires may be present even in the virtuous person—as revealed in sleep—very much in the form of an ‘appearance’, except that such a person will never consciously assent to it, and thus those appearances will fail to motivate her. If this were the case, then the text of the *Republic* would give

and weaker, sense, that is (4) insofar as they lack, unlike reason, the capacity to form judgements about the agent’s overall good (for this latter sense see Glenn Lesses, ‘The Divided Soul in Plato’s *Republic*’, *History of Philosophy Quarterly* 4 (1987), 147–61). Note, however, that in the virtuous person reason does succeed in showing them that it is in their best interest to follow reason’s rule (see IX 586d–e).

³⁸ Thus, 442c–d in particular (describing moderation as a community of opinion between all parts of the soul about who should rule) suggests that the lower parts of the soul are capable of having not only doxastic attitudes but also evaluative attitudes (about what ought to be done, *dein d1*). See also above, p. 371. While the former point has gained some acceptance in the literature, the latter is still very much resisted (particularly as far as *to epithumētikon* is concerned: see e.g. Irwin, *Plato’s Ethics*, 214–15; Charles Kahn, ‘Plato’s Theory of Desire’, *Review of Metaphysics* 41 (1987), 77–103 at 85; White, *A Companion to Plato’s Republic*, 125).

³⁹ Note that *Rep.* IX 571b in turn gives room for a subdivision of these unnecessary desires into lawful and lawless.

⁴⁰ Note that the Stoics too believe that we all start by experiencing undesirable emotions, even though the ultimate goal is to eliminate them. On this issue cf. Inwood, *Ethics and Human Action in Early Stoicism*, 182 ff.

room for a distinction between unmotivating and motivating desires, contrary to what I have argued above. This, however, does not sit well with the context in which the passage is inserted, as Plato seems willing to describe not any kind of person, but, in particular, the democratic one (572b). The point is emphasized by his talk of ‘those of us who *seem* to be entirely moderate or measured’, as if suggesting that ‘everyone’ in the text refers to everyone in a democratic environment (possibly including Socrates himself, if he does not lay claim to virtue?)⁴¹ rather than including the properly virtuous person.⁴² The latter, in fact, is presented in sharp contrast with the democratic person at 571d–572b, where we read that ‘someone who is in a healthy and moderate state with himself’ will not have those kinds of dreams, but rather ‘the visions in his dreams appear least lawless’. It could certainly be argued that the reason why this person attains this state is certain practices that Plato recommends in that passage—such as neither feasting nor starving one’s appetites, nor arousing one’s anger, before going to bed—and that, in the absence of those practices, lawless dreams might occur even in the virtuous person. That objection, however, begs the question on the important point of what it is to be virtuous: as *Rep.* IV has shown, a Platonically virtuous soul will also perform virtuous acts. Thus, the Platonically just person ‘calls just and fine the action which preserves this state [of inner harmony] and helps produce it’ (443e).⁴³ So, not starving or feasting one’s appetites, or not arousing one’s anger in an untimely fashion, are indeed actions that naturally follow from and lead towards a properly virtuous state in the first place.

4. Conclusion

In this essay I have argued that, in the *Republic*, and despite views and apparent evidence to the contrary, all desires are motivating desires. This includes not only the desires of reason or spirit, but, most importantly,

⁴¹ As would follow from granting that knowledge in the *Republic* is necessary for virtue (see above, n. 28) and taking seriously Socrates’ professions of ignorance in that work (see e.g. II 368c–d, VI 506d–e).

⁴² There is also a philosophical reason why Plato might not feel comfortable with a distinction between motivating and non-motivating *epithumiai* in this context: in the developmental picture he is presenting, it seems rather clear that, once the desire is present in the mind, it could in principle motivate the person, and that is why there is a continuum and not a gap in the transition from the democratic to the tyrannical man (whose waking life is like the democrat’s dreams, IX 574e).

⁴³ On this, see e.g. G. Vlastos, ‘Justice and Happiness in the *Republic*’, in his *Platonic Studies* (Princeton, 1973), 111–39, esp. 112; cf. R. Parry, *Plato’s Craft of Justice* (Albany, NY, 1996), 102–4.

the desires of the appetitive part of the soul. Plato, with the Stoics, maintains a distinction between desire and appearance, and concedes that, while appearances might turn into desires by motivating someone who is driven by them in the absence of virtue, they would not be more than mere appearances, motivationally powerless, for the virtuous person who understands the truth counter to them. And even though the text of the *Republic* might also seem to suggest that lawless desires, or even lawless appearances, could be present in the virtuous soul, I have presented a reading which has Plato consistently maintain a picture of virtue as a state of harmony between all self-reflective beliefs pertaining to the various parts of one's soul, rather than a state of repression by reason of unanalysed and unmediated 'irrational' drives.⁴⁴

Bibliography

- ANNAS, J., *An Introduction to Plato's Republic* (Oxford, 1981).
 ——— *Hellenistic Philosophy of Mind* (Berkeley, 1992).
 BRENNAN, T., 'Reservation in Stoic Ethics', *Archiv für Geschichte der Philosophie* 82 (2000), 149–77.
 CARONE, G., 'La racionalidad humana como tarea en la filosofía de Platón', *Nova Tellus* 7 (1989), 59–79.
 ——— 'Plato and the Environment', *Environmental Ethics* 20 (1998), 115–33.
 ——— 'Akrasia in the *Republic*: Does Plato Change his Mind?', *Oxford Studies in Ancient Philosophy* 20 (2001), 107–48.
 COOPER, J., 'The Psychology of Justice in Plato', *American Philosophical Quarterly* 14 (1977), 131–57.
 ——— 'Plato's Theory of Human Motivation', *History of Philosophy Quarterly* 1 (1984), 3–21.
 CROSS, R. C., and WOOZLEY, A. D., *Plato's Republic* (London, 1964).
 FRANKFURT, H., 'Freedom of the Will and the Concept of a Person', *Journal of Philosophy* 68 (1971), 5–20.
 FREDE, M., 'The Stoic Doctrine of the Affections of the Soul', in M. Schofield and G. Striker, *The Norms of Nature* (Cambridge, 1986), 93–110.
 HOBBS, A., *Plato and the Hero* (Cambridge, 2000).
 INWOOD, B., *Ethics and Human Action in Early Stoicism* (Oxford, 1985).
 IRWIN, T., *Plato's Ethics* (Oxford, 1995).
 KAHN, C., 'Plato's Theory of Desire', *Review of Metaphysics* 41 (1987), 77–103.
 KERFERD, G. B., 'What Does the Wise Man Know?', in J. M. Rist (ed.), *The Stoics* (Berkeley, 1978), 125–36.
 KRAUT, R. (ed.), *The Cambridge Companion to Plato* (Cambridge, 1992).

⁴⁴ I wish to thank Marcelo Boeri, Ricardo Salles, Christopher Shields, and Raphael Woolf for helpful comments on previous drafts of this essay. I am especially grateful to Richard Sorabji both for his encouragement with this piece and for his inspiration and criticism over the years. This essay is dedicated to him.

- 'The Defense of Justice in the *Republic*', in *The Cambridge Companion to Plato*, 311–37.
- LESSES, G., 'The Divided Soul in Plato's *Republic*', *History of Philosophy Quarterly* 4 (1987), 147–61.
- LONG, A. A., 'The Early Stoic Concept of Moral Choice', in F. Bossier et al. (eds.), *Images of Man in Ancient and Mediaeval Thought* (Leuven, 1976), 78–92.
- 'Representation and the Self in Stoicism', in *Stoic Studies* (Cambridge, 1996), 264–85.
- LONG, A. A. and SEDLEY, D. N., *The Hellenistic Philosophers*, i–ii (Cambridge, 1987).
- NEHAMAS, A., 'Imitation and Poetry in *Republic X*', in *Virtues of Authenticity* (Princeton, 1999), 251–78.
- NUSSBAUM, M., *The Therapy of Desire* (Princeton, 1994).
- PARRY, R., *Plato's Craft of Justice* (Albany, NY, 1996).
- PENNER, T., 'Thought and Desire in Plato', in G. Vlastos (ed.), *Plato II* (Garden City, NY, 1971), 96–118.
- 'Plato and Davidson: Parts of the Soul and Weakness of Will', *Canadian Journal of Philosophy*, suppl. vol. 16 (1990), 35–74.
- 'Socrates in the Early Dialogues', in R. Kraut (ed.), *The Cambridge Companion to Plato*, 121–69.
- RIST J. M., *Stoic Philosophy* (Cambridge, 1969).
- SALLES, R., 'Compatibilism: Stoic and Modern', *Archiv für Geschichte der Philosophie* 83 (2001), 1–23.
- SANDBACH, F. H., *The Stoics* (Bristol, 1994).
- SORABJI, R., *Animal Minds and Human Morals* (London, 1993).
- *Emotion and Peace of Mind* (Oxford, 2000).
- VLASTOS, G., 'Justice and Happiness in the *Republic*', in *Platonic Studies* (Princeton, 1973), 111–139.
- WHITE, N., *A Companion to Plato's Republic* (Indianapolis, 1979).

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The Presence of Socrates and Aristotle in the Stoic Account of *Akrasia*

MARCELO D. BOERI

I. Introduction

The issue of incontinence has become a favourite theme of scholarly discussion in recent decades. Certainly it has been one of the philosophical topics that have contributed greatly to reintroduce ancient philosophers into contemporary philosophical discussion. While papers and books devoted to the issue of *akrasia* are, for the most part, focused on Socrates, Plato, and Aristotle, those dedicated to the Stoics are much scantier.¹ Any reader familiar with the Stoic fragments that have come

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¹ Among the contemporary philosophers who dealt with this and other related topics taking as their departing point the Ancients deserve to be quoted E. Anscombe, *Intention* (Oxford, 1963), 14 (the claim that 'there is point in speaking of knowledge only where a contrast exists between "he *knows*" and "he [merely] *thinks* he knows"' contains Socratic echoes), and 57–70; see also D. Davidson, *Essays on Actions and Events* (Oxford, 1980), 21–42. Of course, I am not implying that the topic of Stoic incontinence has not been addressed by scholars; there is a considerable amount of scholarly discussion on Stoic emotions and related topics (including the issue of *akrasia*). See, among other studies, B. Inwood, *Ethics and Human Action in Early Stoicism [Ethics]* (Oxford, 1985), ch. 5, at

down to us should not be surprised at this situation. In fact, whenever one says ‘the Stoics maintain that’ one is compelled to undertake a real task of reconstruction in order to establish, within an acceptable degree of reasonability, that a specific thesis effectively belongs to a doctrine asserted by the Stoic school as a whole or to a particular Stoic philosopher. The problem in the case I am concerned with is that in the existing evidence for early Stoicism there is not any *systematic* discussion of the issue of incontinence.² The silence of the Stoics on the phenomenon of incontinence is significant for, although the word ‘acratice’ or ‘incontinent’ (*akratēs*) is used by Chrysippus to describe a movement of the soul which is disobedient to reason, there is neither a trace of a reference to a psychic conflict nor a systematic discussion about how it is possible that an agent be inclined to perform an action that, although he knows it to be incorrect, he performs anyway against his own better judgment.³ This

132–39); A. M. Ioppolo, ‘Il monismo psicologico degli stoici antichi’ [‘Monismo’], *Elenchos* 8 (1987), 449–66; J. Gosling, ‘The Stoics and Akrasia’ [‘Akrasia’], *Apeiron* 20 (1987), 179–202; C. Gill, ‘Did Galen Understand Platonic and Stoic Thinking on Emotions?’ [‘Galen’], in J. Sihvola and T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht, Boston, and London, 1998), 113–69; M. Nussbaum, *The Therapy of Desire, Theory and Practice in Hellenistic Ethics [Therapy]* (Princeton, 1994), chs. 9–10; P. L. Donini, ‘Struttura delle passioni e del vizio e loro cura in Crisipo’ [‘Struttura’], *Elenchos* 16/2 (1995), 305–29; R. Joyce, ‘Early Stoicism and Akrasia’ [‘Akrasia’], *Phronesis* 60/3 (1995), 315–35; T. Brennan, ‘The Old Stoic Theory of Emotion’ [‘Old Stoic’], in J. Sihvola and T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht, Boston, and London, 1998), 21–70; J. M. Cooper, *Reason and Emotion. Essays on Ancient Moral Psychology and Ethical Theory [Reason]* (Princeton, 1999), 449–84; R. Sorabji, *Emotion and Peace of Mind. From Stoic Agitation to Christian Temptation [Emotion]* (Oxford, 2000), esp. chs. 2–3.

² I have done an exhaustive search for the terms *akrasia*, *akrateia*, *akrates*, *akrateumai* and their cognates in Galen (*De Placitis Hippocratis et Platonis*, hereafter abbreviated *PHP*; I quote this work by book, chapter, page, and line of P. De Lacy, *Galen. On the Doctrines of Hippocrates and Plato*, 3 vols. Corpus Medicorum Graecorum; Berlin 1978–85), Plutarch (*De virtute morali [VM]*, *De Stoicorum repugnantibus [SR]*, *De communibus notitiis adversus Stoicos [CN]*), Diogenes Laertius 7 (DL), and Stobaeus, *Eclogae (Ecl.)*, 2.57, 13–116, 18. In what follows I cite this work by chapter, page, and number line of C. Wachsmuth’s edition *Eclogae physicae et ethicae* (Berlin, 1884). The results of this search have shown that the cases in which some of the mentioned words appear are not included in the context of a *systematic* discussion of the topic.

³ See Inwood, *Ethics*, 137 and Galen, *PHP* 4.2, 246, 20–4. Galen describes the issue of continence and incontinence on the ground of a psychology implying the conflict between reasoning (*logismos*) and irrational desire (*epithymia*). Although Galen suggests that Chrysippus’ example of the runner (briefly commented on in the second section of this essay) also testifies to the conflict between reasoning and irrational desire, the point is not so clear. I think that the example can be interpreted in terms of a monistic psychology. In my view, this is the only way of being consistent with the Chrysippean thesis that vice is nothing other than the *hegemonikon* of the soul disposed in a certain manner, not the reason that has been overcome by irrational desire.

point is clarified as soon as the Stoic psychology is examined, since one of its foundations is the defence of a monism that removes from the very beginning the possibility of any conflict between two antagonistic parts of the soul.⁴

In what follows I intend to show that, despite the fact that incontinence never is systematically discussed in the Stoic sources, an acceptable reconstruction and a coherent interpretation of it in early Stoicism can be presented. I shall suggest that, even though the Stoics hold an intellectualist position, an argumentative strategy might be developed to show that such a position does not lead to the impossibility of accounting for how an agent is capable of making a correct moral judgment and at the same time admitting that such an agent can act against it. In my view, it is relevant to take into account the cognitive state of the agent (*episteme* or *doxa*) when he or she assesses the state of affairs concerning what is really good for him or for her, and when he or she agrees to a proposition describing the appearance of what he or she takes to be good. The Stoic virtuous person (*enaretos*), whose cognitive state always is knowledge (*episteme*), not only has the theory of what should be done, but also practices it.⁵ By contrast, the incontinent, whose cognitive state is always opinion (*doxa*), appears to have just the theory of what should be done, but he does not practice it. This is probably the case because, due to his weakness of character, he is not able to translate into action the content of the temperate propositions that describe the right course of action.

First, I shall present some details concerning the Stoic doctrine of the soul and the way in which the problem of incontinence emerges in it. Next I shall concentrate briefly on the Stoic account of the psychology of action and offer an interpretation of how the mechanism that produces the incontinent action works (or ‘should work’) for a Stoic according to that account.⁶ My claim is that, although a Stoic incontinent is able to

⁴ On the monistic Stoic position and other psychological matters see the helpful remarks by Brennan, ‘Old Stoic’, 23–6.

⁵ DL 7.126; Stobaeus, *Ecl.* 2.63, 11–15 (included in LS 61D; cf. *SVF* 3.280). If possible, I shall indicate the section and number text of the quoted passage in A. A. Long and D. N. Sedley, *The Hellenistic Philosophers* [LS] (Cambridge, 1987) or in H. von Arnim, *Stoicorum Veterum Fragmenta* [*SVF*] (Stuttgart, 1903–05).

⁶ The fact that Posidonius has adopted a tripartite psychology (an interpretation that has been recently questioned by Cooper, *Reason*) makes his account similar to the Platonic one and hence different from the one given by the early Stoics. When speaking of ‘the Platonic account’ I mean the psychological doctrine as found in Plato’s *Republic* 4 (on this point see below n. 25). Cooper has noted that Posidonius ‘appears consistently in all our sources as one leading Stoic among the others, and indeed, with almost the sole exception of Galen, he seems to have been universally regarded as a leading authority for *orthodox* Stoic moral theory in particular’ (see *Reason*, 450–1; the emphasis on ‘orthodox’ is mine). The point is that Galen’s testimony on Posidonius is crucial for the reconstruction of Posidonius’ as well as Chrysippus’ thought. What we know about Chrysippus’ psychology

notice, however weakly, that the temperate proposition (for instance, ‘the appropriate thing is to act with moderation’) is true and that the action derived from directing his impulse toward the predicate of that proposition would be correct, because he fails to direct his impulse to this predicate, he does not act correctly. This appears to show that he has not given a strong assent to that proposition. And he acts that way *believing* that he knows what he is doing, although his alleged knowledge is just opinion, a ‘weak cognitive state’.⁷ Actually, what the evidence explicitly says is that weak assent—derived from the base person’s cognitive state—is a changing assent (which is the same as ignorance), i.e. a vacillating assent that displays a bad or perverse judgment (see Stobaeus, *Ecl.*, 2.111, 20–1), which is an accurate description of what the psychological state of a passionate person is.

2. Stoic Akrasia and its Socratic Background

Let me briefly stress some links between Stoic and Socratic moral psychology and why I think such links are relevant for the correct understanding of Stoic developments. For the most part, the connections between Socrates and the early Stoics have not been questioned, although such connections have not yet been thoroughly clarified.⁸ Despite the fragmen-

and about Posidonius’ criticisms on Chrysippean psychology does not show Posidonius to be very orthodox. If Cicero must be trusted, the orthodox thesis was that Zeno (to whom Chrysippus seems to have followed) denied that desire and reason should be placed in different parts of the soul (*Acad.* 1.39). According to Cooper, no matter what Galen says, Posidonius does not reject the Chrysippean psychological monism (*Reason*, 451–5, 467–8). Cooper’s thesis—which follows J. Fillion-Lahille, *Le de ira de Sénèque et la philosophie stoïcienne des passions* (Paris, 1984), in some points—should be carefully considered; this task is beyond my focus here. Now Sorabji has even questioned the assumed orthodoxy of Chrysippus (see his *Emotion*, 101–2).

⁷ I am aware that an orthodox Stoic would not accept ‘types of knowledge’, such as I have suggested here. For just as there are wise (*sophoi*) and base (*phauloi*) people, there is knowledge (*episteme*) and ignorance (*agnoia*) too as the suitable cognitive states corresponding to each of them. However, there is a passage where two types of assent are suggested: the one belonging to the wise person (the assent to what is cataleptic), and the one belonging to the agent whose presentations are not correctly trained and falls into disorder and careless (see DL 7.48 = LS 31B; see also Stobaeus, *Ecl.* 2.111, 18–114, 1–2, partially contained in LS 46G). This means that the base person usually gives his assent to the ‘acataleptic’ as a consequence of his cognitive state (see Sextus, *Against the Mathematicians*, [M] 7.247–8).

⁸ To my knowledge, one of the first contemporary scholars to stress the connections between Socrates and the Older Stoics is A. M. Ioppolo, *Aristone di Chio e lo stoicismo antico* (Naples, 1980), esp. 78–81, 86–9, and particularly A. A. Long, ‘Socrates in Hellenistic Philosophy’, *Classical Quarterly* 38 (1988), 150–71 (reprinted in A. A. Long, *Stoic Studies [Studies]* (Cambridge, 1996), 1–34). Sedley has also made reference to the

tary state of the Stoic evidence, it is almost certain that the Stoics of the early period (Zeno, Cleanthes, and Chrysippus) and of the Roman period (Epictetus) considered themselves as disciples of Socrates, or at least regarded him as their model of a sage person.⁹ This has been widely recognized by prominent scholars and is strongly supported by the evidence.¹⁰ Despite the fact that it is generally acknowledged that Socrates' influence upon the Hellenistic schools (and specially upon the Stoics) took place through the Cynics,¹¹ and although it is still far from clear (to me) which Socrates should be regarded as a model for the Stoics (whether Xenophon's or Plato's), I tend to believe that, in the most theoretical issues of Stoic ethics, the Platonic Socrates is the best candidate.¹² To be sure, we can find standard Socratic theses in early Stoic ethics: the concept of virtue (*arete*) as a form of knowledge (*episteme*), the thesis of the unity of virtues and that virtue is necessary and sufficient for happiness.¹³

importance of Socrates for the Stoics in emphasizing that the background to Stoic psychology should be located in *Socratic* psychology rather than in Platonic psychology. See his 'Chrysippus on Psychological Causality' ['Chrysippus'], in J. Brunschwig and M.C. Nussbaum (eds.), *Passions and Perceptions. Studies in Hellenistic Philosophy of Mind. Proceedings of the Fifth Symposium Hellenisticum* (Cambridge, 1993), 313–31, at 313–14 and 317–18. Other scholars have also pointed out the connections between Socrates and the Stoics; see G. Striker, *Essays on Hellenistic Epistemology and Ethics* (Cambridge, 1996), 317–20. The Socratic legacy is now analysed in detail by A. A. Long, 'The Socratic Legacy' ['Legacy'], in K. Algra, J. Barnes, J. Mansfeld, and M. Schofield (eds.), *The Cambridge History of Hellenistic Philosophy* (Cambridge, 1999), 617–41, and by F. Alesse, *La Stoa e la tradizione socratica [La Stoa]* (Naples, 2000), 299–334.

⁹ Epictetus, *Discourses*, 4 5, 1–4 (quoted by Long, *Studies*, 1–2). For Socrates' presence in Epictetus see now A. A. Long, *Epictetus. A Stoic and Socratic Guide to Life* (Oxford, 2002), ch. 3.

¹⁰ Cf. LS, vol. 1, 383; J. D. DeFilippo and P. T. Mitsis, 'Socrates and Stoic Natural Law' ['Natural Law'], in P. A. Vander Waerdt (ed.), *The Socratic Movement* (Ithaca and London, 1994), 252–71, at 252–4. See also M. Schofield, 'Ariston of Chios and the Unity of Virtue', *Ancient Philosophy* 4 (1984), 83–96, and more recently Long, 'Legacy', 621 and 639, and Alesse, *La Stoa*, 271–2.

¹¹ Long, 'Legacy', 620 and 623.

¹² Indeed there is a strong presence of Socratic tradition apart from Plato's in Stoicism (see Cicero, *On the Nature of the Gods*, 2.18; 3.27; Sextus *M* 9.98 and Xenophon, *Memorabilia*, 1 4, 5–18, quoted and commented on by Long, who has called attention on this passage in his 1996: 20–3). In fact this is one of the few passages which would allow us to think of Socrates as a forerunner of the Stoic thesis that principles of morality can be derived from laws governing the natural world (Plutarch, *SR* 1050A–B; on this point see DeFilippo and Mitsis, 'Natural Law', 253–5). It is certainly arguable that the Stoics did not have the 'Problem of Socrates' (Long, *Studies*, 4–5). As pointed out by Sedley ('Chrysippus', 314), they did not distinguish clearly between historically Socratic texts and Platonic texts, either. Galen, in commenting on Chrysippus' account of the weakness of the soul, attributes the thesis that nobody fails willingly to Plato, not to Socrates (*PHP* 4. 6, 272, 36–274, 1).

¹³ Indeed this is a simplification. The Socratic thesis that virtue is knowledge should be carefully examined. Some of the most influential interpretations emphasize that

To the best of my knowledge, there is no clear definition of the term *akrasia* in the Stoic remains, but the discussions found in the sources strongly suggest that what the Stoics had in mind was something close to the Socrates' picture (such as it is depicted in Plato's *Protagoras* 352b–357e and by Aristotle in his critical presentation of the issue in *Nicomachean Ethics* [NE] 7.4, 1147b24–8): an agent *X* is incontinent when he or she intentionally and knowingly performs an action *Y* against his or her better judgment, and when his or her psychological condition is weak with respect to the necessary or 'unavoidable' sources of pleasure, i.e. food, drinking, or sexual satisfaction.¹⁴ In the incontinence phenomenon itself a cognitive factor is involved. At least for the common sense (*hoi polloi*), it is evident that an agent can be overpowered or conquered by the pleasures of food, drink, and sex, and that what such an agent performs is performed on the basis of a certain knowledge that it is wrong, or at least, a belief that he knows what is bad or good for himself (Plato, *Protagoras*, 353c6–8). These actions are wrong because they provide an immediate pleasure and, in doing so, the agents translate their action into a 'short-term belief about what is good/pleasant' and give it 'greater weight than a long-term, and better grounded, belief about this'.¹⁵ The cognitive point, according to both Plato's Socrates and the Stoics, is precisely what should be challenged. They contend that these agents do not know what they are doing, they think they know it, but in fact they don't. Consequently, what the majority of people think to be goods are not, and this is so because

knowledge is a necessary and a sufficient condition for moral virtue. The former implies that if an agent acts morally, he or she has moral knowledge, the latter that if an agent has moral knowledge, he or she will act morally (for discussion see G. Vlastos, *Socrates. Ironist and Moral Philosopher* (Ithaca and New York, 1991), 209–14; G. X. Santas, *Socrates' Philosophy in Plato's Early Dialogues* [*Socrates*] (London, 1979), 231 ff.; G. X. Santas, 'Socratic Goods and Socratic Happiness' ['Goods'], in T. Irwin and M. C. Nussbaum (eds.), *Virtue, Love & Form. Essays in Memory of Gregory Vlastos* (Edmonton, 1993), 37–52 at 39–48; T. Irwin, *Plato's Ethics* [*Plato*] (Oxford, 1995), chs. 3–4). The presence of these Socratic positions in the Stoics can be seen, for example, in Plutarch, *SR* 1034D–E (LS 61C); see also Stobaeus, *Ecl.* 2.58, 18–19; *DL* 7.92–3. According to Chrysippus (as reported by Galen, *PHP* 7.2, 436, 10–15), there would be one virtue (knowledge) and one vice (ignorance), a thesis that perfectly fits into the Socratic view that the only bad action is to be deprived of knowledge (see Plato, *Protagoras*, 345b5). See also Stobaeus, *Ecl.* 2.59, 4–60, 8 (cf. LS 61H); 2.63, 6–10 (LS 61D) and *DL* 7.97. For a detailed examination of the unity of virtue thesis in Stoicism, see Alesse, *La Stoa*, 293–9.

¹⁴ For the Socratic position, such as it is presented by Plato, see *Protagoras*, 352b7; d8; e6–353a1; c2. The point of view of the majority of people is that this experience or affective state (*pathema*) consists in being overcome by pleasure (*hedones hettasthai*), this pleasure being that of eating, drinking, and having sex (*Protagoras*, 353c6).

¹⁵ As C. Gill clearly characterizes the issue in his *Personality in Greek Epic, Tragedy, and Philosophy. The Self in Dialogue* [*Personality*] (Oxford, 1996), 233.

they are ignorant of what a real good is.¹⁶ These supposedly good things are actually bad due to the final result they produce, namely diseases, and diseases cause pain, which is precisely what the agent wanted to avoid. The things that were wrongly regarded as being goods turn out to be painful, and thus deprive people of other pleasures, the ones that are the real pleasures because they unconditionally benefit the agent (Plato, *Protagoras*, 353d4–354a).¹⁷

For the Platonic Socrates there is no psychological struggle understood in terms of *parts in conflict*. No one desires bad things, and the one who pursues bad things does so unwillingly. His choice is based upon ignorance. This is the so-called ‘Socratic intellectualism’, according to which if the agent *knows* that an action is bad, he does not perform it. If he performs it, he does not know that it is bad. In other words, virtue is knowledge and he who acts wrongly does so due to his ignorance and hence he performs a bad action unwillingly.¹⁸ This is equivalent to maintaining that there is no incontinence, that is to say no one does anything that is bad for himself *knowingly* (Plato, *Protagoras*, 358c2–3). If Socrates wishes to maintain that vices are ignorance, he needs to remove the possibility of incontinence and to reduce vices to mistaken judgments, a thesis clearly maintained by the Stoic Chrysippus (cf. Galen,

¹⁶ This is clearly put in Plato’s *Gorgias*, 468b1–e5, where it is suggested that, although the agent cannot be mistaken in wishing what is best for himself, he can make a mistake in *believing* that this determined thing or course of action is the best for himself. So, even though the tyrant *thinks* or *believes* that what he is doing is good for himself and benefits him, he does not *know* that it is actually bad and harms him. The opposition in the context clearly is between the two basic cognitive states, recognized both by Socrates and by the Stoics: opinion (*doxa*) and knowledge (*episteme*).

¹⁷ This passage in Plato’s *Protagoras* should be compared with the one in *Euthydemus*, 278e–281e, where the character Socrates (or perhaps Socrates himself) emphasizes the fact that something is a real good if and only if it is an unconditional good, i.e. if it does not depend on another thing to be good. This is why Socrates can say that wisdom (*sophia*) is the only thing good alone by itself (281d–e), so it is *the* condition (or the unconditioned condition) of the other things that are assumed to be goods. On this point, see Santas, ‘Goods’, 42–4, whose analysis I follow.

¹⁸ For evidence see Plato, *Meno*, 77b–78b. *Gorgias*, 460b–d; 488a; 509e. *Protagoras*, 345c; 360d. See also *Phaedo*, 69b2–3: sometimes *X* is a true virtue if it is accompanied by wisdom. My formulation of the Socratic position is mostly based on the ‘sufficiency thesis’. Some influential interpretations stress that knowledge is both a necessary and a sufficient condition for moral virtue. The former implies that if an agent acts morally, he or she has moral knowledge (for discussion see Santas, ‘Goods’; Irwin, *Plato*, chs. 3–4). The best discussion of the ‘Socratic paradoxes’ continues to be, in my view, that of Santas, *Socrates*, 183–94. As noted by C. Kahn, *Plato and the Socratic Dialogue [Plato]* (Cambridge, 1996), 225, the view that virtue is knowledge and that no one performs a bad action willingly are logically connected by the assumption that everyone pursues what is good. If an agent performs a bad action, it can only be due to an intellectual mistake. Virtue (*arete*) is nothing other than a correct recognition of what is good (see Plato, *Protagoras*, 352c4–7). This is the conclusion advanced by Socrates himself in the passage of Plato’s *Gorgias*, 460b.

PHP, 5.1, 292, 17–20). But if this is effectively the case, how can the incontinent action be explained? The answer for Socrates seems to have been by denying the phenomenon of incontinence itself and, in doing so, removing the conflict and avoiding the concept that the mind is a battlefield between two opposing factors. In the dialogue, *Protagoras*, Socrates is shown making emphasis on the extreme case, that is, ignoring the emotional or affective components in human psychology or, rather, reinterpreting such components in terms of a judgment making reference to what is good or bad.¹⁹ Thus the denial of incontinence appears closely linked to the identity between virtue and knowledge as well as to the identity between vice and ignorance.²⁰ Even taking for granted these fundamental issues of Socratic psychology, I still believe that the Stoics were willing to account for the acratia behaviour.

3. A Brief Exposition of the Stoic Psychology: Psychological Monism and the Psychology of Action

From Zeno of Citium (and up to Posidonius, in the first century BC) the Stoics defended a monist psychology and they did not recognize the distinction ‘rational part’–‘irrational part’ of the soul. Following Zeno, Chrysippus distinguished eight parts of the soul: the five senses, the faculty of speech (*to phonetikon*), the faculty of procreation (*to spermatikon*) and the ‘commanding’ of the soul (*to hegemonikon*).²¹ The passionate (*to pathetikon*) and the irrational (*to alogon*) are not separate from the rational, but the same part of the soul (*tauto tēs psychēs meros*, which they

¹⁹ See Kahn, *Plato*, 227.

²⁰ See Plato, *Protagoras*, 355a–358a. For the Stoic version of this Socratic thesis, see Stobaeus, *Ecl.*, 2.58, 9–11; 18–19 (cf. LS 60K).

²¹ As correctly indicated by Gosling (‘Akrasia’, 187), the Stoics did not regard the soul as a unified entity. What is a unified entity is the *hegemonikon*, not the soul or mind. In fact, the soul is divided into eight parts. By contrast, the ‘commanding part’ is a unity with different faculties at work. In commenting on Chrysippus’ thesis that the judgment that is identical with the passion is itself a *pleonazousa horme*, Nussbaum suggests that the sort of tumultuous movement this judgment is has its seat in *the rational soul*, and that the Stoics recognize only a single *part of the soul: the rational part* (*Therapy*, 373; italics are mine). Cooper’s assessment of the issue seems to me more accurate. He holds emotions (*pathe*) to be *functions* of the reasoning power or of the rational *faculty* (see *Reason*, 451–2; 455). As far as I can see, there is no textual support to speak of ‘the rational part of the soul’. The Older Stoics accepted four faculties or functions of the *hegemonikon*; ‘reason’ or ‘reasoning’ (*logos*) is one of its functions or faculties among others (the other functions being *phantasia*, *synkatathesis*, and *horme*). For evidence see DL 7.159; Stobaeus, *Ecl.* 1.49, 369, 6–9. For the examination of the commanding of the soul from a physical point of view and of the soul as a physical entity, see L. Couloubaritsis, ‘La psychologie chez Chrysippe’ [‘Psychologie’], *Entretiens sur l’antiquité classique. Aspects de la philosophie hellénistique* (Geneva, 1986), Tome 32, 99–142, at 107–15.

call ‘thought’ and ‘commanding’) becomes vice and virtue, and the soul contains nothing irrational in itself.²² When positing a monist psychological position, the Stoics remove the account of the inner irrationality in terms of conflict, since there are neither parts nor faculties at odds within the soul. As a result, to some extent they follow the Socratic position which avoids dealing with the problem of incontinence in terms of an inner psychological conflict. The Stoic monist psychology is in agreement with the Socratic psychology but the Stoics seem to have taken into account some criticisms made by Aristotle to the extreme intellectualist position (attributed to Socrates), for they make each agent responsible for his or her cognitive state.

Galen notes that, if it is accepted that there is not an appetitive part in the soul nor parts that are in conflict (as the Stoics do), the same possibility of continence is removed, for if the possibility of desiring is removed there will be neither continence nor temperance.²³ The same thing could be said of incontinence: if there is no room for the appetitive faculty (and because of this there is no desire struggling to control reason), there cannot be room for incontinence. Neither Zeno nor Chrysippus, however, conclude that there is no room for incontinence or that incontinent action cannot be explained (the vicious person is in fact an incontinent and we have some detailed accounts of what a Stoic vicious person is).²⁴ Neither

²² Plutarch, *VM* 441C (*SVF* 3.459; LS 61B). What becomes vice or virtue is the *hegemonikon* as a whole.

²³ See *PHP*, 5.7, 342, 14–16. The terminology when talking about passion is a little confusing, because ‘temperance’ and ‘continence’, on the one hand, and ‘intemperance’ and ‘incontinence’, on the other hand, would seem to be the very theoretical terms at issue (I am grateful to Brad Inwood for having drawn my attention to this point). This was envisaged, to some extent, both by Aristotle and by the Stoics. For Aristotle the fact that we are naturally more inclined toward pleasures explains that we are more prone toward intemperance (*akolasia*) than toward orderliness (*kosmiotēs*; see *NE* 1109a14–16). In the same vein, the Stoics speak of orderliness and continence as virtues subordinate to temperance, and of incontinence as a vice subordinate to intemperance (for textual references, see the next note).

²⁴ Cf. *DL* 7.93, where incontinence (*akrasia*) is regarded as a vice subordinate to intemperance (*akolasia*). According to a Plutarch passage (who makes an apparently verbatim quotation of Chrysippus), that which is done in accordance with continence (*enkrateia*) is a correct act (*katorthoma*; *SR* 1041A–B; *SVF* 3.297). As is obvious, the Stoics do not distinguish, like Aristotle (*NE* 1146b19–24; 1150b29–31; 1151a11–14), incontinence from intemperance. Following Plato, for the Stoics any failure in being master of oneself counts as an instance of *akrasia*. For the issue of incontinence in Plato, see *Laws*, 636c7 and the paradigmatic passage in *Republic* 439e6–440a3 (analysed by Sorabji, *Emotion*, 305–8), where Leontius, after struggling with himself, fails to control his irrational desire and looks at the corpses lying in front of him. He did so, Plato says, because he was overcome by his appetite or irrational desire (*kratoumenos hypo tes epithymias*; 440a1). Note that the struggle in Leontius’ case is not between the rational and the appetitive part, but between the spirited and the appetitive parts. See A. W. Price, *Mental Conflict* [*Conflict*] (London and New York, 1995), 97–8. Plutarch, who can admit the analysis of the phenomenon of inner irrationality in Aristotelian and Platonic terms, complains about the way the Stoics

do they think that the only way to explain the inner irrationality should be in terms of conflict. Certainly the Stoic position on what the inner irrationality is disrupts our normal view of the topic, the 'normal view' being the Platonic one, which presupposes the model of parts in conflict.²⁵

However, the Stoic Cleanthes apparently put forward a psychological model based on the conflicting parts of the soul. In fact, Galen argues for the presence of such a partition model in Cleanthes when suggesting that the Stoic Cleanthes took the passionate to be different from reasoning. In a well-known passage, Galen quotes from Cleanthes' verses a dialogue between rage (*thymos*) and reasoning (*logismos*) in order to show that Cleanthes agrees with the divided-mind position that holds that there is a conflict within the soul. Galen puts in Posidonius' mouth the assertion that Cleanthes has made reasoning speak with rage, these being two different things. Galen contends that the psychological monism defended by Chrysippus not only disagrees with the evident facts, but also with Zeno and Cleanthes (*PHP*, 5.6, 332, 21–3; LS 65I). Thus for Posidonius

deal with the theme. In accordance with Plutarch, the Stoics, while maintaining that it is the same part of the soul that we use to desire and to judge, confuse intemperance with incontinence (*VM* 445B).

²⁵ See the way David Hume puts forward the issue: 'Nothing is more usual in philosophy, and even in common life, than to talk of the combat of passion and reason, to give the preference to reason, and to assert that men are only so far virtuous as they conform themselves to its dictates' (*A Treatise of Human Nature*, (Oxford, 1960), book II, part III, sect. III). It should be noted that the partition model is not present in Plato before *Republic* 4. The two components of Plato's dualism in *Phaedo* are the body and the soul, the soul not being divided into parts. The irrational desires are related to the body, not to the soul (*Phaedo*, 66b–d). At *Phaedo* the body is envisaged as a hindrance for acquiring truth and wisdom; it is nothing but a source of confusion and a real evil (*Phaedo* 66a5–b6). Since the body has need for nurture, Plato says, it fills us with wants, appetites, fears, and much nonsense. So our body prevents us from having a wise thought (*phronesai*) and its appetites (*epithymiai*) produce 'war' and 'civil war' (66b8–c7). Unlike what can be found in the *Republic*, 'war' (*polemos*) and 'civil war' (*stasis*) are not used in *Phaedo* with reference to an agent who fights against himself, this himself being another part of the soul (see *Republic*, 470b5–470d; 550e9–560a and n. 34 below). By contrast, at *Phaedo* the soul as a whole is dragged (*helketai*) by the body (not by another part of the soul) toward things that are never identical (79c6–7). The model that the critics of the Stoics seem to have taken into consideration is the one of *Republic* 4, where three parts of the soul in conflict are clearly distinguished (*Republic* 435b9–441c). For details concerning Plato's psychology see T. M. Robinson, *Plato's Psychology* (Toronto, Buffalo, and London, 1995), chs. 2–3 (on Plato's bipartition of character, see 41) and B. Inwood, 'Seneca, and Psychological Dualism' ['Seneca'], in J. Brunschwig and M. C. Nussbaum (eds.), *Passions & Perceptions. Studies in Hellenistic Philosophy of Mind. Proceedings of the Fifth Symposium Hellenisticum* (Cambridge, 1993), 150–83, at 156–61. I am aware that my account of the 'Socratic' psychology as different from the 'Platonic' psychology is controversial. For a contrasting view, see G. Carone, 'Akrasia in the *Republic*: Does Plato change his Mind?', *Oxford Studies in Ancient Philosophy* 21 (2001), 107–48, at 116–42.

(and Galen indeed approves of his position, which, in his view, displays Platonic doctrine), Cleanthes' opinion is much more reasonable than Chrysippus', who does not take the passionate part of the soul (*to pathetikon*) to be other than the rational (*PHP*, 332, 31–334, 2). The evidence, it seems to me, is highly controversial, mainly because our source for Cleanthes is Galen, an antagonist of Chrysippus' monist model. I believe that, whether or not Chrysippus made significant modifications to the admittedly orthodox psychological doctrine of Zeno, it is hard to know that accurately based on Galen's testimony. The evidence provided by Galen should be taken with extreme caution, for his picture of Cleanthes' psychology can be a polemical interpretation. As Rist points out,²⁶ even for Chrysippus reason and rage could arise in the soul, but this does not necessarily mean that what is at issue is a theory of *opposing parts* of the soul. To be sure, for the Stoics rage is a kind of passion subordinate to appetite (*epithymia*), one of the four basic or generic passions (Stobaeus, *Ecl.*, 2.91, 11–12), and if passion is understood in terms of judgment (as Chrysippus thought), there is no need to believe that Cleanthes was positing a different psychology. We are fairly sure about the fact that Zeno and Chrysippus used to say that passion is something related to judgment or a type of judgment, respectively. In so far as judgment is one's reason disposed in a certain way (with no presence of struggle among opposing parts), this position might be interpreted in terms of a monistic psychology.²⁷ Nevertheless, according to Galen (*PHP*, 5.1, 292, 20–5), Posidonius disagreed with both Zeno and Chrysippus and he did so because he was willing to follow Plato's doctrine. Hence, for Posidonius passions are neither judgments (Chrysippus) nor certain things supervening on judgments (Zeno), but rather, certain motions of other irrational powers or faculties: the appetitive and the spirited. If we look into this passage and compare it to the previous one, we have to notice that Galen's testimony is at least tendentious, for Zeno and Chrysippus seem to have defended a similar 'intellectualist' view (passions are what supervenes on judgments or the same as judgments, that is to say, verbalized assertions maintaining that 'p is the case').²⁸ If this is so, there is no room for thinking that Cleanthes' and Chrysippus' doctrines of the soul were substantially different. Passions are judgments,

²⁶ J. M. Rist, *Stoic Philosophy [Stoic]* (Cambridge, 1969), 29.

²⁷ DL 7.111 (*SVF* 3.456). More detailed evidence is also supplied by Galen, *PHP* 4.3, 246, 39–248, 3 (cf. LS 65K). See especially Galen, *PHP* 5.1, 292, 17–20, where a subtle difference between Chrysippus' and Zeno's positions is pointed out: for Chrysippus passions are certain judgments of reasoning, while for Zeno passions are not the judgments themselves but contractions and expansions of the soul that supervene on judgment.

²⁸ For a judgment as a verbalized assertion, see Clement, *Strom.* 2.12.54, 5–55, 1 (ed. Stählin-Früchtel).

but judgments perverse or corrupt, distortions of reason;²⁹ however, they are not something different from reason but the reason itself in a different state.

The way in which Zeno and Chrysippus appear to have understood emotions has been a well-known puzzle in scholarship. In his new book on emotions, Professor Sorabji has contributed to the debate by presenting new arguments to show that the alleged divergence between Zeno and Chrysippus must be taken seriously. I do not intend to engage in Sorabji's detailed examination of this and other related issues;³⁰ I shall just point out the problem and concentrate on aspects of disagreement. While I find Sorabji's argument challenging and appealing, I continue to be persuaded that the orthodox view on Stoic emotions, stating that the divergence between Zeno and Chrysippus is just a shift of emphasis on Zeno's view, should be followed.³¹ Sorabji argues that there is a crucial difference between considering an emotion as being a contraction and expansion which occur 'on occasion of' judgments about what is good or bad (Zeno), and taking emotion to be a form of false judgment and belief (Chrysippus). He also thinks that Zeno's non-identification of emotions with judgments as a significant divergence cannot be impugned by the fact that he makes reference to judgments in his characterizations of distress, for he usually defines emotions as contractions and expansions on the occasion of judgments of evil (distress) and good (pleasure).³² So, even though Zeno recognized judgments as the cause of emotion, he did not identify emotion with judgment: that was Chrysippus' move.

Indeed Zeno mostly refers to emotions as being contractions and expansions on the occasion of (fresh) judgments. However, the two classical passages quoted by Sorabji³³ explicitly say that distress *is* a belief or opinion (*opinio; doxa*), not something (contraction) that only occurs on occasion of judgment. If this evidence is to be trusted, we have at least a reason for believing that Zeno also considered emotions as being judgments in his account. But there is also a systematic reason for thinking that this is coherent in Zeno's account of emotions: both for Zeno (DL 7, 110; Stobaeus, *Ecl.*, 2.39.5) and Chrysippus (Galen, *PHP*, 4.4, 240, 36–242, 11 De Lacy) an emotion is a sort of impulse. If this is so, there would not be any problem with regarding Zeno's and

²⁹ Plutarch, *VM* 446F (*SVF* 3.459; LS 65G) and 449C (*SVF* 3.384). Zeno's disciples, says Themistius (*in de An.*, 107, 18 = *SVF*, 3.382), call passions distortions or erroneous judgments of reason (*distrophas . . . logou kriseis hemartemenas*). See also n. 43 below.

³⁰ For a detailed presentation of Sorabji's reconstruction on Stoic emotions see Professor Gill's essay in this volume.

³¹ See Rist, *Stoic*, 30–6; Inwood, *Ethics*, 130–1.

³² Sorabji, *Emotion*, 34–5 n. 27.

³³ Cicero, *Tusc.* 3. 75 and Galen, *PHP* 4.7 2–3, 280 De Lacy (both texts included in *SVF* I 212), in his *Emotion*, 35 n. 27.

Chrysippus' views on emotions as related to each other, since every impulse is the result of having given assent to a judgment expressing the content of an impulsive appearance. If giving assent to a practical judgment can be considered a unique event, which translates into action the predicate contained in an evaluative proposition, such as 'I ought to do X' (on this issue, see below notes 40 and 50), it does not sound unreasonable that Chrysippus' identification of emotion with judgment is the same as or close to Zeno's conception of emotion as being a contraction or elation on occasion of judgment. On the other hand, there is a suggestive passage in Galen (*PHP*, 5.6, 334, 24–30, De Lacy) where he shows himself unsympathetic to Zeno's view on emotions, as though Galen were suggesting that the thesis that emotions supervene on judgments is almost the same as saying that emotions *are* judgments or they are close in meaning to them. In fact, Galen takes Zeno's thesis as being an intermediate between 'the worst view' (Chrysippus') and 'the best view' (Hippocrates' and Plato's). Thus, although Galen is not saying that Zeno's and Chrysippus' positions are identical, he probably is suggesting that they are close in meaning.

Now an emotion (*pathos*) is not different from reason (*logos*); when reason as a whole is understood in terms of passion, it is vice, a 'perverse' (*poneros*) and 'intemperate' (*akolastos*) reason. Between reason and passion there is no conflict (*diaphora*) or civil war (*stasis*); what happens is a sort of turning (*trope*) into one and the same reason in two distinct directions or states.³⁴ According to the Stoics, we do not notice this change due to its sharpness and speed; so we do not realize that it is the same part of the soul (*tauton esti psychēs*) with which we desire (*epithymēin*) and feel regret (*metanoēin*), we are angry (*orgizesthai*) and afraid (*dedienai*; Plutarch, *VM*, 447A; *SVF*, 3.459; LS 65G). The soul is called

³⁴ See Plutarch, *VM* 441C; 446F–447A (*SVF* 3.459; cf. LS 61B). David Sedley has objected to me that it is not certain that this Plutarch passage is genuinely Stoic. However, even if this text is rejected as belonging to the Stoics, we can find the same conception attributed to the Stoics in Galen (*PHP* 4.5, 270, 14; 274, 1–3), Epictetus (*Discourses*, 1.28, 6–10), and Stobaeus (*Ecl.* 2.111, 20–1). In all these passages the weakness of the soul—proper of the Stoic passionate person—is described and particularly emphasized in terms of a 'vacillating mind'. For a detailed discussion of this topic (with special reference to Euripides' *Medea*, vv. 1078–80, an apparently favourite Chrysippus' example for the treatment of *akrasia*), see C. Gill, 'Did Chrysippus understand *Medea*?' [*Medea*], *Phronesis* 28 (1983), 136–49 at 140–2 and, more recently, *Personality*, 226–35. Cf. also Gosling, 'Akrasia', 186–7. For a discussion of the so-called 'model of oscillation', see Joyce, 'Akrasia', 327–8 and Price, *Conflict*, 3–7. In Plutarch's text the image of the inner conflict as a 'civil war' (*stasis*) is surely taken from Plato's *Republic*, where the term 'civil war' is applied to 'hostilities' with 'what is one's own and akin' (470b5–470d). This is especially spoken of the cases where Greeks fight with Greeks, but later the distinction between 'war' (*polemos*) and 'civil war' (*stasis*) is used with reference to a person who battles against himself (see 550e9–560a).

‘irrational’ when it is brought to something bad or contrary to reason, and this happens when an ‘excessive impulse’ (another expression to designate a passion or emotional state), which has acquired violence and strength, arises. The oscillation issue has been debated since antiquity and indeed it is not clear enough, especially if it is tackled from a Platonic or Aristotelian standpoint.

In suggesting that it is hard to believe that every emotion involves an oscillation too rapid to notice, a key point in the ‘turning’ (*trope*) theory, Professor Sorabji has revived the debate. He suggests that whereas a readiness to push and a readiness to pull can coexist in the same arm, *perhaps* for the same unitary reason we can simultaneously entertain the opposite judgments Chrysippus might have been postulating (italics are mine).³⁵ The fact that the Stoic Posidonius avoided the need for oscillation between judgments does not seem to me particularly suggestive, since he appears to have abandoned the allegedly Stoic monist psychology for a psychology based on the existence of non-rational capacities and on the assumption that within the soul there are opposing powers at work (no matter whether Posidonius did only distinguish capacities—not parts—of the soul; the crucial issue is to admit the existence of powers motivationally opposed within the soul). In order that the Stoic oscillation between judgments makes sense, I consider crucial the fact that the turning of one and the same reason to both sides cannot be simultaneous. As noted by Sorabji, Plato had argued that opposed thoughts cannot be entertained in a unitary soul at the same time (*Rep.* 436b–439e).³⁶ Sorabji also recognizes that the idea of an oscillation too rapid to notice avoids the thoughts being entertained at the same time. The Stoic diachronic model of the turning of one and the same reason to both sides allows the Stoics to explain the psychological weakness without appealing to the synchronic model of the conflict between opposing parts. Certainly, in the Stoic model there is a conflict of opposing beliefs: the agent showing himself reluctant to give his assent to one proposition or to another—evaluative propositions describing a determined state of affairs, such as ‘the appropriate thing to do is X’, X being ‘to drink excessively’ or ‘to drink with moderation’, for instance—displays a certain conflict of beliefs. But that quarrel does not take place at the same time between opposing faculties or parts of the soul. That the oscillation involved in every emotion is too rapid to notice can be reasonably admitted, I think, if we focus on the fact that the only agent who eventually can undergo that oscillation of judgments is the passionate agent and, due to his psychological state, he is not able to realize his vacillating condition. In Stoic terms, such an oscillation is just present in the soul of an agent whose reason can be characterized as

³⁵ Sorabji, *Emotion*, 314.

³⁶ *Ibid.* 57, n. 15.

‘changing’, a person who is changing his mind all the time and whose cognitive abilities are weak. And he who cannot notice must be only the vicious person, the one who feels appetite, regret, anger, fear, and so on. The cognitive state of the wise person and his psychological disposition prevent him from having these emotions. The sage person’s judgment must always be a correct judgment, so there is no room for oscillation of judgments in the wise.

At this point, I would like to explain when and why, according to the Stoics, impulse becomes excessive. As is well known, for the Stoics ‘impulse’ (*horme*) is not a synonym of ‘reactive or instinctive conduct’. Unlike instincts, ‘impulsive dispositions’ can be modified.³⁷ Plutarch, when citing Chrysippus, says: ‘impulse is the reason of man prescribing him to act’ (*logos prostaktikos autōi tou poiēin*).³⁸ If this is so, impulse is always ‘practical’, that is to say, it is a movement of the soul in which action is involved. In the sequence of Stoic psychology of action³⁹ impulse is what is directed (or what can be directed, if nothing hinders it) intentionally toward action as a result of an assent to a presentation.⁴⁰ Thus it

³⁷ Cf. A. A. Long, ‘The Early Stoic Concept of Moral Choice’, in F. Bossier *et al.*, *Images of Man in Ancient and Medieval Thought. Studies presented to G. Verbeke* [‘Early’] (Louvain, 1976), 77–92 at 80–1; Inwood, *Ethics*, 45; R. Salles, ‘El problema del conocimiento práctico en la teoría estoica de la acción’, *Tópicos* 14 (1998), 105–33 at 107–8. To be sure, an impulse is not one of the functions of the soul (*pace* Couloubaritis, ‘Psychologie’, 116), but one of the functions of the commanding of the soul. On the problems the rendering of *horme* by ‘impulse’ involves see Sorabji, *Emotion*, 42–3.

³⁸ Plutarch, *SR* 1037F (*SVF* 3.175; *LS* 53R). I shall get back to this Plutarch passage when commenting on the type of propositions—i.e. ‘practical or evaluative propositions’—whose assent yields and action. See also Stobaeus, *Ecl.* 2.86, 17–18 (*SVF* 3.169; *LS* 53Q).

³⁹ Presentation (‘impression’ or ‘appearance’; *phantasia*), assent (*synkatathesis*), and impulse (*horme*); Cicero, *Acad.*, 2.24–5; Plutarch, *SR* 1056F–1057A (cf. *LS* 41E; 53S).

⁴⁰ According to Stobaeus’ testimony, the Stoics hold that all impulses are assents (*Ecl.* 2.88, 1; see also 97, 15–98, 6), which may mean that impulse comes directly from assent. Some scholars suggest that giving assent to a presentation, whose content is ‘I ought to do X’, is the same thing as performing an impulse for doing X. In other words, there would not be two events (assent and impulse) but only one (see R. Salles, ‘The Stoic Account of the Psychology of Responsible Actions and the Question of Determinism’. Doctoral Dissertation (London, 1997), 94 n. 196 and p. 95; Brennan, ‘Old Stoic’, 28). What this view seems to imply is that, against Long’s interpretation (in his ‘Early’, and *LS*, vol. 2, 200), just as every impulse is an act of assent, so too every assent to a presentation is an impulse. Some textual evidence, though—included in Stobaeus too—suggests that assent and impulse are two different things (which, eventually, can work together as a whole): we give assent to certain propositions or statements (*axiomata*), and impulses are toward the predicates (*katagoremata*) (see Stobaeus, *Ecl.*, 2.88, 2–6). I think there is a problem here that is not completely clear in the evidence; Ioppolo’s view on the issue can be illuminating: assent and impulse can be considered as being two different events, since while assent is a sort of *cognitive act* implying the recognition of the truth of the proposition, impulse is a *movement* leading toward action (see A. M. Ioppolo, ‘Le cause antecedenti in Cic. *De fato* 40’ [‘Cause’], in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics. Fourth Symposium Hellenisticum* (Naples, 1988), 397–424 at 410–11). At any rate, I accept that assent and

seems to be possible to think that impulse becomes excessive as a result of the assent we have given to a proposition of a certain kind. Passions are 'excessive impulses', perverse opinions (*doxai*) and judgments (*krisis*) that do not arise as a result of parts of the soul in conflict (as Platonists assume), but are inclinations (*ropai*) and yieldings (*eixeis*), assents (*synkatatheseis*) and impulses (*hormai*) of the ruling part of the soul as a whole. Passions are certain states of one's reason that in a moment, due to a weakness and lack of stability in the agent, have changed suddenly from the correct disposition into the bad one.⁴¹

It seems to me that this fits quite well into what Stobaeus says when reporting the two types of assent supposedly recognized by the Stoics. In effect, a wise person never makes a false supposition nor does he assent to anything which is not comprehensible, because he neither holds opinions nor is ignorant. By contrast, the base person, due to his cognitive state (*doxa*), moves swiftly, and his assent, which is the same as ignorance, is changeable and weak. The cognitive state of the wise person guarantees that his beliefs are always safe and firm; this is why for the Stoics he holds no opinion at all. A base person, in giving his assent to what is not graspable, the 'acataleptic' (the first kind of opinion), and in making weak suppositions (the other kind of opinion), behaves precipitately and gives his assent before having a real understanding or apprehension (Stobaeus, *Ecl.*, 2.111, 17–112, 8). So, I would suggest that in the Plutarch passage cited above⁴² to hold opinions and to assent precipitately, which is a yielding to what is present due to weakness, are the same thing. Yielding (*eixis*), then, would be an assent (or rather 'weak assent'; Stobaeus, *Ecl.*, 2.111, 20–112, 2; Cicero, *Tusc.*, 3.71–2) to what is not graspable, the kind of assent that is done when the cognitive state of the agent is opinion. On the other hand, the wise person's assents must be those that arise after a critical acceptance of a presentation.⁴³ If this approach is right, we should conclude that the meaning of the word *eixis*

impulse are a unique totality insofar as impulse immediately translates into action the proposition's predicate (once that proposition has been recognized as being true). That is what I mean when I suggest that assent and impulse, in spite of being two different things, can work together as a whole in the performance of an action. I shall go back to this point later.

⁴¹ Plutarch, *VM* 441C; 446F–447A (cf. *SVF* 3.459 and LS 65G). For the Stoics, animals, in spite of the ill-intentioned complaints by Galen (*PHP* 1.68, 28–34; 2.1, 102, 8–10; 3.3, 190, 16–17), have no passions since these are deviations (*diastrophai*) or perversions of reason, and animals have no reason (Themistius, *in de An.* 107, 17–18; *SVF* 3.382).

⁴² See also *Against Colotes*, 1122B–C and Sextus, *M.*, 7.225–6.

⁴³ See Origen, *De princ.* 3.1.3, with Inwood's discussion in *Ethics*, 78–81. Actually, this is one of the senses of the word 'judgment' (*krisis*) for the Stoics. The other one is the verbalized assertion affirming that 'p is the case'. This second sense of the word is suggested by Clement, *Strom.* 2.12.54, 5–55, 1 (ed. Stählin–Früchtel).

is not necessarily ‘the assent of the irrationals’;⁴⁴ it can also be the assent proper of the person whose conduct is irrational because such an assent is disobedient to right reason, that is, acting against right reason.⁴⁵

At this point, it is important to emphasize again the fact that Chrysippus does not think that the *hegemonikon* of the soul can be identified with ‘the rational part’, as suggested by Galen,⁴⁶ since within the *hegemonikon* are listed impulses, presentations, and assents as its faculties *in addition to* reason as another faculty of one and the same *hegemonikon* (Stobaeus, *Ecl.*, 1.369, 6 ff.; *SVF* 1.143; Aetius, 4.21, 1–4; LS 43H). If passion is both a judgment and an opinion, a passionate agent not only believes that something bad (pain or distress; *lype*) or good (pleasure or delight; *hedone*) is present, but also that such a bad or good thing is something about which it would be correct to be upset or depressed, happy or exalted.⁴⁷ When the akratic agent is giving his assent to a presentation, his assent involves a *doxastic belief* that something is good and that it is appropriate to act in accordance with that belief.⁴⁸ By contrast, when the wise person gives assent to a presentation his assent involves *knowledge* that something is good, and that it is correct to act according to that knowledge. Once the agent has given assent to a practical or evaluative proposition of the form ‘I ought to do *X*’ or ‘the correct thing to do is *X*’ an impulse is produced. Such an impulse is his assent translated into an intentional movement toward what the agent

⁴⁴ This is recognized by Inwood, *Ethics*, 77.

⁴⁵ This is the standard interpretation of this puzzling issue, an approach that has been vigorously criticized by Sorabji (*Ethics*, 55–7). He thinks that the allegedly Stoic meaning of ‘irrational’ as ‘contrary to the dictates of reason’ (Plutarch, *VM* 441C–D) would imply a wholly *unconscious* mistake of reason, but ‘disobedience’ implies going against one’s better judgment (*Emotion*, 55 n. 2). The remark that ‘irrational’ as ‘what is contrary to the dictates of reason’ is an unconscious error of reason seems to fit well in the Stoic passionate person, who just *believes* he knows what is good. I think there is a textual support for the interpretation that the passionate state of a base person is ‘irrational’ in the sense of being contrary to the reason ‘virtuously disposed’. In a Stobaeus passage (*Ecl.* 2.89, 4–5; not quoted by Sorabji) we are told that the expressions ‘irrational’ and ‘contrary to nature’ are not used there in a general sense, but ‘irrational’ (*alogos*) is the same as ‘disobedient to reason’ (*apeithes toi logoi*). For further evidence, see Galen, *PHP* 4.4, 254, 13–19 and Plutarch, *VM* 450D.

⁴⁶ *PHP*, 2.7, p. 156, 13–15. Apparently, Couloubaritsis was persuaded by Galen that the *hegemonikon* and the rational part are one and the same thing (see his ‘Psychologie’, 120). But the passage just quoted shows that that assumption is an assumption made by Galen, not by Chrysippus. What Galen cannot accept is that the commanding part is identified with thought but not with the rational *part*.

⁴⁷ Stobaeus, *Ecl.* 2.90, 14–17, and the comments by Nussbaum, *Therapy*, 377.

⁴⁸ The cause of appetite (*epithymia*) is *to hold the opinion* (*doxazein*) that a good thing is approaching; that of fear (*phobos*) is *to hold the opinion* that a bad thing is approaching (Stobaeus, *Ecl.*, 2.90, 8–12). The Stoic incontinent is a fool (*phaulos*) and, accordingly, his cognitive state is opinion, which is the same thing as ignorance (see Stobaeus, *Ecl.* 2.111, 20–112, 5; cf. LS 41G and *SVF* 3.548; see also Cicero, *Tusc.* 3.71–2).

takes to be good and, accordingly, choiceworthy. An action is a type of causal activity, insofar as the subject produces an effect through his action. But the causal relation in practical contexts must be peculiar, since the kinds of propositions to which assent is given to stimulate action contain an evaluative operator, which compels us to consider the intention of the agent. The causal relation must be regarded from the point of view of its internal production, i.e. from the agent's point of view, for the cause of an action is one's assent (that is why Plutarch, in citing Chrysippus' definition of impulse, says that a *horme* is the reason of the person *prescribing* him to act).⁴⁹ If this approach is right, it follows that assent and impulse cannot refer to the same propositional *content*, since assent is nothing but a corroboration in a merely descriptive level, while impulse corroborates nothing in advance but intentionally aims at something that the agent believes should be done.⁵⁰ So while assent is directed at the proposition as a whole, impulse deriving from it has as its intentional referent a predicate, an incomplete sayable (Stobaeus, *Ecl.*, 2.88, 1–6; LS 33I). This accounts for the fact that not every presentation but the 'impulsive' one (whose linguistic expression corresponds to a proposition containing an evaluative operator; Stobaeus, *Ecl.*, 2.86, 17–18; LS 53Q) activates the impulse.⁵¹ If this is so, the proposition accepted as true must be the evaluative one, the only type of proposition whose assent stimulates action. This mechanism of action works similarly both in the wise man and in the fool, but in the case of the former his cognitive state will allow him to distinguish what is *really* correct/good from what is *apparently* correct/good. This is not what happens to a Stoic fool: his cognitive state is not able to discern rightly and he cannot realize that pain, for example, is something that should not be feared, or that pleasure is something that should not cause delight, either. For neither pain nor pleasure are morally good or bad. They are just indifferents.⁵²

⁴⁹ Plutarch, *SR* 1037F (*SVF* 3.175; LS 53R), with Sorabji's comments in his *Emotion*, 328–9.

⁵⁰ I am emphasizing the fact that assent and impulse are different things, and understanding assent as a sort of cognitive act implying the recognition that the proposition is true. I am also taking impulse to be a movement toward action. As said earlier, the issue is controversial, for it might be thought that assent and impulse are a unique whole insofar as impulse immediately translates into action the proposition's predicate, and this occurs after the proposition has been recognized as true. For further discussion see Inwood, *Ethics*, 60–2; A. M. Ioppolo, 'L *Horme Pleonazousa* nella dottrina stoica della passione' [*Horme*], *Elenchos* 16/1 (1995), 25–55 at 27–8.

⁵¹ For the Stoics every impulse comes from assent but not every assent yields an impulse. When you give your assent to the proposition 'there is a piece of cake there', no impulse is followed. What activates impulse is the impulsive presentation, whose propositional content can be 'this piece of cake is to be eaten by me' (Stobaeus, *Ecl.* 2.88, 2–6 = LS 33I).

⁵² On indifferents see the passages collected in LS 58; for discussion see G. Lesses, 'Content, Cause, and Stoic Impressions' ['Content'], *Phronesis* 43/1 (1998), 1–25 and N. P. White, 'Stoic Values', *The Monist* 73/1 (1990), 42–58.

In order to exemplify what the conduct of a person who acts in a passionate state is like, Chrysippus offers the famous simile of the runner and the walker, preserved by Galen (*PHP* 4.2, 240, 36–242, 11; see also *PHP*, 4.4, 256, 7–12). These passages clearly show that a ‘passionate conduct’ is not regarded in terms of inner conflict but as an agent’s personality as a whole (the *hegemonikon*) which is emotionally disposed. The walker controls his impulses and hence is able to stop his pace; this is not the case of the runner (as it is fairly clear in the simile, the walker is the continent person and the runner the incontinent one). Although this passage (whose content Galen attributes to Chrysippus himself) sounds quite Platonic in character—insofar as judgment is overcome by a factor over which reason has no control⁵³—it is clear enough that the walker and the runner are one and the same person in different states. The walker is not ‘the *rational part*’ but is the unified whole ‘rationally’ disposed. By contrast, the runner is the same unified whole but emotionally disposed.⁵⁴ But he who is not obedient to reason somehow must know (in a weak sense, since his cognitive state is *doxa*) the reason in respect of which he is not obedient. He should also know the judgments that are supposed to be correct or to fit in reason and from which he departs when assenting to the false propositions that mistakenly express the content of presentations. In this weak sense of ‘knowing’ the Stoic incontinent does something other than fail to follow reason: what he does is to act knowing (this ‘knowing’ understood in terms of *doxa*) that he is irrational insofar as he fails to make consistent his impulses with a *hegemonikon* virtuously disposed. The incontinent person is irrational, not because of lack of reason, but because of not being in line with the proper measure of the ‘natural impulse’.

Now if the soul is a rational unity, how is it possible that it judges irrationally? If passion is a state of the *hegemonikon*, why is it that states of passion (which, according to the Stoics, are real illnesses, pathological states) should be considered as ‘states of reason’?⁵⁵ The Stoics, in spite of

⁵³ See Joyce, ‘Akrasia’, 328.

⁵⁴ A critical comment on Galen’s first passage can be found in J. Annas, *Hellenistic Philosophy of Mind* (Berkeley, Los Angeles, and London, 1992), 115–16. As Ioppolo subtly points out (‘Horme’, 42, n. 67), although one might think that with the expression ‘those who move with reason as their guide’ Chrysippus is making reference to the wise people, the restriction ‘no matter what the nature of the reasoning is’ should make us consider that he does not refer to the perfect reason of the *sophoi* but to that of the man in general in terms of rational being.

⁵⁵ The orthodox Stoic position appears to be this: if passions or emotional states (*pathe*) are illnesses of the *hegemonikon* of the soul, it is in one’s own interest to get rid of them. Actually this is just common sense: if you are sick, what you really want is to remove your sickness, not to improve your sickness state (for evidence, see Seneca, *Ep.* 116, 1 [*SVF* 3.443] and Lactantius, *Div. Inst.* 6.14; *SVF* 3.444). On passions as sick states of the soul, see the helpful remarks by Donini, ‘Struttura’, 314–15.

daring efforts by Plutarch to ridicule and reject their position, insist that what happens is not a struggle between conflicting parts. Actually, what is going on is rather a dispositional transformation of the soul that, as a whole, suddenly changes from having a good disposition to having a bad disposition.⁵⁶ The psychological state of a passionate agent explains why those who are not trained in their presentations (*phantasiai*) have precipitancy (*propeteia*) in their assertions and veer into disorder (*akosmia*) and carelessness (*eikaiotes*).⁵⁷

4. The Stoic Psychology of Action and How it Should Work in the Account of the Incontinent Action

The Stoic sage is the one who is in possession of prudence (*phronesis*), a knowledge of what should be done and of what should not be done, or a knowledge of bad and good things (DL 7.92; Stobaeus, *Ecl.*, 2.59, 4–5); the ‘fundamental features’ (*kephalaia*) of prudence are the *theoria* and *praxis* of what should be done. The virtuous person, then, is both theoretical and practical about what should be done. Now if prudence is *knowledge* of what should be done and of what should not be done, and if the *phronimos* is theoretical and practical of what should be done, he will possess a theoretical and practical knowledge of what should be done (Stobaeus, *Ecl.*, 2.63, 11–12; DL 7.126). The case of the incontinent must be that of the one who, even having a ‘weak or feeble knowledge’, does not have the type of knowledge that guarantees that he will properly assess what should and what should not be done.

Let me briefly explain now how I think the mechanism for the production of the incontinent action works according to the Stoic account. As stated earlier, the Stoic psychology of action consists of the following steps: presentation (*phantasia*), the contents of which, in the case of humans, are expressed propositionally through articulated language (DL 7.49). Presentation is followed by an assent (*synkatathesis*), which is the act of accepting such a presentation, or rather the propositional

⁵⁶ The difficulties this account raised in antiquity are well reflected in the polemic commentary by Plutarch on the Stoic thesis that passions are judgments (*VM* 449B–C).

⁵⁷ DL 7.48 (LS 31B); to precipitate (*propiptein*) and to give assent in advance to apprehension is proper of the Stoic *phaulos* (Stobaeus, *Ecl.* 2.112, 5–7; *SVF* 3.548; LS 41G). The wise person, by contrast, has *aproptasia*, ‘non-precipitancy’, which is defined as ‘knowledge of when one should and should not assent’. See DL 7.48. On the definition of *aproptasia* as ‘the disposition of not giving assent in advance of apprehension’ (Papyrus Herc. 1020 = *SVF* 2. 131) see W. Görler, ‘Asthenes sunkatathesis. Zur stoischen Erkenntnistheorie’, *Würzburger Jahrbücher für die Altertumswissenschaft, neue Folge* 3 (1977), 83–92 at 85–6.

expression of its contents, as true.⁵⁸ Finally, when the agent gives assent to the *practical* proposition describing the content of an impulsive presentation, the assent becomes an impulse (*horme*) for action.⁵⁹ Assent causes the impulse to perform the action described in the proposition's predicate.⁶⁰ Human presentations, unlike non-rational animal presentations, are rational, i.e. they can be expressed propositionally;⁶¹ and what

⁵⁸ Strictly speaking, assent is given to a propositional formula (*logos*), not to a presentation (see Sextus, *M* 7. 154, included in LS 41C).

⁵⁹ For evidence see Antiochus of Ascalon, quoted by Cicero, *Acad.* 2. 24–5, supported by Plutarch, *SR*, 1056F–1057A (cf. LS 41E and 53S). Cicero, *Fat.* 41–2 (cf. LS 62C), along with Seneca, *Ep.* 113, 18, offers a different sequence: presentation, impulse, assent (a commentary on these two passages can be found in Ioppolo, 'Monismo' and 'Cause', 407–17. Against Ioppolo's interpretation that Zeno and Cleanthes held that impulse precedes assent, see Inwood's persuasive remarks in his 'Seneca', 166, n. 29). While trying to account for how anger is produced, Seneca seems to present the supposedly orthodox account. He argues that anger (*ira*) is set in motion by a presentation (*species*) received of a wrongful act (*iniuria*) and suggests that anger does not follow immediately without the involvement of mind giving assent to the presentation (*De ira*, 2.1.3–5). Perhaps Seneca is rendering the Greek *synkatathesis* with the expressions *accedens animus* or *animus adprobans*, and *phantasia* with *species* (for a detailed discussion of this passage see Inwood, 'Seneca', 173–4—although he takes Seneca's account as a 'characteristically Senecan development' (165—and more recently Sorabji, *Emotion*, 41; 66–75).

⁶⁰ Or, as suggested above (n. 40), impulse immediately translates into action the proposition's predicate. Cf. Plutarch, *SR* 1056F, who suggests that, according to the Stoics, all acceptance of a presentation (*paradochen phantasias*) is the same as an act of assent (*synkatathesis*); see also Stobaeus, *Ecl.* 2.86, 17–18. Actually at this passage what causes impulse to be in motion is the direct 'impulsive presentation' (*phantasia hormetike*) of that which is appropriate (*kathekon*). The proposition 'the appropriate thing to do is X' expresses the content of the impulsive presentation, and in order to act in accordance with this proposition the agent must assent to it first. For a challenging analysis of Stobaeus, *Ecl.* 2.86, 17–18 see now Sorabji, *Emotion*, 33, n. 19; 42–3; 328–9. Sorabji is willing to suggest that 'not every appearance of what is appropriate motivates' (33, n. 19).

⁶¹ I do not intend to engage here in the discussion whether or not small children and animals have thoughts with propositional content. At this point I am following (with no argument) the traditional view according to which a presentation is a 'mental image' having a content which can be expressed in a propositional way. Among the holders of this position are J. Annas, 'Truth and Knowledge', in M. Schofield, M. Burnyeat, and J. Barnes (eds.), *Doubt and Dogmatism. Studies in Hellenistic Epistemology* (Oxford, 1980), 84–104 at 88–9; M. Frede, 'Stoics and Skeptics on Clear and Distinct Impressions', in his *Essays in Ancient Philosophy*, (Oxford, 1987), 151–76; Inwood, *Ethics*, 73–5; LS 1987, vol. 1, p. 293; J. L. Labarrière, 'De la "nature phantastique" des animaux chez les Stoïciens' (in Brunschwig and Nussbaum, eds. cited above), 225–49 at 228–30 and 232; and, more recently, Gill, 'Galen', 116. For the unorthodox interpretation that Stoics are not taken to hold that perceptual presentations of animals are completely devoid of propositional contents, see R. Sorabji, *Animal Mind and Human Morals. The Origins of the Western Debate* (Ithaca and New York, 1993), 20–8. To put it briefly, Sorabji's interpretation holds that Chrysippus' hunting dog can have *phantasiai* with propositional content, for insofar as a Stoic proposition is an *axioma* or a *lekton* and these are 'something assertible' and 'something sayable', respectively, but not something actually asserted or said by the dog's owner, it follows that irrationals can have appearances with propositional contents in this sense (Sorabji's argument is much more refined). Recently, Lesses

is most important here, rational agents are capable of giving or of withholding assent to such propositions. If this is so, the rational agents are responsible for their cognitive states, and such agents are also responsible for the actions derived from the assents they have given to certain practical propositions indicating what should be done.

The oscillation model describes the psychological state of the incontinent, an agent that is swinging hesitantly from one course of action to another; the relevant point here is that, even though the acrat character seems to envisage the temperate as well as the intemperate propositions, he *always* assents to the intemperate one. Now what is taken for granted in this account is that the incontinent person somehow ‘knows’ that what he or she is about to do is bad for himself or herself but performs it anyway. This is explicitly suggested in a significant passage where the meaning of the expressions ‘irrational’ (*alogon*) and ‘contrary to nature’ (*para physin*) are being clarified (Stobaeus, *Ecl.*, 2.89, 4–90, 6; see *SVF*, 3.389; LS 65A). Those who are in a state of passion (*tous en tois pathesin ontas*) frequently ‘see’ or ‘notice’ (*horontas*) that it is advantageous not to do anything, but are dragged by the violence of passion and are drawn into doing it. Even though they notice (*kan mathosi*) or are taught (*metadidachthosin*) to realize that they should not feel pain or fear (i.e. passions), they allow themselves to be drawn by passions.⁶² This being so, it might be suggested that the conduct of an agent supposedly willing to assent to the proposition ‘the correct thing to do is *X*’ (*X* being ‘to act with temperance’) but not doing *X*, is explained because such an agent has not given a full assent to this proposition or rather because he has given a weak assent to it.⁶³ The case of the incontinent is that of someone who has

(‘Content’), in suggesting that the Stoics deny that there are psychological states completely devoid of cognitive content, has mediated in the conflict.

⁶² Inwood holds (*Ethics*, 142–3) that this Stobaeus passage is influenced by Posidonius or by a Platonizing philosopher (in fact, the comparison of the passionate state with a disobedient horse reminds us of Plato’s *Phaedrus*, 246a–249e). But in the Stobaeus passage what is compared to a disobedient horse is not the irrational *part* of the soul but the passion itself or, to be more accurate, the *hegemonikon* of the soul which, as a whole, is emotionally disposed. Those who are in states of passion are carried away by the violence of passion *as though* by some disobedient horse. To be sure, in the picture of the horses in Plato’s *Phaedrus* the disobedient horse depicts the irrational part of the soul and somehow it is that part. The Stobaeus simile, I think, looks like the one of the runner cited by Galen. On this point see Gill, *Personality*, 227, n. 196 and 230, n. 205. More recently Inwood has acknowledged how hard is to argue that the Stobaeus passage uses the Platonic image of the horse deliberately and has also shown how difficult is to decide whether or not a Platonic dualism is consistent with Stoic views (see ‘Seneca’, 158–60).

⁶³ To be sure, we have no evidence of assent being given to propositions like ‘the appropriate thing to do is to act with temperance’. This proposition, as Brad Inwood has pointed out to me, would be self-evident to anyone but a complete villain. My claim is that, according to the Stobaeus passage just quoted and commented on, even to the *phaulos* (this *phaulos* being a complete villain or Aristotle’s incurable intemperate person; *NE*

changed his mind, or whose assent was not sincere.⁶⁴ But whether or not he has changed his mind or his assent has not been sincere, his situation reflects the cognitive state of the non-virtuous person. The wise person does not change his mind, for the changing of mind is liable to false assent (cf. Stobaeus, *Ecl.*, 2. 113, 3–7).

Now if the incontinent is just able to recognize theoretically the truth value of the temperate proposition but is not capable of translating into action the predicate of such a proposition, and, accordingly, if he is not giving assent with his *hegemonikon* virtuously disposed, his eventual assent to the temperate proposition might not be a strong or ‘unshakeable’ assent, and his impulse will not agree with the truth contained in the temperate proposition. Insofar as the practical impulses contain a motive factor (Stobaeus, *Ecl.*, 2.88, 2), they are causes of action. Thus, impulses are able to produce a change in something. But the change an incontinent person’s practical impulse produces will be in the wrong direction, for the incontinent does not direct his impulse toward the temperate predicate but probably toward the opposite predicate, i.e. the one describing an intemperate action. For the incontinent usually assents to non-cataleptic presentations, the presentations that take place in pathological or emotional states (Sextus, *M*, 7.247; LS 40E; cf. *SVF* 2.65). He, as any individual, possesses certain cognitive elements. When he does what is against that which is appropriate, ‘knowing’ what he is doing, he does not perform that action because an outside force is dragging him, but because his whole psychological state is passion. That is the case of Medea, a Chrysippean example to illustrate delusion: she must have given her assent to a proposition such as ‘the correct thing is to take revenge on my husband’, and she did so due to her dispositional and cognitive state.⁶⁵ When giving her assent she is able to analyse the consequences of her action since she is aware that she is about to do something wrong: in fact, in taking her revenge she will kill her own children.⁶⁶

1150a19–22) this proposition should be more or less obvious. For, although his cognitive state does not permit him to give a full or firm assent to the temperate proposition (even in the case of a proposition with more descriptive content), he would be at least able to recognize that he should not do what he is about to do. That is why, as Stobaeus reports (*Ecl.* 2.89, 6–9; 2.90, 2–6), a person in a state of passion is able to notice that he should not allow himself to be dragged along by passion.

⁶⁴ As Inwood suggests (*Ethics*, 138).

⁶⁵ See Gill, ‘Medea’, 138–9; ‘Galen’, 117 and Nussbaum, *Therapy*, 379 n. 51.

⁶⁶ See Euripides, *Medea*, v. 1078, quoted by Chrysippus (reported by Galen, *PHP* 3.3, 188, 27–8; 4.6, 274, 10–17; see also Epictetus, *Discourses*, 1.28, 7). The most illuminating discussion of this and other Euripidean passages (in Stoic contexts) continues to be Gill, ‘Medea’. Cf. also his *Personality*, 226–34 and ‘Galen’, 117–19; 121–2. It is well known that Chrysippus used to cite Euripides’ plays in order to illustrate different moral characters. According to DL 7.180, Chrysippus quoted the whole text of Euripides’ *Medea*.

5. Is There any Conflict in the Stoic Psychological Monism? Conclusion

In spite of what I have been arguing, my description of the incontinent action (Stoically considered) seems to involve a certain conflict.⁶⁷ The conflict can be noted in the vacillating and hesitating attitude of the weak-minded agent. To put it in Professor Sorabji's words, although reason is a single thing, 'in emotional conflict it oscillates between rival judgments'.⁶⁸ The cognitive state of a person in a state of passion compels him to be uncertain about what to do. What the Stoic account appears to describe is that he, by virtue of his psychological state, will always give his assent to the intemperate propositions. Of course presentations come up for assessment through the reason of the incontinent agent. But his assessment systematically fails to be a good assessment since his cognitive abilities are limited to and determined by opinion, and for a Stoic you must have *episteme* in order to get a correct understanding and hence to do a correct evaluation of the state of affairs. As the wise person, the fool will attempt to discern the evidence before giving assent to a presentation. But his evaluation of presentations will unavoidably be deficient and unsuccessful in its attempt to achieve the correct appreciation of things.⁶⁹ Certainly there is a conflict here, but the Stoics would not accept that the conflict is between the dictates of reason, on the one hand, and desire or appetite, on the other hand. At best the conflict holds between different presentations (and their corresponding propositional formulations) of the form 'the right thing to do is *X*'.⁷⁰

I would like to finish this essay by stressing the similarities and dissimilarities (i) between Socrates and the Stoics, and (ii) between the Stoics and Aristotle. As suggested in the first section of this article, I think that the Stoics were strongly Socratic in maintaining the following theses: (a) virtue is a form of knowledge and vice a form of ignorance; (b) there is one virtue (knowledge) and one vice (ignorance); (c) there are no

⁶⁷ According to Galen's testimony, Chrysippus seems to have advanced cases in which there is a certain conflict between belief and passion, such as involuntary crying (Galen, *PHP* 4.7, 284, 3–19; 288, 22–4).

⁶⁸ Sorabji, *Emotion*, 313. Once more, Medea is a good example of a vacillating person (see Euripides, *Medea*, 1042–4). In fact, her attitude exactly matches Chrysippus' description of the weak-minded agent.

⁶⁹ This interpretation can fail to explain how the weak-minded agent is anyway able to perform 'due or appropriate actions' (*kathekonta*). But such actions (honouring parents, serving embassies) are in a pre-moral level and, in not being based on a firm and unshakable character, are not strictly virtuous actions. So although a fool can perform an action containing a 'reasonable justification' (Stobaeus, *Ecl.* 2.85, 13 ff.; LS 59B), he will fail to do what is morally good.

⁷⁰ Gosling, 'Akrasia', 198, suggests this account.

intermediate cognitive states.⁷¹ Although the Stoics identified virtue with knowledge, they did not draw the conclusion that there is no incontinence. For them incontinence is a vice subordinate to intemperance (DL 7.93, and note 24). Therefore, their notions of knowledge and ignorance must have been different from the Socratic ones, given that the Stoic incontinent, even being an agent in a state of passion and, accordingly, a person whose cognitive state is opinion or ignorance, appears to envisage that it is advantageous not to do what he is about to do (Stobaeus, *Ecl.*, 2.89, 6–9; LS 65A). But this seems to be at odds with the assertion that between *episteme* and *doxa* there are no intermediate cognitive states. According to the standard Stoic characterization, ‘ignorance is a changeable and weak assent’ (Stobaeus, *Ecl.*, 2.111, 20–1), and knowledge is ‘an apprehension (*katalepsis*) which is secure and unchangeable through argument’ (Stobaeus, *Ecl.*, 73, 19–21). Such a characterization of ignorance matches well with the suggestion that the incontinent person ‘envisages’ both the temperate and the intemperate propositions but unavoidably gives his assent to the intemperate proposition. The definition of knowledge just quoted seems to remove the very possibility that the incontinent person ‘knows’ something when performing his act. Now to say that he ‘envisages’ or ‘sees’ the correct course of action (or, as Stobaeus’ text says, ‘what is advantageous not to do’) is not the same as saying that he knows strictly what should be done.

I think that there is a plausible way to understand this issue: by suggesting that the Stoics were willing to defend a form of moderate intellectualism. As indicated above, the Stoics recognized the existence of the phenomenon of incontinence without renouncing their intellectualist position. If this suggestion is at least reasonable, it could be agreed that opinion, the standard cognitive state of the incontinent, is a form of ‘feeble knowledge’. The Stoic intellectualism would coincide with that of those who, in accordance with Aristotle (*NE*, 1145b33–1146a4), claim that nothing is superior to knowledge, but do not agree that no one is able to act against what they think is best.⁷² The solution provided by this moderate intellectualism would be to say that the individual is mastered by pleasure because he does not have knowledge in the strict sense but only opinion. In this line of thought, the Stoics would have accepted that, despite the fact that there is nothing more powerful than knowledge, it is possible that someone acts against his better judgment, this judgment being *opinion*. This tenet does not necessarily introduce ‘degrees’ of

⁷¹ See Plutarch, *SR*, 1034C–E (LS 61C); DL 7.127 (LS 61I); Galen, *PHP* 7.2, 434, 30–436, 33 (*SVF*, 3.256). See also above nn. 7 and 13.

⁷² What Aristotle takes to be the extreme intellectualist position is the one discussed in Plato’s *Protagoras* (see *NE* 1145b21–31).

knowledge, but allows that the mere opinion is regarded as being a 'form of (weak) knowledge'.

It is tempting to compare the manner Aristotle accounts for the incontinent action to the way the Stoics do. Like Aristotle, the Stoics acknowledged that cognition is decisive in emotional response, and like Aristotle, they also recognized that emotions are not automatic reactions but the agent is acting according to his own judgment.⁷³ For Aristotle, as for the Stoics, any emotional state involves a certain type of judgment or belief (as we have already seen, for the Chrysippean emotions not only involve a certain judgment but they *are* judgments): a person is angry at someone or is afraid of something because he believes that someone is despising him or something harmful is going to happen to him.⁷⁴ Now the problem in explaining the incontinent action, both for Aristotle and the Stoics, continues to be the same: what does 'knowledge' mean when it is said that the incontinent 'knows' that what he is about to do is bad for himself? According to Aristotle, the cognitive mistake involved in the incontinent action happens as an effect of the influence of emotional states over the rational abilities (*NE*, 1147a10–b5). Aristotle's examples (a person asleep, mad, or drunk) show that the agent cannot consciously control his action, and such an action properly describes what Aristotle calls 'actions done *in ignorance*' (*NE*, 1110b24–7). If the agent is drunk or angry his actions are caused by drunkenness or anger, so the action is done having no knowledge, but *in ignorance* (*NE*, 1110b27). The cognitive faculties of the individual are momentarily undermined or deactivated. These actions, though, are not 'involuntary' without qualification, but the person is responsible for being in the state he is. So he is also responsible for the ignorance that such states produce. Unlike Socrates, who believed that the incontinent acts *by ignorance* (*NE*, 1145b27), Aristotle contends that the incontinent person acts *in ignorance* and, even though he is indirectly responsible for his actions, he is directly responsible for the emotional states that provoked his incontinent action.

The Aristotelian picture of the incontinent action, then, emerges as the consequence of an inner conflict between rational and irrational motivations belonging to two opposing parts of the soul. This is not what happens according to the Stoics, who defend a monistic psychology.

⁷³ See Aristotle, *Rhetoric*, 1356a15–16; 1378a19–24, and W. Fortenbaugh's comments in 'Aristotle's *Rhetoric* on Emotions' ['Emotions'], in J. Barnes, M. Schofield, and R. Sorabji (eds.), *Articles on Aristotle. Psychology and Aesthetics* (London, 1979), 133–53 at 145–8.

⁷⁴ See *Rhetoric*, 1378a30–2; 1382a21–2. Aristotle's definition of anger, *orge* ('a desire accompanied by pain to vengeance due to a conspicuous belittling') clearly shows that the agent must know to some extent that he has been despised or dishonored (*Rhetoric*, 1378a30–2 and Fortenbaugh, 'Emotions', 142 and 147).

Nevertheless, they seem to share with Aristotle's account of the cognitive state of the incontinent agent the fact that his cognitive faculties are weakened to some extent. In the Stoic view, this is not due to the fact that a part of the soul is overpowered by the other, but because the soul as a whole is emotionally disposed and the individual's beliefs are based on error. Both Aristotle and the Stoics also think that the incontinent person regrets.⁷⁵ At this point it might be helpful to comment briefly on the manner in which the Stoics regarded regret (*metameleia*) and how it is related to the weak-minded agent. The base person (*phaulos*), in not having experience of the right use of things, does everything badly; he is prone to instability (*eumetaptotos*) and liable to regret about each thing he does.⁷⁶ Regret is a pain (*lype*), i.e. an emotional state, about what has been performed; it is as though the agent had the belief that the actions which have been performed were erroneous by the agency of himself (*hos par' autou hemartemenois*). So the person having regret suffers sorrow and is angry at himself for having been responsible (*aition*) for the things that have happened (Stobaeus, *Ecl.*, 2.102, 25–103, 4). Now if the base Stoic person (who can be identified with the incontinent) thinks that what has been done has been done wrongly by himself, and is angry at himself for having been responsible for what happened, he must have a certain knowledge of what is good and bad for himself. The Stoic thesis that the base person only has the theory of what ought to be done, not the *praxis* (DL 7.126), sounds similar to what Aristotle says in comparing the incontinent to a city that votes for all that should be done and has excellent laws, but never makes use of them (*NE*, 1152a20–1). In both cases the agent is thought to have his rational faculties deactivated so as not to be able to put into practice the knowledge he has.

I am aware that my account of Stoic incontinence is debatable (the evidence is very scanty and the Stoic argument is hard to reconstruct). However, if the foregoing arguments are at least plausible, it might be possible to conclude that, on the grounds of their moderate intellectualism, the Stoics developed an argumentative strategy that allowed them to show that their position did not lead necessarily to the impossibility of accounting for how an agent is capable of making a morally correct judgment and, at the same time, admitting that such an agent can act against his own better judgment.

⁷⁵ Aristotle, *NE* 1150b30–1. I did not find any Stoic passage where it is explicitly said that *the incontinent* regrets, but insofar as the Stoic incontinent is a *phaulos*, and is prone to regret and change his mind, it can be said that the Stoics would have accepted Aristotle's view that the incontinent regrets (Stobaeus, *Ecl.* 2.102, 22–5).

⁷⁶ This lack of experience or 'expertise' (*apeiros*; Stobaeus, *Ecl.* 2.102, 22–3) with regard to life could explain why the incontinent only has the theory of what should be done, but is unable to practice it.

Finally, I believe that when one focuses on an ancient philosopher the aim is not only to offer a comprehensible account of what the author meant, but also to attempt to understand the image of the world such a philosopher had. This is probably because implicitly or explicitly we think the author at issue is offering a correct description of the state of affairs that can help us to understand our own world. The possibility of considering the past philosophically is one of the most important teachings Professor Sorabji's work has transmitted to me. Among the many things I owe to his influential books and papers is the fact that ancient philosophy can be an illuminating pursuit in itself, and also a fascinating way to understand contemporary philosophy.

Bibliography

- ALESSE, F., *La Stoa e la tradizione socratica* (Naples, 2000).
- ANNAS, J., 'Truth and Knowledge', in M. Schofield, M. Burnyeat, J. Barnes (eds.), *Doubt and Dogmatism. Studies in Hellenistic Epistemology* (Oxford, 1980), 84–104.
- *Hellenistic Philosophy of Mind* (Berkeley, Los Angeles, London 1992).
- ANSCOMBE, E., *Intention*, (Oxford, 1963).
- ARNIM, VON, H., *Stoicorum Veterum Fragmenta*, 3 vols. (Stuttgart, 1903–5).
- BRENNAN, T., 'The Old Stoic Theory of Emotion', in J. Sihvola, T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht, Boston, and London, 1998), 21–70.
- CARONE, G., 'Akrasia in the Republic: Does Plato change his Mind?', *Oxford Studies in Ancient Philosophy* 21 (2001), 107–48.
- COOPER, J. M., *Reason and Emotion. Essays on Ancient Moral Psychology and Ethical Theory* (Princeton, 1999).
- COULOUBARITSIS, L., 'La psychologie chez Chrysippe', *Entretiens sur l'antiquité classique. Aspects de la philosophie hellénistique* 32 (Geneva, 1986), 99–142.
- DAVIDSON, D., *Essays on Actions and Events* (Oxford, 1980).
- DEFILIPPO, J. D., and MITSIS, P. T., 'Socrates and Stoic Natural Law', in P. A. VANDER WAERDT (ed.), *The Socratic Movement* (Ithaca and London, 1994).
- DE LACY, P., *Galen. On the Doctrines of Hippocrates and Plato*, 3 vols. (Corpus Medicorum Graecorum; Berlin 1978–85).
- DONINI, P. L., 'Struttura delle passioni e del vizio e loro cura in Crisipo', *Elenchos* 16/2 (1995), 305–29.
- FILLION-LAHILLE, J., *Le de ira de Sénèque et la philosophie stoïcienne des passions* (Paris 1984).
- FORTENBAUGH, W., 'Aristotle's *Rhetoric* on Emotions', in J. Barnes, M. Schofield, and R. Sorabji (eds.), *Articles on Aristotle (Psychology and Aesthetics)* (London, 1979), 133–53.

- FREDE, M., 'Stoics and Sceptics on Clear and Distinct Impressions', in M. Frede, *Essays in Ancient Philosophy* (Oxford, 1987), 151–76.
- GILL, C., 'Did Chrysippus understand Medea?', *Phronesis* 28 (1983), 136–49.
— *Personality in Greek Epic, Tragedy, and Philosophy. The Self in Dialogue* (Oxford 1996).
- 'Did Galen understand Platonic and Stoic Thinking on Emotions?', in Sihvola, Engberg-Pedersen (eds.), cited above, 113–69.
- GÖRLER, W., 'Athenes synkatathesis. Zur stoischen Erkenntnistheorie', *Würzburger Jahrbücher für die Altertumswissenschaft*, NF 3 (1977), 83–92.
- GOSLING, J., 'The Stoics and Akrasia', *Apeiron* 20 (1987), 179–202.
- INWOOD, B., *Ethics and Human Action in Early Stoicism* [*Ethics*] (Oxford 1985).
— 'Seneca and Psychological Dualism', in J. Brunschwig and M. C. Nussbaum (eds.), *Passions and Perceptions. Studies in Hellenistic Philosophy of Mind*, Proceedings of the Fifth Symposium Hellenisticum, (Cambridge, 1993), 150–183.
- IOPPOLO, A. M., *Aristone di Chio e lo stoicismo antico* (Naples, 1980).
— 'Il monismo psicologico degli stoici antichi', *Elenchos*, 8 (1987), 449–66.
— 'Le cause antecedenti in Cic. *De fato* 40', in J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics (Fourth Symposium Hellenisticum)* (Naples, 1988), 397–424.
— 'L' *Horme Pleonazousa* nella dottrina stoica della passione', *Elenchos* 16/1 (1995), 25–55.
- IRWIN, T., *Plato's Ethics* (Oxford, 1995).
- JOYCE, R., 'Early Stoicism and Akrasia', *Phronesis* 60/3 (1995), 315–35.
- KAHN, C., *Plato and the Socratic Dialogue* (Cambridge, 1996).
- LABARRIÈRE, J. J., 'De la "nature phantastique" des animaux chez les Stoïciens', in J. Brunschwig and M. C. Nussbaum (eds.), *Passions and Perceptions. Studies in Hellenistic Philosophy of Mind*, Proceedings of the Fifth Symposium Hellenisticum, (Cambridge, 1993), 225–49.
- LESSES, G., 'Content, Cause, and Stoic Impressions' *Phronesis* 43/1 (1998), 1–25.
- LONG, A. A., 'The Early Stoic Concept of Moral Choice' in *Images of Man in Ancient and Medieval Thought. Studies presented to G. Verbeke* (Louvain, 1976), 77–92.
— 'Socrates in Hellenistic Philosophy', *Classical Quarterly* 38 (1988), 150–71 (reproduced in Long, *Stoic Studies*, 1–34).
— *Stoic Studies* (Cambridge, 1996).
— 'The Socratic Legacy', in K. Algra, J. Barnes, J. Mansfeld, and M. Schofield (eds.), *The Cambridge History of Hellenistic Philosophy* (Cambridge, 1999), 617–41.
— *Epictetus. A Stoic and Socratic Guide to Life* (Oxford, 2002).
- LONG, A. A., and SEDLEY, D. N., *The Hellenistic Philosophers*, 2 vols. (Cambridge, 1987).
- NUSSBAUM, M. C., *The Therapy of Desire, Theory and Practice in Hellenistic Ethics* (Princeton, 1994).
- PRICE, A. W., *Mental Conflict* (London and New York, 1995).
- RIST, J. M., *Stoic Philosophy* (Cambridge, 1969).
- ROBINSON, T. M., *Plato's Psychology* (Toronto, Buffalo, and London, 1995).

- SALLES, R., 'The Stoic Account of the Psychology of Responsible Actions and the Question of Determinism' (Doctoral Dissertation; London, 1997).
- 'El problema del conocimiento práctico en la teoría estoica de la acción', *Tópicos* 14 (1998), 105–33.
- SANTAS, G. X., *Socrates. Philosophy in Plato's Early Dialogues* (London, 1979).
- 'Socratic Goods and Socratic Happiness' in T. Irwin and M. C. Nussbaum (eds.), *Virtue, Love & Form. Essays in Memory of Gregory Vlastos* (Edmonton, 1993), 37–52.
- SEDLEY, D., 'Chrysippus on Psychological Causality', in J. Brunschwig and M. C. Nussbaum (eds.), cited above, 313–31.
- SCHOFIELD, M., 'Ariston of Chios and the Unity of Virtue', *Ancient Philosophy* 4 (1984), 83–96.
- SORABJI, R., *Animal Mind and Human Morals. The Origins of the Western Debate* (Ithaca, 1993).
- *Emotion and Peace of Mind. From Stoic Agitation to Christian Temptation* (Oxford, 2000).
- STRIKER, G., *Essays on Hellenistic Epistemology and Ethics* (Cambridge, 1996).
- VLASTOS, G., *Socrates. Ironist and Moral Philosopher* (Ithaca, 1991).
- WACHSMUTH, C. (ed.), *Eclogae physicae et ethicae* (Berlin, 1884).
- WHITE, N. P., 'Stoic Values', *The Monist*, 73/1 (1990), 42–58.

Extend or Identify: Two Stoic Accounts of Altruism

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I. Introduction: the Problem and Two Strategies for its Solution

Why do we act for the sake of others? Why *should* we act for the sake of others? These questions are demanding on ethics, not least because the first may seem disingenuous. After all—it is commonly assumed—we are all selfish: our fundamental, our most basic, psychological drive is towards our own interests. This assumption, base in both senses of the word, implies that the phenomenon of altruistic behaviour needs explaining—why do we appear to act against these base drives? The explanation is often framed (or evaded) in terms of that appearance: we seem to act for others' sake, when in fact, albeit indirectly, we are serving our own.¹ Further, any imperative to altruism, any answer to the second question, must (on the base assumption) either harness our selfishness (by showing that considering the interests of others is consistent with it)² or transcend it (by showing that there is another source of the demand that we act altruistically).³ The Stoics, I shall suggest, do both.

It is a great honour to offer this essay to Richard Sorabji. Richard has been an inspiration to the London ancient philosophy community for many years: a model of perspicacity, enthusiasm, and extraordinary scholarship. I owe him a huge debt, of which this is shockingly meagre repayment.

¹ The thought that we only *really* act in our own interests is an ethical commonplace from Glaucon onwards: see e.g. *Republic* 359c, Hobbes, *Leviathan* 13. It mutates in modern genetics, but Richard Dawkins (*The Selfish Gene* (New York, 1976), 5) warns against inferring, or justifying, the base assumption for human behaviour from 'the gene's law of universal selfishness'. The ease with which the base assumption is made should not be allowed to conceal the fact that the contrast on which it relies (between why we *really* do what we do—we are selfish—and why we *appear* to do what we do—we act unselfishly) is itself problematic.

² See e.g. D. Hume, *A Treatise of Human Nature* (Harmondsworth, 1985), III§2.

³ Compare Kant's move to separate categorical imperatives from those which are conditioned by our own desires: *Groundwork of the Metaphysics of Morals*, (tr. H. J. Paton, New York, 1964), ch. 3.

What is it, anyway, to act for the sake of another? Altruism seems to grade up. You might be gently inclined towards it, perhaps, if your actions and attitudes include some consideration of the interests of others—if, when it does not discommode you at all, you are willing or even ready to care about how others are affected by what you do. On occasions, however, where the interests of others somehow come up against your own, yours win. This—a Mrs Bennett kind of altruism: I shall call it *parlour altruism*⁴—is defeated by your own interests in cases of conflict. At the other extreme, you might be steeply inclined towards altruism, so that where the interests of others demand that your own be sacrificed, you are prepared to do so. This—a Violetta kind of altruism: I shall call it *grand opera altruism*⁵—will defeat your own interests in cases of conflict. The many and multiform scenes which lie between the parlour and the grand opera may reflect the degrees of reluctance with which one set of interests defers to another. As we shall see, however, the two kinds of altruism may need to be sharply distinguished within the Stoic account.

A Stoic argument⁶ purports to give an account of why we do (sometimes) act for the sake of others (*aliorum causa*).⁷ Start with the base assumption. We are in fact ‘appropriately disposed’ to ourselves:⁸ that is, we are self-aware and benevolent towards ourselves.⁹ Yet (or perhaps even consequently) we are by nature fitted to relations with others, both in individual cases and in a wider civic context.¹⁰ Altruistic behaviour, therefore, is no mere appearance, but a fact of the natural world. But if nature is normative—that is to say, if an appeal to nature has a teleological cast—then what is natural is good, desirable, to be pursued or maintained.¹¹ Hence the imperative: if altruism is natural, we should

⁴ Consider Mrs. Bennett’s single-minded pursuit of her own objective (to marry each daughter off to as rich and influential a man as possible) in despite of Elizabeth’s feelings in the matter: Jane Austen, *Pride and Prejudice*, ch. 19.

⁵ Giuseppe Verdi, *La Traviata* (1853), libretto by Francesco Maria Piave.

⁶ In what follows I use the translations of A. A. Long and D. N. Sedley, *The Hellenistic Philosophers* [L&S], 2 vols. (Cambridge, 1987), vol 1, where available; and I give the L&S reference in square brackets.

⁷ Cicero, *De finibus* 3.62–8 [57F].

⁸ Plutarch, *De Stoicorum repugnantiis* 1038b [57E]; I shall return below to what this may mean.

⁹ e.g. at Hierocles, *Elements of Ethics* 9.3 [57D1], and compare Diogenes Laertius 7.85–6 [57A].

¹⁰ Cicero, *De finibus* 3.62 [57F1], 63–4 [57F2–3]; Hierocles 11.14–18 [57D2].

¹¹ Chrysippus, quoted by Plutarch, *De Stoicorum repugnantiis* 1035C [60A1]; and see J. Annas, *The Morality of Happiness* (Oxford, 1993), 159–79; G. Striker, *Essays on Hellenistic Epistemology and Ethics* (Cambridge, 1996), 221–80; B. Inwood, *Ethics and Human Action in Early Stoicism* (Oxford, 1985), ch. 6.

actively promote wider relations with others—to the extent that we develop a sense of community with the furthest Mysian.¹²

The argument relies on the Stoic notions of appropriation (*oikeiosis*) and alienation (*allogtriosis*); but its detail is muddled. Indeed, I shall argue, the appropriation arguments to be found in Stoic sources display two strategies to explain just why we should feel ourselves to be a part of a universal community. The strategies are different; and so are their implications. As a consequence, as I shall argue, their moral significance differs too.

The first strategy deploys what I shall call a principle of *extension*: we are encouraged to think of nothing as alien to us, in the sense that we think of everything *as us or ours*. The argument works on a rough analogy with body parts: just as I can see that my toe is me or mine, so I can come to see that what is next to me is me or mine too, and so on outwards to the furthest Mysian. This might be characterized as an appeal to sympathy;¹³ if so, sympathy is taken literally—we feel, together and at the same time, what others feel. Such literal sympathy would be congenial (on the assumption of Stoic physics) to a world which is a material, unified whole. We feel, we are affected, continuously with the feelings and affections of the rest of the material whole. On such a view, the self (the ‘ego’ of egoism) is something whose boundaries are variable, at will, or at least by training; and its ethical purview is extended in the same way.¹⁴

The second strategy uses what I shall call an identification argument: we are encouraged to think of anyone else *as if they were ourselves*. There is no moral difference—we may be taught to see—between myself and the furthest Mysian. Each of us is a self in exactly the same way, and equally entitled to consideration. So I should make my ethical dispensations on the basis of some sort of principle of impartiality, rather than on the basis of extended egoism.¹⁵

Our sources, I shall suggest, make no effective attempt to disambiguate these two strategies, or to enforce a distinction between seeing others *as*

¹² Plato, *Theaetetus* 209b, Anonymous Commentary on Plato’s *Theaetetus* 5.27–30 [57H3] and see Hierocles in Stobaeus 4.671,7–673,11 [57G].

¹³ As such it has considerable currency in modern discussions of extended egoism: see e.g. John Stuart Mill, *Utilitarianism* (ed. Warnock, Glasgow, 1962).

¹⁴ I shall discuss different conceptions of the self in detail below. As will, I hope, become clear, the ‘I’ of the self is not understood in terms of the privileged epistemic access claimed for it by Descartes; but it does represent a particular (ethical, or even metaphysical) *point of view*. On ancient conceptions of the self see e.g. R. Sorabji, ‘Soul and Self in Ancient Philosophy’, in M. J. C. Crabbe (ed.), *From Soul to Self* (London, 1999), 8–32; C. Gill, *Personality in Greek Epic, Tragedy and Philosophy* (Oxford, 1996); C. Taylor, *Sources of the Self* (Cambridge, 1989); M. F. Burnyeat, ‘Idealism and Greek Philosophy: What Descartes saw and Berkeley missed’, in G. Vesey (ed.), *Idealism Past and Present* (London, 1982).

¹⁵ On Kant’s version of this argument see B. A. O. Williams, *Ethics and the Limits of Philosophy* (London, 1985), 54–70.

ourselves and seeing them *as if they were ourselves*. Yet each may be thought to cohere with different parts of Stoic theory; and if we reflect on their metaphysical foundations, the two are in fact incompatible with each other. Why did Stoic theory end up this way?

2. The Base Assumption: Cradles and Otherwise

The elaborate Stoic account of natural motivation, first of all, depends on the base assumption—that our fundamental psychological drive is towards our own interests. Consider first of all Diogenes Laertius on Chrysippus:¹⁶

The first thing appropriate to each animal, [Chrysippus] says, is its own constitution and the consciousness of this. For nature was not likely either to alienate the animal itself, or to make it and then neither alienate it nor appropriate it. So it remains to say that in constituting the animal, nature appropriated it to itself. This is why the animal rejects what is harmful and accepts what is appropriate.

This short, dilemmatic argument, that the animal's constitution is 'appropriate', indicates that appropriation is somehow a brute metaphysical fact, a feature of the nature of nature.¹⁷ What that means, however, is less clear. Cicero's Cato (the propounder of Stoic views in the *De finibus*) may illuminate:

They take the view (and I agree) that as soon as an animal is born (for we should start from here)¹⁸ it is appropriated to itself, and it is impelled to preserve itself and to love its own constitution and whatever is such as to preserve that; but it is alienated from destruction and from those things which seem to bring destruction along. That this is so, they urge as proof that before ever pleasure or pain touch them, infants seek what is salutary and avoid the opposite—which would not happen if they did not love their own constitution and fear its destruction. But it would be impossible for them to feel desire unless they had some sense of themselves and therefore loved themselves. From this it can be understood that self-love is the principle. (*De finibus* 3.16–17 [my translation])¹⁹

¹⁶ 7.85 [57A2].

¹⁷ The expression *oikeiosis* seems to be derived from the use of the adjective *oikeios* in several Platonic contexts which discuss our attitudes to others: cf. e.g. *Lysis* 221; *Republic* 433e, 463–4, 470 (Stoic close reading of Plato is well attested; cf. e.g. A. A. Long, 'Socrates in Hellenistic Philosophy', in Long, *Stoic Studies* (Cambridge, 1996), 1–34; M. M. McCabe, 'Indifference Readings', in T. P. Wiseman (ed.), *Classics in Progress* (London, 2002), 363–98).

¹⁸ See J. Brunschwig, 'The Cradle Argument in Epicureanism and Stoicism', in M. Schofield and G. Striker (eds.), *The Norms of Nature* (Cambridge, 1986), 113–14. Cicero is emphatic that this is a genuine (empirical?) claim about the cradle; but here the cradle is supposed to underpin what is true *by nature*, rather than some elementary psychologizing.

¹⁹ See discussion by T. Engberg-Pedersen, 'Discovering the Good: *oikeiosis* and *kathēkonta* in Stoic Ethics', in Schofield and Striker (eds.), *Norms*, 150 ff.

Cato's argument is for the base assumption, for the fact that egoism is fundamental to our understanding of human moral psychology: 'self-love is the principle'. In this argument, the base assumption is constructed from three elements:

- i. A claim about nature: when an animal is first born it is appropriate to itself by nature.

What does that mean? Perhaps what follows might encourage us to think about this as a claim about the internal structure of the animal or its constitution. Significantly, this is supposed to be antecedent to any affective psychological input—that the animal is naturally appropriate to itself antedates its experience, in particular its experience of pleasure and pain. This seems, therefore, to be a claim about metaphysics, about the way things are naturally arranged. This arrangement, moreover, is already normative, because it represents a natural principle.²⁰

- ii. A cognitive response to this nature: the animal recognizes (is conscious) that its constitution is appropriate to it.

(It is perhaps inevitable that Stoic theory will begin with the cognitive.²¹) The animal's cognitive grasp is antecedent to experience, so this sort of self-consciousness is present in it by nature.²² So in Diogenes Laertius' account of *oikeiosis* (7.85) the appropriateness of the constitution and the animal's consciousness of it are treated as a single thing: 'the first thing appropriate to every animal . . . is its own constitution and the consciousness of it'. The expression 'self-consciousness' of course, may give us a grandiose view of what is thought here to be basic, but we should not be thinking here of higher order cognition. Merely, the animal is aware that this is his own constitution: he recognizes that this is where he begins.²³ In what follows, I shall suggest that part of the cognitive element in *oikeiosis* is perspectival: the animal's view of the world starting from itself.

²⁰ Compare e.g. Cicero, *De finibus* 3.62 [59D1].

²¹ See e.g. Diogenes Laertius 7.147 [54A] on god's intelligent pervasiveness.

²² Should we concede that this would be present at birth? These cradle arguments are tricky (cf. Brunschwig, 'Cradle'). When it is claimed that appropriation is the *first* thing, is that priority chronological or metaphysical? This question runs through the material I discuss below, since the two differing responses to altruism may reflect different sorts of priority. For extended egoism, the thought is clearly that the ego extends itself over time from a base narrow ego: so the base (self-conscious self-love) should be chronologically prior. For identification, the consciousness of self may not be immediate at birth, but it should be central to our understanding of justice, and so on—therefore it will be metaphysically, or ethically, 'first'. However, as I shall argue in §11, the shift between chronological and metaphysical priority will not be enough to justify what will appear to be an inconsistency between the two different models of altruism I discuss below.

²³ This is not, I take it, a claim about the first-person privilege against sceptical attack. The issue here is not scepticism, but rather ethical perspective: the view from in here. Compare T. Nagel, *The View from Nowhere* (Oxford, 1986) and Williams, *Limits*.

- iii. The animal's natural appropriation to itself and its self-consciousness combine to produce the third, affective, element: self-love.²⁴

This is, in effect, an account of the animal's having conscious *interests*; those interests are centred on the self and based on the animal's appropriation to itself.

These three elements generate a fourth:

- iv. A motivational account: the animal accepts what is appropriate and avoids what is alien.

This is thought to *follow* from the first three elements of *oikeiosis*; so Diogenes, again: '*this is why* the animal rejects what is harmful and accepts what is appropriate.'

The causal or explanatory connectives in this material imply that recognition of itself, or of what belongs to it, is somehow the base of an animal's motivation; the arguments that follow treat this *as* basic, not only to psychology in general, but also to the explanation of motivation. Think about body parts:²⁵ if someone steps on my big toe, it is *me* they hurt; and if someone threatens to step on my big toe, *I* flinch. That is because I recognize that my big toe is a part of me. Basic here, therefore, is my *sense* of me and mine, where what is mine is a part of me. Given that sense of self,²⁶ motivation follows: no further argument is needed to explain why I flinch, or why I mind about what happens to the furthest bits of me; it is enough to say that they are bits *of me*. This, then, is the base assumption: by virtue of our being 'appropriate to ourselves', by virtue of our having this sense of self, our fundamental, our most basic, psychological drive is towards our own interests.

What exactly is the status of this claim? The Stoic insistence that egoism is based in nature does more, I take it, than merely to suggest that egoism is a part of the grim reality of our natural proclivities. For Stoic appeals to nature rest, not upon the thought that nature equips us with base instincts

²⁴ Notice here Cicero's 'But it would be impossible for them to feel desire unless they had some sense of themselves and *therefore* (*eoque*) loved themselves'. Once again, the sequence may be chronological, or it may be logical: in the latter case, appropriation and self-consciousness may *explain* self-love, rather than actually preceding it in time. Hierocles clearly supposes the sequence to be chronological, see e.g. 1.34–9 [57C2] ('as soon as an animal is born it perceives itself'); so too does Seneca at *Ep.* 121.6 [57B1].

²⁵ The animal's 'constitution' at least includes body parts: see e.g. 'No-one sets his limbs in motion with difficulty, no-one is hesitant in the activation of himself', Seneca, *Ep.* 121.6 [57B1], and also at Hierocles 1.51.7, 2.1–9 [57C2–3]; Cicero, *De finibus* 3.26 [57F1]; Anon. Commentary on Plato's *Theaetetus* 6.6–16 [57H6].

²⁶ What sense of self is this? There may be nothing here that we should call reflective; and nothing, either, that we could use in riposte to a sceptic (there is no privileged first person in the sense required by Descartes). The imperatives to altruism, however, which rest upon it require the moral agent to take a reflective stance towards who he is, and what are the limits of his self. See Sorabji, 'Soul'.

against which we should struggle, but on an account of the well-ordered structure of the whole of nature and its parts.²⁷ There need be nothing deplorable about egoism as a base for morality (the assumption need not be base in the pejorative sense); on the contrary, in what nature provides we should seek to find a good, and a reasonable, source of moral structure. Problems will only arise if that source flows in different directions: this, I shall suggest, is exactly what happens to the Stoic theory of *oikeiosis*.

3. Extend!

Even if I have a sense of ‘me and mine’ by nature, it can diminish, nonetheless. Try body parts, again. That I would mind if someone chopped my toes off does not mean that I mind equally if someone cuts my hair. The Anonymous Commentary on Plato’s *Theaetetus*, in critical mode,²⁸ picks this point up: ‘For we are not disposed in just the same way relative to our eyes and fingers, let alone to our nails and hair, seeing that we are not alienated from their loss equally, either, but to a greater and a lesser extent.’²⁹ So my sense of me and mine, even within the base assumption, is differential.

Fair enough. My sense of ‘me and mine’ by nature can increase, too. For it is part of the natural structure of things—or so I shall claim that the Stoics argue—that parents feel for their children as they do for themselves: parents see their children, indeed, as part of themselves, as ‘themselves or theirs’.³⁰ In the case of one’s children, that is to say, parents transcend the possessive (‘this is *my* child’) to the incorporation of the child into the parent’s self—at least when it comes to the consideration of interest (‘this child is (what is important about) *me*’). That thought, in turn, seems to justify the thought that the sense of self can be increased, or changed: in particular, it can be broadened to include things which, initially, we might suppose to be outside the limits of the animal’s egoistic concern.

Here the first move³¹ seems to be an analogy drawn between the natural structure of animal bodies and animal reproduction. Cicero’s *Cato*, again:

They think it is important to understand that nature engenders parents’ love for their children.³² That is the starting point of the universal community of the

²⁷ See here e.g. Plutarch, *De Stoicorum repugnantibus*, 1035C [60A]; Cleanthes, *Hymn to Zeus* [54I].

²⁸ I shall return in §11 to the structure of Anon.’s criticisms.

²⁹ 6.11–16 [57H6].

³⁰ So Plutarch, *De Stoicorum repugnantibus*, 1038B [57E1].

³¹ Notice ‘That is the starting point’ in the text cited below.

³² Here, as in Diogenes’ discussion of how the animal’s constitution is appropriate, the appropriation occurs by nature—and not, for example, by the exercise of some kind of elementary reasoning.

human race which we seek to attain. This must be clear first of all from bodies' shape and limbs, which make it plain by themselves that reproduction is a principle possessed by nature.³³ But it could not be consistent for nature both to desire the production of offspring and not to be concerned that offspring should be loved. Even among animals nature's power can be observed; when we see the effort they spend on nature and rearing, we seem to be listening to the actual voice of nature. As it is evident therefore that we naturally shrink from pain, so it is clear that nature itself drives us to love those we have engendered.³⁴ (*De finibus* 3.62 [57F1])

The argument lurking here relies on something very like the argument for the base assumption: for it moves from something which is true by nature (that animals reproduce) to an affective feature of the animals themselves (that they love their offspring). This is supported by two allusions to the physical nature of the reproducer: the shape and structure of the body indicates that reproduction is natural;³⁵ and the self-love which explains our shrinking from pain also explains our love of our offspring. In short, Cicero insists here that the love of offspring is *explained* by the base love of self.

Why should this argument—for such it seems to be³⁶—be plausible? Two construals present themselves. On one, the animal sees that its interests are indirectly served by its observing the interests of these others, its offspring: as far as his children are concerned, he is an indirect egoist. On the other, the animal takes the interests of these others, his offspring, just to be his own interests: as far as his children are concerned, he is an extended egoist. Which move are the Stoics making here?³⁷

³³ What does this mean? Is it a claim about likeness between parent and offspring? Or about the complexity of the structure of the body? In the context, the claim must explain some kind of attitude we have by nature to ourselves and to our offspring.

³⁴ Here Cicero maintains that there is some kind of symmetry between our attitudes to ourselves and our attitudes to our children: 'as it is evident . . . so it is clear'.

³⁵ It could be argued that this is not an argument, but simply an assertion, that animals are by nature fitted to reproduce. And yet Cicero insists that the shape of the body somehow *shows* that animals reproduce by nature. In what follows I claim that this is indeed an argument for extended egoism based on animals' initial *oikeiosis* to their own body parts.

³⁶ Look at the structuring remarks: 'this must be clear first of all'; 'make it plain by themselves'; 'it could not be consistent'; 'as it is evident, therefore . . . so it is clear' (although here '*ut*' is an editor's suggestion).

³⁷ David Sedley and Alex Long independently challenge my interpretation of Stoic *oikeiosis* as extended egoism, on at least three counts: (i) the arguments in the sources only produce an analogy between our appropriation to our own body parts and to our offspring; (ii) the original cradle argument is only designed to give us a weak illustration of our natural affections and their limits; (iii) the circles of interest described by Hierocles only illustrate the exercise of attempting to feel for others as for ourselves, and so do not enjoin the extension of the self. I maintain, however, that the move from thinking about body parts to thinking about others is taken in these texts to be genuinely explanatory: hence the absence, in these texts, of additional explanatory apparatus in the account of thinking about others (such as indirect egoistic reasoning).

They seem at first to suppose that a parent's protective love for her children is *analogous to* my shrinking from a threat to my toe. So from some natural process—parents produce children, as a natural offspring *from themselves*—flows the natural affection, that by nature we love our children. This would rest, if the analogy were pressed, on the thought that offspring, like body parts, are seen as parts or extensions of ourselves. But then there turns out here not to be an analogy so much as a symmetrical and continuous process, itself supported by the shape and structure of the reproducer's body and brought about by natural development. As we reproduce, you might say, we make ourselves wider and larger (both literally and figuratively: the base thought here must be that our children started out as actual parts of our bodies); and then we extend the attitudes we have towards our earlier, thinner selves, to the broader compass. This occurs by nature: by nature I am related to both my toes and my children; by nature I care for them as for myself.³⁸

This seems to be Hierocles' point, too (in Stobaeus, 4.671, 7–673, 11 [57G]). Imagine that nature is composed of a series of concentric circles, whose 'first and closest' circle includes our bodies, the next includes our children, and thereafter in widening circles until the outermost one, which includes the whole human race. It seems that the difference between the inner circle and the next, and so on further out, is to be explained in the same way: so we have a symmetrical relation between each circle and its successor.³⁹ But the central circle is explained by direct egoism; so the succeeding circles should be—in that case, what we find here is extended egoism, not the indirect version. The thought is not: since I have a natural sense of myself, so I can reason that my children matter; instead, Cicero and Hierocles both suggest that just as I have a natural sense of myself so I have a natural sense of affinity to my children, and so on to uncles and aunts, and further out. Egoism extends.

But how is this the starting point of the universal community of the human race?

³⁸ If this were an analogy between toes and children (and so not a direct claim for extended egoism), then the sense of 'as for' would shift from one case (the toes) to the other (the children); but if the claim is for symmetry, the extension is of the same type in each case. If, as I maintain, this is a claim for extended egoism, to say that 'I care for my children as for myself' becomes almost incoherent, however. The grounds for my caring for them is that they are in fact parts of myself; so there is no longer any purchase for the thought that they are 'them', and not 'me', nor for the claim that their relation to me is analogical, 'as for'. This result does not, in my view, militate against the interpretation of the Stoics as extended egoists: the appearance of the analogy is the ladder up which the argument climbs.

³⁹ Hierocles suggests that the relation between the first circle (us) and the second (our children) is symmetrical with the relation between the second and the third (uncles and aunts), and so on. This symmetry supports extended egoism.

Hence it follows that mutual attraction between men is also something natural. Consequently, the mere fact that someone is a man makes it incumbent on another man not to regard him as alien.⁴⁰ Just as some parts of the body, like the eyes and ears, are created as it were for their own sake, while others, such as the legs and the hands, serve the needs of the other parts; so, some large animals are created only for themselves, whereas . . .⁴¹ ants, bees and storks do certain things for the sake of others as well. Human behaviour in this respect is much more closely bonded. We are therefore by nature suited to form unions, societies, and states.

The Stoics hold that the world is governed by divine will: it is as it were a city and state shared by men and gods, and each one of us is a part of this world. (*De finibus* 3.63–4 [57F2–3])

The case of our children provides us with reason to think that we can extend our sense of ‘me or mine’ out beyond our bodily limits to include other people. Not only can we, we should—as Hierocles famously insists. Since we can extend our area of interest beyond the narrowest, so ‘it is the task of a well-tempered man’ to do so as much as possible, bringing the outermost nearer to himself in the middle.⁴² This extension, notice, is conceived as a process: one which begins from the limited purview of the infant, and continues through the development of the child into the moral adult. What grounds the imperative to extend?

You might think that the whole thing rests on the normativity of nature.⁴³ Since the outermost circle is connected to the inner one by nature, then we ought to attempt to make the circles come closer together. It is not clear, of course, whether such an appeal to nature will sustain anything like ‘the task of the well-tempered man’.⁴⁴ But Cicero may help us out here. For he appeals to the particularly Stoic notion that nature is teleologically arranged.⁴⁵ This is so in the small compass of a body and its parts; and it is so in the large compass of the universe ‘governed by divine will’. Natural arrangement, that is to say, is well-ordered; and in that case our own natures are directed towards sustaining the larger natural order. It is, then, this teleological appeal that grounds the requirement that we

⁴⁰ I shall return below to the significance of this sentence.

⁴¹ Here L&S omit the example which supports Cicero’s point: the symbiosis of a certain type of mussel and a small crab. The example makes clear that the symbiosis is a case of parlour altruism, not grand opera: the crab warns the mussel of the approach of an enemy in the process of its ordinary activities, ‘thus appearing to warn the mussel to take care’ (63). This gives the same (parlour) force to the qualifier ‘as well’ in the case of ants and storks.

⁴² At Stobaeus 4.672 [57G5].

⁴³ See e.g. Striker, ‘Following Nature’, *Essays*, 221–80; Annas, *Morality*, ch. 5.

⁴⁴ That nature is red in tooth and claw carries no implications that I should be so too.

⁴⁵ *De finibus* 3.64 [57F3]: ‘The Stoics hold that the world is governed by divine will: it is as it were a city and state shared by men and gods, and each of us is a part of this world. From this it is a natural consequence that we prefer the common advantage to our own.’

should extend our self beyond the limit it has at birth, to include the whole of the human race. Extended egoism, that is to say, constitutes the universal community of the human race.

So Hierocles urges the individual to extend himself so that his advantage will include as wide a compass in nature as possible (indeed, the wider his interests, perhaps, the greater the advantage⁴⁶). He will care for that wide compass just by extension of his natural impulses towards himself; and so his care for others will bootstrap on his egoism. The imperative here—that is to say, the imperative of ‘Extend!’—is based on egoism, and on the claim of natural continuity between one person and the next. It has its roots, however, in two assumptions of Stoic physics: that the world is a continuous finite whole; and that it is teleologically arranged (it is good). Does this quite work? Does this theory of *oikeiosis* as extended egoism (a theory pictured in Hierocles’ concentric circles) really provide a universal view?

We might complain that there is a difference between the thought that I should care for the world at large *as for* myself and the thought that I should prefer the world at large *over* myself. Cato seems to have no doubts, however:

From this it is a natural consequence that we prefer the common advantage to our own. For just as the laws set the safety of all above the safety of individuals, so a good, wise and law-abiding man, conscious of his duty to the state, studies the advantage of all more than that of himself or any single individual.⁴⁷ (*De finibus* 3.64)

For he implies here that the parlour altruism of the extended egoist may be transmuted into grand opera—perhaps when *oikeiosis* is fully developed.⁴⁸ So we might suppose that egoism can be so far extended that we cease to consider the interests of the individual self with which we began, and to consult, instead, the interests of the whole. We should move, on this account, from the narrow perspective of extended self-interest (parlour altruism) into our selfless place in nature (grand opera altruism). This may just be, one might argue, a matter of perspective. The world may be naturally arranged, and coherent, from the perspective of eternity; but from the perspective of an individual human being, the continuity of nature can be seen best as the extension of himself, with himself at the centre. The two points of view cohere, the Stoics might maintain, just because man is a part of the natural universe; and in the

⁴⁶ Compare Cicero’s allusion to the common advantage at *De finibus* 3.65 [57F3].

⁴⁷ This sentence is omitted by L&S at 57F3; translation by Rackham.

⁴⁸ Again notice the structure of the imperatives. The completion of nature is an ideal; and so to promote it is required of us (or of the well-tempered man).

ideal circumstance (for the ideal person, the wise man) the two perspectives are in fact the same.⁴⁹ To this we shall return.

4. Objections to Extended Egoism

The sources which report the extended egoist account of *oikeiosis*, however, are not unanimous in its support. Consider two hostile commentators:

We have an appropriate relationship to members of the same species. But a man's relationship to his own citizens is more appropriate. For appropriation varies in its intensification. So those people [the Stoics] who derive justice from appropriation, if on the one hand they are saying that a man's appropriation in relation to himself is equal to his appropriation in relation to the most distant Mysian, their assumption preserves justice; on the other hand, no one agrees with them that the appropriation is equal. That is contrary to plain fact and one's self-awareness. For appropriation in relation to oneself is natural and irrational, whereas appropriation in relation to one's neighbours, while also natural, is not independent of reason. (Anonymous Commentary on Plato's *Theaetetus* 5.18–42 [57H1–4])

But that nothing is appropriate or harmonious to the bad man, [Chrysippus] says in these words: 'As nothing is alien to the good man, so in the same way nothing is appropriate to the bad man, since the former [sc. what is appropriate] is good and the latter [sc. what is alien] is bad'.⁵⁰ Why then again for heaven's sake in every book on physics and ethics does he weary us to death in writing that we have an appropriate disposition relative to ourselves as soon as we are born and to our parts and our offspring? (Plutarch, *De Stoicorum repugnantiiis* 1038B [57E])

In these complaints we may discern, perhaps, four objections to extended egoism.

First, an objection to the *extension* of egoism: Anonymous claims that the theory will not do what it is intended to do because the appropriation of others to ourselves is not made on the basis of our own self-love, but on the basis of reason.⁵¹ So *oikeiosis* just does not work, because we just do not feel the same degree of affection for ourselves as we do for others; in that case the spread of our interests outwards is not as simple, nor as uncontentious, as the Stoics may seem to suppose. In order to love ourselves, we need simply to benefit from the dispensations of nature;

⁴⁹ This is why the wise man is like god, and thus consistent with nature: see e.g. Cicero, *Tusc. Disp.* 5.82 [63M3–5]; Seneca, *Ep.* 92.3 [63F].

⁵⁰ First sentence and the quotation from Chrysippus are not cited by L&S: here my translation of those sentences.

⁵¹ Anonymous argues, that is to say, that in fact egoism is indirect, not extended; this further supports the view that the target of his complaint is indeed extended egoism; see above.

but in order to love others, we have to do so as a result of reasoning. Altruism, therefore, is not directly a part of base egoism; the psychological advantage of extended egoism is thus lost.

Second, and consequently, there may be a bad fit between the problem (why should we care for others?) and the solution (we care for others because they are in fact and by nature ourselves). For the solution addresses the problem by ignoring the possibility that we do in fact care for others *as such*, and by concentrating instead on enlarging our care for ourselves. This may be Anonymous' point when he says that appropriation is not equal: for he alludes to the express partiality (to oneself at the centre) which is the basis of egoism, and which is also the psychology underlying its extension. Extended egoism, that is, fails to account for the fact that the others (about whom we should care) are indeed *other*; rather, it treats them as extensions of oneself. In so supposing, of course, the Stoics lose their grip on the problem of altruism itself.

So, third, extended egoism fails to support the claim that the theory should establish a 'universal human community'. After all, such a community, if it is to be universal, should be constituted in terms of principles of impartiality.⁵² But the psychological assumptions of egoism—and Hierocles' description of the circles of *oikeiosis* around the individual moral agent—are expressly partial. For this reason, Anonymous is right to complain that the theory fails to provide justice just because it offers unequal appropriation. The distant Mysian, by virtue of his distance, is less central to the extended egoist than the egoist's own big toe.

In that case, extended egoism does not provide any account of the transition from parlour altruism to its grand opera counterpart. Although Cato maintains that the theory of *oikeiosis* will encourage us to 'prefer the common advantage to our own', that is exactly the reverse of what will be provided by the graded preferences of the Hieroclean circles. For there the self is still at the centre; and however much we may include the good of others further out in our own good, nothing suggests that we have any reason to *prefer* it. Once again, although demands are made on the theory that it provide an impartial perspective (under which, perhaps, simple maximizing principles will imply that we should prefer the common good to our own), impartiality is exactly where it fails.

So although *oikeiosis* was advertised as a basis for a theory of justice, hostile sources variously complain of a false trades' description. The disposition we have towards ourselves is not such as to preserve justice because, as a matter of fact, it is partial to ourselves. We recognize that we feel appropriation more closely to ourselves and ours; and indeed the effort that is required for Hierocles' ever-widening circles indicates that

⁵² Compare Annas, *Morality*, 262–76.

impartiality is not natural. So much the worse, one might then say, for any attempt to underpin justice by an appeal to our natural inclinations.

5. Identify!

The theory of *oikeiosis* may, however, explain altruism in a different way. Consider the following, from Hierocles:

We should realize that as soon as an animal is born it perceives itself . . . The first thing that animals perceive is their own parts . . . both that they have them and for what purpose they have them, and we ourselves perceive our eyes and our ears and the rest. So whenever we want to see something, we strain our eyes, but not our ears, towards the visible object . . . therefore the first proof of every animal's perceiving itself is its consciousness of its parts and the functions for which they were given. The second proof is the fact that animals are not unaware of their equipment for self-defence. When bulls do battle with other bulls or animals of different species, they stick out their horns, as if these were their congenital weapons for the encounter. Every other creature has the same disposition relative to its appropriate and, so to speak, congenital weapons. (1.34–9, 51–7, 2.1–9 [57C])

Start with the cradle. If my first *awareness* is awareness of self, then I know (I perceive) both that these limbs and organs are mine,⁵³ and that they are my limit (thus far *and no further*). If I strain to hear, I know (I perceive)⁵⁴ that it is my own ears I deploy. Likewise, when I perceive that I perceive I am reassured that it is I who does the perceiving. At the same time, these 'deliberate'⁵⁵ perceptions (straining to perceive, perceiving that I perceive) heavily limit me—since, after all, I do not perceive that *you* see or hear (or if I do, it is in an entirely different way).⁵⁶ The perception that I perceive, that is, may operate as a reassurance (that this really is me) and a test (this perception is mine if and only if I can perceive that perception). All of these perceptions (perception of my own

⁵³ This thought is also traded upon in the argument to extend.

⁵⁴ I have not the space to discuss further the complex epistemological notions invoked here, in a long history of discussions of knowing that we know or perceiving that we perceive: see for example, Plato, *Theaetetus* 181 ff.; Aristotle, *De anima* III.2.

⁵⁵ Does the Stoic argument depend on this deliberation's being fully explicit? I think not. As in the cradle arguments in general, the thought invokes some kind of hypothetical: 'If I were to notice what I am doing, I would notice that it is I who am perceiving right now.' The dangers of this kind of hypothetical account of intentional action, or of deliberative rationality, are well attested; but that does not, of course, show that here the Stoics must have an explicit perception that we perceive as part of the apparatus of their theory.

⁵⁶ Compare Aristotle, *De anima* III.2, although Aristotle has a different argumentative purpose in discussing the phenomenon of perceiving that I perceive.

parts and deliberate perceptions) are centred on myself—and they provide me with both a sense of myself and a distinction between myself and others. This is basic, perhaps, to self-perception.

If self-awareness is construed thus as the awareness of our limits, it has a converse: we know also that the body parts of something else are *not ours*.⁵⁷ Consider Hierocles' contrast between the bull's awareness of its own horns and its competition with other bulls: self-awareness brings with it a sense of the other *as other* (otherwise the bulls would not compete).⁵⁸ That this is immediate ('the first thing that animals perceive is their own parts') may not tell us much about the cradle, or about the chronological priority of any perception. But it will give us something which is logically prior—call it the *differentiated* sense of self.

Now consider more from Cicero's Cato:

Just as they think that rights bind men together, so they deny that any rights exist between men and animals. For Chrysippus excellently remarked that everything else was created for the sake of men and gods, but these for the sake of community and society; consequently men can make beasts serve their own needs without contravening rights. Since, moreover, man's nature is such that a kind of civil right mediates between himself and the human race, one who maintains this will be just, and whoever departs from it, unjust. But just as the communal nature of a theatre is compatible with the correctness of saying that the place each person occupies is *his*, so in the city or world which they share no right is infringed by each man's possessing what belongs to him. (*De finibus* 3.67 [57F5])

We 'have an appropriate relationship to members of the same species', as Anonymous reports the Stoics to have believed.⁵⁹ What does this mean? Why should it be true? Some of the sources⁶⁰ suggest that what happens here is that we *recognize* that other humans are *humans like us*: this supports the thought that there is natural attraction between men and the thought that we are by nature suited to form unions. But this is radically different from the idea that we should extend the bounds of our own ego. For the insistence that there are natural relations between humans maintains that the *relata* are themselves determinate and limited: it requires a differentiated self. Each has one seat in the theatre, none more than one.⁶¹

⁵⁷ This may be the point of Diogenes Laertius' discussion of whether or not the animal could be 'alienated from itself' at 7.85 [57A2].

⁵⁸ 2.1–9 [57C3].

⁵⁹ In the first sentence of the text quoted above, 5.18–19 [57H1].

⁶⁰ e.g. Cicero again, quoted above: 'the mere fact that someone is a man makes it incumbent on another man not to regard him as alien' (*De finibus* 3.63 [57F2]).

⁶¹ Cicero, again: 'But just as the communal nature of a theatre is compatible with the correctness of saying that the place each person occupies is *his*, so in the city or world which they share no right is infringed by each man's possessing what belongs to him' (*De finibus* 3.67 [57F7]).

So we have a differential relationship to members of the same species, contrasting the relations that we have with other humans from the relations that we have to animals:⁶² we recognize that these other humans are *others, like us*. It is in the process of *oikeiosis* that man recognizes that he is himself and that others are others, like him. So, ‘man’s appropriation in relation to himself is equal to this appropriation in relation to the most distant Mysian’.⁶³ In the developed state of *oikeiosis* man *identifies* (as I shall call it) with other men. That is to say, each one recognizes that others are both other, and themselves one like us. This is said to be something we do by reason; and it involves treating others as ourselves in a quite different sense from the egoist view. For where extended egoism supposes that what matters to us is ourselves, however inflated our selves may have become, this version of *oikeiosis* produces a principle of impartiality, that ‘each to count for one, none for more than one’. This rational principle can be suspended: so there are cases where someone has done so much wrong that we are alienated from them; but in general it provides the basis for justice.⁶⁴

If the imperative ‘Identify!’ allows us to see each human being from an impartial point of view, then it runs directly counter to any principle of egoism, extended or otherwise. For its perspective is not taken from the point of view of anyone in particular; on the contrary, rational *oikeiosis* on this account will be indifferent to who is benefited or whose interests are consulted in any particular situation. Will this then generate an imperative—in particular, would such a principle of impartiality explain why we should prefer the common advantage to our own?⁶⁵ Cato may provide the answer to this question: ‘we are driven by nature to benefit as many people as possible’. If each counts for one, then many will count for more than one: if advantage is the sort of thing that can be maximized, a merely additive exercise may show why it is worthwhile (or even mandatory) to consider the advantage of the most people. And if *oikeiosis* transcends egoism and embraces impartiality, it will provide for a rational decision to maximize advantage, unaffected by local partialities in our own favour. Identification, we may suppose, supports the self-sacrifice of grand opera altruism.

⁶² Hence Chrysippus’ distinction, mentioned at *De finibus* 3.67 [57F5], between our relations with other men (and gods) and our relations with animals, which are not limited by considerations of rights (*iustitia*). Or should this be ‘law’, or ‘justice’? Richard Sorabji has focused our attention, both on the general question of the history of conceptions of rights, and on the status of animals in the ancient world: *Animal Minds and Human Morals* (London, 1993), ch 10.

⁶³ Anon. 5.28–34 [57H3].

⁶⁴ Anon. 5.42–6.8 [57H5].

⁶⁵ Compare modern attempts to generate impartiality from self-interest, e.g. John Rawls’s postulate of the Original Position, *A Theory of Justice* (Oxford, 1972), ch. 3.

6. Objections to Identification

However, the ‘Identify!’ account of *oikeiosis* is as objectionable, it may seem, as its rival. Anonymous has a series of points:

If, at any rate, we charge people with misbehaviour, we not only criticize them but we are also alienated from them, whereas they themselves, having done wrong, although they do not welcome the criticisms, cannot hate themselves. So appropriation in relation to oneself is not equal to appropriation to anyone else, given that our relationship to our own parts is not one of equal appropriation. For we are not disposed in just the same way relative to our eyes and our fingers, let alone to our nails and hair, seeing that we are not alienated from their loss equally either, but to a lesser and greater extent. If on the other hand they themselves should say that appropriation can be intensified, we may grant the existence of philanthropy, but the predicaments of shipwrecked sailors will refute them when it is inevitable that only one of two survive. (5.42–6.25 [57H])

First, consider the psychological claim produced by the cradle argument—the claim that self-awareness and other-awareness are both part of our base perceptions. We might wonder whether this is indeed what occurs in the cradle, and thence whether thought experiments about base psychology are misguided. (The Stoics may have a riposte here: it is a mistake to read the cradle thought experiment as a claim about what actually happens in the cases of infants: the priority that is claimed is logical, not chronological.)

Second, and connectedly, surely appropriation (our developing sense of others as others, like us) varies? It is, after all, an assumption of Hierocles’ exhortation to extend our sphere of concern that as a matter of fact our relations to others are variable, stronger towards our children, weakest towards the furthest Mysian: hence Anonymous’ complaint that ‘no one agrees with them that the appropriation is equal’.⁶⁶ In that case, impartiality is not built in to the natural occurrence of *oikeiosis*; and in that case, perhaps, the imperative to aspire to impartiality needs separate justification. Even within oneself, after all, identification may only be partial. We mind more about the big toe than the hair, more about the face than the shin. So, equally, we may have disparate relations to those whom we admit to be *prima facie* equal: we may even reject their inclusion in the community (as we do for the criminal). Both, therefore, as a matter of psychological fact, and as a matter of deliberate choice, it may be simply false that we identify with other members of the same species as such.

Third, does the account of *oikeiosis* as identification with other members of the same species explain hard cases? Suppose two people

⁶⁶ 5.32–5 [57H3].

are shipwrecked, and only one will survive: under those circumstances, does impartiality prevail?⁶⁷ Or is it rather egoism which dominates the desire of each to be the one to survive?

Fourth, and on the back of the 'hard case' objection, we might ask how it is that this version of *oikeiosis*—a version which insists on impartiality—is able to provide an account of motivation at all? Consider this in the context of the two versions of altruism I have offered: the altruism of the parlour (where the interests of others are defeated by one's own) and the altruism of the grand opera (which allows the possibility of self-sacrifice). Suppose, first of all, that the base assumption has some credibility: that we do indeed have some attachment to our own interests. This may allow that those interests can be expanded to include those of others (so long as there is no conflict: so long as we are still in the parlour). But if our sense of others as other is just that (and does not have an additional motivating element, such as *love* of others), then it may be hard to see just why my recognition that the furthest Mysian is another such as I am would trigger any action at all on my part, on his behalf. That is to say, the complexity of the base assumption, which, as we saw, moves from self-awareness to self-love, does not have a counterpart in the identification model of *oikeiosis*. For the latter may simply give us—and this is pointed up by the contrast between the rational and the irrational urged by Anonymous—an intellectual or even merely factual conclusion: the truth that others are other, after all.

Fifth, even if we suppose that identification does motivate, does it also provide a maximizing principle, sufficient to explain preferring the common interest to our own? If I have to choose between my interests and the collective interests of several others, what about this theory shows that I will, or even that I should, prefer theirs? If I am called upon to die for my country—or, indeed, for someone else's—should I obey?

7. Two Stories About the Furthest Mysian, and the Self

The objections to identification appeal to something like base egoism, because they ask us to prefer parlour altruism to its grand opera counter-

⁶⁷ I am grateful to David Sedley for reminding me that the original Stoic puzzle was about two wise men being shipwrecked; see here, S. G. Pembroke, '*Oikeiosis*', in A. A. Long (ed.), *Problems in Stoicism* (London, 1971), 128. In that case, the puzzle about what to do might be inverted (should one wise man defer to another, since he will be perfectly virtuous?) or even become undecidable (if both are wise men, what reason to prefer either, since both are perfect? In the absence of a decision, both will drown). Anonymous' criticisms, however, may rely on a more mundane difficulty in decision-making, where the sailors are just ordinary, and inclined towards their own interests. If not, his use of this hard case points to the fourth objection, detailed below.

part. They argue that impartiality either does not follow from base psychological impulses, or that even if it does follow, it will in times of crisis be overruled by (unextended) egoistic drives. The objections to extended egoism, contrariwise, complain that it does not live up to its billing as a basis for justice or the community of mankind. It looks, therefore, as though the two accounts of *oikeiosis* are in tension. Extended egoism, on the one hand, figures in a story about the concern or emotional pull we may feel, or may come to feel, towards others. Here self-awareness leads to self-love; and self-love can be expanded to include the furthest Mysian: the furthest Mysian *is* us. Identification, on the other hand, figures in a story about how we recognize in others that they are such as ourselves. Here self-awareness directly leads to our sense of others as others, like us; and from this flows both our love of self and our (impartial) love of others (*pace* the fourth objection above). The furthest Mysian, therefore, *is just like* us.

On each story, therefore, the furthest Mysian may figure in our ethical deliberations. On the egoistic story, he will be fortunate if we have managed to extend our sense of ‘us and ours’ to include him. On the identification story, on the other hand, he will be unfortunate if our sense of impartiality fails to allow that he has an equal claim to our own, from the outset. How far are these two accounts of our concern for him compatible with each other?

Consider how each conceives the self: in terms of two criteria—how the self is limited; and the point of view from which it is conceived. For extended egoism, the self is fluid, something whose edges can be indefinitely extended outwards to the limits of the cosmos—or at least to the limits of the human race.⁶⁸ We are imagined as sitting inside the self, and pushing the edges out;⁶⁹ and the centre is imagined as being particular to, partial towards, each self.⁷⁰ For identification, by contrast, the self is differentiated: so it must be something determinate, with limited

⁶⁸ Notice a contrast here between Cicero’s thought that we are talking about the whole natural world as if it were a state, and Hierocles’ suggestion that we are talking about our appropriation of exactly the human race. The unclarity here is symptomatic, I think, of a deeper tension running throughout this piece of Stoic theory.

⁶⁹ Of course, what counts as the centre could vary over time: an extended ego might have a different centre from the narrow ego with which the process started. Science fiction provides us with plenty of examples (think of *The Blob* (1958) which absorbed everything it came across and grew huge: my thanks to Ursula Coope and Verity Harte for discussion of the metaphysics of Steve McQueen’s opponent). Even in less outré cases we could imagine someone extending their interests to those of a group, and finding their perspective taken over by that of the group: think of the victims of cult. It may, however, be worth noting that many such cases are counted as pathological.

⁷⁰ Then egoism has an epistemological counterpart in first-person perspective accounts: one of the problems attached to the extended egoist account is that it precludes the view from nowhere.

boundaries described by the awareness we have of our body parts.⁷¹ Its replication we can recognize elsewhere; and in so doing we are imagined as looking at it from an external or impartial point of view.

The moral response demanded by the theory of *oikeiosis* is quite different for each conception of the self:

- Extend! generates sympathy, taken literally. We feel for other people just where we *are* the other people; we weep for the suffering of others just because it is continuous with our own.⁷² Thus our own ego transcends, or just gobbles up, everyone else's. But then perhaps it cannot see them as 'other than us'; and cannot see them as those for whom we might act *aliorum causa*.⁷³ Others are not people like us; they will figure in our thinking rather more as physical extremities, or even remote possessions.⁷⁴
- Identify! insists, by contrast, on the moral autonomy of the other person, on the fact that she is other than, quite distinct from, me. This should give us impartiality, in a purely matter-of-fact way, if that just is the recognition of difference. If, moreover, our sense of self includes feelings of self-love, then our impartial view of others may generate respect for their self-love; but how far will that go, in explaining how we *care* for others? Respect may give us justice; but it may not give us any reason to act on others' behalf. It may need, to do so, further principles to explain both motivation and choice (such as a maximizing principle: 'each to count for one, many for more than one').

So, to repeat my question, are the two views of the self and its care for others compatible? They are pretty much mixed up in the sources, and the mixture is affected by the ways in which the arguments fit other Stoic views.

9. Egoism and Stoic Metaphysics

The Stoics were materialist monists: 'the universal body . . . is limited and one and whole and substance'.⁷⁵ The continuity of matter might encour-

⁷¹ It may be worth noticing that the original context (*Theaetetus* 209b) of the furthest Mysian is a distinction between various individuals: Theodorus, Theaetetus, and the furthest Mysian.

⁷² The contrast that may occur in Hierocles 9.3–10 [57D1] between benevolence and affection may be impossible for the theory of extended egoism to sustain. There are long-standing difficulties in the contemporary debate about just how sympathy works to generate an explanation of altruism. For a Wittgensteinian approach, see C. Taylor, *Sympathy* (Swansea, 2002).

⁷³ This is tricky, as we have seen: if extended egoism collapses the others into myself, can the advice to extend the ego *across others* even be coherently stated?

⁷⁴ So inattention to the extremes of one's extension (carelessness, as it were, to coiffure) may perhaps go some way to explain what is deplorably known nowadays as 'compassion fatigue'.

⁷⁵ Cf. e.g. Calcidius 293 [44E].

age the view that the limits of the self are variable (as far as the limits of the universe), rather than determinately fixed.⁷⁶ Material monism, therefore, would be hospitable to extended egoism, which demands, as I have suggested, a variable view of the self.

But what then of the other aspect of extended egoism, that it favours the perspective of this ego, here and now? How does the perspectiveless view of the material monist accommodate the view that egoism takes from right here? This difficulty, you might suppose, besets Stoic doctrine anyway, since the claim that the cosmos is divine through and through,⁷⁷ and that we are component parts of that cosmos, tends to reduce any sense of perspective: the material universe just *has* the god's eye view. And yet the Stoics seem to have believed that they could account for the contrast between one perspective and another; witness their heavy reliance on cradle arguments: arguments which treat the base impulses or facilities of the child as somehow explanatory of the developed adult.⁷⁸ It is, that is to say, a tension central to Stoic theory, between the ego-centred view of the child and the universal view of reason consisting in the pervasiveness of god. In that case, it may well not be implausible to suppose that the same tension occurs in the account of acting for the sake of others; and so not implausible to suppose that the defence of altruism is based on extended egoism. Extended egoism may well be genuinely and respectably Stoic.

What is more, the imperative to extend may then explain a general tendency in the Stoic account of the good: that the best life, the life of the wise man, is perfected reason.⁷⁹ For if the wise man extends his sphere of interest to include the furthest Mysian, then his ego encompasses the whole of humanity—perhaps even the whole of the rational cosmos. That will identify him with god—and the aspiration to being like god is, of course, an objective for the Stoics.⁸⁰ In that case, we may well conclude, the Stoics could see the partial, incomplete, ego-centred view of the

⁷⁶ The continuity of matter does not, of course, *imply* the variability of the self, any more than it implies the vague boundaries of any other property or entity within it: the Stoics have strategies to deal with identity within the material universe which do not render the self indeterminate, cf. e.g. Simplicius, *On the Categories* 222,30–3 [28H], Dexippus, *On the Categories* 30,20–6 [28J]

⁷⁷ e.g. Aetius 1.7.33 [46A], Sextus Empiricus, *M.* 9.75–6 [44C2].

⁷⁸ I have suggested above that the cradle arguments can be variously interpreted. So we should distinguish between claims made for the actual early history of the organism and claims which rely on what we might call a metaphorical use of history, arguing some kind of logical priority for what is imagined to occur in the cradle. See Brunschwig, 'Cradle'. In either case, however, the view from the cradle is claimed to develop into something else: in this case, either into the broad extension of the ego or into the impartial view of the identification argument.

⁷⁹ See e.g. Seneca, *Ep.* 76.9–10 [63D].

⁸⁰ See e.g. Annas, *Platonic Ethics Old and New* (Ithaca, 1999), ch 3.

self which has not completed the process of *oikeiosis* as merely a deficiency of the early stages of moral development. In the end, or in the ideal condition, there is no difference in perspective between the wise man and god.

Extended egoism is parasitic on some assumptions that we are asked to make about our emotional directions and attachments; for it asks us to think about a redirecting of our basic self-love outwards in the direction of the furthest Mysian. In the idea that the emotions are subject to rational control, we may see the echoes of the cognitivist account of the emotions proffered in our sources.⁸¹ Indeed the same doctrinal background may explain both the rather vague way in which the cradle arguments claim a connection between self-awareness and self-love, and the assumption made by Hierocles that the extension of our interest from the inner to the outer circles can be something that we reason about.

But if we put the matter in the context of the problem of altruism—of the problem which suggests that the imperative to act for the sake of others is counter-intuitive—then a cognitivist account of the emotions may do more harm than good. Consider, for example, how the notion of sympathy is often deployed in moral psychology. If my apparent rational interest is served by ignoring the interests of others (or at least by practising parlour altruism), sympathy supplements, or supersedes, reason so that I follow the counter-intuition that I should care for this other person. The point of the invocation of emotion in such contexts, we might say, is to provide a motivation that goes beyond reason—to push where reason will not already go. In that case, the account of the emotions we need may not be a cognitivist one: for that may simply leave us with the rational self-interest with which we began.

A standard Stoic view of the emotions, therefore, may not be as congenial to the version of *oikeiosis* provided by extended egoism as we might think. Or perhaps standard Stoicism has so little to offer in terms of a separate account of the sympathy that we might (irrationally) feel *for others* that it is reduced to explaining others in terms of ourselves? This brings *oikeiosis* back to face an early objection: does extended egoism explain altruism at all?

10. Identification and Stoic Accounts of Responsibility

The alternative account of *oikeiosis*, identification, preoccupies itself with explaining justice, rather than altruism alone. In so doing, it had better

⁸¹ See Sorabji, *Emotions and Peace of Mind* (Oxford, 2000); M. Nussbaum, *The Therapy of Desire* (Princeton, 1994).

cohere with the account the Stoics gave of moral responsibility in the context of their commitment to determinism. Indeed, the issue of the relation between responsibility and determinism might be thought to mirror the relation between extended egoism and identification, as we shall see.

Notoriously, the Stoics conceded that causal determinism is true.⁸² Their commitment to this is directly connected to their physics, to the view that the world is a single, coherent whole—for in such a whole there will be no causal dead ends, and no fresh starts.⁸³ Causal structures, therefore, weave through the whole continuously, and every event is implicated in a causal plenum. There are no causal gaps.⁸⁴ There are no lines of demarcation within this causal plenum causally to detach one set of causes from another, even although within such a system it is entirely possible to classify causes, or distinguish between their types. So, for example, there is no reason to deny that the cylinder rolling down the hill does so at the mercy of a whole set of causes, not all of which are internal to the cylinder.⁸⁵

The Stoics' opponents complained that this account of causation eliminates the 'up to us'.⁸⁶ The complainants suppose that what is 'up to us' allows for some kind of freedom of choice. This would constitute a line of demarcation, a point where one set of causes is detached from the rest by the openness of the freedom to choose (what happens could go either way). Without it—the complainants continued—the Stoics eliminate moral responsibility; and that is disastrous for a theory which lays claim to ethical consideration.

The Stoics (Chrysippus, for a start)⁸⁷ are unconcerned by the criticism that they ignore what is 'up to us'; they have little interest in showing that I could have done otherwise, or that I might have been free, or that my decisions are the beneficiaries of causal gaps. But they are concerned to retain a robust sense of moral responsibility. So they insist that even in a deterministic universe some things are 'down to us',

⁸² See here the extended discussion to be found in Cicero, *De fato*. The literature on this topic has been too huge to detail here—but n.b. Sorabji, *Necessity, Cause and Blame* (London, 1980); R. W. Sharples, *Alexander of Aphrodisias on Fate*, (London, 1983); S. Bobzien, *Determinism and Freedom in Stoic Philosophy* (Oxford, 1998).

⁸³ Alexander of Aphrodisias, *On Fate* 190,30–192,28 [55N].

⁸⁴ To forestall the obvious objection: this does not imply fatalism, nor any of the other queer excrescences determinism is commonly thought to have. That the world is a causal plenum does not imply that one cause cannot be *distinguished* from another, nor that causes might not have some kind of arrangement or structure. See M. Frede, 'The Original Notion of Cause', in M. Schofield, M. Burnyeat, and J. Barnes (eds.), *Doubt and Dogmatism* (Oxford, 1980), 217–49.

⁸⁵ See e.g. Cicero, *De fato* 43 [62C8–10].

⁸⁶ e.g. Alexander of Aphrodisias, *On Fate* 10.

⁸⁷ Cicero, *De fato* 39 [62C3].

when they occur through the mediation of our nature, the primary and complete cause.⁸⁸ In those circumstances, while we may have no (free) choice in the matter, we are still required to take responsibility for what happens.⁸⁹ For actions which are down to us, we must accept responsibility.⁹⁰

Consider the metaphysics of this. If moral responsibility is assigned to actions that are caused through our nature, it still does not create a causal gap between our nature and what is outside. It does, however, impose a *metaphysical* limit: there must be a separate account to be given of where our nature ends and begins in order for responsibility to be properly allocated. This metaphysical limit—a common-sense view might insist—would march with the limit of the self: for the question of moral responsibility concerns just that: ‘is this action down to *me*, or not?’. But that account of the self had better be differentiated and not indefinitely variable:⁹¹ moral responsibility needs to be predictable and determinate, especially in the kind of legal context imagined (and inhabited) by Cicero. In particular, it is incompatible with this view of responsibility that the self could be variable in the way conceived by extended egoism. It would make a nonsense of ordinary notions of moral responsibility if the accompanying metaphysics required that we take responsibility for what the furthest Mysian does. Instead, moral responsibility demands a fully determinate, well-limited account of the self. Such an account will distinguish between a self and others like it, and generate a differential ‘*me*’ as opposed to ‘*you*’, on the basis of which responsibility may be allocated between us. Just this account of the self is provided by the identification account of *oikeiosis*, and denied by extended egoism.

⁸⁸ This does not rule out other auxiliary and proximate causes, cf. Cicero again, *De fato* 41 [62C5].

⁸⁹ The opponents beg the question that it is easy to see just why we should care for freedom in the first place, where that seems to expose choice to the threat of indeterminism.

⁹⁰ The vexed issues of just how the agent’s *assent* (Cicero, *De fato* 40 [62C4]) fits in here I shall leave on one side, except to make two points: first, that it would be a mistake to suppose that the theory of assent deals with the problem of determinism by importing some extra indeterminism (some freedom, some ‘could do otherwise’): cf. Carneades’ objections at *De fato* 23 [20E4]. Second, I take it that the agent’s assent to an action is the expression of his taking responsibility for that action. It is (as we should expect) a cognitive matter; and it runs closely parallel to the base assumption that what comes first is the agent’s *recognition* of himself, and his interests. This topic (the parallelism of assent and self-awareness) is for another time, however.

⁹¹ Or not, at least, variable in the way imagined by Hierocles’ concentric circles: of course there needs to be room, in a differentiated account of the self, for changes in the self over time.

II. The History of the *Oikeiosis* Argument

The two accounts of *oikeiosis*, therefore, match two quite different strands in Stoic theory. Extended egoism fits well with Stoic material monism, and with the determinism that follows in its wake. Identification, by contrast, fits with Stoic accounts of moral responsibility, and along with those, with their accounts of justice. We might say that if—as seems plausible—the self cannot be both determinate and indefinitely variable, the two versions of *oikeiosis* are inconsistent. They certainly cannot be reconciled by any suggestion that they refer to different stages in the development of the self, since both seem to offer a fully developed moral imperative, whether to universal sympathy or to justice.⁹² Their appearances in the sources, therefore, sit uneasily side by side. Consider some of the passages that are now familiar.

Hierocles' story about the concentric circles seems clearly designed to underpin extended egoism; and there is no sign in that passage of the identification move.⁹³ So, for example, even the first circle does not rely on an intuitive notion of the self (since it includes 'the body and anything taken for the sake of the body'). Likewise, the fluidity of the requirement to move people into ever closer circles implies that none of these circles is naturally fixed. Instead, we should be trying to 'assimilate' the outer, inwards.

The initial (base) argument presented by Diogenes is attributed to Chrysippus;⁹⁴ and that, as I have suggested, is a preliminary to both versions of *oikeiosis*. In his accounts of the later stages of moral development, however, Chrysippus seems a clear identifier. In Plutarch⁹⁵ and in Cicero⁹⁶ he is associated with questions about justice and the natural community of mankind, both of which, I have suggested, rely for their plausibility on an appeal to impartiality. What is more, our evidence is that the early Stoic interest in responsibility and determinism flourished under Chrysippus' careful account of the nature and structure of causation.⁹⁷ And, of course, the example of the cylinder is his, an example which demands that we distinguish between the internal nature of something and its external circumstance.⁹⁸ All of this should encourage us to suppose that this version of *oikeiosis* goes back to the very beginnings of Stoicism.

⁹² See comments above in nn. 18, 22, 24, 78.

⁹³ Although elsewhere, as I have suggested, Hierocles shows some inclination towards identification: 1.34–9, 52–7, 2.19 [57C].

⁹⁴ 7.85 [57A1].

⁹⁵ *De Stoicorum repugnantiis* 1038b [57E].

⁹⁶ *De finibus* 3.67 [57F5].

⁹⁷ e.g. at Cicero, *De fato* 41 [62C5].

⁹⁸ *De fato* 43 [62C8–10], 30 [55S2].

By Cicero's time both types of argument are current; and they turn up together in the account of *oikeiosis* he gives in *De finibus* 3. In my analysis, Cicero provided the evidence for both strategies; here now is a brief résumé of the passage as a whole.⁹⁹

- i. They think it is important to understand that nature engenders parents' love for their children. That is the starting point of the universal community of the human race which we seek to attain. This must be clear first of all from bodies' shape and limbs, which make it plain by themselves that reproduction is a principle possessed by nature. But it could not be consistent for nature both to desire the production of offspring and not to be concerned that offspring should be loved. Even among animals nature's power can be observed; when we see the effort they spend on giving birth and rearing, we seem to be listening to the actual voice of nature. As it is evident therefore that we naturally shrink from pain, so it is clear that nature itself drives us to love those we have engendered. (3.62 [57F1])

This entire section, relying as it does on the analogy with body parts, is characteristic of the opening moves of the extended egoism strategy.

- ii. Hence it follows that mutual attraction between men is also something natural. Consequently, the mere fact that someone is a man makes it incumbent on another man not to regard him as alien. (3.63 [57F2])

Here, however, there is slippage between extension and identification. Mutual attraction between two men could be derived from their both being extended egoists (and so explained by extended egoism from the perspectives of both parties). But the reasoning of the second sentence ('the mere fact that someone is a man') seems based, instead, on an appeal to impartiality, of recognizing that the other is another, like us. The principle, that is, of the second sentence is fundamental to identification.

- iii. Just as some parts of the body, like the eyes and ears, are created as it were for their own sake, while others, such as the legs and the hands, serve the needs of the other parts; so, some large animals are created only for themselves, whereas ... ants, bees, and storks do certain things for the sake of others as well. Human behaviour in this respect is much more closely bonded. We are therefore by nature suited to form unions, societies, and states. (3.63 [57F2])

The argument of this section is opaque. However, its appeal to the relations between parts and wholes seems to support extended egoism; and the examples from the natural world offer parlour altruism (if that expression in this context be not rebarbative).

⁹⁹ In accordance with my argument above, I take the earlier passage, 3.16–17, to describe the base assumption, and so to be common to both Extend! and Identify!

- iv. The Stoics hold that the world is governed by divine will: it is, as it were, a city and state shared by men and gods, and each one of us is a part of this world. From this it is a natural consequence that we prefer the common advantage to our own. For just as the laws set the safety of all above the safety of individuals, so a good, wise, and law-abiding man, conscious of his duty to the state, studies the advantage of all more than that of himself or any single individual. This explains the fact that someone who dies for the state is praiseworthy, because our country should be dearer to us than ourselves.¹⁰⁰ (3.64 [57F3])

Here, however, we have grand opera altruism; and it is put in a context which emphasizes the difference, in moral or political terms, between single individuals and large communities composed of individuals. Its underlying metaphysic, that is to say, is one which relies on the narrow individuation of persons, and it is suitable for the argument to identify; notably the preference we have for the common good is derived from the thought that ‘*each one of us is a part of this [divinely ordered] world*’.

- v. Just as they think that rights bind men together, so they deny that any rights exist between men and animals. For Chrysippus excellently remarked that everything else was created for the sake of men and gods, but these for the sake of community and society; consequently men can make beasts serve their own needs without contravening rights. Since, moreover, man’s nature is such that a kind of civil right mediates between himself and the human race, one who maintains this will be just, and whoever departs from it, unjust. But just as the communal nature of a theatre is compatible with the correctness of saying that the place each person occupies is *his*, so in the city or world which they share no right is infringed by each man’s possessing what belongs to him. (3.67 [57F5])

The discussion of rights and justice on which this section focuses is heavily dependent on a principle of impartiality towards others of the same species. Indeed, the very exclusion of animals from the domain of those who have rights over humans makes it clear that the underlying reasoning appeals to the notion of others *like us*. What is more, the theatre analogy is clear support of the principle of impartiality: ‘each to count for one, none for more than one’. It is not fair to take up extra room in the theatre.

Our evidence from Anonymous also bears witness to this ambivalent tradition of *oikeiosis*. Consider, for example, his opening sequence:

- i. We have an appropriate relationship to members of the same species. (5.18–19 [57H1])

If this is being reported as the Stoic view, it has the air of identification. It seems to make the same point as we have seen in Cicero: ‘the mere fact

¹⁰⁰ L&S include a further passage (3.66 [57F4]) about teachers and heroes; for reasons of space I omit it here since it too follows the Identify! strategy outlined above, with extra emphasis on benevolence.

that someone is a man makes it incumbent on another man not to regard him as alien’.

- ii. But a man’s relationship to his own citizens is more appropriate. For appropriation varies in its intensification. (5.20–4 [57H2])

This, on the other hand, looks more like the varied commitment to others characteristic of Hierocles’ circles. It may be Anonymous’ own view; but it is also one we can find in pro-Stoic sources.¹⁰¹

- iii. So those people [the Stoics] who derive justice from appropriation, if on the one hand they are saying that a man’s appropriation in relation to himself is equal to his appropriation in relation to the most distant Mysian, their assumption preserves justice; on the other hand, no one agrees with them that the appropriation is equal. (5.24–34 [57H3])

Here Anonymous trades on what he sees to be an inconsistency between the two strategies: between the psychological data of the way egoism extends outwards; and the principle of impartiality which derives from our sense that other members of the same species are like us. His objection to the Stoic view might itself be vulnerable in modern eyes: does he conflate the Stoic use of psychological facts with their appeal to moral imperatives of some kind? But the Stoic theory of *oikeiosis* does not, after all, rely on any such fact/value distinction for its validity; on the contrary, it displays two quite different accounts of value: Extend! and Identify!

- iv. That is contrary to plain fact and one’s self-awareness. For appropriation in relation to oneself is natural and irrational, whereas appropriation in relation to one’s neighbours, while also natural, is not independent of reason. (5.34–42 [57H3])

It is a consequence of his inclusion of both versions of the *oikeiosis* theory that Anonymous’ criticism has an air of missing the point. For what he seems to attack is extended egoism; but he does so on the basis that extended egoism fails to supply what we need for a theory of justice. The extended egoist, of course, may agree, but point out that a theory of justice was not what he set out to explain. The theorist who insists on identification, contrariwise, may just deny the relevance of Anonymous’ counter-claim, that appropriation is not equal. For to identify with other humans, we do not need passion, just reason. So we do not need to concede that we feel differently towards the furthest Mysian and our own kin: we just need to see that they are human too.

¹⁰¹ Anon. may simply be urging, as he does later, what he takes to be a simple truth: that appropriation varies. But that simple truth applies to the appropriation of extended egoism, and not to impartiality.

The evidence of both Cicero and Anonymous, therefore, suggests that in the later Stoic tradition the elements of both Extend! and Identify! are present, and conflated as a single theory of *oikeiosis*.

12. Concluding Remarks

I conclude, first, with an historical speculation. Identify! comes from Chrysippus; and it rests on the account of the self demanded by his approach to responsibility and justice. For this purpose, *oikeiosis* provides an account of how our sense of self is primitive (not necessarily chronologically prior) in our relations with others; but it generalizes to allow us to see that others are like ourselves. The principle of impartiality thus derived generates the maxim, common to many political theories, that ‘each should count for one, many for more than one’. On this basis, it justifies self-sacrifice: grand opera altruism.

Later Stoics, however, moved away from those Chrysippian interests towards greater focus on the problem of altruism itself, and a more detailed analysis of the nature of emotion. Thence they reinterpreted *oikeiosis* as Extend! Their use of the cradle argument provided extra ammunition; for they suppose that the attachment to our own interests is something which antedates even our perception of pleasure. In that case, they suppose, it will be a reasonable project to broaden the scope of our interests, even so far as to include the whole human race. Concern for the human race will still be egoistic, so that these Stoics will be parlour altruists.

But in fact, and as their metaphysical underpinnings show, these two strategies are inconsistent. The product of the tradition, nonetheless, is to be seen in Cicero’s conflation of the two; and in the inconcinnity of Anonymous’s attack on the one version of the theory with elements of the other.

The reductive tendency of the base assumption in arguments about altruism often goes unnoticed; but that tendency has been influential throughout the history of moral philosophy.¹⁰² Stoic naturalism has the great virtue that it moves away from a dismally reductive view towards a richer account of the human condition.¹⁰³ In the case of the theory of *oikeiosis*, indeed, it is generous in giving us two different accounts of the human condition and our care for others beyond a narrow conception of our own interests. Such accounts, indeed, are also available to modern

¹⁰² In the modern revival of Aristotelian approaches to ethics reductive strategies are expressly rejected: see, for example, R. Hursthouse, *On Virtue Ethics* (Oxford, 1999).

¹⁰³ Again, see Williams, *Limits, passim*.

ethical theory. Perhaps, then, the Stoic account—if I am right that it is inconsistent—is not worth the bother?

Further reflection on the grounds for finding it inconsistent may be, after all, illuminating. For, as I have argued, it is the underlying metaphysics which shows up the inconsistency. That metaphysics is a part of a larger, more grandiose, theory of nature, human and otherwise, than we might come across in the modern, compartmentalized, approach to ethical theory. Some of this larger theory the modern eye may find objectionable; but it invites us properly to consider whether we can—as we often seem to believe—successfully detach moral considerations from those of metaphysics. On the Stoic account, we cannot: and this contention is a large part of its continuing virtue for modern thought.¹⁰⁴

Bibliography

- ANNAS, J., *The Morality of Happiness* (Oxford, 1993).
 ——— *Platonic Ethics Old and New* (Ithaca, NY 1999).
 BOBZIEN, S., *Determinism and Freedom in Stoic Philosophy* (Oxford, 1998).
 BRUNSCHWIG, J., 'The Cradle Argument in Epicureanism and Stoicism', in M. Schofield and G. Striker (eds.), *The Norms of Nature* (Cambridge, 1986), 113–14.
 BURNYEAT, M. F., 'Idealism and Greek Philosophy: What Descartes saw and Berkeley Missed', in G. Vesey (ed.), *Idealism Past and Present* (London, 1982).
 DAWKINS, R., *The Selfish Gene* (New York, 1976).
 ENGBERG-PEDERSEN, T., 'Discovering the Good: *oikeiosis* and *kathekonta* in Stoic Ethics', in Schofield and Striker (eds.), *Norms*, 145–83.
 FREDE, M., 'The Original Notion of Cause', in M. Schofield, M. Burnyeat, and J. Barnes (eds.), *Doubt and Dogmatism* (Oxford, 1980), 217–49.
 GILL, C., *Personality in Greek Epic, Tragedy and Philosophy* (Oxford, 1996).
 HUME, DAVID, *A Treatise of Human Nature* (Harmondsworth, 1985).
 HURSTHOUSE, R., *On Virtue Ethics* (Oxford, 1999).
 INWOOD, B., *Ethics and Human Action in Early Stoicism* (Oxford, 1985).
 KANT, I., *Groundwork of the Metaphysics of Morals*, tr. H. J. Paton (New York, 1964).
 LONG, A. A. and SEDLEY, D. N. *The Hellenistic Philosophers*, 2 vols. (Cambridge, 1987).
 LONG, A. A., 'Socrates in Hellenistic Philosophy', in Long, *Stoic Studies* (Cambridge, 1996), 1–34.

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- McCABE, M. M., 'Indifference Readings', in T. P. Wiseman (ed.), *Classics in Progress* (London, 2002), 363–98.
- MILL J. S. *Utilitarianism* (ed. Warnock, Glasgow, 1962).
- NAGEL, T., *The View from Nowhere* (Oxford, 1986).
- NUSSBAUM, M. C., *The Therapy of Desire* (Princeton, 1994).
- PEMBROKE, S. G., 'Oikeiosis', in A. A. Long (ed.), *Problems in Stoicism* (London, 1971), 114–49.
- RAWLS, J., *A Theory of Justice* (Oxford, 1972).
- SHARPLES, R. W., *Alexander of Aphrodisias on Fate* (London, 1983).
- SORABJI, R. R. K., *Necessity, Cause and Blame* (London, 1980).
- *Animal Minds and Human Morals* (London, 1993).
- 'Soul and Self in Ancient Philosophy', in M. J. C. Crabbe (ed.), *From Soul to Self* (London, 1999), 8–32.
- *Emotions and Peace of Mind* (Oxford, 2000).
- STRIKER, G., *Essays on Hellenistic Epistemology and Ethics* (Cambridge, 1996).
- TAYLOR, C., *Sources of the Self* (Cambridge, 1989).
- TAYLOR, CRAIG, *Sympathy* (Swansea, 2002).
- WILLIAMS, B. A. O., *Ethics and the Limits of Philosophy* (London, 1985).

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Competing Readings of Stoic Emotions

CHRISTOPHER GILL

Introduction

One of the most stimulating and rewarding features of my scholarly life has been a long-running debate with Richard Sorabji about the Stoic theory of the emotions. This debate took place in and around papers given by both of us in various contexts (including the Institute of Classical Studies and a conference in Helsinki on the emotions).¹ It included long conversations examining certain key texts and exchanges of letters. Our differences on this topic have run deep and continue to do so. But, certainly on Richard's side, this debate was always conducted in a spirit of open-minded enquiry and a humane concern both for the truth and for participants in the search for this—a spirit that is wholly characteristic of him. For me to renew this debate here, in a volume in Richard Sorabji's honour, might seem needlessly contentious. But the publication of Richard's important book, *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* makes it possible to take the full measure of his thinking on this topic. In responding to the book, I hope to bring out the philosophical as well as scholarly issues raised by our different readings of this theory. Also, I am confident that Richard will respond to my comments in the same generous, exploratory spirit as before.

Richard Sorabji's Reading of the Stoic Theory

The Stoic theory of the emotions is only one strand in *Emotion and Peace of Mind*, a book which embraces therapy, psychology, and ethics in a bold

¹ See e.g. C. Gill, 'Did Galen understand Platonic and Stoic Emotions', 113–48, and R. Sorabji, 'Chrysippus—Posidonius—Seneca: A High-Level Debate on Emotions', 149–69, in J. Sihvola and T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht: Kluwer, 1998), based on papers given at the Helsinki conference. See also Sorabji's contribution to R. Sorabji (ed.), *Aristotle and After* (*Bulletin of the Institute of Classical Studies*, supplement 68, 1997).

narrative of intellectual history, ranging from Hellenistic philosophy and its background to early Christian thought. But it is an important strand: Sorabji's reconstruction of the genesis and development of this theory constitutes the backbone of his larger argument. This reconstruction is innovative in at least two ways. One is the extent to which it sees an evolving debate within Stoicism about emotions, involving both radical disagreement and the emergence of new positions in response to the debate. A related feature is the extent to which the most famous version of the Stoic theory, that of Chrysippus, is seen as vulnerable to justified criticism both within antiquity and in the light of modern psychological research. These two points are closely linked. Chrysippus' version of the theory is seen as the most extreme version of the cognitive (or rationalistic) conception of emotions, which figured, in less extreme forms, in some other ancient theories. It was the extreme character of the theory which, in Sorabji's view, made it liable to effective criticism and in need of repair and modification, a process which in turn both extended its usefulness in therapy and prefigured important developments in Christian thinking about temptation.²

The key move in Chrysippus' theory, as Sorabji sees it, was to claim that emotions were judgements. More precisely, emotions represented a combination of two judgements: (1) that a given state of affairs was good or bad and (2) that it was appropriate to react accordingly (to 'contract' with pain or to 'expand' with pleasure, 28–34).³ This move marks a significant shift, as Sorabji believes, from Zeno's view that emotions (that is, contractions and expansions) occurred 'on the occasion of' (*epi*) judgements about good or bad states of affairs (34–6, 64–5). Chrysippus' theory was both extreme and precisely formulated, and thus invited criticism which could be formulated with equal precision. The later Stoic Posidonius is presented by Galen as rejecting Chrysippus' theory wholesale, and as adopting the Platonic–Aristotelian view that there are non-rational parts of the psyche and that these react emotionally without the mediation of reason. Part of Posidonius' motive for doing so was his dissatisfaction with Chrysippus' explanation for two kinds of phenomenon that seemed to run counter to his (Chrysippus') theory. These cases are those in which the two kinds of judgement involved in emotions seem to come apart, namely (1) a sudden upsurge of weeping when there is no awareness of grief and (2) grief that abates in time although the underlying belief (that the death of

² R. Sorabji, *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford: Oxford University Press, 2000), part 1, esp. ch. 2, also chs. 22–4 on the Christian reception of the idea of 'first movements' evolved by Seneca.

³ These and subsequent page and chapter references not otherwise identified are to Sorabji, *Emotion*.

the relevant person is bad) remains intact.⁴ Sorabji both accepts Galen's account of Posidonius' response and thinks that Posidonius' critique is well-grounded, in terms of the debate reported by Galen.⁵ Sorabji finds further support for Posidonius' type of position in recent brain research. LeDoux has shown that there is a part of the brain (the amygdala) which reacts emotionally—with fear, for instance—before the other (cortical) part of the brain has been able to work out what is fearful about the situation to which the amygdala reacts. Emotion may persist in the amygdala even if the cortical part of the brain establishes that there is no reason for the emotion. Hence, Sorabji argues, Posidonius' case for rejecting Chrysippus' cognitivist view of emotions has not simply intuitive appeal but also modern scientific support.⁶

A second, and highly original, feature of Sorabji's analysis is the suggestion that Seneca's three-stage account of emotion (*On Anger*, 2.2–4, especially 2.4.1) represents an innovative move within Stoic debate (chs. 3–4). The first stage in this account is that in which the person reacts, involuntarily, to the mere *appearance* that a response is appropriate, without approving, or assenting to, this appearance. It is only at the second stage, when the person voluntarily accepts that it is appropriate to react, that we have 'emotion' in the sense recognized by Chrysippus. Sorabji sees in the introduction of the first stage a response to the critique of Posidonius and to the (correct) claim that emotional reactions can be triggered without the judgement of reason. However, Seneca introduces this stage as a way of supporting, and not refuting, Chrysippus' theory. This first stage is presented only as a *pre-emotion*; the second stage, which meets Chrysippus' conditions, remains the crucial stage of judgement-based emotion.⁷ Seneca also introduces a third stage, in which the person is in a state of 'uncontrolled' emotion (*impotens*) and has 'overthrown' (*evincit*) reason; he feels he must react emotionally, whether or not this is appropriate (*utique*). Sorabji sees here another attempt to reconcile competing elements of Stoic thinking. Although our evidence on this point is not unambiguous, it seems that Zeno characterized emotion as a—conscious and deliberate—'rejection' or disobedience of reason whereas Chrysippus described it as a 'mistaken judgement'; specifically, it is the mistake of taking an 'indifferent' to be a good or bad thing. Sorabji sees this as a further sign of Chrysippus' more intellectualist conception of

⁴ Galen, *De Placitis Hippocratis et Platonis* (*On the Doctrines of Hippocrates and Plato*) (=PHP), 4.7.12–17, 37. For text and translation of PHP, see De Lacy (1978–84). For text and translation of 4.7.12–17 see Long and Sedley (1987) (=LS) 65 O; for translation, see Sorabji, *Emotion*, 123, also 110.

⁵ Chs. 7–8, esp. 109–14, 121–5.

⁶ Ch. 10, esp. 145–50.

⁷ Ch. 4, esp. 72.

emotion, which is understood as an act of reason, though a mistaken one, rather than as the rejection of reason (55–61, 63–5). Sorabji thinks that Seneca reconciles these different conceptions by locating them in different phases; the second stage represents the Chrysippian idea of mistaken judgement, the third, which is consequential on the second, expresses the Zenonian idea of rejection of reason (61–3).

Sorabji's reconstruction of the history of the Stoic debate on emotions is, explicitly, made from an engaged intellectual standpoint. He thinks that Chrysippus' theory represents an extreme in cognitivism and that the position of Posidonius (as he understands this) is intuitively more credible as well as supported by the findings of modern science. Sorabji is sceptical also of other central features of Stoic theory, including the idea that full ethical development culminates in a complete absence of (conventional) emotions (*apatheia*) and in the realization that things other than the good (including the health or continued life of those we love) are 'matters of indifference', in comparison with the good. Hence, he has strong reservations about Stoic therapy, if this is grounded on the ideal of *apatheia* and the doctrine of 'indifference'. However, despite these reservations, Sorabji thinks that Stoicism has a potential usefulness in therapy (both ancient and modern) even for those who do not accept its strong ethical and psychological claims.⁸ In his reservations about these features of Stoicism, and in his preference for therapy consisting in the 'moderation' rather than the 'extirpation' of emotions, Sorabji's intellectual standpoint is similar to the Platonic–Aristotelian one adopted by ancient opponents of Stoicism such as Antiochus, Plutarch, and Galen, though his account of Stoicism is vastly more accurate and fair-minded than theirs.⁹

Some Preliminary Comments

My main response to Sorabji's account is to offer a different type of analysis of the Stoic theory of the emotions, combined with an alternative reconstruction of the history of Stoic (and other ancient) debate on this topic. But I begin with some brief general comments. As Sorabji scrupulously points out, his version of Stoic thinking diverges in some respects from that of much recent scholarship. It is common (though not universal) to accept Galen's picture of Posidonius' critique of Chrysippus'

⁸ Ch. 11, esp. 161–6, ch. 12, esp. 175–80; he points out that Chrysippus presents his therapy as potentially useful even for those who did not accept the central Stoic ethical tenets (178, with references in n. 52).

⁹ On the relative merits of moderation or extirpation, see Sorabji, *Emotion*, ch. 12. On the relevant ideas of Antiochus et al., see pp. 456–7 below.

theory.¹⁰ It is less common to accept the indications of some ancient evidence that Chrysippus' theory is substantively different from Zeno's; it is more often supposed that, in this as in other respects, Chrysippus formulates Zeno's ideas in a more systematic and theorized form.¹¹ The question how far Seneca's three-stage account is innovative has been found puzzling by several scholars. Sorabji's suggestions that it incorporates Posidonius' stress on impulsive reactions (before judgement) and that it recasts Chrysippus' account in terms of distinct stages have partial parallels in other recent accounts.¹² His view that it represents a considered and original response to differences between Zeno and Chrysippus, as well as Posidonius and Chrysippus (chs. 3–4), is quite new. Of course, to highlight scholarly innovation is not in itself an objection. More problematic for Sorabji's thesis is the fact that (leaving the evidence of Galen aside), these alleged divergences and debates within Stoic theory on the emotions have passed largely unnoticed in the ancient sources. There is a marked contrast between this aspect of ancient theory and, for instance, Stoic thinking on value (on the good and 'indifferents'). Here, we have rather full evidence from a variety of sources about the history of Stoic debate, including responses to criticism from outside as well as variations within the school.¹³ Subsequently (pp. 459–67 below), I offer a competing history of Stoic thinking on the emotions, which corresponds more closely, I think, to indications—including silences—in ancient commentary on this subject.

A second preliminary comment relates to Sorabji's use of modern psychological research, notably that of LeDoux on the amygdala (ch. 10). In principle, I strongly support reference by classical scholars to modern ideas on related subjects; otherwise, the history of ancient ideas will become an intellectual ghetto. However, I am uneasy about placing such emphasis on *one* contribution to modern debate: Sorabji is much

¹⁰ For dissent from those accepting the accuracy of Galen's evidence for Posidonius, see, especially, J. Fillion-Lahille, *Le 'De Ira' de Sénèque et la philosophie stoïcienne des passions* (Paris: Klincksieck, 1984); J. Cooper, 'Posidonius on Emotions', in J. Sihvola and T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht: Kluwer, 1998), 71–111. For a defence of the validity of Galen's report, see Sorabji, *Emotion*, ch. 6.

¹¹ The ancient evidence for difference includes Gal. *PHP* 4.2.5–6, 5.1.4; see Sorabji, *Emotion*, 34–6, 55–61. For the contrasting view that there is no substantive difference, see e.g. B. Inwood, *Ethics and Human Action in Early Stoicism* (Oxford: Oxford University Press, 1985), 130–1; K. Algra, J. Barnes, J. Mansfeld, and M. Schofield (eds.), *The Cambridge History of Hellenistic Philosophy* (Cambridge: Cambridge University Press, 1999), 699.

¹² For the first suggestion, cf. Cooper, 'Posidonius', 99; for the second, cf. Inwood, *Ethics*, esp. 180–3.

¹³ For evidence, see LS 58; for discussion, e.g., G. Striker, *Essays on Hellenistic Epistemology and Ethics* (Cambridge: Cambridge University Press, 1996), 231–48; Algra et al., *Cambridge History*, 684–7, esp. 686.

more cursory in his reference to the competing (cognitivist) strand in modern psychology (93) and therapy (153–5). There is something rather haphazard in underlining one particular line of modern research. As Sorabji himself points out, the work on the amygdala by Damasio (published in 1994, just before the publication of LeDoux's work) focused on cases in which 'the thoughts come *first* and the physical reactions . . . *follow* as events' (145, Sorabji's italics), that is, cases which precisely match Chrysippus' theory. Also, there is room for debate about what has been shown by LeDoux's research. LeDoux's work is based on rats; it is only inferred by him that the 'fast-track' route to the amygdala also applies in human beings (145). Even if subsequent research does show that the same happens in normally functioning humans, it might still be open to claim that this tells us nothing about *emotions*, as Chrysippus defined these, since these would depend on a judgement based in the cortical part of the brain.

An Alternative Reading of the Stoic Theory

I start by outlining what I see as characteristic features of Hellenistic (both Stoic and Epicurean) thought, though it is only the Stoic side I explore here, and seek to locate within this framework certain key features of Stoic thinking on emotions. In this way, I offer a different point of access to the Stoic theory of emotion from that provided by Sorabji, and one that brings out more fully the rationale of the core, Chrysippian, approach. Characteristic of Hellenistic thought is, I think, a seemingly paradoxical combination of a 'holistic' conception of personality and a 'naturalistic' world-view with a high valuation of timeless structure rather than process and an ideal state defined in terms of negation. As I will suggest more fully later, this combination can be seen as a synthesis of 'Socratic' ideals (as understood in the Hellenistic period) and more naturalistic features drawn in part from Platonic and Aristotelian philosophy.¹⁴

One side of this combination is made up of the following strands: (1) a 'holistic' conception of personality, stressing the idea of humans (and other animals) as integrated organisms both psychophysically and psychologically and (2) various forms of 'naturalism'. The forms of naturalism include (1) a focus on the natural life of humans as embodied organisms, (2) a conception of natural development open to all humans as such, and (3) what could be called 'rich' naturalism, combining the

¹⁴ The line of thought outlined here is developed in C. Gill, *The Structured Self in Hellenistic and Roman Thought* (Oxford: Oxford University Press, forthcoming).

insights of ethics, physics, and logic rather than reducing ethics to physics. The other side of this combination is constituted by these strands: (1) an idealization of states defined negatively such as ‘absence of emotion’ (*apatheia*) or, in Epicureanism, ‘absence of pain/distress’ (*aponia*, *ataraxia*). The latter ideals are ones that might seem more appropriate to a dualist theory, with transcendent aspirations, but are here translated into terms which are compatible with Hellenistic naturalism.

I now highlight certain key features of Stoic thought which illustrate these general tendencies before bringing out their relevance to the theory of emotion. The idea that humans and other animals function as integrated organisms is expressed by saying that they have ‘self-awareness’ (or self-perception) or consciousness of their own coherent nature (*sustasis* or *constitutio*). What is involved here is not Cartesian-style self-consciousness but rather awareness of the internal psychophysical connections that form part of organic life. The central Stoic theory of *oikeiōsis* involves the idea that humans and other animals are naturally disposed to carry out actions which sustain their life as coherent embodied organisms.¹⁵ A further aspect of this theory is that humans are naturally disposed to develop in such a way that all their functions, including their motives and purposive actions, are increasingly informed by rationality.¹⁶ These familiar and central features of Stoic thought can be seen as aspects of the combination of a ‘holistic’ conception of human (and animal) personality and of (a certain type of) ‘naturalism’. But they are combined, in a way that might seem paradoxical, with a very distinctive picture of the ideal outcome of this process of natural development for human beings. This is marked, on the one hand, by the knowledge that only the good is inherently valuable and that, in relation to the good, even the things rightly pursued in the process of development are only ‘matters of indifference’.¹⁷ It is also marked by a type of time-independent perfection of character, defined positively in terms of order, structure, and rationality and negatively by the absence of disordered and irrational emotions.¹⁸ This is an ideal which one might see as more congruent with mind–body dualism or with transcendental idealism of a kind often

¹⁵ See LS 57A–C; see further (on self-perception), A. A. Long, *Stoic Studies* (Cambridge: Cambridge University Press, 1996), ch. 11, in general, Algra et al., *Cambridge History*, 677–82.

¹⁶ See LS 57A(5), 59D; see further M. Frede, ‘On the Stoic Conception of the Good’, in K. Ieradiakonou (ed.), *Topics in Stoic Philosophy* (Oxford: Oxford University Press, 1999), 71–94.

¹⁷ See LS 58 and 59D(4–6); see further Algra et al., *Cambridge History*, 687–99.

¹⁸ Key motifs of this ideal include the idea that length of life is irrelevant for happiness (Cic. *Fin.* 3.46, 3.76) and that the wise person is happy on the rack (Cic. *Fin.* 3.42, 5.84, *SVF* 3.574). On the internal ‘harmony’ and ‘cohesion’ that is characteristic of wisdom, see LS 60K, 60E(8), 63F; on *eupatheiai* (good emotions), LS 65F; in general, LS 63.

associated with Plato or Neoplatonism. But, in Stoicism, this ideal is thoroughly integrated with the other strands noted: the ideal character-state is that of the whole personality and is seen as the consummation of its integration as a natural, embodied form of organic life.¹⁹

These general features of Stoic thinking bear, in particular, on the understanding of adult human rationality. This is seen as, in one way, an absolute characteristic of adult humans, and, in another, as a matter of degree. To be adult is to have developed a relatively structured and coherent set of beliefs (or 'rational impressions') which necessarily inform all motives and actions. It is the fact that children have not yet formed such a set of beliefs that makes them, in Stoic terms, non-rational. To this degree there is a radical distinction between human adults and children (or non-human animals).²⁰ On the other hand, the rationality of most adults is only partial. They only have a *relatively* structured and coherent belief-set because the only fully coherent set is that of the knowledge of the ideal wise person.²¹ The wise person's knowledge is, in a sense that is not easy to define, 'world-guided', and reflects the order, structure, and rationality of the universe as a whole.²² Part of what this involves is that the wise person's knowledge constitutes a coherent synthesis of ethics, logic, and physics (LS 26). The gulf between the wise person's perfect state of rationality and that of all other human beings is, in one way (like that between adults and children) absolute and radical. But, in another way, it is relative and bridgeable because all human beings are in principle capable of becoming wise and of achieving perfect, world-guided, rationality.²³ Correspondingly, it would seem, adult humans who fail to achieve this level of perfect rationality are conscious of having failed to do so; at least, they are conscious of the conflict and inconsistency between their belief-set and that of perfect wisdom.²⁴

These general comments on Stoic thinking are designed as preparation for a contrasting way of understanding their thinking on emotions from that offered by Sorabji. The Stoics formed their theory of emotion against an intellectual background in which 'reason' was often contrasted with 'emotion' or 'desire', as in Plato's famous contrast between 'rational',

¹⁹ See e.g. the idea that complete virtue is a psychophysical state of 'good tension' (*eutonia*), Gal. *PHP* 4.6.1–8, or that the virtues are 'bodies' or 'animals', because they are dispositional states of a psychophysical organism, LS 29B, 61E. See further Algra et al., *Cambridge History*, ch. 17, esp. pp. 571–2, 583.

²⁰ See further Inwood, *Ethics*, 72–5, 79–80, 187–95.

²¹ See LS 61, esp. G, S–U, Stob. 2.65.7–68.23.

²² See LS 63, esp. C; also G. Kerferd, 'What does the Wise Man Know?', in J. Rist (ed.), *The Stoics* (Berkeley: California University Press, 1978), 125–36.

²³ See LS 61 L; also Gill, 'Did Galen ...?', 119–20, Algra et al., *Cambridge History*, 724–7.

²⁴ See further Gill, 'Did Galen ...?', 119–21 and discussion below (p. 456).

‘spirited’, and ‘appetitive’ parts in Book Four of the *Republic* or Aristotle’s contrast between ‘reason’ and ‘desire’ (*orexis*).²⁵ The central thrust of the Stoic account, as I understand this, is to offer an account of motivation (impulse), including emotion, which shows the fundamental integration of these functions, in line with their ‘holistic’ model of the personality. Sorabji (ch. 2) sees the matter differently. For him, Chrysippus holds an extreme version of a cognitivist or rationalistic conception of emotion, which puts him at odds even with his predecessor Zeno. This forms the background, as Sorabji thinks, for the reintroduction by later Stoics, such as Posidonius, of the non-cognitive dimension of emotion.

Sorabji, for instance, makes much of the difference between Chrysippus’ claim that emotions are judgements (of a certain kind) whereas Zeno identified emotions with psychophysical responses, such as contractions. Sorabji follows Galen in finding here a substantive disagreement:²⁶ but how important is this apparent divergence? Sorabji himself refers also to evidence that Zeno saw the contractions as based on judgements and that Chrysippus saw emotional judgements as normally followed by contractions.²⁷ In a searching examination of this question in this volume, Anthony Price also stresses the integrative or ‘holistic’ psychological model underlying the Stoic account of emotion. Although the Stoic analysis of emotion referred to the four key elements in their theory of human action (rational impression, assent, impulse, action), the salient point is that emotion is the outcome of the *combination* of these elements. This point comes out in a wide range of ancient evidence for the theory, including pseudo-Andronicus’ definitions, in which emotions are characterized equally as the reaction (for instance, the contraction) or the judgement.²⁸ The two aspects are further linked by the fact that the relevant judgement is that it is appropriate to react in the way that is actually occurring at the time. In this context, the divergence between Zeno and Chrysippus is, at most, Price suggests, ‘a fairly fine one’: ‘Zeno might have identified emotions with causal complexes wherein contractions and the like follow upon opinions, whereas Chrysippus might have thought that opinion of a kind constitutes emotion even before it causes

²⁵ Pl. *Rep.* 436a–441b, Arist. *De anima* 3.10, esp. 433a21–5. See further on the Platonic and Aristotelian background for the Stoic theory, pp. 460–3 below.

²⁶ Sorabji, *Emotion*, 34–41, esp. references to Gal. *PHP* in his 34, n. 24.

²⁷ Sorabji, *Emotion*, 34–5, referring to Cic. *Tusc.* 3.75, Gal *PHP* 4.7.2–3; 36, referring to Gal. *PHP* 4.7.4, 13–14.

²⁸ *SVF* 3.391 (=LS 65B), e.g. ‘Distress is an irrational contraction, or a fresh opinion that something bad is present, at which people think it right to be contracted.’ Price stresses that the ‘or’ should not be seen as disjunctive; belief and contraction are interdependent and inseparable aspects of the same phenomenon of emotion.

(even if it *does* cause) contraction or the like' (pp. 473–4).²⁹ But this difference is one of emphasis, rather than doctrinal disagreement. 'Zeno and Chrysippus' were 'fundamentally of one mind in identifying an emotion with a single but multi-faceted psychophysical reality equally classifiable, on the mental side, as judgement, impulse, or sensation' (p. 481).³⁰ On this view, which I share, the thrust of the theory lies in the integration of 'rational' and 'emotional' as well as 'mental' and 'physical' elements, a stress shared in slightly different ways by these two Stoic thinkers.

The Stoic theory of the emotions thus illustrates what I described as a 'holistic' conception of personality, characteristic of Hellenistic philosophy, rather than a part-based one. The theory can also be seen as exemplifying what I characterized earlier as the 'rich naturalism' characteristic of Stoicism (and, though differently, Epicureanism).³¹ Although the theory of emotions in general falls squarely within ethics, in Stoic terms, one can see ways in which the formulation of the theory also incorporates elements drawn from all three branches of philosophy. Emotions are a subdivision of 'impulses' (*hormai*), and impulses are characterized as responses to rational impressions. Rational impressions are conceived as taking propositional form (for instance, 'that it is appropriate to . . .'). Impulses, in particular, are described as responses to predicates contained in such propositions (for instance, 'is good/bad', or 'appropriate'). In this respect, the analysis of impulses draws on Stoic logic, understood in Stoicism as including study of linguistic forms.³² The theory of emotions also depends on central Stoic ethical principles, notably in the idea that the judgements involved are false, because they ascribe goodness or badness to things that are properly regarded only as 'preferable' or 'dispreferable'.³³ The theory also involves physics (study of

²⁹ Price notes that we are told that Chrysippus thinks that the impulse is 'towards' (*epi* plus accusative) the contraction, while Zeno holds that emotions 'follow' or 'supervene on' (*epi* plus dative) judgements, Gal. *PHP* 4.7.14, 4.1.17. Thus, both thinkers, in slightly different ways, stress the integral linkage between belief and reaction.

³⁰ On the psychophysical monism underlying the theory, see also M. Graver, Review of Sorabji, *Emotion, Ancient Philosophy* 22 (2002), 225–34, at 229. See also, denying a fundamental difference between Zeno and Chrysippus, Inwood, *Ethics*, 130–1, Algra et al., *Cambridge History*, 699.

³¹ By 'rich naturalism', I mean, in part, that there is an ideal of knowledge in which the insights of ethics, logic, and physics are combined, rather than in which ethics (or logic) is 'reduced' to physics. See further (on Stoic 'naturalism') C. Gill, 'The Stoic Theory of Ethical Development: in What Sense is Nature a Norm?', in J. Szaif and M. Lutz-Bachman (eds.), *What is Good for a Human Being? Human Nature and Values* (Berlin and New York: De Gruyter), 100–25.

³² See further T. Brennan, 'The Old Stoic Theory of the Emotions', in J. Sihvola and T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht: Kluwer, 1998), 21–70, at 24–9; on relevant aspects of Stoic logic, LS 33C, I; on linguistic form and impulse, Inwood, *Ethics*, 56–66.

³³ See LS 65A(4), B, D, taken with LS 58 and 59 (D); see further Brennan, 'Old Stoic Theory', esp. 30–9, 44–52.

nature) in that the contractions or expansions which are the outcome of assenting to these false beliefs form part of the study of the behaviour and causal principles of human beings as psychophysical organisms.³⁴ It is a central feature of Stoic thought that, although all three branches of philosophy have their own methods and subject matters, the ideal outcome of knowledge is the synthesis of these branches. The theory of emotions provides one illustration of how such a synthesis may work and also illustrates what I am calling the ‘rich naturalism’ that is characteristic of the Stoic philosophical outlook. The key point of the theory is not, I think, to offer a narrowly rationalistic or cognitivist account of emotions, as Sorabji suggests. Rather, it is show how all three aspects of the theory (those falling under the spheres of logic, ethics, and physics) add up to an inclusive analysis of emotion as a natural (though, in Stoic terms, defective) phenomenon.

For similar reasons, I am sceptical about Sorabji’s view (ch. 3) that there was a well-recognized contrast between the ideas (1) that an emotion represented a mistaken judgement and (2) that emotion constituted the rejection of reason, the two ideas being associated with Chrysippus and Zeno respectively. On this point the evidence is complex and rather ambiguous, though Sorabji thinks that it is sufficiently clear to enable us to see this as a salient point of contrast between accounts of the two thinkers,³⁵ and one that Seneca tried to harmonize with the second and third stages of his account (61–3). I am doubtful about this contrast for several reasons. One is that the idea of emotion as rejection or disobedience of reason is associated, particularly, with the example of Euripides’ Medea, who announces, famously, ‘I know that what I intend to do is bad’. But the use of Medea as a paradigm of passion is specifically associated with Chrysippus;³⁶ so it follows that the idea of emotion as the disobedience of reason formed a key part of his theory too. However, this raises the question (as Sorabji underlines), how these two conceptions of emotion are to be coherently combined. If the ‘mistake’ of reason is to think (mistakenly) ‘that it is appropriate to contract/expand in this situation’, how can the same person *also* be regarded as rejecting or disobeying reason? Surely, as Sorabji maintains, if Chrysippus combined the two ideas, he did so incoherently, and it

³⁴ See LS 65B; also n. 26 above; on the Stoic conception of physics, see LS 43.

³⁵ More precisely, Sorabji makes two main points in *Emotion*, ch. 3, esp. 55–61: (1) that the two conceptions of emotion (Zeno’s and Chrysippus’) are different and (2) that, therefore, when Chrysippus combined these ideas in his analysis (as it seems he did, Sorabji, 57–8), he was offering an incoherent account

³⁶ Gal. *PHP* 4.2.27, referring to Eur. *Med.* 1078–80. Sorabji, *Emotion*, 56–7, accepts that it was Chrysippus who introduced this example, but argues that Medea’s case is inconsistent with Chrysippus’ view of emotion as a mistaken judgement.

is only Seneca's temporal separation that made sense of the analysis (*On Anger* 2.4.1).

Here, it is helpful to bring to bear the points made earlier about the Stoic understanding of human rationality (text to nn. 20–4 above). Although all adult human beings necessarily act on the basis of their (rational) beliefs, including their mistaken judgements, they are also, in principle, capable of the perfect rationality of the wise person and at some level capable of recognizing their own folly. This explains the fact that those in a state of emotion were seen by the Stoics as also victims of *akrasia* and as *impotens*, unable to exercise a form of self-control whose value they themselves recognized.³⁷ It is for this reason that Medea was, for the Stoics, such an illuminating paradigm. She *knew* that what she was doing (acting on the mistaken judgement that revenge on her husband justified the murder of her children) was bad. Also, like other poetic examples cited by Chrysippus, she knew this at the time that she decided she must act on her desire for revenge; the formation of the 'mistaken judgement' and the 'rejection of reason' do not belong to separate phases of the process.³⁸ But even so, the power of the whole process of the emotion (the wrong judgement and the correlated contraction or expansion) carried her along, like 'running legs'.³⁹ In other words, the mistaken judgement is seen by Stoics as, at some level, a *conscious* mistake, a deliberate rejection of reason, whether or not it involves—as it sometimes does—the rejection of (what is recognized as) good advice by other people.⁴⁰ Thus, the ideas of mistaken judgment and the rejection of reason are two aspects of the same process, paradoxical though this may seem. So it is unsurprising that Chrysippus adopted both formula-

³⁷ Gal. *PHP* 4.4.24, Sen. *On Anger* 2.4.1, also refs. in n. 38 below; cf. Zeno's characterization of emotion as a 'fluttering' (*ptoia*) (LS 65A(2), also *SVF* 1.206). Sorabji, *Emotion*, 56–7, notes this point but interprets its significance differently.

³⁸ Passages apparently cited by Chrysippus in this connection include figures who say, 'Let me be undone; this now is good for me'; he also referred to figures who 'want to gratify their anger and (want others) to let them be, whether it is better or not', Gal. *PHP* 4.5.42–4, 4.6.27. So we should not suppose that Medea's words, 'I know that what *I intend to do* (*dran mellō*) is bad' (1078), were taken by Chrysippus (Gal. *PHP* 4.2.27) to signify that she only knew that this was bad in advance but not at the moment of action (i.e. the form of analysis of *akrasia* offered by Aristotle in *EN* 7.3). See further on Chrysippus' use of the example of Medea, C. Gill, 'Did Chrysippus Understand Medea?', *Phronesis* 28 (1983), 136–49; *Personality in Greek Epic, Tragedy, and Philosophy: The Self in Dialogue* (Oxford, 1996), 228–32; 'Did Galen ...?', 118–21.

³⁹ Gal. *PHP* 4.2.10–18 (=LS 65J, esp. (7)).

⁴⁰ For such cases, see Gal. *PHP* 4.6.27, Stob. 2.88.8–90.6. Hence, I do not see a substantive difference between these cases (where the voice of reason comes from outside) and Medea's (where it comes from within); Sorabji, *Emotion*, 57, sees the two types of case as quite different.

tions.⁴¹ Thus, in allocating them to chronologically distinct stages (*On Anger* 2.4.1),⁴² Seneca is blunting the force of the earlier Stoic view that both faults of reason were two aspects of the same process.

Although I have reservations, therefore, about Sorabji's reading of the significance of Seneca's account of emotion in this respect, I am more inclined to think, as he does, that the first stage of emotion (the *pre-emotional* stage) may represent a response to Posidonius' introduction of the idea of 'emotional movements' (*pathētikai kinēseis*).⁴³ But I differ sharply from Sorabji (chs. 6–8) in his supposition that Posidonius intended this innovation to form part of a root-and-branch rejection of Chrysippus' theory (which I see as being the most complete formulation of the mainstream Stoic theory, shared in substance with Zeno). I am persuaded by the arguments of those, especially John Cooper, who maintain that this innovation formed part of a strategy of modification of the theory, rather than its wholesale rejection in favour of a Platonic–Aristotelian part-based model, as Galen claims.⁴⁴

The idea of emotional movements was introduced, in part, to explain the prevalence of emotions among adult humans, despite the Stoic view that human beings are naturally disposed to develop towards a state of freedom from emotions (*apatheia*).⁴⁵ It was seen by Posidonius as serving to explain more effectively certain cases of apparent dislocation between judgements (or at least one judgement) and emotional reactions, which Chrysippus himself acknowledged as being hard to explain.⁴⁶ It was also introduced to explain the motivation of non-human animals and human children, who react without the mediation of rational judgements.⁴⁷ But the introduction of the concept of emotional movements did not, on the view I am following, entail the repudiation of the idea that adult human emotions depended on judgements, an idea which emerges clearly in at least two key pieces of evidence for Posidonius' theory, which Sorabji

⁴¹ As Sorabji notes (*Emotion*, 55–9), though he regards the idea of emotion as mistaken judgement as more characteristically Chrysippian.

⁴² For Seneca, the realization that one must act passionately 'whether or not this is appropriate' (*utique*) comes only in the third stage, after the decision that it is appropriate to act in a passionate way; see p. 447 above.

⁴³ Sorabji, *Emotion*, ch. 4, esp. p. 72, referring to Sen. *On Anger* 2.2.1–2.4.2; a link is also seen by Cooper, 'Posidonius', 99.

⁴⁴ See further Gill, 'Did Galen...?', 124–30, supporting the view of Cooper, 'Posidonius'.

⁴⁵ Hence, Posidonius' question, insistently raised in response to Chrysippus' theory: what is the *cause* (*aitia*) of the 'excessive impulse' that constitutes an emotion: Gal. *PHP* 4.3.4, also Cooper, 'Posidonius', 81–2.

⁴⁶ For these cases, see Gal. *PHP* 4.7.12–17, 37; see further Sorabji, *Emotions*, chs. 7–8, Gill, 'Did Galen ...?', 121–2, 127–8.

⁴⁷ See further Cooper, 'Posidonius', 89–90; Gill, 'Did Galen ...?', 129–30.

himself cites.⁴⁸ Sorabji (*Emotion and Peace of Mind*, 72) has made the interesting suggestion that Seneca aimed to combine the (Posidonian) idea of pre-emotional reactions with the Chrysippian theory that (adult human) emotions involved judgement. I think that this suggestion may, in fact, give us a crucial pointer to reconstructing *Posidonius'* theory. Posidonius also, I suggest, aimed to combine the idea of emotional movements with the standard Stoic theory of emotions; hence Seneca's combination of these two ideas (or variants of them) simply represents a continuation of the state of Stoic theory up to that point.⁴⁹ This might help to explain (what is otherwise rather puzzling) the complete lack of any explicit indication that Seneca is innovating in the account of emotions offered in *On Anger* 2.2–4.⁵⁰

The composite Stoic theory—of emotions *and* emotional movements—can be illuminated, perhaps, by locating it within the general characterization of Stoic thinking offered earlier (p. 451 above), centred on the combination of a naturalistic world-view and holistic conception of personality with an ideal of emotion-free perfection. The core point of the theory may be seen as being, not so much the claim that (adult human) emotions are based on judgements but, rather, that the reactions of all forms of organic animal life reflect their specific psychophysical character and state. Also, since the psychophysical states of (at least) human animals are seen as constituting a scale of organized complexity, through which they are naturally disposed to develop, the type of reaction reflects the developmental level reached by the animal.

Hence, non-human animals and human children react instinctively in responding not to what is pleasurable (as Epicureans maintained) but to what fosters the natural state (the *sustasis* or *constitutio*) of the animal and what promotes its natural development. For human animals, as outlined earlier, the process of natural development leads, first, to responding rationally to what fosters one's natural state, and, finally, to recognizing that the rationality (order, structure, goodness) in this selection has real value for human beings.⁵¹ Although emotional movements

⁴⁸ (Pseudo?) Plutarch, p. 48 of fragments, Plutarch Loeb vol. 15 (= *De libidine et aegritudine*, ch. 6) and Gal. *PHP* 5.5.21. For discussion, see Cooper, 'Posidonius', 104, n. 25, 87–8, Gill, 'Did Galen . . .?', 125–7, Sorabji, *Emotion*, 104, 126–8. The key feature of both passages is that emotions involve and depend on (false) judgements and suppositions (*kriseis* and *hupolēpseis*); both passages, especially Gal. *PHP* 5.5.21, raise considerable difficulties of interpretation but this feature emerges clearly.

⁴⁹ Cf. Gill, 'Did Galen . . .?', 129.

⁵⁰ The absence of any explicit comment to this effect by Seneca seems to me a problem for Sorabji's view, one that he does not address. The contrast with Posidonius' direct engagement with Chrysippus (even allowing for Galen's exaggeration on this point) is striking.

⁵¹ LS 57, esp. A, 59F.

belong, essentially, to a more primitive developmental layer, they also, typically, persist within the later stages and retard human development. In particular, they serve to explain why humans often fail to develop towards the final, fully rational, state. The combination of the false judgement that ‘preferable’ things such as health constitute complete goodness with the persisting ‘emotional pull’ (*pathētikē holkē*) towards naturally preferable things forms part of this explanation.⁵² In some cases, the emotional movement can run counter to the occurrent judgement, helping to explain, for instance, why tears arise unprompted, without the (mistaken) belief that it is appropriate to contract with grief at someone’s death. Presumably, the emotional movement towards reacting to such things as bad, and so weeping, is still operative here, although the person’s belief-structure has developed beyond the point where this response is seen as appropriate. In the converse case, where the (mistaken) belief that grief is appropriate remains but no tears come, we may take it that the ‘emotional pull’ of such movements has faded through the passage of time, combined, perhaps, with a general development in belief-structure that renders this belief isolated and thus weakens the force of such movements.⁵³ In all such cases, the overall aim of the analysis, whether by Chrysippus, Posidonius, or Seneca, is to show how the pattern of response by an animal (human or non-human) reflects its psychophysical nature as an organism and, in the cases of humans, reflects the developmental stage. Even cases of apparent internal conflict or dislocation are understood in the light of a holistic conception of personality. This conception explains how the animal responds intelligibly (even if incoherently), when viewed as a connected psychophysical whole, and when one takes into account its developmental state, rather than assuming that it constitutes a collection of distinct psychological parts.

A Possible History of the Ancient Debate

In seeking to understand the significance of the Stoic theory of emotions, an important factor is the picture one forms of the larger history of ancient debate on this topic. The picture assumed by Sorabji is a broadly familiar one, though it is one he has developed in several ways, notably in

⁵² The phrase ‘emotional pull’, taken from Gal. *PHP* 5.5.21, refers to Posidonius’ theory; my suggestion is that his theory of emotions, as well as Chrysippus’, can be illuminated by the line of thought developed here.

⁵³ For these two types of case, see refs. in n. 46 above. My sentence here is designed to synthesize the kinds of explanation offered by Posidonius (Gal. *PHP* 5.6.31–2) and Chrysippus (Gal. *PHP* 4.7.12–17, esp. 16), on the assumption that there is a shared pattern of thinking underlying their different explanations.

stressing the elements of debate, disagreement and innovation within the Stoic school (pp. 446–8 above). The picture assumed by Sorabji is, substantially, that of Galen, particularly on the question of the relationship between Stoic and Platonic psychological thought. Galen presents Chrysippus, especially, as explicitly challenging the received philosophical idea, shared by Plato and Aristotle, that the psyche consisted of distinct parts which constituted independent sources of motivation. Relatedly, he presents Posidonius, whom he depicts as a throughgoing critic of the Chrysippian theory, as explicitly re-adopting the Platonic part-based model in preference to the Stoic monistic one.⁵⁴ I have elsewhere criticized Galen's account and offered an alternative view of the main thrust of Chrysippus' theory and of Posidonius' modified version of this theory.⁵⁵ Here, I want to raise a further and more fundamental question, which has figured surprisingly little in scholarly discussion of this topic. At what date and in what context did the contrast between part-based (tripartite or bipartite) and monistic conceptions of personality become formulated as an issue of explicit debate? I think that the answer to this question is much less obvious than it may seem and that examination of the question can make possible a quite new history of ancient thinking on this subject.

It is striking that Galen is not able to cite a text in which Chrysippus explicitly rejects the Platonic (or Aristotelian) accounts of the psyche, despite the undoubted fact that the Stoic model is innovative in its monistic or holistic approach.⁵⁶ This might seem surprising, or (alternatively) it might seem simply to reflect the incompleteness of our evidence. But it ceases to be so surprising if we adopt the hypothesis that the conflict between monistic and part-based models was not recognized as a distinct and substantive issue of debate until a considerably later date. In Plato and Aristotle, we find a readiness to deploy a variety of psychological models, without necessarily commenting on the specific type of model that is used or its difference from other possible models. Although the tripartite psyche is introduced with great fanfare in Plato's *Republic*, subsequently in that dialogue Plato's Socrates deploys a bipartite version and also outlines a further one, in which the disembodied rational mind constitutes our sole essential nature.⁵⁷ Aristotle in the *Nicomachean Ethics*, though he presents formally at one point a bipartite version, sometimes seems to draw both on a tripartite schema and on the idea of

⁵⁴ See, e.g. Gal. *PHP* 5.1.10–11, 4.3.3, 4.38; see further Cooper, 'Posidonius', 71–4.

⁵⁵ Gill, 'Did Galen ...?', 113–30, summarized above (pp. 456–8).

⁵⁶ Galen notes several times that, although Chrysippus knew about Plato's tripartite theory in the *Republic* and *Timaeus*, he failed to argue explicitly against it: *PHP* 3.1.19–21, 4.1.6, 4.1.15, 4.3.6, 5.7.43, 5.7.52.

⁵⁷ 436a–441c; 602c–603b, 604b–605c; 611b–612a.

the mind as our real self.⁵⁸ Given this variety of models within Platonic and Aristotelian writings, and thus the absence of a single ‘orthodox’, Platonic or Aristotelian doctrine on this subject, it is less surprising that Chrysippus (or Zeno) might have felt no particular need to render explicit their differences from these earlier philosophical models, real though these differences are.

This raises the larger question of the relationship in general between early Stoic thought and, particularly, Platonic thought. Zeno is presented in the ancient sources as the pupil of the Platonist Polemo (along with thinkers of other schools). Socrates is also pictured in a wide variety of types of evidence as a kind of pre-founder of Stoic philosophy. A good deal of recent scholarship has been devoted to trying to reconstruct the Stoic picture (or pictures) of Socrates and to tracing the influence of Socratic–Platonic philosophy on the formation of Stoic thought. It is becoming clear that, in general, Platonic thought exercised a powerful influence on the evolution of Stoic philosophy.⁵⁹ The Stoic world-view, for instance, seems to represent a more naturalized version of the providential picture of the universe offered in Plato’s *Timaeus*.⁶⁰ I have suggested elsewhere that this influence may extend, in certain respects, to psychology.⁶¹ Despite the obvious contrast between the account of psychic division in *Republic* Book Four and Stoic psychology, certain aspects of Platonic psychology may have been seen by early Stoics as more congenial and suggestive. These include the idea of justice (and virtue generally) as a ‘harmony’ of the parts of the psyche and indications of close integration between different psychic functions in *Republic* Books

⁵⁸ I.13, esp. 1102b13–1103a3 (bipartite model); *EN* 3.2 (anger–appetite contrast as regards motivation), 7.6 (anger–appetite contrast as regards incontinence; 10.7, esp. 1177b30–1178a3 (mind as real self).

⁵⁹ See, e.g. Long, *Stoic Studies*, ch. 1, esp. 1–8; *Epictetus: A Stoic and Socratic Guide to Life* (Oxford: Oxford University Press, 2002), ch. 3; P. A. Vander Waerdt (ed.), *The Socratic Movement* (Ithaca: Cornell University Press, 1994), part 2.

⁶⁰ See further G. Reydam-Schils, *Demiurge and Providence: Stoic and Platonist Readings of Plato’s Timaeus* (Turnhout: Brepols, 1999), chs. 1–2; D. N. Sedley, ‘The Origins of Stoic God’, in D. Frede and A. Laks (eds.), *Traditions of Theology: Studies in Hellenistic Theology, its Background and Aftermath* (Leiden: Brill: 2002), which also stresses the importance of Polemo as a link between Platonic and Stoic thought.

⁶¹ C. Gill, Galen versus Chrysippus on the Tripartite Psyche in *Timaeus* 69–72’, in T. Calvo and L. Brisson (eds.), *Interpreting the Timaeus and the Critias* (St Augustin: Academia Verlag, 1997), 267–73, on the tripartite psyche in *Timaeus* 69–72 and Stoicism; C. Gill, ‘The Body’s Fault? Plato’s *Timaeus* on Psychic Illness’, in M. R. Wright (ed.), *Reason and Necessity in Plato’s Timaeus* (London: Classical Press of Wales/Duckworth, 2000), 59–84, esp. 73–7, on the mind–body relationship; for a different but parallel approach (Stoic psychology and Plato’s *Phaedo*), see D. N. Sedley, ‘Chrysippus on Psychophysical Causality’, in J. Brunschwig and M. C. Nussbaum (eds.), *Passions and Perceptions: Studies in Hellenistic Philosophy of Mind* (Cambridge: Cambridge University Press, 1993), 313–31. See also Gill, ‘Did Galen...?’, 130–7 (key Platonic passages cited in nn. 55–6 below).

Eight and Nine.⁶² Also suggestive in those books of the *Republic* are the ideas that all psychic states other than the ideal are in some way internally conflicted and that the development of a defective state of character implies the ‘rejection’ of reason, both ideas which prefigure distinctive aspects of Stoic thinking on emotion.⁶³ If I am right to see ways in which Platonic thought thus prefigured (and may have helped to inspire) the early Stoic model, this provides a further explanation why Zeno and Chrysippus may not have felt the need to articulate their differences in other respects from Platonic thinking about psychology.

Special care is needed in seeking to reconstruct the nature of the relationship between the Stoics and earlier philosophy, especially that of Plato, and also to differentiate the phases of this relationship. Although the nature of our sources does not make it easy to us to form a clear view on this point, it does not look as though the early Stoics, typically, saw themselves as *commentators* on the Platonic texts. The ideas of some Platonic texts were explicitly rejected (notably the class-based political ideal of the *Republic*);⁶⁴ but, on other points, the early Stoics seem to have adopted some ideas and ignored others, whether based on the dialogues or indirect sources, without necessarily feeling the need to render this process explicit. Their primary concern, it seems, lay in constructing their own theory, using a variety of earlier ideas and materials as sources of inspiration, rather than in specifying what was or was not different from previous theories. We can link this suggestion about their working methods with some points made earlier about the main lines of their philosophy. I suggested earlier (p. 45 above) that in Stoicism (as also in Epicureanism), we find a seemingly paradoxical combination of a holistic conception of personality and a naturalistic world-view with the idealization of time-independent perfection and freedom from emotion. This combination can be linked, as far as the early Stoics go, with their relationship to Socratic–Platonic philosophy. It seems that, from an early period, they adopted certain of what they saw as ‘Socratic’ ideas, including the ideal of freedom from emotional surrender and the belief that the achievement of virtue is within the reach of all of us through personal agency.⁶⁵ But they adopted these ideas in a form that was both

⁶² *Republic* 442c10–d1, 443d–e; 549c–550b, 553b–d, 559e–561d, 572c–573c.

⁶³ *Republic* 549e–550b, 553a–d, 560c–d; 553d3–4, 561b–c.

⁶⁴ See M. Schofield, ‘Epicurean and Stoic Political Thought’, in C. Rowe and M. Schofield (eds.), *The Cambridge History of Greek and Roman Political Thought* (Cambridge: Cambridge University Press, 2000), 435–56, at 444.

⁶⁵ For Socrates as paradigm of emotion-free calm, see, e.g. *Pl. Ap.* 29d–30e, 32b–e, *Phd.* 115a–118a (imperviousness to fear), *Smp.* 217a–219d (imperviousness to sexual appetite), *Xen. Mem.* 2.1.1; the idea that virtue is within our power is implied in the use of dialectic (with anyone) to promote enquiry into virtue as the means of acquiring it (see, e.g. *Ap.* 29d–e).

more systematic and more naturalistic, including, for instance, the idea of natural human development towards complete wisdom, and thus towards a recognition of the ‘indifference’ of things other than goodness.⁶⁶ It seems highly likely that, in constructing this more systematic and naturalistic version of Socratic ideas, they drew on aspects of Platonic (and also Aristotelian) thought such as those outlined earlier.⁶⁷ But their focus, probably, was on the distinctive character and coherence of the philosophy they were constructing out of these, and other, materials, and not on commenting explicitly on what they did or did not adopt.

The position seems to be rather different with some later Stoics, notably Panaetius and Posidonius. They lived at a period of culture in which the transmission of, and commentary on, texts from an earlier period, including those of Plato and Aristotle, was becoming a more important part of philosophical activity. Their later reputation as ‘lovers of Plato and Aristotle’ may reflect, in part at least, their participation in this process.⁶⁸ In the case of Posidonius’ thinking on emotions, it is clear (in a way that is not clear as regards Chrysippus) that, in offering his own ideas, he refers explicitly to certain Platonic texts, especially the account of the formation of character in early childhood and through education in Book Four of the *Laws*.⁶⁹ Galen, of course, presents this process as one in which Posidonius rejected Stoic, or at least Chrysippus’, theory of emotions and adopted the Platonic tripartite model in its place, though no other ancient source presents Posidonius as radically rejecting orthodox Stoicism in this way.⁷⁰ But a quite different interpretation is possible, particularly if we adopt the account of Posidonius’ innovations outlined earlier (p. 457 above), as centring on the introduction of the idea of emotional movements. This is that Posidonius, unlike Chrysippus, discussed explicitly the relationship between Stoic theory (including his contributions to this) and the Platonic texts. More precisely, I think that what Posidonius may have been doing, in part, was *translating Platonic ideas into Stoic form* (the reverse of the way that Galen pictures the position). If we look closely at the relevant passages, it seems to me quite possible that Posidonius was showing how ideas such as the charioteer-horse image in the *Phaedrus*, or the tripartite psyche in general, made more philosophical sense if understood in Stoic terms, particularly

⁶⁶ For Stoics as offering a more systematic and naturalistic account of key principles of Socratic–Platonic ethics, see Algra at al., *Cambridge History*, 687–90 (also 683–4).

⁶⁷ See text to nn. 59–63 above; comparable Aristotelian ideas include virtue as internal ‘harmony’ (*NE* 1102b26–8, 1119b15–18).

⁶⁸ See, e.g. Panaetius fr. I, lxi van Straaten, see further D. N. Sedley, ‘The School from Zeno to Arius Didymus’, in B. Inwood (ed.), *The Cambridge Companion to the Stoics* (Cambridge: Cambridge University Press, 2003), 7–32, at 20–4.

⁶⁹ Gal. *PHP* 5.5.30–2; also 4.7.23, 5.6.19–22.

⁷⁰ Cooper stresses this point, ‘Posidonius’, 72, and references in n. 5.

when his suggestions about emotional movements were taken into account.⁷¹ This is a more plausible project for the Head of the Stoic School in his day to have engaged in than the root-and-branch rejection of previous Stoic theory ascribed to him by Galen; and one that is, as I say, compatible with several of the passages that Galen himself cites in this connection.⁷²

Is this the point at which the contrast between part-based and monistic conceptions of the psyche became defined as an issue? This is not likely, on the view I am suggesting. It is more likely, I think, that Posidonius, like Chrysippus before him, highlighted similarities between Platonic and Stoic thought without seeing the two thought-patterns involved as fundamentally opposed. The difference between Posidonius and Chrysippus, in this respect, was probably only that Posidonius was more explicit about the relationship between the two theories (Platonic and Stoic) as well as being explicit about his modifications of Chrysippus' theory. Support for the idea that this had not yet become an explicit issue of debate can be found in Cicero. Cicero, twice, when discussing Stoic theory, uses language which seems more appropriate to a part-based psychological model such as Plato's.⁷³ Why does Cicero not see the inconsistency? Various reasons have been suggested for Cicero's usage.⁷⁴ But a plausible one, which has not yet been considered, as far as I am aware, is that Cicero conflates the two kinds of model because the contrast between them had not yet been defined as an explicit issue. In the relevant passages, it seems likely that Cicero is drawing on Panaetius and Posidonius, so his failure to mark the difference indicates that they too had not marked this as an

⁷¹ See Gal. *PHP* 5.6.31–2, 5.5.34–5; this reinterpretation of Platonic imagery is more likely if Chrysippus had initiated this process, as suggested in Gill, 'Did Galen ...?', 136–7, following A. W. Price, *Mental Conflict* (London: Routledge, 1995), 150. This reinterpretation (by Chrysippus or Posidonius) may have influenced the use of horse-imagery in the account of emotion in Stob. 2.89.6–9.

⁷² Thus, Posidonius, in discussing Platonic treatments of childhood and early education (refs. in n. 62 above), may have reinterpreted Plato's ideas in terms of Stoic ideas about *oikeiōsis*, in particular, the idea that non-human animals and human children respond only with emotional movements but that humans are naturally adapted to respond with increasing rationality; see Gal. *PHP* 5.5.29, 33–5, also 5.6.37–8, taken with Gill, 'Did Galen ...?', 128–30. In 5.6.21–2, it may be significant that those affected by the two types of music are both young and drunk, and hence more liable to be influenced by emotional movements (though potentially capable of developing rationality). For Sorabji's discussion of some of these passages, see *Emotion*, 96, 130.

⁷³ Cic. *Off.* 1.101, 132, 2.8, *Tusc.* 4.10–11.

⁷⁴ He was influenced by Posidonius' (explicitly part-based model), Inwood, *Ethics*, 140–1, Sorabji *Emotion*, 103; he is deliberately employing the language of Platonic dualism, which reflects his Academic (Platonic) intellectual affiliation. C. Lévy, *Cicero Academicus. Recherches sur 'Les Académiques' et sur la philosophie cicéronienne* (Rome: École Française de Rome, 1992), 472–80.

issue.⁷⁵ Indeed, Cicero may be following texts which adopt the policy I have ascribed to Posidonius, of reading Platonic ideas and texts in terms of Stoic psychology. The difference in Cicero's report of Antiochus' account of ethical issues is very marked; here, the difference between the Platonic-Aristotelian and the Stoic positions, as Antiochus presents this, is explicit and is made the basis of sustained polemical debate.⁷⁶ Cicero's failure to isolate the psychological issue is also very striking, in view of the fact that he makes much of the related question whether emotions should be moderated (the Platonic-Aristotelian view) or extirpated (the Stoic one).⁷⁷ It seems extraordinary that Cicero does not pick up the correlated issue of the contrast between part-based and holistic conceptions of personality; yet this seems to be the case.

In Seneca's *On Anger*, we also find that the contrast between the moderation and the extirpation of emotions is a major issue of debate, but it is not explicitly linked with the correlated contrast between models of personality.⁷⁸ In *On Anger* 1.7.2–3 Seneca makes comments which are compatible with either a unitary or a bipartite model.⁷⁹ In Letter 92, which argues at length the central Stoic ethical claim that virtue is sufficient for happiness (including peace of mind), Seneca offers without comment a bipartite (1) and tripartite (8) model of mind. The issue about monistic conceptions of the *psuchē* might be seen as implicit in the three-stage analysis of emotion in *On Anger* 2.2–4, but only if we take it that reference to pre-emotions implies an allusion to a non-rational part of the psyche, an inference that we do not have to draw from the passage.⁸⁰

The first text in which the issue is made explicit, as far as I am aware, is Plutarch's essay, *On Ethical Virtue*. Here, the contrast between the Platonic-Aristotelian (part-based) and Stoic (monistic) psychological models is wholly explicit and polemically argued about, from an anti-Stoic standpoint. It is also linked with a series of correlated contrasts, including that between the moderation and extirpation of emotions. That contrast is then taken up in the next century by Galen (*De Placitis Hippocratis et Platonis* [PHP] 4–5) who argues in similar terms, though

⁷⁵ This may also be the explanation for Arius' use of dualistic language in his (otherwise largely orthodox) account of the Stoic theory of emotion, discussed further in Inwood, *Ethics*, 142–3.

⁷⁶ Cic. *Fin.* 4–5, esp. 4.2, 14–15, 19–23, 5.67–75, 77–95; see further J. Annas, *The Morality of Happiness* (Oxford: Oxford University Press, 1993), 180–7, 419–23.

⁷⁷ See, e.g. Cic. *Tusc.* 4.41–2, 39, 57, noted in Sorabji, *Emotion*, 208–9.

⁷⁸ Sen. *On Anger* 1.7, 9–10, 3.6.1–2. Seneca, like Cicero, adopts the Stoic approach on this issue.

⁷⁹ We are told that reason (*ratio*) remains in control (*potens*) only if it is kept separate from emotions (*adfectus*), and that, when 'mingled' with them, it becomes their slave.

⁸⁰ Sen. *On Anger* 2.3.5, 2.4.1–2. Sorabji, *Emotions*, 72, sees allusions in the whole passage (2.2–4) to Posidonius' theory, though to his claims about animals, music, and tears, rather than to his alleged part-based psychology.

focusing on the contrast between a tripartite (rather than bipartite) and monistic model and combining it with his distinctive synthesis between Platonic–Aristotelian and medical ideas.⁸¹

Why does this conflict become explicit for the first time only in Plutarch? I do not think that the answer lies in anything peculiar to Plutarch, and would not be surprised to learn of other, earlier statements of the issue.⁸² But I think it is clear why this issue should be made explicit by Plutarch, and taken up also by Galen. Plutarch is one of the earlier thinkers in the broad movement we call ‘Middle Platonism’, which falls between the post-Platonic Academy and Neoplatonism. The movements which precede and follow Middle Platonism (in this respect like Stoicism) focus on the creative evolution of new ideas, based in part on Platonic writings or thought, as they understood these. Middle Platonism, though not uncreative in its own way, has a more explicitly doctrinal, even doctrinaire, focus. There is a prevalent concern to distinguish and defend distinctively Platonic ideas from those of other schools, including the influential Stoic school. (This concern coexists with an extremely broad and varied view of what should count as distinctively Platonic.)⁸³ This focus is apparent from Antiochus onwards, whose interests centred on categories of value and ethical development. Plutarch is the first thinker, as far as I know, who extends this concern to ethical psychology, and who argued strongly in *On Ethical Virtue* for the Platonic–Aristotelian part-based model against the Stoic unitary view.⁸⁴ He is followed by Galen, in *PHP*, who has his own intellectual reasons for arguing for the Platonic–Aristotelian model against the Stoic theory.

The essays in which these thinkers present this opposition, particularly Galen, *PHP* Books 4–5, are the richest and most important sources for the Stoic theory of emotions. But, if the view I have just been arguing is correct, they are not simply, as is evident, intellectual opponents and critical reporters of the theory but also import a more subtle form of misrepresentation. This is that they (particularly Galen) depict the con-

⁸¹ See further J. Hankinson, ‘Galen’s Anatomy of the Soul’, *Phronesis* 36 (1991), 197–233; T. Tieleman, *Galen and Chrysippus on the Soul* (Leiden: Brill, 1996), on *PHP* 2–3.

⁸² However, the passages (other than Plutarch) cited in Inwood, *Ethics*, 139–43, in connection with this subject, do not seem to me to treat it as a fully explicit issue of debate.

⁸³ On this movement, see J. Dillon, *The Middle Platonists* (London: Duckworth, 1977; 2nd edn. 1995); on questions of doctrine and eclecticism in this period, see J. Dillon and A. A. Long (eds.), *The Question of ‘Eclecticism’: Studies in Later Greek Philosophy* (Berkeley: University of California Press, 1988), and G. Boys-Stones, *Post-Hellenistic Philosophy: A Study of its Development from the Stoics to Origen* (Oxford: Oxford University Press, 2001), esp. ch. 7.

⁸⁴ Antiochus, as reported by Cicero, *Fin.* 4.26–39, esp. 26–8, criticizes the Stoics for an excessively rationalistic or intellectualist conception of human nature (for treating the mind as if it were the whole person), but does not make it explicit, as Plutarch does, that two quite different models of personality are involved.

flict between part-based and monistic psychological models, which they are the first to make into an explicit issue, as already a well-recognized subject of debate from the early Stoics onwards. In this way, they offer an anachronistic picture of the formation of the Stoic theory (of Chrysippus' response to Plato, for instance) and also of Posidonius' debate with Chrysippus and his use of Platonic ideas (pp. 460–4 above). I am not saying that this distortion was deliberate; Plutarch and Galen simply projected backwards an awareness of a conflict which they had themselves articulated. If this is so, the Middle Platonic picture of ancient debate about emotions introduces a subtly misleading emphasis; and it will be a matter of considerable scholarly work to explore fully the significance of this emphasis and to uncover a view of the ancient debate which is not coloured by this distortion.

Conclusion

My account of the history of the ancient debate is quite different from that of Richard Sorabji, who accepts, in broad terms, the validity of Galen's picture, including his presentation of the debate as an explicit conflict between different types of model, from at least Chrysippus onwards. Also, as suggested earlier, Sorabji's reservations about the credibility of Stoic thinking (at least in its Chrysippian version), as a psychological model and as a basis for therapy, show that he shares the scepticism of Plutarch and Galen about the apparently over-intellectualist character of the theory, whereas I find the Stoic theory (above all, that of Chrysippus) more convincing than that of its ancient opponents and also see it as holistic and comprehensive rather than narrowly intellectualist. However, I hope it is also clear from this discussion how much I, like many others, have benefited from Richard Sorabji's thoughtful, precise, and powerfully argued reconstruction of the theory and of ancient debate. Although I have tried to offer what seems to me a credible account, I am all too aware of its limitations and of the potential counter-arguments. What I want, above all, to convey is the enormous stimulus that Richard Sorabji's work has been to the exploration of the richness and complexity of this material and my hope that our readings, suggestively different as they are, may serve as a comparable stimulus for others.

Additional Note

Since the preparation of this chapter, an important new book on the Stoic theory of the passions has been published: Teun Tieleman, *Chrysippus On*

Affections: Reconstruction and Interpretation (Leiden: Brill, 2003). The main findings are worth noting here, as an indication of continuing debate on this topic. As I do in the preceding chapter, Tieleman takes a sceptical view of Galen's report of the Stoic theory and thinks that Galen greatly overstates the differences between Stoic thinkers on this question, especially Posidonius' differences from Chrysippus. He explores fully the idea suggested briefly here, that Posidonius reinterprets Platonic ideas in the light of orthodox Stoic thinking (ch. 5). Tieleman also shares my view that Chrysippus' theory is a coherent synthesis of psychophysical and cognitive approaches, rather than being implausibly intellectualist (ch. 3). In the attempt to reconstruct an alternative history of ancient debate on this topic to that offered by Galen, Tieleman stresses the role of ancient doxography in providing the categories which, increasingly, shaped ancient thought on this topic. Tieleman's book, while offering a quite different interpretation from that of Richard Sorabji, underlines further the significance of the Stoic theory and the complexity of the intellectual and evidential issues that this raises.⁸⁵

Bibliography

- ALGRA, K., BARNES, J., MANSFELD, J., and SCHOWELD, M. (eds.), *The Cambridge History of Hellenistic Philosophy* (Cambridge: Cambridge University Press, 1999).
- ANNAS, J., *The Morality of Happiness* (Oxford: Oxford University Press, 1993).
- BOYS-STONES, G. R., *Post-Hellenistic Philosophy: A Study of its Development from the Stoics to Origen* (Oxford: Oxford University Press, 2001).
- BRENNAN, T., 'The Old Stoic Theory of Emotions', in Sihvola and Engberg-Pedersen (1998), 21–70.
- BRUNDSCHWIG, J. and NUSSBAUM, M. C. (eds.), *Passions and Perceptions: Studies in Hellenistic Philosophy of Mind* (Cambridge: Cambridge University Press, 1993).
- COOPER, J., 'Posidonius on Emotions', in Sihvola and Engberg-Pedersen (1998), 71–111.
- DE LACY, P. (ed. and trans.), *Galen: De Placitis Hippocratis et Platonis*, 3 vols. (Berlin: De Gruyter, 1979–84).
- DILLON, J., *The Middle Platonists* (London: Duckworth, 1977, 2nd edn. 1995).
- DILLON, J. and LONG, A. A. (eds.), *The Question of 'Eclecticism': Studies in Later Greek Philosophy* (Berkeley: University of California Press, 1988).
- FILLION-LAHILLE, J., *Le 'De Ira' de Sénèque et la philosophie stoïcienne des passions* (Paris: Klincksieck, 1984).

⁸⁵ I am grateful for very helpful comments on an earlier version of this chapter from Ricardo Salles and Brad Inwood; also to Anthony Price, for sharing with me his interesting and relevant chapter in the volume.

- FREDE, M., 'On the Stoic Conception of the Good', in K. Ieradiakonou (ed.), *Topics in Stoic Philosophy* (Oxford: Oxford University Press, 1999), 71–94.
- GILL, C., 'Did Chrysippus understand Medea?', *Phronesis* 28 (1983), 136–49.
- *Personality in Greek Epic, Tragedy, and Philosophy: The Self in Dialogue* (Oxford: Oxford University Press, 1996).
- 'Galen versus Chrysippus on the Tripartite Psyche in *Timaeus* 69–72', in T. Calvo and L. Brisson (eds.), *Interpreting the Timaeus and the Critias* (Saint Augustin: Academia Verlag, 1997), 267–73.
- 'Did Galen understand Platonic and Stoic Thinking on Emotions?', in Sihvola and Engberg-Pedersen (1998), 113–48.
- 'The Body's Fault? Plato's *Timaeus* on Psychic Illness', in M. R. Wright (ed.), *Reason and Necessity in Plato's Timaeus* (London: Classical Press of Wales/Duckworth, 2000), 59–84.
- 'The Stoic Theory of Ethical Development: In What Sense is Nature a Norm?', in J. Szaif (ed.), *Human Nature and the Good* (Berlin: De Gruyter, forthcoming).
- *The Structured Self in Hellenistic and Roman Thought* (Oxford: Oxford University Press, forthcoming).
- GRAVER, M., Review of R. Sorabji, *Emotion and Peace of Mind, Ancient Philosophy* 22 (2002), 225–34.
- HANKINSON, J., 'Galen's Anatomy of the Soul', *Phronesis* 36 (1991), 197–233.
- INWOOD, B., *Ethics and Human Action in Early Stoicism* (Oxford: Oxford University Press, 1985).
- 'Seneca and Psychological Dualism', in Brunschwig and Nussbaum (1993), 150–83.
- KERFERD, G., 'What does the Wise Man Know?', in J. Rist (ed.), *The Stoics* (Berkeley: University of California Press, 1978), 125–36.
- LÉVY, C., *Cicero Academicus: Recherches sur 'Les Académiques' et sur la philosophie cicéronienne* (Rome: École Française de Rome, 1992).
- LONG, A. A., *Stoic Studies* (Cambridge: Cambridge University Press, 1996).
- *Epictetus: A Stoic and Socratic Guide to Life* (Oxford: Oxford University Press, 2002).
- LONG, A. A. and SEDLEY, D. N., *The Hellenistic Philosophers* (Cambridge: Cambridge University Press, 1987) (=LS).
- PRICE, A. W., *Mental Conflict* (London: Routledge, 1995).
- REYDAM-SCHILS, G., *Demiurge and Providence: Stoic and Platonist Readings of Plato's Timaeus* (Turnhout: Brepols, 1999).
- SCHOFIELD, M., 'Epicurean and Stoic Political Thought', in C. Rowe and M. Schofield (eds.), *The Cambridge History of Greek and Roman Political Thought* (Cambridge: Cambridge University Press, 2000), 435–56.
- SEDLEY, D. N., 'Chrysippus on Psychophysical Causality', in Brunschwig and Nussbaum (1993), 313–31.
- 'The Origins of Stoic God', in D. Frede and A. Laks (eds.), *Traditions of Theology: Studies in Hellenistic Theology, its Background and Aftermath* (Leiden: Brill, 2002), 41–83.

- SEDLEY, D. N., 'The School from Zeno to Arius Didymus', in B. Inwood (ed.), *The Cambridge Companion to the Stoics* (Cambridge: Cambridge University Press, forthcoming).
- SIHVOLA, J. and ENGBERG-PEDERSEN, T. (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht: Kluwer, 1998).
- SORABJI, R. (ed.), *Aristotle and After* (*Bulletin of the Institute of Classical Studies*, suppl. 68, 1997).
- SORABJI, R., 'Chrysippus—Posidonius—Seneca: A High-Level Debate on Emotions', in Sihvola and Engberg-Pedersen (1998), 149–69.
— *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford: Oxford University Press, 2000).
- STRIKER, G., *Essays on Hellenistic Epistemology and Ethics* (Cambridge: Cambridge University Press, 1996).
- SZAIFF, J. and LUTZ-BACHMAN, M. (eds.), *What is Good for a Human Being? Human Nature and Values* (Berlin and New York: De Gruyter), 101–25.
- TIELEMANN, T., *Galen and Chrysippus on the Soul* (Leiden: Brill, 1996).
- VANDER WAERDT, P. A. (ed.), *The Socratic Movement* (Ithaca: Cornell University Press, 1994).

Were Zeno and Chrysippus at Odds in Analysing Emotion?

A. W. PRICE

It is my loss to have coincided with Richard Sorabji in London for only a few years. The memories that I most treasure are of a unique style of seminar. Each occasion opened with the circulation of a generous hand-out of generally unfamiliar texts and translations. Richard would then invite us to think on our feet as he led us through them, not directing us how to read them, not pressing upon us some new and newly distorting interpretation, but recruiting us as volunteers in a voyage of shared discovery. His self-restraint and encouragement of others generated discussions as exhilarating and collaborative as any that I have known.

What was Richard keeping back? One of his salient abilities is to marshal a mass of textual evidence within a broad, yet robust narrative.¹ It may not be unduly sceptical to suggest that the point of attempting such an account, in the history of philosophy as within history in general, is not to put an end to discussion but to lend it a focus. It is in display of indebtedness that I shall now try out an alternative to a small fragment of the grand conception that structures Richard's most recent and not least magisterial study, *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation (EPM)*.²

¹ A fine example is the survey of Greek theories of sense perception that forms the first section of 'Intentionality and Physiological Processes: Aristotle's Account of Sense-Perception', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford: Clarendon Press, 1992), 195–225.

² (Oxford: Oxford University Press, 2000). In this essay I shall follow Sorabji in translating *pathos* as 'emotion', rather than 'passion' or 'affection'. This has the advantage of marking a commonality of topic between the Stoics and our contemporaries. But we have to remember that the Stoics also recognized, and approved, certain *eupatheiai* (such as joy) that we would class as emotions, but which they did not class as *pathē*. Here I shall always mean by 'emotion' what the Stoics counted as *pathos*. One must further remember that a *pathos* is an episode, and not a disposition.

I

Emotion is a complex phenomenon, which may have met its match in the intricacy of Stoic moral psychology. The Stoics denied the passivity connoted by the very term *pathos* (cognate with *pathein* = ‘to suffer’), and analysed emotion according to the structure of their philosophy of action, which may be presented as follows:³

- (i) An impression (*phantasia*) that presents a proposition (an assertoric ‘sayable’ or *lekton*).
- (ii) An assent (*sunkatathesis*) to the proposition presented.
- (iii) An impulse (*hormē*), which may be conceived of as a self-addressed command (Plutarch, *De Stoicorum Repugnantiis* 1037F = *Stoicorum Veterum Fragmenta* [SVF] 3.42.4–6 = LS 53R).⁴ If the assent is to the proposition that it is appropriate to φ , the command to oneself is to φ , and the impulse is towards the predicatively identified attribute φ -ing (*katēgorēma*, Stobaeus, SVF 3.91, 3.171; Cicero, *Tusculan Disputations* (*Tusc.*) 4.21 = SVF 3.398).
- (iv) The action or activity of φ -ing.

One must note two things. First, the four elements are not independent but cumulative: each depends for its existence upon its predecessor. Secondly, some of the elements differ not numerically but notionally; thus Arius reports, ‘All impulses are acts of assent’ (Stobaeus, SVF 3.40.27–8 = LS 33I1). The schema applies most lucidly to the two better articulated Stoic genera of emotion, pleasure and distress. (I shall turn later to the other two genera, fear and appetite.) Cicero defines distress as ‘a fresh opinion that an evil is present at which one thinks it right to lower and contract the soul’, pleasure as ‘a fresh opinion that a good is present at which one thinks it right to be elated’ (*Tusc.* 4.14).⁵ Associated with each, there are (i) impressions of the presence of good or evil, and of the appropriateness of a reaction of elation or of contraction; (ii) an assent to the propositions presented; (iii) an impulse directed towards elation or contraction; and (iv) an elation or contraction according to impulse.

However, Galen is generally confident that Zeno and Chrysippus were at odds about where exactly to locate the emotion within this schema. As he reports, Zeno identified occurrent emotions with psychophysical

³ More fully, see my *Mental Conflict* (London: Routledge, 1995), 146–9.

⁴ ‘LS’ denotes A. A. Long and D. N. Sedley, *The Hellenistic Philosophers*, 2 vols. (Cambridge: Cambridge University Press, 1987). I shall often make use of their translations.

⁵ I adapt my renderings from Margaret Graver’s new translation and commentary, *Cicero on the Emotions: Tusculan Disputations 3 and 4* (Chicago: Chicago University Press, 2002).

movements attending on judgements, whereas Chrysippus identified them with the judgements themselves.⁶ Sorabji agrees with Galen that this was a real disagreement, and not, say, just a variation in focus. If so, Zeno places pleasure and distress under (iv), Chrysippus under (ii), and they deny that anything can belong to both. Sorabji takes them to agree that the emotions are impulses, falling under (iii), but to identify these divergently either with judgements (as in Arius), or (in his view more problematically) with psychophysical movements (*EPM*, 64–5).⁷ My question is: is this right?

In my view, the mischief comes of Galen's insistence that Zeno and Chrysippus were in real disagreement when Zeno identified emotions with psychophysical movements, but Chrysippus with judgements. Consequently, he has to find it self-contradictory of Chrysippus at times to identify emotions with contractions and the like (*PHP* 4.2.4–5, cf. 3.7.4); and he should equally have reprehended Zeno for oral definitions of emotions in terms of belief (4.7.2–3). Yet we may reasonably prefer to apply an interpretative principle of charity. All our sources confirm that two characterizations of emotion were standard: 'irrational and unnatural movement of soul' (*alogos kai para phusin psychēs kinēsis*) and 'excessive impulse' (*pleonazousa hormē*).⁸ Tad Brennan has suggested that we should ascribe to Zeno himself only specifications of these to capture different species of emotion.⁹ But then we seem to lose what, beyond a dim view of the emotions, is distinctively Stoic. Cicero should not be disbelieved when he credits Zeno with contradicting 'the ancients' in maintaining that 'even the emotions were voluntary, and entered into by a judgement of opinion' (*Academica* 1.39, cf. *Tusc.* 4.14). And then it is surely likely that he already differentiated species of emotion in part through distinguishing kinds of judgement.¹⁰ This leaves possible a fine point of divergence: Zeno might have identified emotions with causal

⁶ *De placitis Hippocratis et Platonis* (*PHP*), 4.3.1–2, 5.1.4. I shall generally adapt my translations from Phillip de Lacy, 2nd edn. (3 vols.; Berlin: Akademie-Verlag, 1984). However, it is striking that at 5.6.42 Galen appears to admit alternative readings of Zeno, one aligning him with Chrysippus, though *he* believes his position to have been intermediate between that of Chrysippus and Platonism.

⁷ Sorabji comments on Zeno: 'How they [emotions] can be impulses as well as expansions or contractions is never clarified, since later Stoics at least did not consider expansions and contractions to be impulses' (*EPM*, 65). Yet we shall see that the definitions of fear and appetite given by pseudo-Andronicus (*SVF* 3.391 = LS 65B) are happy to alternate the language of psychophysical movements (shrinking or stretching) with that of impulse (avoidance or pursuit).

⁸ For Zeno, see *SVF* 1.205–6; for Chrysippus, *PHP* 4.2.8, 4.2.18 (an actual quotation).

⁹ 'The Old Stoic Theory of Emotions', in J. Sihvola and T. Engberg-Pedersen (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht: Kluwer, 1998), 21–70; 59–60, n. 19.

¹⁰ Cf. the four species of distress that are distinguished by their intentional objects at Diogenes Laertius (*DL*) 7.111–12.

complexes wherein contractions and the like follow upon opinions, whereas Chrysippus might have thought that opinion of a kind constitutes emotion even before it causes (even if it always *does* cause) contraction or the like.¹¹ However, we must remember that, being materialists about the mind, the Stoics must identify emotions with bodily states. Of course we can distinguish within these: perhaps, in Zeno, bodily states constituting judgements are always distinct from bodily states, such as contractions, constituting or completing emotions; possibly, in Chrysippus, a bodily state constituting the opinion that a contraction is appropriate is always distinct from the contraction itself. But even bodily states are not to be multiplied *praeter necessitatem*.

A reconsideration may start from another look at a preposition that recurs in Galen: within distress, Chrysippus takes the impulse to be 'towards' the contraction (*epi* with the accusative; *PHP* 4.7.14, an actual quote), while Zeno held emotions to follow or depend or supervene 'upon' judgements (*epi* with the dative, either on its own or within *epigignesthai*; 4.1.17, 4.3.2, 5.1.4, 5.6.42). Must we suppose that *epi* here connotes a Humean causal relation between two distinct events (with different grammatical cases after *epi* indicating different directions of causation)?¹² It may rather indicate an explanatory relation that resembles a causal one in being asymmetrical (in the manner in which *a* is *epi b*, *b* cannot also be *epi a*), but need not hold between distinct existences (*a* and *b* may be aspects of a single complex but unitary state). We have to reconcile the Stoics' general materialism (every mental entity is also a physical one) with their voluntarism about emotion (emotion is attributable to misplaced assent). They went so far as to argue that the soul *is* a body (Nemesius, *SVF* 1.518 = LS 45C, *SVF* 2.790 = LS 45D). So by 'irrational and unnatural movement of soul' Zeno and Chrysippus have in mind not some mental abstraction that may be called 'movement' by metaphor, but the concrete reality of contractions (and the like) that are embodiments of intentionality.¹³ By alternately using that phrase and

¹¹ Thus Sorabji's Chrysippus concedes that contraction, though not a constituent of distress, is a necessary concomitant (*EPM*, 36).

¹² My eyes were opened to this question by a sentence in Graver's salutary review of *EPM*: 'What accords with Stoic materialism is not a model in which a strictly-mental and a strictly-corporeal event interact causally; rather, we should expect to see a single event which may be described either in intentional or in psychophysical terms' (with a note mentioning Galen's *epigignesthai*); *Ancient Philosophy* 22 (2002), 225–34; 229. Jackie Pigeaud had previously conveyed Chrysippus' monism by a metaphor: 'Il s'agit d'un seul et même acte; la passion est constituée de ce *recto-verso* indissociable du jugement et du mouvement de la contraction, ou de la dilatation'; *La Maladie de l'âme* (Paris: Les Belles Lettres, 1989), 267.

¹³ On the psychophysicality of Chrysippus' very vocabulary, see Sedley, 'Chrysippus on Psychophysical Causality', in J. Brunschwig and M. C. Nussbaum (eds.), *Passions and*

‘excessive impulse’ to characterize emotion they already indicate that the contraction within distress is intimately and internally related to the impulse: each exists in a close but asymmetrical relation to the other, the impulse (we may say) *informing* the contraction, the contraction *realizing* the impulse. Hence they invite us to analyse emotion as a psychophysical union of intentionality and physiology, while emphasizing that it is psychic assent that forms the locus of the subject’s responsibility for his own emotions. The crux is to recognize that distress and pleasure contain an internal cross-reference: distress is opinion-cum-contraction, pleasure opinion-cum-swelling, with the opinion prescribing the very movement that realizes it.¹⁴

These movements involve *feelings* apt to the judgements and impulses that they realize. A ‘biting’ accompanies distress (*PHP* 2.8.4, 2.8.18). Different misfortunes may even register differently, if it is not for purely verbal variation that Cicero writes that poverty ‘bites’ and disgrace ‘stings’ (*paupertas momordit, et ignominia pupugit, Tusc.* 3.82). It is clear from Galen that Chrysippus argued from the felt location of such sensations (that is, movements of soul *qua* conscious) that the heart is indeed the central organ of thought and consciousness (as Aristotle also believed, but Plato and Galen did not). Galen quotes him as follows:

[Men] have, as it were, an inner awareness of the emotions according to thought happening to them in the region of the chest and especially the place assigned to the heart. This is especially so in distress and fear, in anger and inflamed anger most of all; for impressions arise in us as if it were vaporized from the heart and were pushing out against someone and were blowing into the face and hands. (*PHP* 3.1.25)

Here Chrysippus supposes that feeling a pang of emotion amounts to being aware in a way of the emotion itself. If a pang were merely a *symptom* of (say) distress, and so distinct from it, a pang in the heart would no more prove that the heart is the organ of distress than a blush on the cheek shows that the face is the organ of embarrassment.¹⁵

Perceptions: Studies in Hellenistic Philosophy of Mind (Cambridge: Cambridge University Press, 1993), 313–31; 325–31.

¹⁴ This is what I missed, to implausibly intricate effect, in *Mental Conflict*, 148–9 (where I was already concerned to reconcile our authors as best I could). Strictly, however, the contraction or swelling that occurs is a *token* (a particular event here and now or then and there), whereas the contraction or swelling that is prescribed is a *type* (contraction or swelling in circumstances like those obtaining here and now or then and there). So a more exact statement would be that each token depends upon a prescription of its type.

¹⁵ I write ‘being aware in a way’ to capture the force of the Greek *hōsanei sunaisthanomenoi*: the impression, though perceptual, is not infallible or ‘cataleptic’; so Teun Tieleman, *Galen and Chrysippus: Argument and Refutation in the De Placitis Books 2–3* (Utrecht: Department of Philosophy, 1992), 162–4. Sorabji mentions Tieleman, but infers instead (*EPM*, 39) that the movement that is perceived is not identical to the emotion itself. He

Difficult but further indicative is a passage that Galen quotes from Chrysippus (which I cite from LS, minimally changed and with their internal numbering):

(1) On the lessening of distress, the question might be asked how it occurs, whether because a particular opinion is altered, or with them all persisting, and for what reason this will be so ... (2) I think that this kind of opinion does persist—that what is actually present is something bad—but as it grows older the contraction and, as I take it, the impulse towards the contraction, lessen. (3) But perhaps even this persists, but the consequences will not correspond because a differently qualified character supervenes, which does not reason from those events. (4) So it is that people cease weeping and people weep who do not want to, when different impressions are created by external objects, and something or nothing stands in the way. (*PHP* 4.7.13–16 = LS 65O)

As an impulse can be identified with its correlated assent (Stobaeus, *SVF* 3.40.27–8 = LS 331I), an impulse towards a contraction is identical to a second opinion, that contraction is appropriate, which supplements a first opinion, that an evil is present. Whether (3) takes the two opinions to be sufficient for a contraction, or denies that they always suffice, is debated.¹⁶ I take it to be raising a contingency remoter, and more problematic, than that already treated by (2). This may be exemplified by the intervention of irrelevant considerations, such as distractions that take one's mind off the misfortune without changing one's mind by persuading one that a contraction is inappropriate. Then people may 'cease weeping... when different impressions are created by external objects' either because, as in (2), the impulse ceases, or because, as in (3), it somehow becomes ineffectual.¹⁷ And 'people weep who do not want to' when the weeping is

then cites on his side, as distinguishing *pain* that is perceived from *distress* that is not, a later passage, which he misleadingly quotes only up to de Lacy's semicolon: 'As when our foot hurts us or our head, the hurting occurs in our foot or head, just so we are conscious of the pain in distress as occurring in the chest; and it is not the case that distress is not a pain, or that it occurs in some place other than the control-centre of the soul' (*PHP* 3.7.4). The truncation saves Sorabji's argument—and sinks that of Chrysippus.

¹⁶ Contrast LS ad loc. (whom I follow) with Brad Inwood, *Ethics and Human Action in Early Stoicism* (Oxford: Clarendon Press, 1985), 149–51, and Christopher Gill, 'Platonic and Stoic Thinking on Emotions', in Sihvola and Engberg-Pedersen (eds.), 113–48; 121–2 (with nn.). It seems to me that, linguistically, the words *kai tautēs* at the start of (3) must be referring not to the first opinion, but to the impulse. Hence (3) is to be read not as a variation upon (2), but as the discussion of a different case. While I try above to make some sense of (3) so construed, I must confess that I do not know what Chrysippus has in mind by 'a differently qualified character'; technically, a 'character' (*diathesis*) is a state, like any virtue or vice, that does not allow of degrees (Simplicius, *SVF* 2.129.37–44 = LS 47S2).

¹⁷ The word *anesis* clearly means 'lessening' in Diogenes Laertius (7.101 = *SVF* 3.92); in Aëtius (*Placita* 5.24, 4), an unintensified *anesis* is a lessening, whereas a 'total' *anesis* is a ceasing. I take it, within (2), that the contraction *lessens* when the impulse *ceases*. Otherwise the clause 'but perhaps even this persists', within (3), marks no contrast; and impulse, being identical to assent, hardly comes in degrees.

stimulated by some impression that, not producing an assent, provokes only the signs of emotion without the emotion itself. What matters for our present argument is that Chrysippus is apparently willing to count one kind of case in which the opinions ‘persist’ as a ‘lessening of distress’.¹⁸ This must be because he allows ‘the consequences’ of the opinions (literally, ‘the things that are next’, *ta hexēs*) to include constituents of the distress, and so contractions as well as tears. If we place the contractions ‘next’ to the opinions not as Humean effects, but as whatever follows in the order of explanation, we may locate them as physical correlates of the opinions. It is a complication that these may, exceptionally, be physically realized in movements that lack the full intensity characteristic of contractions. When this happens, the opinions remain, but lose their resonance. We only have a full instance of distress when they are physically realized in the excessive movements that they *normally* involve.

Thus Zeno and Chrysippus may be interpreted as agreeing that an emotion can be characterized in many ways: in mental language, it is classifiable as a sensation (which is felt as located), a judgement, and an impulse. Yet the judgement is primary in that false belief is the cause, and true belief the cure. Confirmation that this was indeed taken to be a unitary position is provided by later summaries of Stoic teaching. Of course, these are inconclusive about original intentions: the school may have papered over cracks to inconsistent effect. Yet we have to remember that far more evidence was surviving then than is now available to us: we know (as from DL 7.110–11) that both Zeno and Chrysippus wrote books ‘On Emotions’ (*Peri Pathōn*). And Posidonius, who was significantly revisionary, and Galen, who was hostile, had their own motives for translating differences into disagreements (though Galen still associates Zeno and Chrysippus as partners in crime).¹⁹

¹⁸ Zeno may have been aware of the same possibility as is raised in (3), on this reading, when he added that the opinion that evil is present must be ‘fresh’ (Cicero, *Tusc.* 3.75 = *SVF* 1.212), a term that was apparently taken over by Chrysippus in defining distress (*PHP* 4.2.1, 4.7.3). According to Arius, the Stoics actually used the term ‘fresh’ as short for ‘stimulating an irrational contraction or swelling’ (Stobaeus, *SVF* 3.92.23 = LS 65C). We may rather suppose that the freshness was a non-propositional feature (probably never purely temporal) that was taken further to explain a contraction or swelling.

¹⁹ Sorabji (*EPM*, 102) and Brennan (‘The Old Stoic Theory of Emotions’, 59–60, n. 19) both suppose that Galen’s contrast between Chrysippus and ‘the ancients’ (*hoi palaioi*) places Zeno among the latter (referring, respectively, to *PHP* 7.1.9 and 4.2.1). In fact, Galen gives no indication of that, and Brennan is just mistaken to translate ‘his [Chrysippus] predecessors’. (The phrase cannot mean that, and definitely does not at 3.4.28, 5.2.2, and 5.5.8.) Galen opposes ‘the ancient doctrine’ (*to palaion dogma*) to Zeno as well as to Chrysippus (5.1.6); and we have already noted that Cicero sets Zeno against ‘the ancients’ (*antiqui*, *Academica* 1.39). It is evident, as Sorabji agrees, that Galen was following Posidonius in placing Chrysippus at odds with Zeno and Cleanthes (see my *Mental Conflict*, 203, n. 21); but Posidonius had his own reasons for unsettling Stoic orthodoxy. We do not have

Let us first consider a passage in pseudo-Andronicus' *On Emotions*. This gives the familiar Stoic characterizations of emotion in general as 'irrational and unnatural movement of soul' and 'excessive impulse', and then states definitions of four genera (*SVF* 3.391 = LS 65B):

Distress is an irrational contraction, or a fresh opinion that something bad is present, at which people think it right to be contracted.

Fear is an irrational shrinking, or avoidance of an expected danger.

Appetite is an irrational stretching, or pursuit of an expected good.

Pleasure is an irrational swelling, or a fresh opinion that something good is present, at which people think it right to be swollen.²⁰

The two initial characterizations of emotion in general form 'an outline account' (*hupographē*), which is 'a statement introducing us to things by means of a sketch, or which conveys the force of the definition more simply than a definition does' (DL 7.60 = LS 32C3). Each of the four definitions of genera of emotion then makes up 'a definition' (*horos*), which is 'a statement of analysis matchingly expressed (meaning by "analysis" the filling out of the definiendum, and in succinct fashion, and by "matchingly" that it is neither broader nor narrower)' or 'the representation of the peculiar characteristic' (Alexander, *SVF* 2.75.34–7 = LS 32E). There may well be debate in identifying the 'peculiar' (*idios*) feature of a concept, one that fully captures what has to hold of any instance if it is to *be* an instance. Yet it cannot be meant that emotions are disjunctive phenomena. Rather, the irrational contraction or swelling that is distress or pleasure relates intimately, as physical realization, to a fresh opinion of the presence of good or evil, and so on. What of fear and appetite (which tend to receive less attention)? Again, the implication must be that the shrinking or stretching which is the psychophysical

to resolve recent debate about how best to interpret his innovations to find Sorabji's question 'Who is orthodox, Posidonius or Chrysippus?' (*EPM*, 101) hardly an open one.

²⁰ I take Sorabji to be missing the probable point of a question pressed by Anthony Savile, how contractions can be thought *appropriate* to a situation, when he replies (*EMP*, 40): 'The sensations are thought appropriate either because they have been associated with unpleasant things in the past, or because they themselves feel unpleasant.' For the difficulty is surely in comprehending how a sensation, whatever its associations or its quality, can relate intelligibly and normatively to a state of affairs. (If fear were simply a sensation, how could danger *merit* fear?) A better answer may emphasize that emotional movements are more than sensations. Their very labels carry intentional connotations (cf. the Sedley cited in n. 13): thus the 'stretching' (*orexis*) of appetite also signifies desire, while the 'shrinking' (*ekkklisis*) of fear also signifies aversion. Stretching and shrinking are internal anticipations and representations of, respectively, active pursuit and active avoidance. Swelling and contraction connect less straightforwardly with action, but are equally infused with intentionality: contraction is a response of closing down, swelling a response of opening up, directed (like an expressive gesture) towards a good or evil, already present, that is as much its intentional object as it is its external cause. Savile's question raises a good philosophical objection to permitting the movements only a contingent link to intentionality.

movement characteristic of fear or appetite physically realizes the impulse of avoidance or pursuit; and we noted at the start that an impulse is identical to a propositional assent, and so to an opinion.²¹ Here the object of the opinion and impulse is an external act, of escaping a danger or acquiring a good. Within fear and appetite, to deny that the internal movement physically realizes the impulse and opinion would relegate it to limbo: if it is neither a target of impulse (compare the ‘impulse towards the contraction’ that is part of distress, *PHP* 4.7.14), nor a realization of impulse, where does it come in? (It cannot simply be an internal accompaniment of external action, since the latter is never guaranteed.)

Arius presents much the same material in a somewhat different form. He starts by asserting baldly ‘Emotion is a kind of impulse’, and then reiterates the familiar phrases ‘excessive impulse’, and ‘irrational and unnatural movement of soul’, glossing ‘excessive’ as ‘disobedient to the dictates of reason’ (Stobaeus, *SVF* 3.92.9–13 = LS 65A1). After an important passage explaining that gloss (which I shall cite later), he offers definitions of the four genera in a text too lacunose to invite full quotation (*SVF* 3.394). What remains striking is a structure common to all four definitions: appetite is defined as a stretching, fear as a shrinking, distress as a contraction, pleasure as a swelling, all disobedient to reason; and then, in each case, the cause (*aition*) of the emotion is spelled out as a complex belief. So distress is described as follows (with just one word supplied): ‘Distress is a contraction of soul disobedient to reason, and its cause is thinking that a fresh evil is present, at which it is appropriate <to be contracted>.’²² The formulation is equivocal, for it might be supposed that the *definition* of distress ends at the first comma, and that what follows is a description of its *aetiology*, which may be universal but is also contingent. However, even Sorabji concedes that there is ‘evidence that he [Zeno] referred to judgements in his definitions of distress and pleasure’, and speaks of ‘this causal pattern of definition’ (*EPM*, 34–5). Arius’ *mélange* of Zeno and Chrysippus (if that is what it is—with a

²¹ It is curious to find fear and appetite defined with no mention of opinion. But no doubt the avoidance that is the impulse of fear comes of ‘an opinion that an evil is impending which one thinks intolerable’, while the pursuit that is the impulse of appetite comes of ‘an opinion that a good is in prospect which it would be expedient to have present here and now’—to cite Cicero’s explications of fear and appetite (*Tusc.* 4.14); and Arius is explicit that belief is the cause (*aition*) of the shrinking that is fear as of the stretching that is appetite (Stobaeus, *SVF* 3.95.37–40).

²² I select some familiar wording. Elsewhere Arius is unreliable: this is the only place where the term ‘fresh’ is used to define fear and (if we so fill a lacuna) appetite as well as distress and pleasure. And his would be closer to other evidence (in Galen as in pseudo-Andronicus) if it was in the first place the movement of soul, and not the emotion, that was said to have some belief as its cause.

structure taken from the former, but some details from the latter) is not ideally helpful for our purposes. Yet it remains implausible that a minimal definition of the emotion would attach to itself such a minute aetiology; if the beliefs are merely contingent causes, they are spelled out with a curious precision and generality. And it will be implied, if the definitions *are* minimal, that any emotions that differ only in their objects will be one and the same emotion. It makes better sense to take the *aition* not as a Humean cause of emotion, but as an intelligible ground contributing to a complex definition; and then the movement of soul may realize the belief that explains both it and the emotion. After all, as I have already quoted from Arius, ‘Emotion is a kind of impulse’ (Stobaeus, *SVF* 3.92.9–10), and ‘All impulses are acts of assent’ (Stobaeus, *SVF* 3.40.27–8 = LS33I1).²³

Less tractable, to my mind, is Cicero’s *Tusculans*. There he alternates indifferently between having the second opinion in an episode of distress prescribe the contraction (4.14), or the distress itself (3.61, 3.74)—as if he takes the distress to *be* the contraction. And he relates a definition of distress as ‘a contraction of mind contrary to reason’ to one as ‘a fresh opinion that an evil is present at which one thinks it right to lower and contract the mind’ as a first formulation (*prima definitio*, *Tusc.* 4.14) to a more deliberate one (*pressius*, *ibid.*) conveying how much emotions are in our power. This hardly means that he takes the two styles of definition to be in conflict—and we have seen that they were concurrent. Yet the passage that follows may indicate otherwise:

Further, they say that it is not only the emotions which depend on (*in . . . positae esse*) the judgements and opinions which I have mentioned, but also the effects of those emotions (*quae efficiuntur perturbationibus*). For instance, distress effects a kind of biting pain, fear a sort of shrinking and fleeing of spirit, gladness an outpouring of hilarity, desire an unbridled stretching. (*Tusc.* 4.15 = *SVF* 3.93.3–7)

One might suppose that *depending on* is a generic relation of which *being effected by* is a causal species. If so, emotion here relates internally and conceptually to opinion, but externally and contingently to sensation and physical process. Yet to impute such a dualism of mind and body is more likely to read too much into the choice of a word. Cicero may not have had in mind anything more philosophical than the following question and

²³ The definitions given by Diogenes Laertius (7.111–14) are less of a piece: Sorabji’s Zeno might call distress ‘an irrational contraction’, and appetite ‘an irrational stretching’, while his Chrysippus might (after Plato) call fear ‘an expectation of evil’. However, when Diogenes calls pleasure ‘an irrational swelling at what is taken to be choiceworthy’, he combines movement and belief within a single formula.

answer: 'Why do I feel biting pain? Because I am distressed.' We may wonder whether he would still have used the verb *efficere* if he had intended to contribute to our present discussion.²⁴

Thus we can read Zeno and Chrysippus, more sympathetically than Galen, as being fundamentally of one mind in identifying an emotion with a single but multi-faceted psychophysical reality equally classifiable, on the mental side, as judgement, impulse, or sensation. Any innovations that Chrysippus introduced even beyond Zeno's oral teaching may be interpreted rather as developments than as corrections.

II

In one recurrent respect Galen accuses Chrysippus of remaining too loyal to Zeno, to inconsistent effect. It seems that they shared not only the phrases 'irrational and unnatural movement' and 'excessive impulse', but also an understanding of these as connoting both a conflict with reason and a loss of control. Yet it is indeed not immediately clear how this conception agrees with a view of emotions that brought out their voluntariness by attaching them to mistaken assents.

Though Galen already makes heavy weather of Chrysippus' gloss upon 'irrational' as 'without reason and judgement' (*PHP* 4.2.8), he is not in fact at a loss to make sense of it:

To state that an affection has nothing to do with judgement is surely the exact opposite of stating that it is a judgement, unless indeed one might say in his defence that the word judgement has more than one meaning, and that in his explanation of the definition he used the word in the sense of circumspection, so that 'without judgement' equals 'without circumspection', but when he says that the affections are judgements, he is using 'judgement' as a name for impulse and assent. (4.3.7)

He has more genuine difficulty with a second gloss upon 'irrational', 'disobedient to reason and rejecting it' (4.2.12; cf. Stobaeus, *SVF* 3.94.26–7 = LS 65A6). Chrysippus was clear that this involved more than error or illogicality, as quotations make plain:

It is not the case that if a person is carried away by error and from a misapprehension of something that is in accord with reason, he is also acting in a way that rejects and disobeys reason . . . An affection of the soul is a movement contrary to

²⁴ Thus I take Cicero to be unalive to nuance. Certainly question-begging would be a presumption that he is careful in separating emotions from sensations (*Tusc.* 4.15), but careless in equating contraction and distress (compare 4.14 with 3.61 and 3.74).

nature, as in fear and desire and the like. For all such movements and states are disobedient to reason and reject it; accordingly we say that such persons are moved irrationally, not in the sense of reasoning poorly, as one might speak of a person who reasons the opposite of well, but in the sense of rejecting reason. (*PHP* 4.2.24, 4.4.16–17)

Chrysippus took such rejection of reason to incur a loss of control that was a further unnatural aspect:

Those who move with reason as their guide and steer their course by it, no matter what the nature of the reasoning, have control over their movements and the impulses pertaining to them, so that they obey, like walkers, if reasons shows itself. Therefore the emotions that are irrational in this sense are also said to be affections and contrary to nature because they go beyond a rational constitution. (4.4.31–2)

And he counted the impulse as ‘excessive’ for the same reason:

Affection is also appropriately called excessive impulse, as one might say of the runaway movement that it is an excessive movement, the excess in it arising along with the rejection of reason, and what is without excess is preservative of reason. (4.5.13)

Yet how an emotion centred upon a misjudgement can be not a misuse but a ‘rejection’ of reason may be no more obvious to us than it was to Galen.

Sorabji’s assessment of Chrysippus’ consistency is less hostile in intent than Galen’s, but no more favourable in upshot. He even finds the very characterization of emotion as being without reason and judgement ‘not compatible with Chrysippus’s idea that emotions are (mistaken) judgements of reason’ (*EPM*, 58). So it is not surprising that he ascribes the conception of emotion ‘as disobedience rather than mistake’ to an account of emotion ‘very different’ from that of Chrysippus (*EPM*, 56). He does offer a kind of explanation of how the inconsistencies arose. Galen tells us that Chrysippus ‘wrote about’ and ‘expounded’ accounts of the emotions as ‘irrational and unnatural movements’ and ‘excessive impulses’ (*PHP* 4.2.8, 4.2.13, 4.2.19); and I have already mentioned the definitions of emotions apparently ‘pronounced’ by Zeno and ‘recorded’ by Chrysippus (4.7.2). Sorabji suggests: ‘Perhaps Chrysippus originally set out merely to expound Zeno’, but concedes, ‘Unfortunately he gives at least the impression of endorsing Zeno’s definitions’, admitting that both Posidonius and Galen took him to be actually doing so (*EPM*, 57–8). Sorabji’s eventual view is that Chrysippus appears to accept the definitions despite their inconsistency with his own view: ‘There is a real incompatibility between Chrysippus’s account of emotion as mistaken judgement and Zeno’s account of it, which Chrysippus seems to present

so favourably, as akratic disobedience to recognized truth' (*EPM*, 100). So ambivalent a verdict can hardly be definitive.²⁵

Happily, Galen's wish to convict Chrysippus as much of inconsistency as of implausibility leads him to preserve a fair range of relevant material, often in quotation, mostly from Chrysippus' *On Emotions* (*Peri Pathōn*). This, taken with other evidence, makes it possible, I believe, to recover a subtle account of how, throughout its history, an emotion involves both a conflict with reason and a loss of control, even if its origin is a false judgement attributable not (as in Plato) to some lower part of the soul, but to its control-centre (*hēgemonikon*). Distinguishable though connected elements in the account are the *cause* of the emotion, its *context*, its *content*, and its *consequences*.

Galen reports (*PHP* 4.3.4) that Posidonius kept pressing the question: what is the cause (*aitia*) of excessive impulse? Chrysippus refused to follow Plato in diagnosing a few innate fault-lines within the soul. Some people, he was willing to say, are prone to succumb to external stimuli: as Galen reports, 'Chrysippus says that their soul is analogous to a body which is apt to fall into fever or diarrhoea or something else of that kind from a small and chance occasion' (*prophasis*, 5.2.3).²⁶ These attacks are irregular: 'We must suppose that the disease of the soul is most similar to a feverish physical state in which fevers and chills do not occur at regular intervals but irregularly and disorderedly as a result of the constitution and at the incidence of small causes' (*aitiai*, 5.2.14). A term that the Stoics used to capture the rapid and sporadic nature of such episodes was 'fluttering' (*ptoia*). Zeno first applied it (*SVF* 1.51.2), and Chrysippus adopted it: "'Fluttering" too has been appropriately used to characterize the affections as a class in respect of this being "ruffled" and "moving at random"' (*PHP* 4.5.6, a quotation). Plutarch reports that fluttering was likened to the sudden assaults of children who are violent out of weakness (*De virtute morali* (*DVM*) 446F = *SVF* 3.111.27–38 = LS 65G). And the phenomenon was generalized: as Arius roundly has it, 'Every fluttering is also an emotion, and likewise, every emotion is a fluttering' (*SVF* 3.92.13–14 = LS 65A2). Of the causes of such unpredictabilities it could only be said that they are plural: 'Chrysippus says that there are many

²⁵ It is anyway unclear whether Sorabji's Zeno fares any better, for there is the same tension between these two statements of his position: 'Emotion involves not a mistake of reason, but actual disobedience to one's own reason' (*EPM*, 54, cf. 7); 'He [Zeno] evidently defined them [emotions] as being contractions and expansions on the occasion of (fresh) judgements of evil and good' (35). Take any of Arius' formulations, say 'Appetite is a stretching disobedient to reason, and the cause of it is believing that a good is in prospect' (*SVF* 3.95.36–7): it is problematic how to reconcile the two clauses, even if the stretching is distinct from the believing.

²⁶ The medical analogy makes it apt to cite the use of *prophasis* as what Liddell and Scott call 'a technical medical term' to mean *external exciting cause*.

causes—causes, he obviously means, which convict one of weakness of soul, just as Helen's beauty was the cause for Menelaus, gold for Eriphyle, other things for other persons' (*PHP* 4.6.15). Galen concedes (or reports—it is unclear which) that there are 'tens of thousands of particular items' which can have this effect, but objects, 'One must not mention these tens of thousands; one must bring the account to a few main heads, as Plato did' (4.6.16–17). The Stoics classified the emotions under the four genera that I listed, but they did not—if we set aside Posidonius—identify any independent and internal sources of motivation that might provide a degree of stability. Proclus cites as a Stoic adage what is, in effect, a denial that inferior men have a settled character: 'Grant the circumstance and take the man' (*SVF* 3.49.33). If so, it is a matter of chance which impressions will come over a weak man and precipitate him into emotion. When he entertains one and assents to it, he is entering into a judgement that is impulsive and unpredictable.²⁷ As Chrysippus noted, 'We say in ordinary usage that some persons are pushed and moved irrationally, without reason and judgement' (*PHP* 4.2.12), so as 'to be moving in conformity with some force external to themselves' (4.6.35). We can still hold them responsible; for they yield out of a weakness that can count as the 'principal' cause of their emotion, though the object that it takes is determined by 'proximate' causes.²⁸ Yet they should themselves be aware of the non-rational contingency and variability of the resulting impulse.

Another typical feature is a context of contrary belief. Galen reports that those who 'take some action because of an affection' were thought by Chrysippus to 'depart from their initial judgements' (4.6.13, cf. 4.6.16). And he gives an actual quotation: 'All inferior men act in this way, abandoning their course and yielding for many causes' (4.6.11). Galen even has Chrysippus generalize over not just subjects of emotion but episodes: 'The origin of emotions is in the conflict between two judgements' (5.4.10), and 'The diseases and emotions of the soul arise when

²⁷ This needs care in the light of Arius (Stobaeus, *SVF* 3.421 = LS 65S) and Cicero (*Tusc.* 4.23–30). A 'sickness' (*nosēma*) is a false general evaluation (say of wine, women, or song) that 'has flowed into a tenor (*hexis*) and hardened' (*SVF* 3.102.37–8 = LS 65S2), so that it is 'deeply attached and rooted in the mind' (*Tusc.* 4.26). This becomes an 'infirmity' (*arrōstēma*) if it is accompanied by 'weakness' (*asthēneia*, *SVF* 3.103.1–2 = LS 65S3). There is also 'faultiness' (*vitiositas*), which Cicero defines as 'a condition or state of being inconsistent and out of agreement with oneself over one's whole life' (*Tusc.* 4.29). Yet he appears to be of two minds whether sickness and infirmity are alternatives to faultiness, or species of it (*ibid.*). One possibility is this: infirmity involves faultiness, since weakness makes the occurrence of emotions (which are episodes) unpredictable even from sicknesses.

²⁸ For the distinction, see Cicero, *De fato* 42 = *SVF* 2.283.16–24 = LS 62C8. However, for a different reading see Suzanne Bobzien, 'Chrysippus's Theory of Causes', in K. Ierodiakonou (ed.), *Topics in Stoic Philosophy* (Oxford: Clarendon Press, 1999), 196–242.

judgements are in mutual disagreement' (5.10.14).²⁹ (Of course he finds here yet further inconsistency.) An example would be welcome, and one is offered, though in respect of a mundane fact, when Galen quotes this: 'When people have swallowed the statement (let us say) that it is day, and have stored this up in their minds, and then make that other assertion, that it is not day (the facts remaining the same), it is not absurd or inappropriate to say that they vomit up' (*anemein*, 3.5.15). This gives a fuller force to the gloss upon the belief that enters into emotion as 'weak supposition' (Stobaeus, *SVF* 3.92.22 = LS 65C; cf. Cicero, *Tusc.* 4.15 = *SVF* 3.93.7–9).³⁰ In the case of the emotions, conflicting opinions may actually provoke one another. To this phenomenon, the Stoics gave the label 'collision' (*proskopē*, Latin *offensio*). Thus a man may not only alternate between philogyny and misogyny, philanthropy and misanthropy, but be prompted to each by the other (Stobaeus, *SVF* 3.421 = LS 65S). And this may become a recurrent pattern: Cicero describes how, when a mutual tossing or flinging of beliefs (*iacrantibus se opinionibus*) becomes established, and settled as it were in our veins and marrow, there arise sicknesses and infirmities *together with their opposites* (*Tusc.* 4.24 = *SVF* 3.103.29–33).³¹ It remained a contrast with Plato that, through ascribing even opinions in open conflict to a single commanding faculty, the Stoics could not allow them—given the criterion of partition in *Republic* Book 4—to be simultaneous. Yet they accommodated the appearance of synchronous conflict by postulating an accelerated alternation of beliefs. Thus Plutarch reports, incredulously, 'a turning of the single reason in both directions, which we do not notice owing to the sharpness and speed of the change' (*DVM* 446F = *SVF* 3.111.27–38 = LS 65G).³² With or without that further illusion, we have in the reciprocal

²⁹ Plutarch similarly has Chrysippus describe emotions as 'knocking out' reasonings (*ekkrouein*, the same verb as at Aristotle, *Eudemian Ethics* 2.8.1224b21–4), and 'impelling forcibly to the contrary actions' (*De Virtute morali* [*DVM*] 450C = *SVF* 3.390).

³⁰ Cf. the association of 'changeable' and 'weak' assent (Stobaeus, *SVF* 3.147.2 = LS 41G2).

³¹ Admittedly, it is not clear how well Cicero understands what he is reporting. When he writes, 'All these infirmities of mind arise from some kind of fear of those objects which the persons in question dislike and avoid' (*Tusc.* 4.25 = *SVF* 3.104.5–6), he should have in mind that the fear that provokes the dislike and avoidance is a fear that those objects may disappoint an initial liking and pursuit.

³² No doubt much is wrong here. One perennial difficulty is how to define what it is for a thought to be *occurrent*—which the Stoics were not the last to analyse, surely wrongly, as its being *identical to an event*. A drawback of Stoic assent (as of Fregean assertion) is that it is all or nothing. Yet in cases of conflict *p* may be serving one set of a subject's inferences while $\sim p$ is serving another; this is less incoherent than bringing *p* and $\sim p$ together within one and the same inference. What is problematic is not, in itself, a temporal coincidence of contradictories in a single mind, but their proximity within a single stretch of thinking. *Acting* on a belief is another matter, and a different criterion of occurrence.

provocation of opposite opinions through collision another aspect of evident irrationality and loss of control.³³

Chrysippus further supposes that the irrationality of the assent is often confirmed by its very content. Galen quotes him claiming that we hear people in the grip of emotion saying that ‘they want to gratify their anger and to let them be, whether it is better or not’, or that ‘this is to be done by all means, even if they are wrong and if it is not to their advantage’ (*PHP* 4.6.27). The Stoic sage always qualifies his intentions with an act of reservation, roughly equivalent to adding a ‘*deo volente*’.³⁴ The emotional man tends explicitly to reject, no doubt as constraining, even the qualification ‘if it is better’ or ‘to my advantage’. In this way, the judgement constituting his emotion takes on an additional content that advertises its own irrationality.

It is once the emotion has got going, and in its consequences, that the physiology comes into its own. That an emotion is initiated freely (if too impressionably) by one opinion does not entail that it can be freely terminated through the adoption of a contrary one; for the psychophysical movements, once set off, may take over, and impede any change of mind. Chrysippus likened an emotion’s running out of control to the loss of control by a runner:

When a man walks in accordance with a impulse, the motion of his legs is not excessive but is in some way commensurate with the impulse, so that he may stop when he wishes, or change his pace. But when persons run in accordance with a impulse, this sort of thing no longer happens. The movement of the legs exceeds the impulse, so that they are carried away and do not obediently change their pace the moment they set out to do so. I think that something similar to this happens also in impulses because of an excess beyond the rational measure, so that when a man exercises the impulse he is not obedient to reason; and whereas the excess in running is termed contrary to the impulse, the excess in impulse is termed contrary to reason. (4.2.15–17; cf. 4.4.31–2, 4.5.13, 4.6.35)

The last clause is significant: it permits the man who continues to run, but not the man who continues to be emotional, to disobey an actual impulse. It fits that Chrysippus imagines a subject who can look forward to a rational self-criticism that his immediate physical state prevents: ‘By this account a person would not give up hope that with the passage of time,

³³ This contextual feature is an easy corollary of the causal one, for sudden and random impressions must indeed tend to lure emotional subjects into inconsistent assents. We may still welcome a deeper suggestion by Gill that it was part of the Stoic theory of *oikeiōsis* that ‘the capacity for virtue remains latent in all of us, in spite of the corrupting effect of our social environment’, so that, ‘at some more or less conscious level’, subjects of false evaluations that mistake preferred indifferents for real goods are aware of their error; ‘Platonic and Stoic Thinking on Emotions’, 119.

³⁴ See Sorabji, *EPM*, 53–4.

when the inflammation of the affection has abated, reason will make its way in and find room, so to speak, and expose the irrationality of the affection' (4.7.27–8). Here the corrective impulse can only lie in the future.

And yet there is evidence elsewhere that a man subject to emotion may be capable of a judgement-cum-impulse that fails to arrest his emotion. Arius uses a different comparison to convey this different possibility:

Every emotion is overpowering, since people in states of emotion frequently see that it is not suitable to do this but are carried away by the intensity, as though by a disobedient horse, and are induced to do it... When people are in states of emotion, even if they realize or are taught to realize that one should not feel distress or fear or have their soul, quite generally, in states of emotion, they still do not give these up, but are brought by them to a position of being controlled by their tyranny. (Stobaeus, *SVF* 3.389 = LS 65A6&8)

In a Stoic context, the simile of the horse may surprise more than that of the runner, for Plato had famously used the same simile, in the *Phaedrus*, to convey a motivating force independent of reason. Yet it is confirmed by Galen, who commends Chrysippus for saying of Medea's emotion that it 'has not been made to submit and does not obey and follow reason as it would a master, but throws off the reins and departs and disobeys the command' (*PHP* 4.2.27, Galen's words). So the unexpectedness of the simile leaves it open that Chrysippus may be Arius' source. If so, it seems that he conceded two ways in which reason may be operative yet ineffectual. In one case, the sufferer is persuaded *in general* that emotion is inadvisable, but this has no effect in the circumstances. In the other, he comes to see that 'It is not suitable to do this' *in particular*, and yet is still led to do it. The first might be explained by an inability to make *and to mean* an inference from the general to the particular, which would leave standing the original opinion endorsing the current pursuit. The second cannot be so accommodated. Is this, at last, an identifiable incoherence? It may be. However, we should keep in mind the evidence that I have already rehearsed about contrariety in belief. It would be consistent, and even plausible, of Chrysippus to hold that the sufferer alternates between reiterating and rejecting the assents that initiated his emotion. He may be incapable not of glimpsing ethical truth, but of keeping it in view; and then it is his own reason that he disobeys. That this no longer occurs of his own free will confirms that he is not now in his right mind (cf. 4.6.24). And yet (compare Aristotle's analogy of the stone that leaves our control as we throw it, *NE* 3.5.1114A17–19) his responsibility, and the reality of his emotion, remain.

The account that emerges is complex, but hardly over-complicated. Charges of incoherence are not necessitated by the evidence. We can

locate Chrysippus as standing close enough to Zeno to be able to cite him without inconsistency. Neither can be refuted by counter-examples, so long as they are willing to prescribe new rules for applying the language of the emotions. Whether such revisions can and do serve any explanatory and non-procrustean purpose is indeed a question that invites both general reflection and particular scrutiny. Let us at least concede that, in his ability to develop an apparently viable theory from a plainly implausible starting point, Chrysippus is a model for philosophers.³⁵

Bibliography

- BRENNAN, T., 'The Old Stoic Theory of Emotions', in J. Sihvola and T. Engberg-Pedersen, 21–70.
- GILL, C., 'Platonic and Stoic Thinking on Emotions', in Sihvola and Engberg-Pedersen, 113–48.
- GRAVER, M., *Cicero on the Emotions: Tusculan Disputations 3 and 4* (Chicago: Chicago University Press, 2002).
- review of Sorabji, *Emotion and Peace of Mind, Ancient Philosophy* 22 (2002), 225–34.
- INWOOD, B., *Ethics and Human Action in Early Stoicism* (Oxford: Clarendon Press, 1985).
- LONG, A. A., and SEDLEY, D. N., *The Hellenistic Philosophers*, 2 vols. (Cambridge: Cambridge University Press, 1987).
- PIGEAUD, J., *La Maladie de l'âme* (Paris: Les Belles Lettres, 1989).
- PRICE, A. W., *Mental Conflict* (London: Routledge, 1995).
- SEDLEY, D., 'Chrysippus on Psychophysical Causality', in J. Brunschwig and M. C. Nussbaum (eds.), *Passions and Perceptions: Studies in Hellenistic Philosophy of Mind* (Cambridge: Cambridge University Press, 1993), 313–31.
- SIHVOLA, J., and ENGBERG-PEDERSEN, T. (eds.), *The Emotions in Hellenistic Philosophy* (Dordrecht: Kluwer, 1998).
- SORABJI, R., 'Intentionality and Physiological Processes: Aristotle's Account of Sense-Perception', in M. C. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's De Anima* (Oxford: Clarendon Press, 1992), 195–225.
- *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford: Oxford University Press, 2000).
- TIELEMAN, T., *Galen and Chrysippus: Argument and Refutation in the De Placitis Books 2–3* (Utrecht: Department of Philosophy, 1992).

³⁵ I am grateful to Ricardo Salles for encouraging the revision of this essay.

Seneca on Freedom and Autonomy

BRAD INWOOD

It is a pleasure to offer this short essay to Richard Sorabji. He has done path-breaking work on philosophy in the Roman imperial period, with particular emphasis on the interaction of pagan philosophy and non-pagan traditions. In particular, his enthusiastic engagement with Seneca's philosophical achievements has been a major stimulus for a great deal of recent work. In discussing, however superficially, the relationship between Stoic and Platonic strands in Seneca's thought and their relationship to some themes in the historian Josephus, I hope at least to suggest some areas and approaches where further exploration might be fruitful.

It is hardly a new notion that the idea of freedom was crucially important to Stoic thought. But it is an issue which has been bedevilled by a number of misconceptions and confusions, most significantly the mistaken notion that freedom was an important part of the debate on determinism and responsibility—which is for us most often cast in terms of fate and free will or determinism and human freedom. In the wake of an important recent book, though, *Determinism and Freedom in Stoic Philosophy*¹ by Susanne Bobzien, it is possible to disentangle these issues and to see how novel Epictetus' contribution was. As Bobzien shows in her chapter 7, the concept of freedom and the concept of what depends on us were originally quite distinct in Stoicism and it is only after Epictetus that we find them definitively linked.

In its origins, freedom is a political term, one which philosophers adopted and put to creative use in the psychological and ethical sphere. In place of freedom from enslavement or command by others, it came to represent, in Bobzien's words (339), 'total independence of the person from all passions and from all wrong desires'. In Greek Stoicism before

¹ S. Bobzien, *Determinism and Freedom in Stoic Philosophy* [*Determinism*] (Oxford, 1998).

Epictetus, there is no connection between freedom and fate or freedom and responsibility. A wise person is free because nothing inside or outside him tells him what to do, and the 'him' so liberated is the rational aspect of the total person. We are free if *no* tyrant, not even our own passions, can push us around. As in the *Protagoras* of Plato (where 352b–e wonderfully captures the political origins of this metaphor), our reasoning is not pushed around by our desires and pleasures. So just as in the political sphere a person is paradigmatically free if he is not a slave and a nation is free if it does not pay tribute or take peremptory orders from an imperial power, so too within our own soul. Freedom in Greek philosophical thought, especially in Stoicism, is an internalization of a social and political reality. According to Bobzien—and she is surely right—the idea of freedom in Epictetus is fundamentally the same; his distinctive contribution is to claim that this kind of freedom is dependent on our having a proper understanding of what is truly in our power and handling *that* issue correctly.²

In all of this, Bobzien has done the philosophical world a service, in part by clearing away the erroneous conflation of freedom and free will which many—and I include myself in this charge, as does Bobzien—have unthinkingly perpetrated. As far as the Greek tradition is concerned, freedom might fairly be said to have found its proper place in her account.

But the most interesting thing, in my view, about the philosophical scene in the first century AD is that by then it was no longer limited to what was going on in Greek. As I have argued elsewhere,³ in that century the philosophical scene in Roman cultural circles was becoming interestingly bilingual and Seneca the Younger—a man who knew a thing or two about freedom and its absence in the political sphere—found himself in the enviable position, for a Roman, of working out his own philosophical insights in a conceptual framework delimited by his own language rather than by Greek. Greek was, of course, still the prestige language of philosophical discourse. But Seneca had philosophical concerns of his own that went beyond merely adapting Greek thought for his Roman audience or working out the implications of Stoicism for the morality of the elite to which he belonged, and he routinely expressed those concerns in his own language—a bold if not always successful move.

Bobzien's account matters for our understanding of Seneca. For her account explains why Seneca does not connect *libertas* with the 'free will' and responsibility problem. That nexus develops later and so when Seneca deals with the issue of moral responsibility the language of free-

² Bobzien, *Determinism and Freedom*, 342–3.

³ B. Inwood, 'Seneca in his Philosophical Milieu', *Harvard Studies in Classical Philology* 97 (1995), 63–76.

dom is not part of the story. But in addition Seneca's interest in freedom, *libertas*, can offer us something beyond what Bobzien uncovers in her careful analysis of the Greek tradition, and since the philosophical world was increasingly bilingual and bicultural in the first century AD, it may turn out to matter what was happening philosophically to the concept of freedom on the Latin side of things too. So I propose to deal primarily, in this context, with Seneca's notion of *libertas*.

Freedom is such a central idea in Roman political culture that we should not expect Seneca's—or anyone's—philosophical exploitation of it to be a straightforward matter. At least since Wirszubski's *Libertas as a Political Ideal at Rome during the Late Republic and Early Principate* (Cambridge, 1950) there has been a series of books and articles probing different aspects of the ideology of *libertas* in Roman politics. Most recently this theme has become one important focus of a significant new work, Matthew Roller's *Constructing Autocracy: Aristocrats and Emperors in Julio-Claudian Rome* (Princeton, 2001).⁴ Roller shows how intimately connected the idea of liberty is with the dominant social paradigm of slavery and argues that in Roman elite culture (for our purposes the only one that matters) it is a largely negative concept, the opposite of being enslaved either literally or (as is more relevant) metaphorically. Seneca features prominently in Roller's discussion, of course, and brings out a great deal of importance about the social and political significance of his reflections on freedom for his fellow aristocrats. But Roller limits himself to this aspect of Seneca's Stoicism, seeing him (as he puts it in another context⁵) as a Roman aristocrat in the first instance, who presents Stoic ethics to his social peers (the implied audience) as a way out of certain contemporary ethical binds. I want to go beyond this undoubtedly important aspect of Seneca's Stoicism and to suggest that his reflections on freedom and autonomy work to push back new frontiers within Stoic philosophy itself as well, since for me (as Roller rightly says) Seneca is first and foremost a Stoic philosopher. Let us see, then, what philosophical novelty Seneca may have brought to the idea of freedom.

There are four philosophically interesting aspects of *libertas* in Seneca which I would like to discuss. The first and most unsettling for us lies in its connection with death. The second deals with a form of freedom that accompanies wisdom: a sage's freedom consists in part in the fact that he is free from harm that others might inflict on him, a freedom which depends on adopting a typically Stoic conception of harm. Third is the connection of freedom with the acceptance of god or fate. And finally, in

⁴ M. Roller, *Constructing Autocracy: Aristocrats and Emperors in Julio-Claudian Rome* (Princeton, 2001).

⁵ *Ibid.* 80 n. 27.

many contexts Seneca explores the notion that the most important kind of freedom is a mental freedom, freedom from various passions and disorders. In what I think of as the richest and most puzzling application of the idea of freedom Seneca connects this kind of freedom to cosmological insights based on Stoic natural philosophy.

Let's start with death.⁶ The idea that Seneca's interest in the moral standing of suicide was unusual within the Stoic school was urged with particular force by John Rist; the importance of the idealization of freedom in this connection of thought is the central theme of chapter 13 of his *Stoic Philosophy*.⁷ In his view Seneca's attitude to suicide is essentially un-Stoic. Fundamentally Seneca's wise man is in love with death (p. 249). Not only is this a one-sided view, and so properly subjected to a healthy correction by Miriam Griffin in her discussion of the question,⁸ but this extreme interpretation means that Rist must allow for occasional lapses by Seneca into a more orthodox Stoic view (e.g. pp. 249–50). Perhaps a less extreme interpretation can be more unified. This is what Griffin offers in her account, but even she misses what I think is the most important aspect of Seneca's approach to death and freedom: the central importance of agency. For it is the possibility of being an agent in the proper sense of the word which is most decisively though paradoxically preserved by a timely or even premature death by one's own hand. In her splendid analysis of the Stoic orthodoxy of Seneca's views (pp. 372–83) this aspect is scarcely mentioned, though she does correctly emphasize that freedom in the sense of free will is not what is at stake in Senecan *libertas* (pp. 383–4). For Griffin, the most important feature of Seneca's individual views is his enthusiasm for martyrdom (p. 386).

Here we cannot avoid introducing the highly ambiguous character of Cato the Younger, a man who was in Seneca's eyes a powerful symbol of philosophical progress, in large measure because he took his own life rather than live under political conditions incompatible with his political values. His ambiguity stems from the fact that the republican institutions for which he died were not those which Seneca himself valued most highly. Seneca is himself a ready supporter of the imperial regime (far too ready, some might say), so some might suspect him of confusion or muddle in his keenness to lionize the republican martyr. A look at how Cato's freedom is handled by Seneca will show that this ambiguity has its roots in subtlety rather than confusion.

⁶ R. Sorabji has hinted at some of what I want to say about the liberating potential of suicide for Seneca in his *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford, 2000), 214.

⁷ J. Rist, *Stoic Philosophy* (Cambridge, 1969). See especially pp. 247–50, where the liberating potential of suicide is emphasized.

⁸ M. Griffin, *Seneca: A Philosopher in Politics*, 2nd edn. (Oxford, 1992), ch. 11.

Consider first *On Providence*. In section 2.10, Seneca is arguing that a god who has special affection for men of virtue might welcome the sight of strong men struggling against adversity.

I do not see, I say, what Jupiter could deem more beautiful to contemplate on this earth (if he were to turn his attention this way) than the sight of Cato, after the repeated defeat of his faction, still standing upright amidst the wreckage of the state. He says, although everything has fallen into the hands of one man and although the land is guarded by his legions as the oceans are by his fleets, though the gates are occupied by Caesar's troops, nevertheless Cato has an escape route; he will make a road to freedom with one hand. His sword, unstained and innocent even in the civil war, will in the end perform virtuous and noble deeds: it will give to Cato the freedom which it could not give to his fatherland. Brave mind, tackle a task you have planned for so long, tear yourself away from human affairs. Already Petreius and Juba have gone to battle and lie dead, slain each by the other's hand, a brave and remarkable convergence of fate, but not one which befits my greatness. It would be as shameful for Cato to seek death from someone else as it would be for him to seek life.

Cato is, Seneca adds, an *acerrimus sui vindex* (2.11). Similarly, in section 6.7 the emphasis is on being in control, the agent of one's situation not the victim: 'Above all watch out that you not be caught against your will (*invitos*). The way out is open. If you don't want to fight you can flee. Just watch for it and you will see how short and easy is the road which leads to freedom.' Dying, he says, is shorter and easier than being born, which is itself a sign of god's providence. 'Let every time and every place teach you how easy it is to reject nature and to shove her gifts back in her face; amidst the altars and the sacred rituals of those who give sacrifice, while you pray for life, practice for death.' (6.7–8).

What, then, is so admirable about the pursuit of death? First and foremost that it is a mark of agency even amidst misfortune. In circumstances where it is most difficult to act, to be in control, there too we can have freedom of action. And if the only expression of that freedom is death, that is no cause for concern (death is, for any Stoic, a mere indifferent). What Jupiter admires and what he recognizes as worthy of the greatness he himself possesses is the independence and self-determination of the agent. That is freedom, and this is the sort of narrative Seneca has in mind in the climax of the great Letter 95 on the topic of moral instruction, when he says (95.72) that it will be beneficial not only to say what good men are generally like and to sketch the form and outline of their characters, but to tell stories about and to set out in detail what they were like—for example, 'Cato's famous, final, and most courageous wound through which freedom released his soul'.

This same general point is made with macabre force as well in *On Anger*, in a passage famous because of its gruesome colourfulness. In 3.14–15 Seneca dwells on a tale drawn from Herodotus. Here is the story in the fine translation by the late John Procopé:

(1) King Cambyses was too fond of wine. Prexaspes, one of his dearest friends, advised him to drink less, declaring drunkenness in a king with the eyes and ears of all upon him to be a disgrace. The king answered: to show you that I never lose control of myself, I will now prove to you that the wine leaves my eyes and hands in full working order. (2) He went on to drink more generously than usual, out of larger cups. Heavily drunk, he ordered his critic's son to go beyond the threshold and stand there with his left hand over his head. Then he drew his bow and shot the boy through the heart—that, he had said, was his aim. He had the breast cut open. He showed the arrow stuck directly in the heart. He looked at the father, asking whether his hand had been sure enough. Not even Apollo, the father replied, could have aimed better.

(3) Confound the man, a slave in mind if not in station! There he was, praising something which it was too much even to have witnessed, finding occasion for flattery in the dissection of his son's breast and the palpitation of the heart in the wound. He should have disputed the question of glory with him and called for the shot to be repeated, that it might please the king to show a yet surer hand in aiming at the father. (4) O bloodthirsty king! He deserved to have everyone's bow turned on him. And yet, execrable as he is to us for ending the banquet with punishment and slaughter, to praise the shot was still more criminal than to make it. But how *should* a father have behaved as he stood over his son's body, witness and cause of his killing? We shall see. The point now at issue is clear, that anger can be suppressed. (5) Not cursing the king, he uttered not a word even of grief, though he felt his heart transfixed no less than his son's. You can say that he was right to choke back his words; expressions of anger would have denied him the role of a father. (6) You can even think that he behaved more wisely in that misfortune than he had when he gave advice on moderation in wine-bibbing to a man who was better employed drinking wine than blood—when his hands were on the wine cup, at least that meant peace. He joined the ranks of those whose catastrophes have shown what it costs the friends of kings to give good advice.

15. (1) I have no doubt that Harpagus offered some such advice to *his* Persian king. It annoyed him into serving up the man's children at a feast and repeatedly asking him if he liked the seasoning. Then, seeing him with a stomach full of woe for himself, he ordered their heads to be brought in and asked him what he thought of the bounty. Words did not fail the poor man, his lips were not sealed. Dinner with a king, said he, is always delicious. What did he achieve by this flattery? He was spared the leftovers. I am not saying that a father should not condemn anything that the king does, I am not saying that he should not try to punish such monstrous ferocity as it deserves; I am just proving, for the moment,

that even anger generated by enormous affliction can be concealed and compelled to use words that express the opposite.

(3) It is necessary to bridle your indignation in this way, especially if your lot is to have this sort of life and be invited to the royal table. That is how you eat there, how you drink there, the sort of answer that you make there—you just have to smile as your family dies.

The key part of this text for us is what follows (15.3 continues):

But is the life worth that much? We shall see. That is a different question. We have no consolation to offer for a prison so gloomy. We are not going to advise men to endure the butcher's commands. We shall simply show that in any slavery the way lies open to freedom. One's affliction is mental, the misery one's own fault, if one can put an end to it, together with oneself. (4) I shall say both to the man with the luck to have a king who shoots arrows at the heart of his friends and to him whose master gorges the father with the entrails of his son: Why the groans, madman? Why wait for an enemy to avenge you through the downfall of your nation, or for some mighty monarch to swoop down from afar? Wheresoever you cast your eyes, there lies an end to affliction. Look at that precipice—down it runs the way to freedom. Look at the sea there, the river, the well—at its bottom lies freedom. Look at that tree, short and shrivelled and barren—there on it hangs freedom. Look at your throat, your windpipe, your heart—all are ways of escape from slavery. But perhaps the ways out which I have shown are too toilsome for you, too demanding on spirit and strength. Are you asking for the road to freedom? Take any vein you like in your body!

I have quoted this passage at length not only as an example of Seneca's macabre power as a writer, but because its conclusion, with its hyperbolic enthusiasm for different ways of killing oneself, is a passage often cited to confirm Seneca's morbid and unorthodox devotion to death. But settling for that reaction to the passage passes over how Seneca's argument is meant to work. What matters most here is not the awfulness of the circumstances from which we escape (though they are certainly maximally awful), and not the emphasis on how easy it is to kill oneself. What matters is the advice he gives to men in the grip of tyrannical circumstance: we shall simply show that in any slavery the way lies open to freedom. It is the *possibility* of freedom, the *availability* of a way out that Seneca stresses.⁹ His concern is primarily with people who suffer unbearably, forget that they have an alternative, and then complain about the cruelty of fate. In Seneca's view those complaints are unwarranted: no slavery is so great that

⁹ His exaggerated emphasis on the ready availability of the ways to die might be compared to the way we use counterfactual situations in our own moral argument: imagine the victim with a suicide pill which works instantly and painlessly and can be carried on one's person legally at all times; or better: imagine the agent augmented with a thought-activated death implant.

free action cannot be exercised and if we choose not to die then we cannot reasonably complain about our lot.¹⁰ It is worth remembering that in this long narrative of suffering and human misery, Seneca defers deciding on what would be the right thing for the victim to do and focuses solely on the possibilities open to him (14.4): ‘But how *should* a father have behaved as he stood over his son’s body, witness and cause of his killing? We shall see.’ And in 15.3: ‘But is the life worth that much? We shall see. That is a different question.’

The significance of this line of thought is made clearer in the *Consolation to Marcia* (20.3): ‘slavery is not an annoyance when, if you get tired of your master, you can cross to freedom with a single step. Life, I deem you dear thanks to death.’ This adds a valuable corrective. The availability of death is a source of freedom, provides room for proper agency and creates room for *deciding* on how one ought to act even when we seem to be most constrained by external factors, because it guarantees the perpetual possibility of action. Of course we may live under a master (who does not?). But even such slavery is a pleasure just in so far as we can walk away from it when *we* get tired of it. Choice is at the heart of agency, and *libertas* here comes down to a typically Senecan concern for agency.¹¹

The same theme runs through the letters as well, a source so rich that the quickest survey will have to suffice.

In letter 12.10 for example, in the midst of the Epicurean *envoi*, Seneca emphasizes that the ready abundance of paths to freedom should make us grateful to god for setting things up in such a way that no one can be *held* in this life: it is always possible to trample constraints under foot. A similar Epicurean context frames 22.5–6, which expresses an anxiety about the possibility that one’s ability to choose death (the *libertas recedendi*) might be taken away by circumstances—that is the proper basis for choosing suicide in many circumstances.¹² In 26.10, again in

¹⁰ For another aspect of this idea in Seneca, see B. Inwood, ‘Natural Law in Seneca’ in H. Najman, D. O’Connor, and G. Stirling (eds.), *Laws Stamped with the Seal of Nature*, The Studia Philonica Annual xv (2003), 81–99.

¹¹ Hence, though it should scarcely need to be said, freedom for Seneca does not involve any incompatibility with earlier Stoic conceptions of determinism and responsibility (or with those of Epictetus). Agency—which is our term, of course—is as compatible with Chrysippian determinism as is the preservation of what is up to us. Seneca’s *libertas* does not, then, represent a move towards a dual potestative theory; it is a feature of moral choice within the compatibilist framework characteristic of the entire Stoic school. Suicide is the focus of freedom *not* because the choice which leads to it is metaphysically different from other decisions we make, but because the focus of the choice being made is a central value (life itself) which truly puts to the test our entire moral character. The choice to give up your life is the ultimate declaration of one’s conviction that it is an indifferent rather than a good, that it does not contribute to human happiness.

¹² At *Ep.* 104.21 Seneca says that Socrates can teach us how to die when it is necessary and Zeno before it is necessary.

the Epicurean context of the conclusion to a letter, the connection between death and agency is again reinforced.

Practise death—the adviser who says this is telling you to practice freedom. He who learns to die unlearns slavery. Death is above every form of power, or at least beyond its reach. What are the jail-cell, imprisonment and shackles to him? He has an open door. Only one chain holds us in bondage, the love of life—which though it should not be rejected utterly ought nevertheless to be reduced, so that if circumstances ever do demand it nothing will hold us back or prevent us from being ready to do immediately what needs to be done on any given occasion.

In 66.13, the suicide to which Scipio drove the Numantians under siege is recognized as being as virtuous as Scipio himself. Someone who knows that he can die is not fully besieged and can die in the embrace of freedom. The connection of free agency with death and the availability of suicide is fully articulated at 70.14–16, where Seneca openly rebuts those philosophers who hold that suicide is immoral. Letter 77 too is rich with examples of death as freedom, where the point of each example is that the suicide is thereby preserving his own agency: he *acts* rather than suffers. As in letter 70, it is held to be a good thing about our circumstances on earth that *tam prope libertas est* (70.15). The freedom which comes from taking action in one's own death is the opposite of sloth and inertia (*Ep.* 70. 16) and its result is happiness (*nemo nisi vitio suo miser est*), the kind of satisfaction produced by acting on one's own inclinations (*placet? vive; non placet? licet eo reverti unde venisti*, 70.15) rather than allowing oneself to be passively influenced by circumstances and the choices of others. Agency in contrast to passivity is the benefit of maintaining a loose grip on life.

Another perspective on freedom in Seneca concerns the peculiarly clear understanding that the sage has of the Socratic meaning of harm and benefit. In *The Constancy of the Sage* 9.2–5, Seneca concedes that there is a very large number of dangers and threats, but nevertheless maintains the Stoic paradox that the sage cannot suffer harm:

The sage escapes these dangers, since he knows not how to live for hope or for fear. Add to this the fact that no one takes an injury unmoved, but is upset when he senses it; but there is no upset in a man who is free of mistakes, controls himself, and possesses a deep and calm tranquillity. For if injury touches a man he is both moved and driven on. But the wise man lacks anger, which is aroused by the appearance of injury and he could not lack anger unless he also lacked injustice—which he knows cannot happen to him. This is the source of his dignity and his light-heartedness; this is why he is elevated with a constant joy. So far is he from being pained by offences inflicted by circumstances and men that the injury itself is of use to him, for he tries his strength with it and tests his virtue. So, I beg you, let us be reverent towards this proposition and listen with fairmindedness while the wise man is exempted from injury. It is not that your own

impertinence is in any way reduced, nor is the violence of your greedy desires or your blind recklessness and pride. This freedom is won for the wise man without any impairment to *your* vices! I am not arguing that you cannot inflict injury, but that he casts aside all injuries and protects himself with endurance and strong-mindedness. In the same way at the sacred games many have won victory by wearing out the blows of their attackers by resolute endurance; think of the sage as being of this sort, one of those who has achieved by long and consistent training the strength to endure and wear down all hostile attacks.

Later in the book, at 19.2, Seneca distinguishes this sort of freedom, which has its roots in the proper understanding of values which enables him to rise above assaults and injuries, from the freedom which consists in simply not putting up with affronts directed at us and asserting our rights with angry indignation. This more conventional kind of freedom is, he maintains, *intemperans libertas*.

The treatise on *The Happy Life* relies on a similar understanding of *libertas* in several places. For example, in 3.4 the constant tranquillity which comes from rising above irritations and grievances is deemed a form of *libertas*. Fear and pleasure are the emotions which underlie the opposite state, a form of *feritas*, beastliness, which corresponds to the *intemperantia* of *On Constancy* 19. A similar path to peace of mind is advocated in *The Happy Life* 4.5, where the freedom which constitutes this eudaimonic state is attributed to rising above fortune. In section 9 this *libertas* is linked once again to the intrinsically valuable (note *pretium sui*) state of happiness: the *summum bonum* is the strength of a mind which cannot be broken, foresight, loftiness, health, freedom, harmony, and dignity.

In this context we can better assess one of those Senecan maxims which so often is cited to show how foreign from our notion of moral strength his Stoicism is. At the end of *The Happy Life* 15 he sums up: 'we are born into a monarchy; freedom is to obey god.' If our freedom consists in submission to a higher power, no matter how special it might be from the normative perspective, we will quite rightly find this an unappealing notion of freedom. We are, perhaps, liberated from one form of slavery just to take on a greater and more limiting servitude. But as the passages we have been looking at show, and as the very context of chapter 15 confirms, even in a passage which *sounds* so theological, the real key to our *eudaimonia* is a clear understanding of human values and *not* simply submission to a higher power.

In brief, Seneca is here arguing that the ideal life cannot be one which combines virtue and pleasure, on the grounds that 'any part of what is honourable must be itself honourable and the highest good will not have its own integrity if within itself it finds anything which is unlike its better aspect' (15.1). Even the joy we take in being virtuous or acting virtuously

is not an unconditional good, despite the goodness of what occasions it. It is a good, but one which follows from the highest good and not one of its components. This much is familiar Stoic doctrine (15.2). Seneca then explains in his own way (15.3):

But he who forges an alliance, even an unequal one, between pleasure and virtue, undermines whatever strength the one has through the vulnerability of the other good; he sends beneath the yoke that freedom which is unconquered only if it knows that nothing is more valuable than itself. For it begins to need fortune, and that is the greatest form of servitude; then comes a worried life, suspicious, fearful, trembling before chance, hanging on brief moments of time.

Inclusion of pleasure in one's goal makes its foundation unstable. If you care in that way about pleasure you are bound to work with one eye on the vulnerabilities which come from having a body. This impairs our ability to obey god just as it would impair our ability to act patriotically. That is why it is essential to exclude physically dependent states like pleasure from our ultimate motivation, the good. Doing so means that we can take proper account of a law of nature (*lex naturae* 15.5) which holds that a good soldier is bound to be wounded or even die. The point is that concern for pleasure would impede the performance of military duty; since one is bound to be in physical danger one can only maintain consistency if one brackets out one's concern for pleasure. Heeding the ancient precept 'follow god' is part of a package of values which ensures the integrity and internal consistency of our life—surely a necessary condition for freedom from fear and confusion. And in the case of a soldier, it also leads to the preservation of our *patria*, the state whose freedom is the necessary condition of our own.

Obedying god, then, is a matter of adopting the values which make our mission in the cosmic state (a kingdom) possible; without those values we will fail to do what we must, due to fear and pleasure, and we will fail to maintain the consistency which the happy life requires. Our freedom comes from obedience to god because obedience to god requires commitment to the same values that guarantee our liberation from distress (15.7), not because we are to find our freedom in simple subordination to some higher power. (In this context I have to pass over the interesting issues of fate and human choice which may also be at play in this complex text.)

For similar reasons the freedom of the wise man which is contrasted to the half-freedom of Cicero (who is represented as whining weakly about his political misfortunes)¹³ in *On the Shortness of Life* 5 can properly be

¹³ To a great extent Seneca's emphasis on the ready availability of death supports a general condemnation of complaint about one's fate on the grounds that there are always alternatives. For example, in *Ep.* 117.21 Seneca says that philosophy should teach us how to handle misfortune: 'teach me how to sustain grief without groaning myself, good fortune

described thus: ‘the wise man is characterized by a freedom which is intact and solid, he is unbound and autonomous (*sui iuris*) and loftier than the others. What [not who] could be above the man who is above fortune?’ If Stoic freedom were just a matter of following god or fate, then the autonomy here described would make no sense and there would be an answer to the question: god would be higher than the wise man. But of course he is not. It is for this reason too that in Letter 8.7–8, Seneca claims that freedom is a result of service to philosophy and not of service to god or fate.

Human freedom, then, comes not from mere political freedom; nor does it come merely from aligning oneself with the overwhelming power of god and fate. It comes from a philosophical and moral breakthrough in one’s life, a realization that things of the highest value to non-philosophers are in the end indifferent to human happiness. In Letter 22.11, he says that the appropriate dedication to freedom will eliminate *perpetua sollicitudo*, the mental anguish which comes from muddling up one’s values and moral commitments. Clear thinking about such things will itself be a liberation. In Letter 75.18, Seneca concludes similarly: we can emerge from the sewer of life to something lofty and noble; what awaits us there is *tranquillitas animi et expulsis erroribus absoluta libertas*—mental peace and the unconditional freedom which comes from driving out the mistakes we too often make in thinking about our lives. Then he asks: ‘what is this freedom? To fear neither men nor gods; to desire neither shameful things nor excesses; to have within oneself the greatest power; it is a good beyond price to be one’s own.’ The same sort of freedom is invoked at Letter 80.4–5 and even more bluntly in Letter 123: a great part of freedom lies in having hungers which know their place and can endure affronts (123.3).

The connections between this freedom, the desires and fears which are its enemies and so the source of slavery, and philosophy itself are complex. In Letter 37.4, Seneca reflects on simple stupidity. It is

a low, base, dirty and slavish thing, subordinate to all kinds of very cruel passions. These masters are very severe, sometimes giving orders by turns, sometimes in concert with each other. Wisdom eliminates them from you and wisdom is the one true freedom. One road leads to freedom, and it is a straight one. You will not go astray; just walk with a steady pace. If you want to

without groaning from others, how not to wait around for the final and inevitable moment, but to take refuge there myself when the time seems right.’ Immediately after this (117.22–4) he criticizes people who merely wish for death amidst misfortune—how hypocritical or muddled it is to wish for death in a kind of despair over one’s situation when one can either just kill oneself or endure; as he says, ‘let me die’ are the words of a weak mind, angling for pity. Knowing that death is readily available forces us to take a genuine responsibility for our reactions to events and so we can sustain grief without groaning.

subordinate everything to you, subordinate yourself to reason; you will rule many people if reason rules you. From reason you will learn what to undertake and how to do so; you won't just blunder into things. You won't be able to show me anyone who knows how he has come to want what he wants. He has gotten there not by deliberation but driven by blind impulse. Fortune comes upon us as often as we come upon fortune. It is shameful not to proceed but rather to be swept along, then suddenly, in the midst of a vortex of circumstance to be stunned and ask, How did I get here?

As Seneca says in Letter 51.9, it is when you *understand* fortune that she ceases to have power over you; that is why freedom comes with philosophy.¹⁴

The kind of philosophy which brings us freedom is a solid knowledge of the real values of things which affect our concrete human lives and which if misunderstood, misevaluated, or muddled will enslave us to our passions. In Letter 104 this kind of knowledge is contrasted with geographical and ethnographic knowledge which does not make us better people (15 ff.). The travels which bring us this sort of knowledge are mere wanderings until we learn what is worth fleeing, what is worth pursuing, what is necessary and what superfluous, what is just and what is unjust, what is honourable and what is dishonourable.

The relationship of this sort of freedom to more lofty forms of philosophical knowledge is set out at some length in a crucially important passage of Letter 65, which is one of the more technical letters in the collection. Its topic is the different conceptions of causation of the various philosophical schools. As is his custom, Seneca digresses at one point to justify this kind of technical exploration, ever eager to avoid the appearance of moral irrelevance.

16. I am not wasting time even now, as you think. For if all those issues are not chopped up and dispersed into this kind of pointless sophistication, they elevate and relieve the mind, which, being burdened by its great load, desires to be set free and to return to the things it used to be part of. For this body is a burden and a penalty for the mind. It is burdened by its weight and is in chains unless philosophy comes to it and urges it to take its ease before the sight of nature and directs it away from what is earthly and towards the divine. This is its freedom, this is its free range. From time to time it slips away from the prison in which it is held and is refreshed by the sight of the heavens.

17. Artisans who work on some quite detailed job which wearies their eyes with concentration if they rely on bad and uncertain lighting, these artisans make an appearance in public and treat their eyes to the light in some region devoted to the public leisure—just so the mind, enclosed in this sad and gloomy dwelling, seeks open space and takes its ease in the contemplation of nature.

¹⁴ Compare Bobzien, *Determinism*, 342 on Epictetus.

18. To be sure, he who is wise and pursues wisdom sticks to his body, but with the best part of himself he is elsewhere and focusses his thoughts on higher matters. Like a soldier under oath [on active service] he thinks that this life is a tour of duty; and he has been shaped in such a way that he neither loves nor hates life and he puts up with mortal matters though he knows that higher things remain.

19. Do you ban me from an investigation of nature, drag me away from the whole and confine me to a part? Shall I not investigate the principles of all things? Who gave them form? Who made distinctions among things which were melded into one and enmeshed in passive matter? Shall I not enquire who is the artisan of this cosmos? How so great a mass was reduced to lawlike structure? Who gathered the scattered bits, who separated what was combined and brought shape to things lying in unsightly neglect? Where did this great light come from? Is it fire or something brighter than fire?

20. Shall I not ask these questions? Shall I remain ignorant of my origins? Am I to see these things just once or am I to be born many times? Where am I to go from here? What residence awaits the soul when it is freed from the laws of human servitude? You forbid me to meddle with the heavens, i.e., you order me to live with bowed head.

21. I am greater than that and born for greater things than to be a slave to my body, which I think of as no different than a chain fastened about my freedom. So it is this that I offer to fortune, so that she will stop right there; I permit no wound to get through the body to *me*. This is the only part of me which can suffer injustice. A free mind lives in this vulnerable dwelling.

22. That flesh will never drive me to fear, never to pretence unworthy of a good man; I shall never lie to show respect for this paltry body. When the time seems right, I shall dissolve my partnership with it. Even now, however, while we cling to it, we will not be partners on equal terms. The mind will reserve all rights to itself. To despise one's body is a reliable freedom.

Here there is something new, and something worth exploring at some length on another occasion.¹⁵ For here there is another notion, one clearly drawn ultimately from the *Phaedo* of Plato. Our freedom here is not merely a matter of knowing the real value of things like money, pleasure, pain, and life itself. It comes from identifying one's mind with the universe, not with one's body. The fact that human origins lie in the heavens and that one's mind will return to its origins when the body falls away—this is the source of dignity. To deny us the opportunity to study cosmology is to make us live with bowed heads. Doing philosophy involves understanding the emotions, human values, pleasure and pain, it involves the optimally rational planning of one's life in a sense which is

¹⁵ But see also G. Maurach, *Seneca: Leben und Werk*, 2nd edn. (Darmstadt, 1996), 169–71.

clearly eudaimonistic and naturalistic. But here in Letter 65 we learn that part of our freedom lies also in identifying our selves with our minds rather than our bodies and in thinking about the cosmos rather than about our own immediate world. So if there were to be a place where Seneca's otherworldliness cut into his naturalism, this would be it.¹⁶ But even here, as I think a careful reading of the letter and this passage in particular shows, Seneca has kept the focus on freedom in this life and not on the divine understood in such a way that our human autonomy was somehow compromised by our attitude to it. We are free due to our detachment from the body in our thoughts and we are free because our nature is like that of the divine. For Stoics, after all, the cosmos as a whole is not opposed to nature but is nature itself. The cosmic perspective is naturalistic.

Before I conclude, I want to point briefly to the presence of the same theme in a rather unlikely place. The Jewish historian Josephus (like other Greek-speaking intellectuals who affiliated themselves closely with Romans) was part of the Latin-speaking world as well as the Greek, and in his *Jewish War* he found occasion to deal with some themes similar to those I have been discussing in Seneca. It is difficult to say if there can be any relevance of Seneca's ideas to those of Josephus, but there are certainly some intriguing parallels between what Seneca believes about the relationship between freedom and death and the magnificent speech of Eleazar in the final hours of Masada.¹⁷ Just as Seneca seems often to anticipate Epictetus' views in this area, perhaps we can see something similar with respect to Josephus.

The similarity becomes apparent in Josephus' account of the motivations and ideological rhetoric of the leaders of the final suicidal siege at Masada, especially Eleazar.¹⁸ That Eleazar and his followers took the desire for *eleutheria* as their central goal is clear from *Jewish War* 2.443, where their longing for freedom is extended to cover their reasons for taking a particular position in the brutal struggles within the Jewish community (cf. 7.254–8). But it is most striking in the great speech of Eleazar at the climax of book 7 (323–36, 341–88). Especially in the second half of this speech, described by Josephus as a second effort to stiffen the spines of those wavering in their determination to accept the suicide pact, Eleazar connects freedom, self-inflicted death, autonomy of choice, and

¹⁶ See Rist, *Stoic Philosophy*, 247–50.

¹⁷ For some background see D. Ladouceur, 'Masada: A Consideration of the Literary Evidence', *GRBS* 21 (1980), 245–60, and 'Joseph and Masada', in L. Feldman and G. Hata (eds.), *Josephus, Judaism and Christianity* (Detroit, 1987), 95–113. I am grateful to Tim Barnes for the references.

¹⁸ It would be worth recalling Seneca's comments on the suicides at the siege of Numantia (*Ep.* 66.13 and above p. 497).

human dignity with a cosmic perspective; and he does so in a way which recalls Seneca's configuration of this theme. A full discussion of this point is not possible here; but a reading of the second half of the speech will, I think, be impressive, especially if careful attention is given to 7.344: 'it is death which gives freedom to our souls and sets them free to escape to their pure and proper place, where they will be untouched (*apatheis*) by all misfortune.' Though the philosophers he invokes to support his point are Indian and the doctrine owes much to Platonism, the thought and language are also Stoic.

It does not, of course, follow that Josephus was in any measure directly influenced by Seneca. There are more than enough common influences to make that the most economical hypothesis. And there is certainly nothing as distinctively Stoic in Eleazar's speech as what there is in Seneca. So perhaps the appearance of common ground comes only from their shared openness to Platonic influences. I suspect, though, that there is more to it than that. The Graeco-Roman intellectual world of the first century AD provided Josephus with a language, a set of terms, which owed a good deal to Stoicism as well as to other schools, but also with an intellectual framework to work in, a framework which had absorbed the perspectives of both Stoicism and Platonism. Any writer struggling with the themes of freedom, autonomy, and the threats to them—as both Seneca and Josephus did in their own ways—will quite naturally have been led to similar solutions. That a highly constrained world can provide room for autonomy only as long as the door is open, as Seneca might say, is not surprising. That it can be difficult to keep the door open and to find the resolution to go through it is, in part, the lesson we learn from Josephus' narrative of the death of the rebels at Masada.

Bibliography

- BOBZIEN, S., *Determinism and Freedom in Stoic Philosophy* (Oxford, 1998).
 GRIFFIN, M., *Seneca: A Philosopher in Politics*, 2nd edn. (Oxford, 1992).
 INWOOD, B., 'Seneca in his Philosophical Milieu', *Harvard Studies in Classical Philology* 97 (1995), 63–76.
 ——— 'Natural Law in Seneca', in H. Najman, D. O'Connor, and G. Stirling (eds.), *Laws Stamped with the Seal of Nature*, *The Studia Philonica Annual* xv (2003), 81–99.
 LADOUCEUR, D., 'Masada: A Consideration of the Literary Evidence', *GRBS* 21 (1980), 245–60.
 ——— 'Joseph and Masada', in L. Feldman and G. Hata (eds.), *Josephus, Judaism and Christianity* (Detroit, 1987), 95–113.
 MAURACH, G., *Seneca: Leben und Werk*, 2nd edn. (Darmstadt, 1996).
 RIST, J., *Stoic Philosophy* (Cambridge, 1969).

- ROLLER, M., *Constructing Autocracy: Aristocrats and Emperors in Julio-Claudian Rome* (Princeton, 2001).
- SORABJI, R., *Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation* (Oxford, 2000).

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Moral Philosophy and the Conditions of Certainty: Descartes' *Morale* in Context

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A familiar characteristic of the erudite tomes of Richard Sorabji is their ability to illuminate the figures and schools of ancient philosophy by placing them in a coherent and vivid intellectual context. The general value of this approach to the history of philosophy is by no means specific to the study of ancient authors, since Sorabji's methods are just as relevant to any scholar of medieval, Renaissance, or early modern philosophical thought. His indefatigable enthusiasm, both in print and in discussion, for mapping the often complicated ebb and flow of philosophical argument, provides a stout example of how the history of philosophy can reveal the conceptual continuities and discontinuities of any age without courting anachronism.

What emerges from Sorabji's engaging portraits of diverse thinkers at different times and places is a view that the principal arguments of the western philosophical tradition, although by no means homogeneous, are in some sense connected. This does not entail that the history of philosophy is to be read in terms of a strict lineage with each new age being judged to eclipse the accomplishments of the last, but rather to suggest that any philosophical understanding of a particular period involves a genuine historical appreciation of the ways in which thinkers of that time inherited or reacted to ideas taken from the past. In so far as the good practices of Sorabji's scholarship can be transposed from one period of philosophy to another, I believe that it is possible to show that an approach similar in character and orientation to his own can be brought to bear outside the confines of ancient thought. Such is the aim of the present essay in which the moral views of René Descartes are set against the broad intellectual context in which he lived. It is my hope that something of interest can be learned about Descartes' moral ideas by imitating methods of analysis that Sorabji has used to such great effect in the study of ancient philosophy.

Rarely acknowledged in his own time as a moral philosopher of any standing,¹ Descartes' scattered remarks on ethics have now attracted the attention of historians of philosophy.² Several commentators have argued that his contribution to moral philosophy is far more significant than has been assumed,³ claiming that his occasional comments on morals (*la morale*), expressed in the form of selective reflections on human happiness, freedom, *générosité*, the passions, and love, are worthy of further debate and consideration.⁴ Undaunted by the fact that

¹ This is so despite the best efforts of Claude Clerselier (1614–84) and Louis de la Forge (1632–66). Clerselier, Descartes's literary executor, claimed in his preface to the *Lettres de M. Descartes*, 3 vols. (1657, 1659, and 1667) that Descartes had a profound interest in ethics and that one of his aims was to show how a scientific understanding of the passions could guide our actions in accordance with the requirements of reason. In a very brief chapter expounding 'Cartesian ethics' in his treatise *L'Homme de René Descartes* (Paris, 1666), Louis de la Forge did little more than précis Descartes' thought and quoted from the Letters. All references to Descartes are cited by volume and page of the Charles Adam and Paul Tannery edition of the *Œuvres de Descartes* [AT], 12 vols. (Paris, 1964–74). All quotations are based upon the English translation of J. Cottingham, R. Stoothoff, and D. Murdoch (eds.), *The Philosophical Works of Descartes* [CSM-I or CSM-II], 2 vols. (Cambridge, 1984–5), and J. Cottingham, R. Stoothoff, D. Murdoch, and A. Kenny (eds.), *The Philosophical Writings of Descartes* [CSMK-III] (Cambridge, 1991). All other translations are my own.

² Earlier attempts to explain those aspects of Descartes' thought now classified under the heading 'moral philosophy' are provided by É. Gilson, *La Liberté chez Descartes et la Théologie* [*Liberté*] (Paris, 1913); A. Espinas, *Descartes et la morale*, 2 vols. (Paris, 1925); A. Boyce-Gibson, *The Philosophy of Descartes* [*Descartes*] (London, 1932), 329–68; P. Men-sard, *Essai sur la morale de Descartes* (Paris, 1936); P. Comarnesco, 'The Social and Ethical Conceptions of Descartes' ['Conceptions'], *Ethics* 52 (1942), 374–400; H. Spiegelberger, 'Indubitables in Ethics: A Cartesian Meditation', *Ethics* 55 (1947–8), 35–50; R. Cumming, 'Descartes's Provisional Morality' ['Provisional Morality'], *Review of Metaphysics* 9 (1955–6), 207–35; Geneviève Rodis-Lewis, *La morale de Descartes* (Paris, 1957); C. J. Chambers, 'The Progressive Norm of Cartesian Morality', *New Scholasticism* 42 (1968), 374–400; M. Gagon, 'Le rôle de la raison dans la morale cartésienne', *Laval Théologique et Philosophique* 25 (1969), 268–305; W. L. Van Reijen, 'Freiheit und Moral in der Philosophie Descartes', *Zeitschrift für philosophische Forschung* 26 (1974), 125–37; and N. F. de Merckaert, 'Les trois moments moraux du Discours de la Méthode', *Revue philosophique de Louvain* 73 (1973), 607–27.

³ See J.-M. Gabaude, 'The Dual Unity of Cartesian Ethics', in G. D. Moyol (ed.), *René Descartes: Critical Assessments*, 4 vols. (London, 1991), iv, 332–42; T. Sorell, 'Morals and Modernity in Descartes' ['Modernity'], in T. Sorell (ed.), *The Rise of Modern Philosophy: The Tension between the New and Traditional Philosophies from Machiavelli to Leibniz* (Oxford, 1993), 273–88; V. G. Morgan, *Foundations of Cartesian Ethics* [*Foundations*] (Atlantic Highlands, NJ, 1994); S. James, *Passion and Action: The Emotions in Seventeenth Century Philosophy* [*Passion*] (Oxford, 1997), 258–68; J. Marshall, *Descartes's Moral Theory* [*Moral Theory*] (Ithaca, 1998); J. Cottingham, *Philosophy and the Good Life* [*Philosophy*] (Cambridge, 1998), 61–103; Z. Janowski, *Cartesian Theodicy* [*Theodicy*] (Dordrecht, 2000); L. Renault, *Descartes ou la félicité volontaire* [*Félicité*] (Paris, 2000); R. Davies, *Descartes: Belief, Scepticism and Virtue* [*Belief*] (London, 2001); and B. Williston and A. Gombay (eds.), *Passion and Virtue in Descartes* [*Passion and Virtue*] (Amherst, NY, 2003).

⁴ See James, *Passion*, 263–8; Marshall, *Moral Theory*, 57–166; Cottingham, *Philosophy*, 87–103; Janowski, *Theodicy*, 113–40; Renault, *Félicité*, 157–208; and Davies, *Belief*, 41–102, 219–47.

Descartes published no single work of moral philosophy, recent enthusiasts of ‘Cartesian ethics’ are motivated to emphasize how his remarks on the passions assist the task of moral improvement, since they form an essential part of any agent’s understanding of their evaluative responses to the world. With regard to the passions and other related areas of moral psychology, Descartes is now believed to have made a genuine contribution.⁵

Without seeking to impune the value of these discussions, I should like to broaden the ongoing debate on Descartes’ ethics by focusing on its relationship to several changes that occurred in philosophical thinking about morals in the early modern period. In particular, I want to concentrate on methodological discussions of ethics and the question of what kind of certainty may or may not attend the exercise of moral judgement. By reconstructing Descartes’ scattered opinions on this subject, and by further examining how his views compare and contrast with the position of early modern scholastic and other thinkers, I hope to sketch a clearer picture of the complications that court the question of his modernity in ethics. For as we shall see, the very fact that Descartes’ *morale* is a composite of different elements, has profound implications for any attempt to relate his moral teaching to more general developments in early modern moral philosophy. It will be the burden of this essay to try to show that important aspects of Descartes’ ethics, whenever they are judged by the standards of the early seventeenth century, are not as ‘novel’ or even as ‘modern’ as some of his recent interpreters are minded to assume.

I. Early Modern Philosophy and Method in Ethics

The early decades of the seventeenth century witnessed the advancement of views that sought to challenge previously accepted ways in which philosophers had defined the scope and point of moral philosophy. Central to this process was the claim that the subject could no longer rest solely on the foundation of authority derived from ancient writers such as Aristotle, or else that it had to be liberated from the views and opinions of scholastic thinkers.⁶ As is well known, the effort of recasting

⁵ See especially the discussion by Morgan, *Foundations*, 185–211; Cottingham, *Philosophy*, 75–103; and Marshall, *Moral Theory*, 117–66.

⁶ Francis Bacon, in particular, thought that traditional moral philosophy was an obstacle to scientific progress. He hoped to redirect moral inquiry away from the settled range of subjects inherited from Aristotle and the scholastics to a more empirical analysis of affections and character. *The Essayes: Civill and Morall* (London, 1597, final edition in Bacon’s lifetime London, 1625) are to contribute to this project. For further discussion of

the methodological status of ethics took place against the background of a more general reaction against ancient authority in philosophy and science on the part of influential thinkers such as Bacon, Hobbes, and Descartes.⁷ While it would be quite wrong to convey the impression that these changes precipitated anything like a wholesale rejection of all traces of ancient and scholastic moral philosophy,⁸ it is possible to discern ideas and attitudes among early modern thinkers that express dissatisfaction with notions that earlier had been considered a central component of the characterization of moral philosophy as a 'practical discipline'.

One source of complaint concerned the presumed relationship of ethics to other branches of speculative inquiry and focused on the issue of certainty. At *Nicomachean Ethics* I. 3 (cf. I. 5, and IV. 7) Aristotle had claimed that it was the mark of an educated person not to assume that a uniform standard of certitude could be applied to all branches of knowledge, and that a practical discipline like *πολιτική* (ethics and politics) lacked the 'precision' (*ἀκρίβεια*) of demonstrative sciences such as mathematics. While Aristotle's cautionary remarks were generally accepted by medieval and Renaissance writers,⁹ dissenting voices in the early seventeenth century began to pose the question whether it was possible to develop a systematic science of moral philosophy based on logically rigorous self-evident principles. Further to this, other thinkers, such as Bacon and Hobbes, asked whether it was possible to convert the study of previously nominated practical subjects like ethics and politics into

Bacon's views see I. Box, *The Social Thought of Francis Bacon* (Lewiston, NY, 1989), 8–124, and 'Bacon's Moral Philosophy', in M. Peltonen (ed.), *The Cambridge Companion to Bacon* (Cambridge, 1996), 260–83.

⁷ See J. Krayer, 'Seventeenth Century Moral Philosophy [SCMP]', in M. Ayers and D. Garber (eds.), *The Cambridge History of Seventeenth Century Philosophy [CHSCP]*, 2 vols. (Cambridge, 1997), ii. 1279–1316; and J. B. Schneewind, *The Invention of Autonomy: A History of Modern Moral Philosophy [Invention]* (Cambridge, 1988), 82–100, 141–63, 184–93, and 263–88.

⁸ One has only to examine the ethics taught in the universities at this time to realize that a traditional form of moral philosophy, invariably Aristotelian refracted through the prism of scholasticism, reigned supreme. See L. W. B. Brockliss, *French Higher Education in the Seventeenth and Eighteenth Centuries: A Cultural History* (Oxford, 1987), 216–27; see also Krayer, 'SCMP', 1279–86.

⁹ For detailed discussions of the medieval and Renaissance reception of Aristotle's method of ethics see G. Wieland, *Ethica, scientia practica: die Anfänge der philosophischen Ethik im 13. Jahrhundert* (Münster, 1981); C. Schmitt, 'Aristotle's Ethics in the Sixteenth Century: Some Preliminary Considerations', in *The Aristotelian Tradition and Renaissance Universities* (London, 1984); J. Krayer, 'Renaissance Commentaries on the *Nicomachean Ethics*', in O. Weijers (ed.), *The Vocabulary of Teaching and Research between Middle Ages and Renaissance, Proceedings of the Colloquium: London Warburg Institute, 11–12 March 1994* (Turnhout, 1995), 96–117; and D. Lines, *Aristotle's Ethics in the Italian Renaissance (ca. 1300–1650): The Universities and the Problem of Moral Education* (Leiden, 2002), 123–30, 223–394.

scientific disciplines such as *scientia moralis* and *scientia civilis*.¹⁰ For these authors, it was a matter for further debate whether a recast 'scientific ethics' could ever emulate the certainty traditionally associated with the speculative sciences.¹¹

A common aim among thinkers who opposed the Aristotelian method was not merely to replace the Stagirite's ideas, but also to establish new criteria of knowledge (*scientia*) that could address the many dilemmas provoked by a renewed interest in ancient forms of scepticism.¹² One feature of this discussion, and the adjustments in epistemological outlook that ensued from it, was an attempt to extend the certitude of mathematics to philosophy by adopting the axiomatic method of geometry with its indubitable demonstrations and conclusions.¹³ In itself, there was nothing new about this idea. Since the twelfth century, Christian apologists addressing either Muslims or Jews, and therefore unable to rely on arguments based on biblical authority or any special revelation, had discovered the utility of writing theological works *more geometrico*.¹⁴

¹⁰ Bacon, at *De augmentis* IV. 405, argued that 'civil knowledge' or politics must be emancipated from traditional moral philosophy thereby creating an entire science by itself. Some years later, Hobbes sought to construct a *scientia civilis* or 'civil science' dealing with politics, which would differ from a science of morals (*scientia moralis*) concerned with vice and virtue, see *The Elements of Law* (1640), and *De cive* (1642). Such an enterprise was antithetical to both the letter and spirit of so much ancient and medieval thought, which, following Aristotle's lead, had assumed that 'ethics' and 'politics' were branches of the same practical inquiry. For further discussion see T. Sorell, *Hobbes* (London, 1986), 105–11, R. Tuck, 'Hobbes's Moral Philosophy', in T. Sorell (ed.), *The Cambridge Companion to Hobbes* (Cambridge, 1996), 175–207; and Q. Skinner, *Reason and Rhetoric in the Philosophy of Hobbes* (Cambridge, 1996), 1–19, 294–375.

¹¹ A very different thinker who argued that the scientific credentials of ethics could be improved by means of imitating the methods of physics was Pierre Gassendi. For Gassendi, whose probabilistic theory drew on many aspects of Epicureanism and Christian theology, the study of ethics and physics must be complementary, but also autonomous. Gassendi's ethics are also marked by a pronounced anti-Aristotelianism, see *Exercitationes paradoxicae adversus Aristoteles* (Grenoble, 1624; Part II published posthumously in *Opera omnia*, Lyons, 1658), I, vi, a. 11. For a general survey of Gassendi's moral writings see L. Sarashon, *Gassendi's Ethics: Freedom in a Mechanistic Universe* (Ithaca, NY, 1996).

¹² The philosophical discussion of the influence of ancient schools of scepticism in this period is chronicled by R. Popkin, *The History of Scepticism from Erasmus to Spinoza*, rev. edn. (Berkeley CA, 1979); C. Schmitt, *Cicero Scepticus* (The Hague, 1972); P.-F. Moreau (ed.), *Le Scepticisme au XVI et au XVII siècle* (Paris, 2001); and L. Floridi, *Sextus Empiricus: The Transmission and Recovery of Pyrrhonism* (Oxford, 2002).

¹³ For further discussion of related issues see W. Wallace, 'The Certitude of Science in Late Medieval and Renaissance Thought' ['Certitude'], *History of Philosophical Quarterly* 3 (1986), 281–91, this being a rejoinder to some of the claims made by B. Shapiro, *Probability and Certainty in Seventeenth-Century England* [*Probability and Certainty*] (Princeton, 1983).

¹⁴ An example of such work from the medieval period can be found in Nicholas of Amien's late twelfth-century tract *De arte fidei catholicae*, see M. Dreyer, *Nikolaus von Amiens: Ars fidei catholicae—Ein Beispielwerk axiomatischer Methode* (Münster,

Some writers in the seventeenth century, such as Jean-Baptiste Morin (1583–1656), were attracted to this method for a similar motive since it enabled them to advance their arguments without recourse to classical or scholastic authority.¹⁵ Moreover, the conclusions they reached, like those of geometry, would not merely be ‘authoritative’ or based on the best and wisest ‘opinions’ (cf. Aristotle’s notion of τὰ ἐνδοξα at *Nicomachean Ethics* IV. 7, 1127a21, and *Topics*, I. 1, 100b21–23 and I. 10, 104b3–11) but would be irrefutable. In the minds of some authors the methodological reform of philosophy, including ethics, was deemed to be a mark of intellectual progress.

The aspirations of those who sought to transpose the *mos geometricus* to previously designated ‘practical disciplines’ like moral philosophy represented a shift (although by no means decisive) in thought about the nature of ethics. However, given the dominance of different versions of Aristotelianism within professional philosophy at this time, and the sustained interest in other ancient paradigms of moral thought such as Stoicism, Epicureanism, and Scepticism among thinkers working outside the universities,¹⁶ the axiomatic method of geometry in works of moral philosophy was used sparingly. One of the first attempts to use the method was the *De lege naturae* (1562) of Niels Hemmingsen (1513–1600). On the basis of specifying an idea of ‘a law of nature’, a maxim that dictated that those things preserved by nature are required by it, Hemmingsen proposed certain immutable, infallible, and indubitable axioms, such as the principle ‘that virtue was to be sought and vice avoided’.¹⁷ Deploying this and other putative self-evident axioms, he

1993). For more general discussions of this tendency see C. Lohr, ‘The Pseudo-Aristotelian *Liber de causis* and Latin Theories of Science in the Twelfth Century’, in J. Kraye et al. (eds.), *Pseudo-Aristotle in the Middle Ages: The ‘Theology’ and Other Texts* (London, 1986), 53–62; and, more generally, P. M. J. E. Tuumers, ‘Geometry and Theology in the XIIIth century’, *Vivarium* 18 (1980), 112–42.

¹⁵ See in particular his *Quod Deus sit* (Paris: 1635), a small work that attempted to argue for the existence of God by means of geometrical definitions, axioms, and theorems. For further discussion of Morin’s life and work see M. Martinet, ‘Jean-Baptiste Morin (1583–1656)’, in P. Costabel and M. Martinet (eds.), *Quelques savants et amateurs de science au XVIIe siècle: Sept notices biobibliographiques caractéristiques* (Paris, 1986), 69–87. See also H. Schüling, *Die Geschichte der axiomatischen Methode im 16. und beginnenden 17. Jahrhundert* (Hildesheim and New York, 1969), 93–7.

¹⁶ The influence of these ancient paradigms within seventeenth-century moral philosophy is clarified and discussed by Kraye, *SCMP*, 1279–98; and J. B. Schneewind, *Moral Philosophy from Montaigne to Kant: An Anthology*, 2 vols. (Cambridge, 1990), i. 1–30; and *Invention*, 42–55, and 167–214.

¹⁷ *De lege naturae* [*De lege*], sigs. B7^r, F3^v–5^r. The concept of self-evident principles (*praecepta per se nota*) had always been central to the arguments of medieval natural theorists who had argued that the first principles of natural law, such as Thomas Aquinas’ principle ‘bonum est faciendum et prosequendum et malum vitandum’ (that the good be done and pursued and evil avoided), could be described as the first principles of practical

attempted to demonstrate various hypotheses concerning morality. Although some of these demonstrations rested on the foundation of previously proven theorems, as the geometrical method prescribed, other aspects of his proposals drew on the staple resources of classical or biblical authority. An example of this latter technique can be seen in his demonstration of the hypothesis that 'knowledge of God occupies first place in all human actions' (*omnium actionum humanarum primum locum obtinere agnitionem Dei*) by means of a syllogism and a quotation from the fourth book of Plato's *Laws* (716D).¹⁸

A related, if more half-hearted, attempt to apply the geometrical method to moral philosophy can be found in the *Summa ethicae* (1617) of the Jesuit Francesco Pavone (1569–1637).¹⁹ As in geometrical works, his treatise begins with definitions which are then used as the foundation for a series of propositions. But here ends any mark of innovation. Pavone's definitions are all selected from classical authors and medieval *auctoritates*, while his *praecepta* are organized into standard scholastic *quaestiones*. This is unsurprising given that he was writing a commentary on Aristotle's *Nicomachean Ethics*. All that Pavone did, in fact, was to appropriate a few formal features of geometry, his motive being that he wished to make his arguments more perspicuous. Tellingly, by positing arguments he deemed sounder by being made clearer, he did not claim to have rendered his ethical principles more certain. In the activity of turning to the geometrical method in order to improve the order and clarity of his exposition as opposed to the certainty of his arguments, Pavone was by no means alone. Other combinations of the geometrical and traditional methods can be seen in several works of natural philosophy and metaphysics of the period. In this connection we can mention *De motu* (1591) by Galileo's teacher Francisco Buonamici (1533–1603/4); the *Euclides*

reasoning, much like the law of non-contradiction was the *primum principium* of speculative reasoning. That said, authors like Aquinas specified that these principles were not applied to the level of action, but were reformulated in the form of so-called 'secondary principles' some of which could not be said to hold in every case. In this sense, Hemming's approach to natural law stands in marked contrast to earlier writers, and indeed to sixteenth-century followers of Aquinas' approach such as the Spanish Dominican Francisco Vitoria. For further discussion of natural law theory among sixteenth-century scholastics see my 'The Nature and Significance of Law in Early Modern Scholasticism', in F. D. Miller, Jr. (ed.), *A History of Philosophy of Law from the Ancient Greeks to the Scholastics* (A Treatise of Legal Philosophy and General Jurisprudence, Volume 6; Dordrecht, 2004).

¹⁸ See *De lege*, sig. G4^r–5^r. For a similar use of Cicero's *De officiis* see sig. H2^v–3^r.

¹⁹ Franciscus Pavonius, *Summa ethicae, sive commentarius in libros Ethicorum Aristotelis* (Naples 1617); later republished as: *Summa ethicae, sive introductio in Aristotelis et theologorum doctrinam moralem* (Lyons, 1620). On Pavone see C. Lohr, *Latin Aristotle Commentaries, II: Renaissance Authors* (Corpus Philosophicum Medii Aevi, Subsidia IV; Florence, 1988), 304.

physicus (1657) and *Euclides metaphysicus* (1658) by Hobbes' opponent Thomas White (1593–1676), and the *Physica* (1669–71) of the Jesuit Honoré Fabri (1608–88).²⁰

While there is little evidence to suppose that Descartes ever stood at the forefront of those few thinkers who wished to recast all areas of philosophy by bringing to bear the methods of the *mos geometricus*—one has just to note his aversion to the methods of Morin²¹—or even that he emphasized ‘absolute certainty’ as a prerequisite of all branches of knowledge,²² there is still reason to believe that what he says about *la morale* provides an instructive resource for assessing changing attitudes to the discipline of moral philosophy in the first half of the seventeenth century. This is so because his relationship to the project of untying moral philosophy from its past appears to display signs of tension. On the one hand, he appears as the very personification of a ‘modern philosopher’. His physics and metaphysics reject the theories of the dominant Aristotelian world-view, and his disavowal of that same heritage is evident in his contributions to other speculative sciences. Further to this, Descartes repeatedly advocates the extension of scientific inquiry and its promise of certainty to all other branches of learning. This last point can be seen in a passage in the *Discours de la méthode* where he reflects upon the direction of his philosophical programme. He says:

²⁰ I am very grateful to Krayer, *SCMP*, for having introduced me to these individuals and for subsequent discussions on these issues with the author herself. For further discussion of Buonamici see M. O. Helbing, *La filosofia di Francesco Buonamici, professore di Galileo a Pisa* (Pisa, 1989), 77–98; E. De Angelis, *Il metodo geometrico nella filosofia del Seicento* (Pisa, 1964), 18, 27–9; and W. Wallace, *Prelude to Galileo* (Dordrecht and Boston, 1981), 190–208, 308–14. On Thomas White see B. C. Southgate, ‘Covetous of Truth’: *The Life and Work of Thomas White, 1593–1676* (Dordrecht, 1993); on Fabri see A. Boehm, ‘L’Aristotélisme d’Honoré Fabri (1607–1688)’, *Revue des sciences religieuses* 39 (1965), 305–60; and E. Caruso, ‘Honoré Fabri gesuita e scienziato’, in *Miscellanea scentesca: Saggi su Descartes, Fabri, White* (Milan, 1987), 85–126; and P. Dear, *Mersenne and the Language of the Schools* [*Schools*] (Ithaca, NY, 1988), 215–19.

²¹ See D. Garber, ‘J.-B. Morin and the Second Objections’, in R. Ariew and M. Grene (eds.), *Descartes and his Contemporaries* (Chicago, 1995), 63–82; reprinted in D. Garber, *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science* [*Descartes Embodied*] (Cambridge, 2001), 64–84.

²² The claim, common to many eighteenth- and nineteenth-century discussions of Descartes’s work, that ‘Cartesianism’ was concerned with absolute certainty has been effectively debunked by twentieth-century scholarship. See R. Blake, ‘The Role of Experience in Descartes’s Theory of Method’, *Philosophical Review* 38 (1929), 125–43; A. Gewirtz (Gewirth), ‘Experience and the Non-mathematical in the Cartesian Method’, *Journal of the History of Ideas* 2 (1941), 3–21; G. Buchdahl, *Metaphysics and the Philosophy of Science* (Oxford, 1969); D. Clarke, *Descartes’s Philosophy of Science* (Manchester, 1982); importantly, D. Garber, *Descartes’s Metaphysical Physics* (Chicago, 1992); and P. Schoulds, *Descartes and the Possibility of Science* [*Possibility*] (Ithaca, NY, 2000).

As soon as I had acquired some general notions in physics and had noticed <...> where they could lead and how much they differ from the principles used up to now, I believed that I could not keep them secret <...>. For they opened my eyes to the possibility of gaining knowledge which would be very useful in life, and of discovering a practical method (*une pratique*) which might replace the speculative philosophy taught in the schools. Through this philosophy we could know the power and action of fire, water, air, the stars, the heavens, and all the other bodies in our environment, as distinctly as we know the various crafts of our artisans; and we could use this knowledge—as artisans use theirs—for all the purposes for which it is appropriate, and thus make ourselves, as it were, the lords and masters of nature (*et ainsi nous rendre comme maîtres et possesseurs de la Nature*).²³

While this passage does not mention moral philosophy as such, it is not without relevance to the concerns of this essay. Descartes appears to be claiming that the techniques and procedures of a ‘new philosophy’ will lead to gains in knowledge that will improve the conditions of human life. Seen thus, there would appear to be grounds for supposing that he held that the methodological programme of Cartesian science could be used to great purpose in recasting the nature and scope of all branches of learning, moral philosophy included, in so far as that discipline concerns itself with the conditions and improvement of human life. This last point is supported by further remarks at the outset of the *Discours de la méthode*, where he says that while ancient writings on morals contain many useful teachings and exhortations to virtue, they are but ‘very proud and magnificent palaces built only on sand and mud’ (*des palais fort superbes et fort magnifiques, qui n’ estoient bastis que sur du sable et sur la bouë*).²⁴ Descartes returns to this metaphor in Part III of the *Discours* when he describes his ‘provisional moral code’ as a temporary accommodation to shelter him while rebuilding his philosophical house on more secure foundations.²⁵ In the light of these passages, it is not stretching the bounds of credulity to suppose that Descartes thought that existing teaching about morals would be ameliorated as soon as it was built on the firmer foundations of Cartesian science.

Yet when we examine other things he says about *la morale*, we find that the picture of Descartes as the champion of ultra-modernism is not so easy to sustain. For one thing, he is prepared to maintain the traditional belief derived from Aristotle that moral knowledge possesses only limited certitude. Though candid in his admission that such knowledge falls short of the certainty that inheres within the absolute truths of the speculative sciences, he is prepared to admit that such knowledge is more than adequate for the purposes of action.²⁶ And when we read what Descartes

²³ AT-IV, 61–2; CSM-I, 142–3.

²⁴ AT-IV, 7–8; CSM-I, 114.

²⁵ AT-IV, 22; CSM-I, 122.

²⁶ AT-IX, 323–4; CSM-I, 289–90.

does say about moral issues in the third and fourth maxims of his ‘provisional moral code’ of the *Discours*, we find a tendency to defer to the ancient past. These maxims record his resolve to ‘master himself rather than fortune’ (*de tascher tousiours plutost a me vaincre que la fortune*) and to select a way of life devoted to cultivating reason (*cultiver ma raison*) and continuing self-instruction.²⁷ The third maxim bears witness to certain Stoic ideas that conditioned other aspects of his moral thought.²⁸ Descartes was to return to these in his correspondence with Princess Elizabeth of the Palatine between 1643 and 1649,²⁹ where he examined the teachings of Seneca the Younger, whose *De vita beata* he had proposed to his correspondent as a text for discussion.³⁰ The fourth maxim bids us to cultivate reason in order to advance our knowledge of truth, and further stipulates the subordination of the will to the intellect by means of judgement. ‘We need only to judge well in order to act well’, Descartes says, ‘and to judge as well as we can in order to do our best—that is to say, in order to acquire all the virtues and in general all the other goods we can acquire. And when we are certain of this, we cannot fail to be happy.’³¹

If we admit that Descartes’ modernism in morals is far from easy to explain, how then are we to clarify his relationship to the assorted

²⁷ AT-VI, 25–7; CSM-I, 123–4.

²⁸ For a discussion of Stoicism and other trace elements of antiquity in Descartes’ moral philosophy, see É. Gilson, *Réne Descartes: Discours de la Méthode, Texte et Commentaire [Discours]* (Paris, 1925), 248–59; M. Gueroult, *Descartes’s Philosophy Interpreted According to the Order of Reasons [Reasons]*, 2 vols. trans. R. Ariew (Minneapolis, 1985), ii. 184–200. For a similar view see G. Rodis-Lewis, ‘Maîtrise des passions et sagesse chez Descartes’, in M. Gueroult and M. Gouhier (eds.), *Cahiers de Royaumont* (Paris, 1957), 214–30; Schneewind, 184–93; G. Olivio, ‘“Une patience sans espérance”?’ Descartes et le stoïcisme’, in P.-F. Moreau (ed.), *Le Stoïcisme au XVI et au XVII siècles* (Paris, 1999), 234–50; and É. Mehl, ‘Les méditations stoïciennes de Descartes. Hypothèses sur l’influence du stoïcisme dans la constitution de la pensée cartésienne (1619–1637)’, *ibid.* 251–80.

²⁹ Descartes’ correspondence relating to moral matters is conveniently collected by J. Chevaillier (ed.), *René Descartes. Lettres sur la morale* (Paris, 1935), 1–224. For commentary on the letters see P. Dupond, ‘Réflexions sur la Correspondance avec Élisabeth’, in P. Dupond, M. Nodé-Langlois, and L. Cournarie (eds.), *Descartes, Passions et Sagesse [Sagesse]* (Toulouse, 1997), 7–64; and for a study of Elizabeth’s letters see A. Nye, *The Princess and the Philosopher: Letters of Elizabeth of the Palatine to René Descartes* (Lanham, 1999).

³⁰ See in particular the Letter of 4 Aug. 1645, AT-IV, 265; CSMK-III, 257–8.

³¹ AT-VI, 28, CSM-I, 125. For further discussion of Descartes’ theory of the relationship of the intellect to the will see Gilson, *Liberté*, 236–85, and *Discours*, 232–33, 247–8; Boyce Gibson, *Descartes*, 329–43; A. Kenny, ‘Descartes on the Will’, in R. J. Butler (ed.), *Cartesian Studies* (Oxford, 1972), 1–31; H. Caton, ‘Will and Reason in Descartes’s Theory of Error’, *Journal of Philosophy* 72 (1975), 87–104; Nicolas Grimaldi, *Six études sur la volonté et la liberté chez Descartes* (Paris, 1988); Janowski, *Theodicy*, 141–51; Shoulds, *Possibility*, 1–44, 144–64; Davies, *Belief*, 91–102; and P. Hoffman, ‘The Passions and Freedom of the Will’, in Williston and Gombay, *Passion and Virtue*, 261–300.

challenges to ancient and scholastic authority that were a developing feature of early seventeenth-century moral philosophy? We might suggest, for instance, that since he never completed anything like a systematic account of moral philosophy, the question of his modernity is not best considered in the light of a few isolated and inconclusive remarks. What is important, rather, is that his innovations in metaphysics and physics are intended to aid and abet the eventual transposition of a genuinely scientific outlook to all branches of human learning, including moral philosophy. Thus, despite the odd genuflection to Seneca and other aspects of the ancient past, Descartes remains a thoroughgoing modernist and that has implications for his views on morals even though he never set these down in definitive form.³²

While there is much to commend this point of view, especially its emphasis on the need to keep in mind the reforming nature of his scientific enterprise, we need to consider whether it is sufficient to assuage any doubts that may linger about the extent of Descartes' modernism in morals rather than his general allegiance to the modernist cause. Blandine Barrett-Kriegel has suggested that one fecund way of understanding Descartes' moral philosophy is biographically.³³ Given the manner and circumstances in which he lived his life—the details of which have been made known to us by biographers from Baillet, Adam, Haldane, Vrooman, to more recent studies by Gaukroger and Rodis-Lewis³⁴—there would seem to be a plausible correspondence between the first two maxims of the aforementioned provisional code and the standards of probity expected of any educated, Roman Catholic, urbane, and patriotic French gentleman of the early seventeenth century. For the first maxim of the code states an obligation to obey the laws and customs of one's country, holding constantly to the religion in which one had been instructed from childhood, and to govern oneself in all other matters according to 'the most moderate and least extreme opinions, especially those accepted in practice by the most sensible of those one should have to live with' (*suivant les opinions les plus modérées, et les plus éloignées de*

³² This is the view of Sorell, *Modernity*, at 276: '[While Descartes' moral] precepts do not appear to be modern when considered in isolation, they are not meant to be considered in isolation. They are meant to be interpreted in the light of the thoroughly modern sciences of Cartesian physics and metaphysics. Descartes's idea that moral science depends on these prior sciences and indeed on a complete knowledge of all of the other sciences is the key to the recognition of the modernity of his morals.'

³³ B. Barrett-Kriegel, 'Politique-s-de Descartes?', *Archives de Philosophie* 53 (1990), 371–88. Cf. Comarnesco, 'Conceptions', 385–95.

³⁴ A. Baillet, *Vie de M. Descartes*, 2 vols. (Paris, 1691); E. Haldane, *The Life of René Descartes* (London, 1905); C. Adam, *Vie et œuvres de Descartes: étude historique* (Paris, 1910); J. R. Vrooman, *Réne Descartes: A Biography* (New York, 1970); S. Gaukroger, *Descartes: An Intellectual Biography [Intellectual Biography]* (Oxford, 1995); and G. Rodis-Lewis, *Descartes: Biographie* (Paris, 1995).

l'excès, qui fussent communement receuës en pratique par les mieux sensez de ceux avec lesquels j'aurois a vivre).³⁵

The second maxim requires that one act decisively in everyday life despite the absence of absolute certainty. Descartes says one must avoid indecision in action and resolve to follow one's opinions though they be doubtful, with no less a constancy than if they were sure.³⁶ When grafted on to the earlier maxims, all four principles of the code of provisional morality, notwithstanding the references to Stoicism, reveal that Descartes himself did not feel any intellectual compunction in aligning himself with the moral standards of his day, even though he was prepared to admit that these standards did not possess the certainty of the speculative sciences—and was prepared to leave the business of moral conduct to other agencies. Indeed, the passive obedience to existing law which is embodied in the first maxim of the provisional moral code may reflect a quietist streak in Descartes' psychological make-up. As he remarked, in certain periods of his existence he tried to be 'a spectator rather than an actor in the comedy of life' (*taschant d'y estre spectateur plutost qu'acteur en toutes les Comedies qui s'y iouent*),³⁷ and appears sincere in his readiness to leave the conduct of the affairs of state to those who were called to high office either by birth or by circumstance.³⁸

In the remaining sections of this essay, I propose to examine important features of Descartes' views on morals, in the light of his clear acceptance of the view that moral knowledge possesses a limited certitude albeit one sufficient for application to ordinary life (*touchant la conduite de la vie*).³⁹ In particular, I want to try to arrive at a much clearer interpretation of his account of the point and character of such knowledge, and how it might be said to relate to the notion of 'moral certainty' (*certitudo moralis*) as that term of art was defined and discussed by late medieval and early modern scholastic authors, and Descartes' own distinction in *Les principes de la philosophie*, and elsewhere, between 'metaphysical' and 'moral' certainty.⁴⁰

³⁵ AT-VI, 23; CSM-I, 122.

³⁶ See AT-VI, 24; CSM-I, 123. For further discussion of *le code provisoire* see Gilson, *Discours*, 234–60; Cumming, 'Provisional Morality', 207–35; R. Spaemann, 'La morale provisoire de Descartes', *Archives de Philosophie* 35 (1972), 353–67; N. Grimaldi, 'La morale provisoire et le découverte métaphysique de l'homme chez Descartes', in N. Grimaldi and J.-L. Marion (eds.), *Le Discours et sa Méthode* (Paris, 1987), 303–19; Marshall, *Moral Theory*, 11–56, and 'Descartes's morale par provision', in Williston and Gombay, *Passion and Virtue*, 191–238; and J.-M. Beyssade, *Descartes au fil de l'ordre* (Paris, 2001), 237–58.

³⁷ AT-VI, 28; CSM-I, 125.

³⁸ See his letter of 20 Nov. 1647 to Chanut, AT-V, 86–7; CSMK-III, 326.

³⁹ See *Principes de Philosophie*, IV, 205, AT-IX, 323–4; CSM-I, 289–90.

⁴⁰ For a discussion of the issues that pertain to Descartes's distinction among types of certainty see P. Markie, *Descartes's Gambit [Gambit]* (Ithaca, NY, 1986), 33–72; E. Curley,

One of the reasons why a study of Cartesian ethics can benefit from a comparison with pre-modern notions such as *certitudo moralis* is that this idea was frequently brought to bear by scholastic authors on the problems of human action, and more especially, on the issue of having to act resolutely in everyday life despite the absence of speculative certainty. If we can arrive at a settled view of the differences, or even similarities, that attend Descartes' distinctions among the classes of certainty and the older scholastic thesis of *certitudo moralis*, we will be able to gauge the distance or otherwise between his position and those more traditional perspectives on the place of certainty within any framework for the guidance of action. By placing Descartes' own remarks in such a context, we will be much better placed to comment on their bearing on those developments in seventeenth-century moral philosophy outlined at the start of this essay.

II. 'Certitudo Moralis' among the Scholastics

The first occurrence of the term 'moral certainty' is far from auspicious.⁴¹ Beholden to medieval discussions of Aristotle's observations about

'Certainty: Psychological, Metaphysical and Moral' ['Certainty'], in S. Voss (ed.), *Essays on the Philosophy and Science of René Descartes* (New York, 1993), 11–30; S. Voss, 'Scientific and Practical Certainty in Descartes' ['Practical'], *American Catholic Philosophical Quarterly* 67 (1993), 569–85; D. Garber, 'Descartes on Knowledge and Certainty: From the *Discours* to the *Principia*', in *Descartes Embodied*, 111–32; and Davies, *Belief*, 248–53. For two helpful discussions that attempt to compare and contrast Descartes' concept with ideas then current in the scholastic tradition see V. Carraud, 'Morale par provision et probabilité' ['Probabilité'], in J. Biard et R. Rashed (eds.), *Descartes et le Moyen Age* (Paris, 1997), 259–82; and R. Ariew, 'Hypothesis and Moral Certainty in Descartes and some Late Scholastics' ['Moral Certainty'], 1–20, forthcoming. For other treatments of the term 'moral certainty' after the period of Descartes with particular reference to British writers, see H. G. Van Leeuwen, *The Problem of Certainty in English Thought 1630–1690* (The Hague, 1969); Shapiro, *Probability and Certainty*, 15–73; and L. Daston, *Classical Probability in the Enlightenment* (Princeton, 1988), 38–9, 57–64, 207–8.

⁴¹ Following the lead of Th. Deman's pionerring study 'Probabilisme' ['Probabilisme'] in *Dictionnaire de Théologie Catholique*, 15 vols. (Paris, 1903–1950), see xiii (1936), cols. 416–619; most scholars have looked for the origins of the term in late medieval and early debates on the moral doctrine of probabilism, see S. Knebel, *Wille, Würfel und Wahrscheinlichkeit. Das System der moralischen Notwendigkeit in der Jesuitenscholastik 1550–1700* [Wille] (Hamburg, 2000), 54–6, 84–6, 108–11, 127–30, 230–6, and 523–8; and J. Franklin, 'The Ancient Legal Sources of Seventeenth-Century Probability', in Stephen Gaukroger (ed.), *The Uses of Antiquity* (Amsterdam, 1991), 123–44, and his more recent book, *The Science of Conjecture: Evidence and Probability before Pascal* [Conjecture] (Baltimore, 2002), 64–101. This work came to my attention after completing the present essay.

method in moral philosophy,⁴² the phrase appears in the work of Jean Gerson (1363–1429),⁴³ who discusses the case of a priest worried that he may be unable to celebrate mass because an instance of ‘nocturnal pollution’ has occasioned his fall from grace into sinfulness.⁴⁴ As with most examples of medieval reflection upon the exigencies of human life, a point of great seriousness so often underwrites what to a modern reader may seem alien or quizzical. Such is the case here.

Gerson’s moral and pastoral writings so often address the problem of a perplexed or agonized conscience, and further concern themselves with the point and purpose of a good confession as well as the standing of the sacerdotal office.⁴⁵ In various tracts, Gerson is minded to confront those obstacles he believes may impede personal reconciliation with God by means of the sacrament of confession, and the appropriate execution of a priest’s duties to his flock. In both cases he provides a psychological analysis of those states of the soul that may cause a pastor to worry about the practice of his sacerdotal duties, as well as those anxieties that may induce despair in a penitent who sincerely doubts his ability to overcome his sinfulness.⁴⁶ Gerson attempts to stifle what he sees as sources of spiritual anxiety by bringing to bear considerations about the epistemic abilities of penitents or over-scrupulous priests to know, with complete certainty, whether they are actually in a state of grace. He holds that no individual can have such certainty of his own moral worthiness at any time, adding that if ‘full certainty’ (*evidentiae certitudo*) were required it is clear:

That < . . . > no one, however pure and just, ought to celebrate <the mass>; nor could anyone do it unless a special revelation were made to him. Therefore there suffices the kind of certainty we usually look for and accept in moral matters. This certainty can be called moral or civil certainty (*quae certitudo appellari certitudo moralis aut civilis*), of which Aristotle prudently speaks in *Nicomachean Ethics*

⁴² For a representative sample of medieval teaching on this issue see: Albertus Magnus, *Super Ethica*, Lib. I, lectio III; Thomas Aquinas, *Sententia libri Ethicorum*, Lib. 1, lectio III; Henry of Ghent, *Summa*, a. 2, q. 2; and John Buridan, *Quaestiones in decem libros Ethicorum Aristotelis ad Nicomachum*, Lib. 1, lectio III.

⁴³ All references to the works of Jean Gerson are to P. Glorieux (ed.), *Jean Gerson Œuvres complètes* [*Œuvres*], 10 vols. (Paris, 1973). For details about Gerson’s life and academic career see P. Glorieux, ‘La vie et les œuvres de Gerson’, *Archives d’histoire doctrinale et littéraire du moyen âge* 25–6 (1950–1), 149–92.

⁴⁴ See *De praeparatione ad missam* in *Œuvres*, ix. 35–50.

⁴⁵ A full discussion of Gerson’s pastoral writings is provided by D. C. Brown, *Pastor and Laity in the Theology of Jean Gerson* (Cambridge, 1987); and M. S. Burrow, *Jean Gerson and De Consolatione Theologiae* (Tübingen, 1991).

⁴⁶ The topic of scrupulosity of conscience in Gerson is analysed by S. Grosse, *Heilsunwissenheit und Scrupulositas im späten Mittelalter. Studien zu Johannes Gerson und Gattungen der Frömmigkeitstheologie seiner Zeit* (Tübingen, 1994).

I.III saying ‘it is proper to a well-educated man to require as much certainty as the nature <of the subject> admits’.⁴⁷

In general one should have *certitudo moralis* that a proposed course of action is licit before doing it, and to acquire such practical confidence one should consider what usually happens, what the best authorities say, and what one’s learning suggests.⁴⁸

Moral certainty, for Gerson, expresses itself in a form of knowledge that is more than sufficient for the guidance of every life, but which does not presume to attain the full certainty (*evidentiae certitudo*) presumed to belong to disciplines such as geometry. This last point concerning a certainty sufficient for quotidian affairs is indicative of a widely held assumption among late medieval writers that due to the contingent and variable nature of human action, one is forced to rely upon principles that are true for the most part (cf. Aristotle’s use of the phrase *ὡς ἐπὶ τὸ πλὸν* at *NE* I, 3, 1094b21).⁴⁹ Seen thus, it was held that the principles we use to guide moral conduct enjoy a probable certitude (*certitudo probabilis*), a certainty that differs in point and scope from that enjoyed by the speculative sciences.⁵⁰

Other fifteenth- and sixteenth-century writers who followed Gerson were the Dominicans Johannes Nider (1380–1438) and Sylvester Mazzolini (aka Sylvester Prierias) (1460–1523). Nider held that ‘certainty taken figuratively and loosely does not remove all improbability or the opinion of the other side, although it leans more to one side than the other’.⁵¹ As was common at the time, Nider is here evoking the relationship between moral certainty and the medieval understanding of probability as it was applied to the philosophical discussion of human action. For Nider, to hold that an opinion is ‘probable’ (*probabilis*) is to say that it either ‘holds

⁴⁷ *Œuvres*, IX, *De praeparatione ad missam*, 37–8: ‘< . . . > non requiritur talis evidentiae certitudo super celebrantis dignitate. Patet quia nullus tunc, quantumcumque purus et justus, deberet celebrare, nec hoc posset absque discrimine si non ei fieret revelatio specialis. Sufficit ergo certitudo talis qualem in materia morali consuerimus expetere et capere. Quae certitudo potest appellari certitudo moralis aut civilis, sicut prudenter loquebatur Philosophus I *Ethicorum* iii capitulo dicens “disciplinati enim est in tantum certitudinem inquirere secundum unumquodque genus quantum natura recipit”.’

⁴⁸ See *ibid.*, 37–8.

⁴⁹ For further discussion of the neo-Aristotelian heritage of late medieval moral thought see my ‘The Origins of Probabilism in Late Scholastic Moral Thought: A Prolegomenon to Further Study’, *Recherches de théologie et philosophie médiévales* 58 (2000), 114–57.

⁵⁰ On the development of the debate about *certitudo probabilis* as the concept came down to late scholastic thinkers from thirteenth-century authors like Thomas Aquinas, *Summa theologiae*, IIa–IIae, q. 70, a. 2, see A. Gardeil, ‘La “Certitude Probable”’, *Revue des sciences philosophiques et théologiques* (1911), 237–66, and 441–85.

⁵¹ Johannes Nider, *Consolatorium timoratae conscientiae* (Cologne, 1473) III, 13: ‘Sumendam esse certitudinem figuratiter et grosse certitudo non removet omnem improbabilitatem vel opinionem alterius partus licet magis declinat ad istam quam ad aliam quod sufficit < . . . >’.

for the most part' (*ut in pluribus*), thereby reflecting the prevailing wisdom that in most cases the opinion can be applied to a case without difficulty, or that it rests on 'sound authority', meaning that the judgments of genuine authorities (*auctoritates*) can be used to support the claims of the opinion.⁵²

In a well-known manual for confessors,⁵³ Sylvester Mazzolini reiterates the late medieval consensus concerning the absence of speculative certainty at the level of action, and of the probity of basing our deeds upon probable opinions in cases of doubt, when he sketched those ideas of which it was deemed a confessor must be cognizant. Defining doubt (*dubium*) as 'the motion indifferent to either side of a contradiction (*dubium est motus indifferens in utramque partem contradictionis*) or 'the equality of contrary reason' (*quando habet rationes ad utramque partem aequaliter*), he said that opinion (*opinio*) lies between doubt and scruple, where a scruple is 'a movement to one side of a contradiction from light and very weak conjectures, which is also called suspicion or pusillanimity of spirit' (*est motio ad unam partem contradictionis ex levibus et multum debilibus conjecturis, quae etiam suspicio et pusillanimitas spiritus*). Going on from there to address the pastoral problem of an over-scrupulous conscience, he contends that 'the devil attacks the scrupulous secretly, urging that in doubtful matters the safer way is to be chosen' (*sed diabolus scrupulosos impugnat latenter, obijciendo primo quia in dubiis via tutior est eligenda*).⁵⁴

Mention here of the 'safer way' (*via tutior*) brings into focus the old scholastic theory of 'tutorism', a theory enshrined in the oft-quoted adage '*in dubiis via est tutior eligenda*' (in doubtful matters the safest path is to be chosen).⁵⁵ This principle was taken to mean that in cases

⁵² The antecedents for the medieval term *probabilis* are found in Roman antiquity, especially in the valiant attempt made by Cicero to find Latin equivalents for Greek philosophical terms. For further discussion see J. Glucker, 'Probabile, Veri Simile, and Related Terms', in J. G. F. Powell (ed.), *Cicero the Philosopher* (Oxford, 1995), 115–45. For a treatment of medieval concepts of probability see Th. Deman, 'Probabilis au Moyen Age', *Revue des sciences philosophiques et théologiques* 22 (1933), 260–90; and (1936); and E. F. Byrne, *Probability and Opinion: A Study in the Medieval Presuppositions of Post-medieval Theories of Probability* (The Hague, 1968). Knebel, *Wille*, provides a near complete discussion of the concept of *probabilis* as it was discussed by early modern scholastic Jesuit authors.

⁵³ *Summa summarum quae Sylvestrina dicitur* (Rome, 1516). For further discussion of Sylvester's work see M. Tavuzzi, *Prierias: The Life and Works of Silvestro Mazzolini da Priero, 1456–1527* (Durham, NC, and London, 1997).

⁵⁴ See extracts quoted from Sylvester in J. De Blic, 'Barthelemey De Medina et les origines du probabilisme' ['Medina'], *Ephemerides Theologicae Lovanienses* 7 (1930), 46–83, 264–91, at 47–50.

⁵⁵ The principle, though based on many precedents, was coined by Pope Innocent III, see the *Decretals of Gregory IX*, 5 tit. 27, cap. 5, cols. 828–9. For further discussion of the development and application of the principle see O. Lottin, 'Le tutorisme du treizième siècle', *Recherches de théologie ancienne et médiévale* 5 (1933), 292–301.

of genuine doubt an agent was obliged to adopt the morally safest course of action. For an author like Sylvester, as indeed for Gerson and Nider, an excessive reliance in cases of conscience (*casus conscientiae*) on 'safety' as bidden by the requirements of tutorism, would lead agents (already perplexed by the nature of the case) to an unwelcome pusillanimity born of over-scrupulousness. If an agent troubled in conscience is always pressed to adopt the safest course of action, then he would never avail himself of the opportunities to act on 'probable' opinion, an opinion by no means fully certain or 'safe', but one more than sufficient to ground a satisfactory, or morally licit, resolution of the case.

This last point is brought to bear in Sylvester's own definition of *probabilis*, which is specified as 'the opposite of hidden is that which is proved by witnesses' and that which 'pertains to opinion' of the wise and many, where this last thought is then glossed by supporting evidence concerning Aristotle's notion of τὰ ἐνδοξά at *Topics* I. 1 and I. 10. Sylvester concludes his account by citing Gerson's notion of 'moral certainty' as an example of the notion of probability under discussion.⁵⁶ So, as it was defined and applied by late medieval moralists and pastoral writers, the doctrine of moral certainty was an important feature of their analysis of *casus conscientiae*, and of the general epistemic issue whether it is ever possible for an individual to know that they are in a state of grace. Further to this, the idea was so often linked to the notion of a 'probable opinion' and was used as a method for effecting licit, if far from ideal, resolutions to the recalcitrant problems of human action.

As we move into the early modern period we find scholastic authors, both before and immediately after Descartes, making use of the term

⁵⁶ Sylvester's definition, by no means an original construction, is quoted by M.-M. Gorce, 'A Propos de Barthélemy de Medina et du probabilisme', *Ephemerides Theologicae Lovanienses* 7 (1930), 480–1, at 480: 'Probabile dupliciter dicitur, primo ut est quid divisum contra occultum et est illud quod per testes probari potest, de quo sup. Notorium. Secundo, ut est quod pertinens ad opinionem. Et hoc dupliciter. Primo ut est objectum opinionis creditum: et sic Aristoteles in I Topica dicit quod probabile dicitur quod videtur omnibus, aut pluribus, aut maxime notis et probabilibus et praecipuis et secundo ut est opinionis circa movens ad credendum: et sic est conjectura, vel signum probabile, id est quod videtur omnibus esse verum, aut pluribus, aut sapientibus, etc. Et sic probabile aliquid redditur apud non habentem demonstrationem de aliquo multipliciter. Primo auctoritate omnium hominum, ut quod mater diligit filium; et secundo auctoritate majoris partis hominum: ut quod furtum sit peccatum; et tertio sapientium ut quod spiritus angelici non sint in loco; quarto majoris partis sapientium: ut quod anima sit immortalis; aut quinto principuorum: ut quod felicitas nostra consistat in intellectu: quod Aristoteles tradit. Et idem dic in materia juris, quod ad doctores juristas. Et secundum Cancellarium, quod sic est probabile, dicitur certum moraliter: quia certitudo moralis non contingit ex evidentia demonstrationis, sed ex conjecturis probabilibus, grossis et figuralibus. Unde, ut dicitur in primo libro Ethicorum, indisciplinati est in unaquaque re certitudines quaerere juxta exigentiam materiae. Aequè enim vitiosum est persuadentem quaerere mathematicum et morale demonstrantem.'

'moral certainty' in a manner reminiscent of late medieval discussions.⁵⁷ One such thinker was Francisco Suárez, who discusses moral certainty at some length in the context of a detailed discussion of grace.⁵⁸ What is interesting about Suárez's remarks is that he begins his account by arguing that the manner in which earlier medieval and more recent thinkers, such as Bartolomeo de Medina (1528–87), had characterized the type of 'certainty' in *certitudo moralis* was imprecise.⁵⁹ In order to counteract the effects of what he believed to be an infelicitous definition, Suárez sought to relay the idea that moral certainty encompasses both the ideas of firm intellectual assent to an opinion, as well as the removal of any prudent or moral suspicion that the opinion is without grounds.⁶⁰

Suárez does this by arguing that moral certainty admits of degrees: 'high' (*maior*) and 'low' (*minor*). 'High moral certainty' is possessed by those things which receive constant and reliable affirmation from all manner of people, races, and nations, and those everyday beliefs that have stood the test of time. An example of such a belief would be that 'Rome exists', one to which anyone can assent without having direct

⁵⁷ See Knebel, *Wille*, 54–5, 83–5, 108–11, 127–33, 230–6, 523–8, 540–9. The notion of *certitudo moralis* is also prominent in the various debates concerning probabilism in moral theology, a debate which began in 1577 with the work of Medina. For further discussion of this issue see I. Döllinger and F. Reusch, *Geschichte der Moralstreitigkeiten in der römisch-katholischen Kirche seit dem 16. Jahrhundert*, 2 vols. (Nördlingen, 1889), ii. 816–27; De Blic 'Medina', 264–91; Deman, 'Probabilisme'; A. Jonsen and S. Toulmin, *The Abuse of Casuistry* (Berkeley, CA, 1988), 152–76; R. Schübler, *Moral im Zweifel. Band 1: Die scholastische Theorie des Entscheidens unter moralischer Unsicherheit* (Paderborn, 2003), 145–224; and my 'Scrupulosity, Probabilism, and Conscience: The Origins of the Debate in Early Modern Scholasticism' ['Scrupulosity'], in H. Braum and E. Vallence (eds.), *Contexts of Conscience in Early Modern Europe, 1500–1700* (London, 2004), 1–16, 182–8.

⁵⁸ See *Tractatus de gratia pars tertia. De habitu iustitiae seu gratiae gratum facientis*, lib. ix, cap. xi, §§ 2–3, in *Franciscus Suarez: Opera omnia* [*Opera omnia*], ed. C. Berton, 28 vols. (Paris, 1856–78), ix. 546–7. Suárez further discusses moral certainty at *De habitu iustitiae*, lib. ix, cap. ix, § 4, and *ibid.*, § 30, see *Opera omnia*, ix. 525, and 537.

⁵⁹ See Bartolomeo de Medina, *Expositiones in Primam secundae divi Thomae* (Venice, 1580; 1st edn. Salamanca, 1577), a. 5. Earlier medieval authorities cited by Suárez are Thomas Aquinas, Bonaventure, Richard of Mediavilla, Durandus of Saint Pourçain, Duns Scotus, Gabriel Biel, and Jean Gerson.

⁶⁰ *Ibid.*, lib. ix, cap. xi, §2 (*Opera omnia*, ix, 546): 'Fortasse contentio haec magna ex parte in verborum usu vel acceptione consistit, quamvis etiam orta videatur ex eo quod, admittendo aliquam certitudinem in hac cognitione, non apparet certa regula ad gradum illius explicandum vel assignandum, et ideo quidam excedunt, illum omnino negando, ut Medina, et alii nonnulli; alii vero excedunt in illo exaggerando, ut si quis alius. Ut ergo tollamus quaestionem de nomine, supponimus, infra duos gradus certitudinis quos jam exclusimus, posse dari aliquem gradum firmitatis in assensu intellectus, qui proprio et usitato modo loquendi certitudo vocetur, non solum quia excludit dubitationem negativam seu suspensivam assensus intellectus, hoc etiam (ut supra dixi) non est certitudo, nam in quacumque humana fide et assensu opinativo invenitur, sed quae prudentem seu morale suspicionem falsitatis excludat.'

acquaintance of that city.⁶¹ The second variety of moral certainty is that which is affirmed by a majority of reliable eye witnesses, especially when there appears no probable reason to doubt such persons or to suspect them of telling lies. Here the credibility of the testimony will depend upon the moral quality of the persons providing it; if there is no reason to doubt such individuals, their testimony can be taken at face value.⁶²

In the light of these considerations Suárez proceeds to explain how the concept of moral certainty can clarify those issues that relate to being in a state of grace. Following his former teacher Gregory de Valentina's (1550–1603) interpretation of Thomas Aquinas,⁶³ Suárez argues that it is by no means inappropriate to have 'moral certainty' concerning one's own moral worthiness or grace.⁶⁴ He proceeds to defend this position in the following way. One should observe, he says, that the subject of grace in this context does not concern the righteousness of all human beings, but rather focuses on the possibility that some holy persons who are well disposed to God can 'definitely judge' (*definite judicare*) that they are in a state of grace. Moral certainty here is possible only if such persons apply 'their moral diligence' (*moralem diligentiam*) to obtain forgiveness for sins committed in the past and if they seek to avoid sinful acts in the future.⁶⁵

⁶¹ *Ibid.*, lib. ix, cap. xi, §2 (*Opera omnia*, ix, 546–7): 'Quidam et supremus esse videtur de his rebus quae, constanti assertione et testificatione gentium et populorum, et nationum (reading '*nationum*' instead of '*rationum*') omnium, ut olim, et nunc etiam ab innumeris visa, et ab omnibus humana fide credita sunt, ut Romam esse, et similia.'

⁶² *Ibid.*, lib. ix, cap. xi, §2 (*Opera omnia*, ix, 547): 'Alius gradus et infirmus est, quod a multis vel a pluribus oculatis testibus fide dignis, et omni exceptione majoribus asseritur, maxime quando non occurrit probabilis ratio dubitandi aut suspicandi mendacium, vel quando ex qualitatibus personarum ratio credibilitatis crescit. Unde fit ut inter hos gradus possint esse plures gradus majoris vel minoris certitudinis, ut per se notum est.'

⁶³ For further discussion of Valentina's views on grace (in the context of an analysis of faith) and their influence or otherwise on other Jesuit authors such as Suárez and Molina see W. Hentrich, *Gregor von Valencia und der Molinismus* (Innsbruck, 1928), 28–57; and J. Espasa, 'Relación entre la fe infusa y la adquirida en Gregorie de Valentina', *Archivo Teológico Granadina* 8 (1945), 99–123.

⁶⁴ *De habitu justitiae*; lib. ix, cap. xi, §3 (*Opera omnia*, ix, 547): 'Dico ergo primo: non repugnat justum aliquem pervenire in hac vita ad habendam moralem certitudinem gratiae suae. In hac assertione convenio cum auctoribus secundae opinionis, inter quos Valentia optime illam prosequitur. Qui merito advertit D. Thomam vel antiquos Scholasticos ab illa non dissentire; cum enim solam conjecturalem cognitionem gratiae admittunt, tantum intendunt duos gradus primos certitudinis excludere, non tamen negant in hoc tertio modo conjecturalis cognitionis posse esse gradus, et aliquem habere rationem aliquam certitudinis; neque illam negant in gratia posse reperiri.'

⁶⁵ *Ibid.*, lib. ix, cap. xi, §3 (*Opera omnia*, ix, 547): 'Ut autem illam probemus, advertendum est in ea non esse sermonem de omnibus justis, sed de possibilitate in aliquis sanctioribus perfectissime et perseveranter Deo servientibus, et familiariter cum Deo agentibus. Nam in genere loquendo de justis, sufficit probabilis conjectura et existimatio, qua absolute possint humano modo credere, et definite judicare se esse in statu gratiae. Haec enim omnibus possibilis est, si moralem diligentiam adhibeant ad consequendam veniam praeteritorum peccatorum, et postea ad vitanda futura.'

Even though such persons may have genuine anxiety about the extent and nature of their moral worthiness, Suárez is clear that they are entitled to judge (in good faith) that they are in a state of grace.⁶⁶ Like Gerson and other writers before him, Suárez is eager to demonstrate that the absence of full certainty concerning our moral condition ought not to weaken our resolve at the level of action, and that it is unnecessary to surrender oneself to overwhelming spiritual anxiety. Upright individuals, he thinks, ought to be assured that they are working within the accepted parameters of moral and spiritual probity; *certitudo moralis* furnishes agents with a practical confidence in the absence of speculative certainty. Provided an agent is acting *in bona fide* and out of a good motive, he can be practically sure that he has attained grace.⁶⁷

The subject of grace aside, Suárez can be said to apply his ideas of moral certainty and probability to the discussion of the just war.⁶⁸ According to that theory as it was set down by medieval thinkers, a war is just, if and only if it meets the following conditions: the war must be fought for a just cause, involving a grave injury to the state; it must be declared by a lawful authority (e.g. only states may declare war); it should be conducted by legitimate means for a limited end; and there must be a reasonable chance of winning.⁶⁹ The first three conditions reflect medieval thinking about the morality of warfare and were codified by early modern scholastics such as Francisco de Vitoria (1483–1546) in his *De iure belli*.⁷⁰ Suárez, however, focuses on the last condition, a reasonable chance of winning, and subjects it to an important clarification.

Taking exception to the position of Cajetan,⁷¹ that a prince must be ‘morally certain of victory’ before engaging in war, Suárez says:

But this condition does not seem to me absolutely necessary. First, because in human life it is almost impossible. Secondly, because it is often for the common good of the state not to wait upon such certainty, but rather to make the attempt, even when there may be some doubt whether the enemy can be overcome.

⁶⁶ *Ibid.*, lib. ix, cap. xi, §3 (*Opera omnia*, ix, 547): ‘ita ut, licet formident et timeant, nihilominus ex conjecturis probabilioribus bona fide et prudenter iudicent se ita esse dispositos’.

⁶⁷ For further discussion of these issues as they impinge upon Suárez’s views on conscience and probabilism see Stone, ‘Scrupulosity’, 1–16.

⁶⁸ For further discussion of Suárez’s thinking about the ethical issues of warfare see R. Specht, ‘Francisco Suárez über den Krieg’ [‘Krieg’], in N. Brieskon and M. Riedenaier (eds.), *Suche nach Frieden: Politische Ethik in der Frühen Neuzeit*, i (Cologne, 2000).

⁶⁹ On this subject see F. H. Russell, *The Just War in the Middle Ages* (Cambridge, 1975); and J. Barnes ‘The Just War’, in N. Kretzman, A. Kenny, and J. Pinborg (eds.), *The Cambridge History of Later Medieval Philosophy* (Cambridge, 1982), 771–84.

⁷⁰ Francisco de Vitoria, *De iure belli*, in T. Urdanoz (ed.), *Obras Francisco de Vitoria: Relecciones teológicas* (Madrid, 1960), English translation in A. Pagden and J. Lawrence (eds.), *Vitoria: Political Writings* (Cambridge, 1991), 295–327, at 311–21.

⁷¹ See Cajetan’s *Commentaria in Secundam secundae*, q. 96, art. 4.

Thirdly, because otherwise the less powerful king would never be permitted to make war on the more powerful, because the less powerful cannot attain the certainty that Cajetan requires. Consequently, it should be said that the Prince is indeed required to achieve the maximum certainty (*procurandum maximam certitudinem*) of victory that he can; he ought also to compare the hope of victory with the danger of harm, as if all things considered, hope prevails. If he cannot achieve so much certainty, he should at least have a more probable hope of victory, or doubt equally balanced as to defeat or victory, according to the necessity of the state and of the common good (*boni communis*). If the probability of hope is less, and the war is aggressive it should nearly always be avoided; if defensive, undertaken, since the former is of choice, the latter of necessity.⁷²

Of paramount importance to Suárez is the idea that there ought to be some reasonable accommodation between an envisaged victory and the grim harm involved in initiating a war. The mere fact that a Prince is 'morally certain' that a war can be won, cannot provide sufficient grounds for its prosecution. For Suárez, the conditions that attend a state of going to war are simply too complex to lend themselves to a straightforward characterization. There are many factors that need to be weighed and considered, especially those that are connected to an idea of the common good.⁷³ The welfare of the state can never be sacrificed to the vanity of a prince and his bellicose intentions.⁷⁴ While moral certainty may suffice for ordinary human actions in the context of everyday life, it cannot be used as a basis on which to conduct a war.

⁷² *De triplici virtute theologica: De caritate*, disp. 13, § 4. 10 (*Opera omnia*, xii, 746): 'Est autem advertendum, ex hoc principio intulisse Cajetanum 2.2, quaest. 96, art. 4, ut bellum sit justum, debere principem tantum in se cognoscere potestatem, ut moraliter certus sit de victoria: primo, quoniam alias exponit se manifesto periculo majora damna inferendi suae reipublicae, quam commodum; sicut (inquit) male aget iudex qui aggrediatur capturam rei absque satellitum numero, quo certus sit non posse superari. Secundo, qui bellum aggreditur, rationem subit agentis, agens autem potentius esse debet ad superandum passum. Sed haec conditio non videtur mihi simpliciter necessaria; primo, quia humano modo est fere impossibilis. Secundo, quia saepe interest ad commune bonum reipublicae non expectare tantam certitudinem, sed tentare potius, etiam cum aliquo dubio, a coerceri hostes possint. Tertio, quoniam alias nunquam liceret regi minus potenti indicare bellum contra potentiolem, quia illam certitudinem, quam Cajetanus requirit, assequi non potest. Quapropter dicendum est, teneri quidem principem ad procurandum maximam certitudinem, quam possit, victoriae; debere item conferre spem victoriae cum periculo damnorum, atque si omnibus pensatis spes praevaleat. Si vero nequit tantam certitudinem assequi, oportet saltem ut habeat probabiliolem spem, aut aequae dubium, juxta necessitatem reipublicae et boni communis. Quod si minor sit probabilitas de spe, et bellum sit aggressivum, fere semper est vitandum, si defensivum, tentandum; quia sit necessitatis < . . . >'.⁷³

⁷³ The idea of the common good and its preservation by the ruler is an important part of Suárez's political theory see L. Pérez Modesto, *The Common Good as a Fundamental Principle of Law according to Suárez* (Rome, 1994).

⁷⁴ For further discussion of this aspect of Suárez's political theory see H. Rommen, *Die Staatslehre des Franz Suárez* (Münchengladbach, 1926); B. Hamilton, *Political Thought in Sixteenth-Century Spain* (Oxford, 1963); R. Wilenius, *The Social and Political Theory of Francisco Suárez* (Helsinki, 1963); and Specht, 'Krieg'.

After Suárez, the notion of *certitudo moralis* is a central feature of more general scholastic discussions of certainty itself.⁷⁵ In the hands of authors such as Rodrigo de Arriaga (1592–1667), we find a stronger stress on the notion as something which provides grounds for reasonable assent if not full certainty.⁷⁶ Another Jesuit theologian, Juan De Lugo (1583–1660),⁷⁷ summarizes prevailing attitudes when he writes:

Moral evidence or moral certainty is found when it is impossible for us, not only to doubt, but also to fear prudently about anything. An example of this certitudo is <the idea> that Julius Caesar and Hannibal once existed. For although it is, physically speaking, not repugnant <to suppose> that all historians lied, it is morally repugnant, and therefore we assent and cannot prudently fear that we are perhaps deceived <about their existence>. The same holds true for other stories about men that all believe because no one contradicts them. Such is the case of the Chinese Empire, which we have never seen, and yet without any fear of <of being deceived> we believe it exists on the basis of what many people have told us.⁷⁸

⁷⁵ For a quite standard division of the classes of certainty see the Jesuits of Coimbra, *Commentarius Conimbricensis in universam dialecticam Aristotelis* (Coimbra, 1606), 696, col. b: 'certitudo est triplex, objecti, cognitionis, et cognoscentis', and the widely used philosophical dictionaries by Rudolf Goclenius (Göckel) (1547–1628), *Lexicon philosophicum quo tantum clave philosophiae fores aperiuntur* (Frankfurt, 1613), see art. 'certitudo'; and Stephanus Chauvin (1640–1725), *Lexicon Philosophicum* (Rotterdam, 1692), see art. 'certitudo', 97–8. For other standard uses outside philosophical writings see Prospero Fagnani (d. 1678), *De opinione probabili* (Rome, 1665), 26–8. For further discussion of the division of certainty see Wallace, 'Certitude', and Andrea Schrimm-Heins, 'Gewissheit und Sicherheit. Geschichte und Bedeutungswandel der Begriffe certitudo und securitas. I', *Archiv für Begriffsgeschichte* 34 (1991), 123–213.

⁷⁶ See Rodrigo de Arriaga, *Cursus philosophicus iam noviter maxima ex parte auctus et illustratus et a variis obiectionibus liberatus [Cursus philosophicus]* (Lyons, 1668; originally published Antwerp, 1632), at 263: 'Moral certitudo ... is that certainty which is acquired from motives that are physically fallible but morally speaking infallible' (*Certitudo ... moralis est illa, quae habetur ex motivis physice quidem fallibilibus, infallibilibus tamen moraliter loquendo*). On Arriaga's writings see L. Thorndike, 'The *Cursus philosophicus* before Descartes', *Archives internationales d'histoire de la science* 4 (1951), 16–24; and S. Sousedík, 'La obra filosófica de Rodrigo de Arriaga', *Ibero-Americana Pragensia* 15 (1981), 103–46. Ariew, 'Moral Certainty', 11–15, provides some useful commentary on Arriaga's use of the term *certitudo moralis*.

⁷⁷ For further discussion of De Lugo's work and life see E. Olivares, 'Juan de Lugo (1583–1660): Datos biográficos, sus escritos, estudios sobre su doctrina y bibliografía', *Archivo Teológico Granadino* 47 (1984), 5–129.

⁷⁸ Juan De Lugo, *Disputationes scholasticae et morales* (Lyons, 1645), reprinted in *De iustitia et iure [De iustitia et iure]*, 8 vols. (Paris, 1868–9), i. 108a/b; disp. 1 § 312: 'Evidentia ergo seu certitudo moralis tunc invenitur, quando de re aliqua non possumus prudenter non solum dubitare, sed nec etiam formidare. Exemplum est in hoc quod est, fuisse Julium Caesarem, fuisse Annibalem etc. Nam licet physice non sit repugnantia, quod Historici omnes mentiti fuerint, moraliter tamen id repugnat, atque ideo assentimur, nec possumus prudenter formidare, ne forte decipiamur; idem est de aliis historiis humanis, quae nullo contradicente ab omnibus creduntur; idem de imperio Sinensi, quod non vidimus, et tamen ex revelatione multorum absque ulla formidine credimus, et sic de aliis.' Cf. *ibid.* 145a; disp. 2 § 40. For further discussion of De Lugo's work on this issue Knebel, *Wille*, 80–6, 179–84, 499–503; 523–6, and 543–6.

So in this instance, moral certainty concerns those items of our knowledge that we can never know to be sure, but which it is foolish to doubt. Like Suárez before him, De Lugo makes it clear that provided we have reliable testimony (be it historical or else derived from quotidian sources), there is no good reason to doubt the existence of figures from the past or lands and continents we have never seen.⁷⁹

In other scholastic discussions, especially in the period after Descartes's death, we again find an explicit linkage between the notions of moral certainty and probable opinion. For instance, in the work of the Jesuit Thyrsus González de Santalla (1624–1704),⁸⁰ especially his *Fundamentum theologiae moralis*, we discover the thesis that for the purposes of acting, certainty of conscience does not have to attain something like the steadfastness expected of religious faith. This is so because a moral decision, based on assent to an authoritative opinion, involves *certitudo moralis*. González says that the use of probable opinions is always compatible with the doctrine of moral certainty.⁸¹

González makes a distinction between two grades of moral certainty, a division which reflects in part the earlier thinking of Suárez, Arriaga, and De Lugo. The first degree concerns those things one may believe on the basis of testimony, which being so credible and authoritative, exclude all fear of doubt. This is similar González thinks to the 'certainty of faith'. In order to make sense of the terms at issue here we need to introduce a number of concepts drawn from medieval philosophy that nourish González's thought. According to Thomas Aquinas—the *auctoritas* par excellence for Jesuit thinkers—there are objects of the intellect which do not possess the same *firmitas* as scientific truths. Such objects are *fides* (faith) and *opinio* (opinion), and it is possible to assent to these objects when the will assists the intellect towards an act of assent. In the case of faith,

⁷⁹ A similar point is made by the Jesuit Sebastian Izquierdo (1601–81), see *Pharus Scientiarum, ubi quidquid ad cognitionem humanam humanitus acquisibilem pertinet, ubertim iuxta atque succincte pertractatur* [*Pharus Scientiarum*], 2 vols. (Lyons, 1659), i. 284. On Izquierdo see R. Ceñal, 'El P. Sebastián Izquierdo y su *Pharus Scientiarum*', *Revista de filosofía* 1 (1942), 127–54; and J. Schmutz, 'Sebastián Izquierdo (1601–1681)', in C. Nativel (ed.), *Centuriae Latinae II offertes à Marie-Madeleine de La Garanderie* (Geneva, 2003).

⁸⁰ Thyrsus González de Santalla, *Fundamentum theologiae moralis, id est tractatus theologicus de recto usu opinionum probabilium* [*Fundamentum theologiae moralis*] (Salamanca, 1674). Here, González spelled out a careful case for 'probabiliorism', or the thesis that in a case of conscience an agent must act on the 'more probable' opinion rather than on a merely 'probable opinion', in order to avoid the laxist implications he believed to be inherent in that theory. For discussion of his work see Deman (1936), col. 488; and A. Eberle, 'Das "probabile" bei Thyrsus Gonzales als Grundlage seines Moralsystems' ['Das probabile'], *Theologische Quartalschrift* 127 (1947), 295–331.

⁸¹ *Fundamentum theologiae moralis*, Diss. X. 98: 'quamvis enim illa opinio non egredietur extra sphaeram probabilis, tamen habet certitudinem quamdam moralem, quae certitudo non opponitur cum conceptu essentiali opinionis probabilis'. See Eberle, 'Das probabile', 309–12.

assent is performed with certainty, while in the case of opinion some uncertainty is involved since there will be doubt or fear that one may be wrong to assent in such a manner.⁸² For Aquinas there is an important difference between the assent of faith and that associated with non-religious belief. In the first instance, the will is moved by divine authority or the 'light of faith', yet in the case of non-religious belief, assent is determined by the will which perceives that 'it is good or fitting' (*bonum vel conveniens*) to assent thus.⁸³

The second instance of *certitudo moralis* is effected, González thinks, when we rely on probable reasons. In this case one assents to an opinion even though one might possess what the scholastics referred to as 'logical fear' (*formido logica*) of the proposition. This type of moral certainty is held to be similar to the certainty of opinion.⁸⁴ *Formido logica*, the argument ran, was a by-product of the fact that one had assented to an opinion whose status was 'probable' rather than fully certain (*evidentiae certitudo*). For this reason scholastic thinkers argued that even if the probable status of the opinion to which one had assented was very high, the very fact that one had assented to an opinion that was probable, could not rule out the existence of a logical fear in one's mind, a fear that was based on the awareness that one had not assented to a fully certain proposition.⁸⁵ It is important to be precise here. The 'logical fear' of which González speaks was not thought to undermine one's ability to act with resolution in particular circumstances, rather it simply indicated

⁸² See *Summa theologiae*, IIa-IIae, q. 1, a. 4; cf. Ia, q. 79, a. 9, as. 4, and *Super ad Hebr.* cap. XI. I. 1.

⁸³ *De veritate*, 14. I; and *Super ad Hebr.* cap. XI. I. 1. For further evidence that these ideas were widely used among late medieval and early modern scholastic authors see Johannes Capreolus (d. 1444), *Defensiones theologiae divi Thomae Aquinatis*, 7 vols. (Turnhout, 1858), see v. 336a, and 348b; and Joannes a S. Thoma ('John of St Thomas') (1589–1644), *Cursus Philosophicus Thomisticus*, 3 vols. (Paris, 1883), see i, *Logica* II, q. 26, aa. 4–5. Cf. Suárez, *Opera omnia*, xi. 424, 560, and xii. 180–2. A slightly different variant on this matter is proposed by Eustachius a Sancto Paulo, *Summa philosophiae quadripartita* (Paris, 1609; edition used Cambridge, 1640), see *Logica*, III, tr. 3, disc. 1, q. 4, 152. For further discussion of Eustachius's thinking and its relationship to Descartes's idea of moral certainty see Ariew, 'Moral Certainty', 12–20.

⁸⁴ *Fundamentum theologiae moralis*, Diss. X. 14: 'Secundo notandum est, duplicem esse gradum moralis certitudinis < . . . >. Primum habent ea, quae creduntur ob auctoritatem humanam sed tamen ita confirmatam et celebrem, ut omnem formidinem prorsus excludat . . . Alium gradum moralis certitudinis habent illa, quae tot signis et conjecturis nituntur, ut securum hominem reddant et anxietatem excludant; non tamen formidinem omnem expellant: atque huiusmodi certitudo opinionis est potius quam fidei.'

⁸⁵ *Ibid.*, Diss. X. 97: '< . . . > sit fundata in tanta verisimilitudine, ut omnem expellant anxietatem et timorem a voluntate, et solum relinquit formidinem logicam, consistentem in iudicio de possibilitate, seu non repugnantia falsitatis.' Cf. Diss. X. 86: 'Hanc igitur cognitionem non repugnantiae ad oppositum, et fallibilitatis mediorum, quibus ad opinandum movemur, appellamus formidinem.' Cf. Sebastian Izquierdo, *Pharus Scientiarum* I. 145b. For further discussion see Knebel, *Wille*, 110–11.

that at the level of speculative reason doubt could remain since one could not be fully certain.

The authors discussed above represent but one, albeit central, strain of early seventeenth-century scholastic opinion. Being Jesuits, they reflect a philosophical standpoint distinctive to that order,⁸⁶ yet in so far as they drew upon common sources such as the writings of Aristotle, Thomas Aquinas, and their late medieval and Renaissance commentators, they can be said to have articulated concerns and defended positions that would have been recognized (if not always appreciated) by other scholastic writers approaching these issues from a Franciscan, Dominican, or neo-Augustinian perspective.⁸⁷ Still, with regard to *certitudo moralis* the teaching of Jesuits was relatively clear and it was endorsed by most scholastics. Moral certainty is sufficient for everyday life since under its auspices an agent could assent firmly to an opinion, and be assured that such an opinion was a more than adequate basis for action. In the absence of full speculative certainty in daily affairs, there was no reason for any agent to succumb either to enervating doubt or (in the case of grace) spiritual anxiety. *Certitudo moralis*, while different in character from full certainty, could still provide a basis on which reasonable belief and resolute action might be based.

III. Descartes on Moral Certainty

Returning to Descartes, we have now to determine what light our proceeding discussion can throw on the subject of his modernity in morals. As mentioned above, despite an admiration for aspects of Stoicism, Descartes maintained that ancient moral philosophy was deficient, both in respect of its quality of explanation and in respect of a claim to epistemological accuracy. In the sphere of the passions, the shortcomings of ancient writers were so evident that in the opening lines of his *Les passions de l'âme* Descartes expressed his dissatisfaction with typical candour:

The defects of the sciences we have from the ancients are nowhere more apparent than in their writings on the passions. This topic, about which knowledge has always been keenly sought, does not seem to be one of the more difficult to

⁸⁶ See C. Lohr, 'Jesuit Aristotelianism and Sixteenth-Century Metaphysics', in H. George II and M. B. Schulte (eds.), *Paradosis: Studies in Memory of Edwin A. Quinn* (New York, 1976); and 'Les Jésuites et l'aristotélisme du XVI^e siècle', in L. Giard (ed.), *Les Jésuites à la Renaissance. Système éducatif et production du savoir* (Paris, 1995).

⁸⁷ For further discussion of the differences within early modern scholasticism see my 'Scholastic Schools and Early Modern Philosophy', in D. Rutherford (ed.), *The Cambridge Companion to Early Modern Philosophy* (Cambridge, 2005).

investigate since everyone feels passions in himself and so has no need to look elsewhere for observations to establish their nature. And yet the teachings of the ancients about the passions are so meagre and for the most part implausible that I cannot hope to approach the truth except by departing from the paths they have followed.⁸⁸

If discussion of phenomena like the passions was to be improved, a new conception of practical philosophy was needed. In the French preface to *Les principes de la philosophie* Descartes presents the familiar analogy of his philosophical system to a tree.

Thus the whole of philosophy is like a tree. The roots are metaphysics, the trunk is physics; and the branches emerging from the trunk are all the other sciences, which may be reduced to three principal ones, namely medicine, mechanics and morals. By morals I understand the highest and most perfect moral system, which presupposes a complete knowledge of the other sciences and is the ultimate level of wisdom (*sagesse*).⁸⁹

Because his treatment of the passions grew out of his physical account of the relation between body and soul, which in turn was grounded in his metaphysical distinction between thinking and extended substance, Descartes believed that he was able to provide those necessary truths which ancient accounts of the passions could never attain.⁹⁰ Thus it was possible to deploy sound reasoning in order to examine phenomena of moral interest such as the passions ‘*en physicien*’, a clear implication being that the study of areas of ethical interest such as the passions could be improved by bringing to bear a scientific method.

Yet despite his willingness to transform the study of the passions into a science and the implications this project has for recasting important aspects of traditional moral philosophy, Descartes was reticent to complete a system of morality based upon the foundations of Cartesian science, as two weary letters to Chanut (1 November 1646, and 20 November 1647)

⁸⁸ AT-XI, 327–8; CSM-I, 328. For further discussion of Descartes’ attempt to offer a scientific account of the passions see D. Kamboucher, *L’Homme des passions: Commentaires sur Descartes [Commentaires]*, 2 vols. (Paris, 1995); Gaukroger, *Intellectual Biography*, 394–405; James, *Passions*, 85–123, 183–99; L. Cournaire, ‘Commentaire détaillé de la première partie du Traité des Passions’, in Dupond, Nodé-Langlois, Cournaire, *Sagesse*, 147–224; and D. Radner, ‘The Function of the Passions’, in Williston and Gombay, *Passion and Virtue*, 175–90.

⁸⁹ AT-IX, 14; CSM-I, 186. Earlier in the same preface, see AT-IX, 2; CSM-I, 191, Descartes had defined *sagesse* as ‘not only prudence in our everyday affairs but also a perfect knowledge of all things that mankind is capable of knowing, both for the conduct of life and for the preservation of health and the discovery of all manner of skills’.

⁹⁰ See Kamboucher, *Commentaires*, i. 129–47; and Gaukroger, *Intellectual Biography*, 396–401.

point out.⁹¹ When these personal reservations are combined with his candid acknowledgement in the maxims of the provisional code that one is to act resolutely despite the absence of evident certitude, the issue of the extent of his modernism in morals once again comes into question. Why did he believe that the improved procedures of Cartesian science could be brought to bear with greater success on some aspects of moral life such as the passions—a position that seems to place him firmly in the modernist camp—and yet appear to be mute on the subject of its eventual transposition to other areas of morality? In order to answer this puzzling question we must turn to his concept of ‘moral certainty’, since a review of its similarity or otherwise to the concept of *certitudo moralis* advanced by scholastic writers will help to clarify (in this instance at least) the extent of Descartes’ modernism in moral philosophy.

In Part IV of the *Discours* Descartes speaks directly to those who have not been convinced of the certainty of the metaphysical principles he has derived from his method. He says:

If there are still people who are not sufficiently convinced of the existence of God and of their soul by the arguments I have proposed, I would have them know that everything else of which they may think themselves more sure—such as their having a body, there being stars and an earth, and the like—is less certain. For although we have a moral certainty about these things, so it seems we cannot doubt them without being extravagant, nevertheless when it is a question of metaphysical certainty, we cannot reasonably deny that there are adequate grounds for not being sure about them.⁹²

Descartes’ statement concerning the deceptive nature of our experience of the physical world around us expresses an important metaphysical position fully developed in the Second Meditation. In the present context, however, his statement is striking in that it draws a distinction between two classes of certainty. This may seem surprising, particularly since in his

⁹¹ AT-IV, 534, CSMK-III, 298; and AT-V, 86–87, CSMK-III, 326. In the first of these letters (To Chanut, 1 Nov. 1646). Descartes states that nothing but trouble would stem from any substantive intervention he might choose to make in the field of moral philosophy. He says: ‘Had I dealt with moral philosophy, then perhaps I would have reason to hope that she [Queen Christina of Sweden] might find my writings more agreeable; but this is a subject which I must not get involved in writing about. The Regents [of the University of Leiden] are so worked up against me because of the harmless principles of physics they have seen, and they are so angry at finding no pretext in them for slandering me, that if I dealt with morality after all that, they would never give me any peace.’ Similar fears are expressed in the second letter (To Chanut, 20 Nov. 1647). Descartes says: ‘It is true that normally I refuse to write down my thoughts concerning morality. I have two reasons for this. One is that there is no other subject in which malicious people can so readily find pretexts for vilifying me; and the other is that I believe that only sovereigns, or those authorised by them, have the right to concern themselves with regulating the morals of other people.’

⁹² AT-VI, 37–8; CSM-I, 129–30.

earlier discussion of certainty in the *Regulae ad directionem ingenii* he provides no indication that certainty is a concept that admits of degrees.⁹³ There, the method is presented as a result of his investigation into why mathematics exclusively provides clarity and certainty:

Of all the sciences so far discovered, arithmetic and geometry alone are free from any taint of falsity or uncertainty < . . . >. These considerations make it obvious why arithmetic and geometry prove to be much more certain than other disciplines: they alone are concerned with an object so pure and so simple that they make no assumptions that experience might render uncertain: they consist entirely in deducing conclusions by means of rational arguments.⁹⁴

Mathematics provides certainty and clarity to an extent that no other science can because it is concerned with a subject matter so clear and distinct that it cannot be doubted.⁹⁵ Furthermore, mathematics develops this subject matter in a deductive manner that is free from error if reasoned correctly: 'While our experience of things is often deceptive, the deduction or pure inference of one thing from another can never be performed wrongly by an intellect which is in the least degree rational.'⁹⁶ If one starts with a subject matter that is indubitably clear and certain, and then develops this subject matter by indubitable necessary steps, the result will be an emergent body of knowledge that is absolutely certain. Such knowledge is the goal of the Cartesian enterprise, leading Descartes to formulate the rule that 'we should attend only to those objects of which our minds seem capable of having certain and indubitable cognition'.⁹⁷ At least at the outset, only mathematics seems to provide the possibility of such knowledge.

Still, as scholars such as Daniel Garber and Roger Ariew have shown, the period between the *Regulae* and the *Principia* represents an important shift in Descartes' thinking about these issues away from a position that demands certain knowledge to a more hypothetical approach to science in general.⁹⁸ In this period Descartes begins to abandon all hope of deriving all his principles with the kind of self-evidence and certainty that typified his earlier work. While still holding to the view that some of the principles of Cartesian science are certain and not mere hypotheses, he nevertheless

⁹³ For further discussion of the *Regulae* see G. Heffernan (ed.), *Réne Descartes. Regulae ad directionem ingenii: Rules for the Direction of the Natural Intelligence* (Amsterdam and Atlanta, GA, 1998), 1–60.

⁹⁴ AT-X, 364–5; CSM-I, 12.

⁹⁵ For discussions about the certainty of mathematics at this time and their relation to Descartes's work in geometry see P. Mancosu, *Philosophy of Mathematics and Mathematical Practice in the Seventeenth Century* (New York and Oxford, 1996), 8–33, 65–91.

⁹⁶ AT-X, 364–5; CSM-I, 12.

⁹⁷ AT-X, 362; CSM-I, 10: 'circa illa tantum objecta oportet versari, ad quorum certam et indubitam cognitionem nostra ingenia videntur sufficere'.

⁹⁸ See Garber, *Descartes Embodied*, 111–29, and Ariew, 'Moral Certainty', 10–20.

holds some principles because they are hypothetical. In his early work he claimed that hypothetical principles could be based on self-evident non-hypothetical principles, yet by the time of the publication of the *Principia* in 1644 he had abandoned all possibility of providing such a demonstration.⁹⁹ It is against this background that the notion of moral certainty takes shape.

We can first spy Descartes' interest in this idea in a letter dated 21 April 1641 to Mersenne, in which he refers to moral certainty in response to some theological objections to Cartesian philosophy raised by his correspondent.¹⁰⁰ The principal complaint reported by Mersenne was the view that Descartes' requirement of absolute certainty in knowledge would make it impossible to be certain about some matters that are crucial to the Catholic faith. For instance, how does one know for certain during the Mass that the priest is actually consecrating the elements (viz. bread and wine) in the correct way, or even that the priest is properly ordained? We cannot be indubitably certain about such things, and if indubitable certainty is the Cartesian requirement for knowledge, many items of knowledge must be rejected.

Descartes' response to Mersenne helps to clarify, albeit initially, the concept of moral certainty. He says:

I am surprised at the objections of your doctors, namely that we have no certainty, according to my philosophy, that the priest is holding the host at the altar, or that he had water to baptise, etc. *Even among scholastic philosophers, who ever said that there was any more than moral certainty of such things?* [my italics]. Theologians say that it is matter of faith, to believe that the body of Jesus Christ is in the Eucharist, but they do not say that it is a matter of faith to believe that it is in this particular host. For that you have to suppose, as a matter of ordinary human credence, that the priest had the intention to consecrate, and that he pronounced the words, and is duly ordained, and other such things which are by no means matters of faith.¹⁰¹

Descartes notes that there are situations in which one cannot attain indubitable certainty, and in which it is improper to expect faith to provide certainty in the absence of individual certitude. One need not be led into confusion by this problem, however, because it is apparently naïve to expect that all foreseeable situations in which knowledge is

⁹⁹ See the important remarks by Ariew, 'Moral Certainty', 5–12.

¹⁰⁰ I agree with the argument of Ariew, 'Moral Certainty', at 11 that 'Descartes frequently used the concept before his formal definition of it in the *Principles*—he did so even in 1637–1638, when he was claiming to Morin that the effects he explained had no causes other than the ones from which he deduced them'. Ariew's persuasive paper can be said to advance the discussion of Descartes' moral certainty beyond the earlier conclusions of Mackie, *Gambit*, Curley, 'Certainty', and Voss, 'Practical'.

¹⁰¹ AT-III, 359; CSMK-III, 179.

required will yield absolute, or metaphysical, certainty. Often one will have to rely upon 'ordinary human credence' that such and such is the case even though one may not be able to establish it with metaphysical certainty. If one's assumption appears sound and there is no reason to doubt it, one has moral certainty concerning the truth of that assumption.

Descartes' advice to the objectors reported by Mersenne's letter is designed to fall within the boundaries of prudence, but the notion that an item of knowledge lacking metaphysical certainty can still be certain in some sense relaxes the stringent requirement in the *Regulae* that we are to accept as knowledge only that which is 'perfectly known and incapable of being doubted' (*omnis scientia est cognitio certa et evidens*).¹⁰² Once one admits, as Descartes has in the above letter, that there are a large number of credible beliefs that do not readily lend themselves to being established with indubitable certainty, one could claim that as the Cartesian method increases knowledge, items of belief that are merely probable will increasingly be established with absolute certainty, eventually converting all items that are known with mere moral certainty to knowledge that is metaphysically certain. Yet tellingly Descartes does not believe this to be the case. Moral certainty is not high probability, and within the advancement of learning we should not expect it to be trumped by absolute certainty should such certainty ever be attainable. Rather, moral certainty is just what it says it is: a form of belief of which we do not have real doubt but one which fails the test of indubitability.¹⁰³

How then does this concept inform his remarks on *la morale*? At first sight, Descartes' choice of words in his various definitions of wisdom (*sagesse*)¹⁰⁴ and his description of the 'highest and most perfect moral system' do not appear to be all that promising for noting a strong relationship. One of the striking features of 'the highest and most perfect moral system' is that it presupposes 'a complete knowledge of the other sciences'. This requirement has led to a great deal of interpretative difficulty. It is hard to imagine, at least in the wake of recent scholarship, that Descartes seriously entertained the possibility that metaphysics and the physical sciences would ever come to a state of definitive completion. Even if he did once hold this optimistic opinion, it is clear that by the end of his life Descartes had become convinced that his philosophical enterprise would never be completed. In either case, a problem arises: how is

¹⁰² AT-X, 362; CSM-I, 10.

¹⁰³ In this respect I disagree with the interpretation of Franklin, *Conjecture*, 217–22, who argues that Cartesian moral certainty is equivalent to high probability.

¹⁰⁴ Early in the preface to the *Discours*, Descartes defines wisdom (*sagesse*) as: 'not only prudence in our everyday affairs but also a perfect knowledge of all things that mankind is capable of knowing, both for conduct of life and for the preservation of health and the discovery of all manner of skill.' AT-IXb, 2; CSM-I 179; cf. AT-VIIIa, 2; CSM-I, 191.

one to direct one's moral conduct in the indefinite absence of the perfect moral system, which cannot be constituted until metaphysics and physics are complete? The 'provisional morality' of the *Discours* is customarily identified as Descartes' temporary specification for moral guidance until the *definitive* morality has been found. Is it then the case that such a code is to be glossed in terms of the requirements of moral certainty? This question does not admit of a simple answer. Let us return, then, to his distinction between the different classes of certainty and see what light is thrown on our difficulty.

In Descartes' most detailed description of the distinction between metaphysical and moral certainty at the end of the *Principia*, he steps back from the scientific results he has presented as the fruit of his method and makes a noteworthy comment.

Although this method may enable us to understand how all the things in nature could have arisen, it should not therefore be inferred that they were in fact made in this way < . . . > the supreme craftsman of the real world could have produced all that we see in several different ways. I am very happy to admit this; and I think I shall have achieved enough provided only that what I have written is such as to correspond accurately with all the phenomena of nature. This will indeed be sufficient for application in ordinary life, since medicine and mechanics, and all the other arts which can be fully developed with the help of physics, are directed towards items that can be perceived by the senses and are therefore to be counted among the phenomena of nature.¹⁰⁵

Thus while physics may explain the phenomena of nature, there is no way of ascertaining whether its explanations correspond to the way in which God actually produced the world, as there are any number of ways in which God could have produced the same phenomena. Descartes' admission that his physical explanations may not correspond to the *reality* of the external world (as it was actually created by God) entails that for those sciences developed out of physics, a certainty 'sufficient for application in ordinary life'—a moral certainty—is all that can be expected. Among these derivative sciences are medicine and mechanics, two of the three branches of the tree of philosophy. Although Descartes does not specifically refer to the third branch, morals, it seems safe to include it among those sciences whose certainty may not arise from their absolute correspondence with the 'real world'.

Descartes does not consider this to be an admission for which he must apologize, nor does he consider it to reveal a deficiency in his method. In order to clarify the import of the above passage, Descartes spends the

¹⁰⁵ AT-VIIIa, 327; CSM-I, 289. The CSM translation of the *Principia* is a rendering of Descartes' original Latin version published in 1647, AT-IXb.

remainder of the *Principia* explaining the distinction between moral and metaphysical certainty.

I distinguish two strengths of certainty. The first is called moral certainty, which is sufficient to regulate our behaviour, or which measures up to the certainty we have on matters relating to the conduct of life which we normally never doubt, though we know that it is possible, absolutely speaking, that they may be false. Thus those who have never been in Rome have no doubt that it is a city in Italy,¹⁰⁶ even though it could be the case that everyone who has told them this has been deceiving them.¹⁰⁷

If we are as 'certain' of the belief that Rome exists as we are generally concerning matters that we do not doubt, but yet admit that it *could* be false even though there is no good practical reason for believing this to be case, then we have moral certainty concerning the existence of Rome. In the regulation of our actions, moral certainty is sufficient and is perhaps all that is possible. By any objective standard, Descartes' thinking here is very much in keeping with those scholastic authors discussed above, even though he arrives at his view by a quite different route.

Descartes goes on to define absolute, or metaphysical certainty, and to establish in part its role within his philosophical enterprise.

There are some matters, even in relation to the things in nature which we regard as absolutely and more than just morally certain. [Absolute certainty arises when we believe that it is wholly impossible that something should be otherwise than we judge it to be.] This certainty is based on a metaphysical foundation, namely that God is supremely good and in no way a deceiver, and hence that the faculty which he gave us for distinguishing truth from falsehood cannot lead us into error, so long as we are using it properly and are thereby perceiving something distinctly. Mathematical demonstrations have this kind of certainty <...> perhaps even these results of mine will be allowed into the class of absolute certainties, if people consider how they have been deduced in an unbroken chain from the first and simplest principles of human knowledge.¹⁰⁸

In order for the Cartesian enterprise to succeed, it must begin with certain principles spoken of in the *Regulae* and identified in the *Meditations*. Such principles, in order to qualify as the philosophical principles, must be indubitable. Furthermore, Descartes identifies once again the indubitable nature of mathematics, from which the method of deduction is derived. Hence metaphysical certainty must apply to both the starting point of

¹⁰⁶ Cf. Suárez, *Opera omnia*, ix. 547. The very same point is also made by De Lugo, *De iustitia et iure*, i. 108a/b, disp. 1, § 312; and Arriaga, *Cursus philosophicus*, Logica, disp. 16, sec. ix. 238–9 (where the example is Naples and not Rome). Arriaga does, however, mention that one can be morally certain that Rome exists at *ibid.*, sec. ix, 239, cols. a–b.

¹⁰⁷ AT-IXb, 323; CSM-I, 289–90.

¹⁰⁸ AT-VIIIa, 328; CSM-I, 290.

philosophy and its development from that starting point. More striking, however, is that even given these powerful elements of metaphysical certainty, the fruits of this process are morally certain rather than metaphysically certain. Where in the process does the transition from metaphysical to moral certainty take place, and why does metaphysical certainty not apply throughout the entire enterprise?

From a brief consideration of one of Descartes' illustrations of the method in practice, it becomes apparent that the flexibility of moral certainty is an important characteristic of the method from the start. In *Les principes*, Descartes uses the example of trying to decode a text in Latin in which the letters of the alphabet do not have their normal values. The proper procedure is to 'guess' what the solution might be, supposing, for instance, that the author of the text replaced the proper letters with their immediate successors in the alphabet (B for A, C for B, and so on), and then to apply the possible solution to the text. If the decoded text does not make sense, then the supposed solution is incorrect. If, however, the solution produces a text that *does* make sense, then one can safely assume that the correct solution has been found.

It is true that his [viz. the reader's] knowledge is based merely on a conjecture, and it is conceivable that the writer did not replace the original letters with their immediate successors in the alphabet, but with others, thus encoding quite a different message; but this possibility is so unlikely that it does not seem credible.¹⁰⁹

One will be morally certain that the solution is correct, but not metaphysically certain, since it is at least conceivable that the 'real' solution would produce a text with a completely different meaning. If, however, the letters make sense one can only be satisfied that it is 'correct' (viz. morally certain). Furthermore, such certainty underlies all hypotheses in science as well as Descartes' position that though experiment and the use of the hypothetico-deductive method, his explanations are, relative to competing hypotheses, morally certain. He says: 'If they think that my assumption of these principles was arbitrary and groundless, they will still perhaps acknowledge that it would hardly have been possible for so many items to fit into a coherent pattern if the original principles had been false.'¹¹⁰ Even for those who refuse to admit that the metaphysical principles that serve as the starting point of philosophy are intuitively and metaphysically certain, the correctness of these principles is supported by the fact that the Cartesian system that is deduced from them is internally coherent. The defining characteristic of the tree of philosophy, in its

¹⁰⁹ AT-VIIIa, 328; CSM-I, 290.

¹¹⁰ AT-VIIIa, 328; CSM-I, 290. For further discussion of this point with reference to *Les Principes* see Garber, *Descartes Embodied*, 121–9.

organic development and growth, is not just the metaphysical certainty of its principles, but also the consistency of its results, whether metaphysically or morally certain, with one another, across the boundaries of separate sciences. Just as the human knower can recognize the metaphysically certain principles of philosophy, the knower can also by nature comprehend what a consistent, unified system of knowledge should look like, if there has been proper nourishment and training through the method for the recognition of truth.

The distinction between metaphysical and moral certainty, while never explicitly expressed, casts a shadow over Descartes' later remarks on *la morale*. The resulting theory—Cartesian moral philosophy—must be certain if it is to be a legitimate result of the method, but the nature of that certainty as well as the balance between metaphysical and moral certainty remain to be determined. At this point, however, one can recognize that there need not be as great a gap between metaphysical and moral certainty as one might immediately think. Both have the notion of firm intellectual assent in common, and the root of both kinds of certainty lies in the knower rather than in the object of knowledge. Descartes isolates mathematics as a model for his philosophical method because he is convinced that the structure of human knowledge requires that the discovery of truth be structured and ordered. This clearly applies to the development of metaphysically certain principles. In addition, it applies to an investigation of areas in which the order and structure of the objects are not immediately apparent. Descartes notes in the *Regulae* that 'the method usually consists in constantly following an order, whether it is actually present in the matter in question or is ingeniously devised' (*Quaerenda esse illa cum methodo, quae in istis levioribus non alia esse solet, quam ordinis, vel in ipsa re existentis, vel subtiliter excogitati, constans observatio*).¹¹¹ Furthermore, it does not matter whether the order is inherent in the object or is supplied by the knower. In fact, we may not ever know. If there is more than one orderly hypothesis that explains the subject matter, any one of them is sufficient, as they exhibit the requisite certainty.

What, then, is to be made of this? One noteworthy feature that has emerged from the foregoing discussion is that there would appear to be a strong affinity between Descartes' use of the idea of 'moral certainty' and the scholastic idea of *certitudo moralis*. Both concepts are designed to afford clear and adequate guidance in action in the face of the absence of

¹¹¹ AT-X, 404; CSM-I, 35. This reference brings into focus Descartes' distinction between two types of order: that which exists in reality, and that which is produced by human thought and industry (e.g. 'art' and technology). Cf. Thomas Aquinas, *Proem* to his Commentary on Aristotle's *Ethics* (*Sententia libri Ethicorum*), where a similar distinction is observed.

complete and indubitable certainty. For Descartes, as set down in his provisional code of morality, all we need to know is that which is sufficient and appropriate to the regulation of our behaviour. The fact that any resulting guidance in action can never enjoy metaphysical certainty is somehow irrelevant to the actual project of living a moral life. This is surely the upshot of all four maxims. We need not grieve for what we cannot have, a fact that is illustrated (if only implicitly) by Descartes' willing and untroubled compliance with the moral standards of his time.¹¹²

Moral certainty aside, there are marked differences between Descartes' outlook on *la morale* and the scholastic tradition that predated him. First, for scholastic thinkers 'probable opinions' or judgements derived from 'moral certainty' are both defined and deployed in the context of a contrast with the certain judgements of the speculative sciences. Morality is not a demonstrative science, it calls for different methods and standards of assessment, and is to be based on what is known and what is deemed to have common agreement. Second, Descartes departs from mainstream scholastic thinking in what might be termed his hope for the 'methodological renewal' in moral philosophy. For early modern scholastics, especially Jesuit writers, it is simply foolish, following Aristotle's remarks at *Nicomachean Ethics* I. 3, 1094b24–7, to expect the discipline of *πολιτική* to be anything other than the study of acts that are contingent and variable. In this respect the possibility of moral philosophy ever being made into a fully fledged science is always a non-starter. While Descartes is prepared to acknowledge that only a limited form of certainty will issue from moral philosophy, he is committed—albeit in varying degrees of stringency as his philosophical career progresses—to the idea that moral philosophy ought not to be aloof from the general advancement of the sciences and learning. It remained a possibility, admittedly one his system never realized, that moral philosophy could be recast as a result of bringing to bear a genuine scientific method. An example of this approach is to be observed in his work on the passions, especially the remarks on particular passions like *générosité*, and this surely stands as evidence of his reforming tendencies to bring to bear a quite different methodological approach to ethics.

Drawing together the main arguments of this essay, I would suggest that Descartes' 'modernity' in moral philosophy is not to be seen in terms of what he actually achieved in this field. Rather, his modernity

¹¹² Having made these remarks I still agree with the general conclusion of Carraud, 'Probabilité', that Descartes' provisional code bears no resemblance to anything like scholastic probabilism or to a moral theory based on probabilism.

in morals inheres in his aspiration that the techniques and procedures of Cartesian science might be transposed with intellectual profit to a practical discipline previously thought to be outside the purview of speculative science. Up to a point, this represents a shift in thinking about the nature of moral philosophy and it surely connects Descartes to other seventeenth-century figures who wished to set ethics on a different track, yet it also serves to hide those more pre-modern aspects of his thought about human action that associate him so strongly with earlier thinkers and traditions of practical philosophy. It is difficult not to be struck by the very strong similarities that exist between the scholastic concept of *certitudo moralis* and Descartes' own notion of moral certainty.

In any final estimation of Descartes' moral thought there is little, other than particular aspects of his discussion of the passions, that strikes one as particularly novel. With regard to fulsome expressions of 'modernity', we can note that like many others of his period he did express the hope that traditional moral philosophy could be recast and improved as a result of more general advances in the sciences. Yet despite his ambition to construct a perfect moral system (*la plus parfaite morale*) he never completed such a theory. Rather, what he did say about other important aspects of morality, such as the need to act resolutely in the face of uncertainty at the level of action and his quietism and conventionalism in other areas, mitigates against any more positive assessment of his standing as a modern moral philosopher. Descartes' scattered set of remarks on *la morale* reveal a philosopher looking towards a future that seeks to renew the subject by means of scientific advance, but mindful of a past that is clearly aware of the recalcitrance of moral phenomena and their resistance to full certainty. Given the incomplete nature of his ethical pronouncements we should not be persuaded by dint of our fascination with other aspects of his scientific and philosophical thought that Descartes offers us anything more than a partial insight into some areas of ethical interest. The early seventeenth century was surely right not to regard him as a moral thinker of any distinction.¹¹³

¹¹³ I am grateful to Jill Krave and Susan James for comments on an earlier draft of this essay. Later versions have greatly benefited from the astute advice of Roger Ariew, Steven Nadler, Herman De Dijn, Guy Guldentops, Roland Breeur, and Carlos Steel. I am especially grateful to Theo Verbeek whose detailed remarks and criticisms have helped me clarify and reassess several aspects of my interpretation of Descartes' writings.

Bibliography

Primary Texts

- ARRIAGA, RODRIGO DE, *Cursus philosophicus iam noviter maxima ex parte auctus et illustratus et a variis obiectionibus liberatus* (Lyons, 1668; originally published Antwerp, 1632).
- BACON, FRANCIS, *The Essayes: Civill and Morall* (London, 1597 and 1625).
— *De dignitate et augmentis scientiarum* (London, 1623).
- BAILLET, ADRIEN, *Vie de M. Descartes*, 2 vols. (Paris, 1691).
- CAPREOLUS, JOHANNES, *Defensiores theologiae divi Thomae Aquinatis*, 7 vols. (Turnhout, 1858).
- CHAUVIN, STEPHANUS, *Lexicon Philosophicum* (Rotterdam, 1692).
- DE LA FORGE, LOUIS, *L'Homme de René Descartes* (Paris, 1666).
- DE LUGO, JOHANNES (JUAN) *Disputationes scholasticae et morales* (Lyons, 1645).
— *De iustitia et iure*, 8 vols. (Paris, 1868–9).
- DE MEDINA, BARTOLOMÉ, *Expositiones in Primam secundae divi Thomae* (Venice, 1580) (1st edn. Salamanca, 1577).
- DESCARTES, RENÉ, *Lettres de M. Descartes*, C. Clerselier (ed.) 3 vols. (Paris, 1657, 1659, and 1667).
— *Lettres sur la morale*, ed. J. Chevailier (Paris, 1935).
— *Œuvres de Descartes*, ed. C. Adam and P. Tannery 12 vols. (Paris, 1964–74).
— *The Philosophical Writings of Descartes*, ed. J. Cottingham, R. Stoothoff, D. Murdoch, 2 vols. (Cambridge, 1984–5).
— *The Philosophical Writings of Descartes III*, ed. J. Cottingham, R. Stoothoff, D. Murdoch and A. Kenny (Cambridge, 1991).
— *Regulae ad directionem ingenii: Rules for the Direction of the Natural Intelligence*, (ed.) G. Heffernan (Amsterdam and Atlanta GA, 1998).
- FAGNANI, PROSPERO, *De opinione probabili* (Rome, 1665).
- GASSENDI, PIERRE, *Exercitationes Paradoxicae Adversus Aristoteles* (Grenoble, 1624).
— *Opera omnia* (Lyons, 1658).
- GERSON, JEAN, *Œuvres complètes*, (ed.) P. Glorieux, 10 vols. (Paris, 1973).
- GOELENIUS, RUDOLFUS, *Lexicon philosophicum quo tantum clave philosophiae fores aperiuntur* (Frankfurt, 1613).
- GONSÁLEZ DE SANTALLA, THYRSUS, *Fundamentum theologiae moralis, id est tractatus theologicus de recto usu opinionum probabilium* (Salamanca, 1674).
- HEMMINGSSEN, NIELS, *De lege naturae* (Wittenberg, 1562).
- HOBBS, THOMAS, *The Elements of Law* (London, 1640).
— *De cive* (London, 1642).
- IZQUIERDO, SEBASTIAN, *Pharus Scientiarum, ubi quidquid ad cognitionem humanam humanitus acquisibilem pertinet, ubertim iuxta, atque succincte pertractatur*, 2 vols. (Lyons, 1659).

- JESUITS OF COIMBRA, *Commentarius Conimbricensis in universam dialecticam Aristotelis* (Coimbra, 1606).
- MAZZOLINI, SYLVESTER, *Summa summarum quae Sylvestrina dicitur* (Rome, 1516).
- MORIN, JEAN-BAPTISTE, *Quod Deus sit* (Paris, 1635).
- NIDER, JOHANNES, *Consolatorium timoratae conscientiae* (Cologne, 1473).
- PAVONIUS, FRANCISCUS, *Summa ethicae, sive commentarius in libros Ethicorum Aristotelis* (Naples, 1617, later republished as *Summa ethicae, sive introductio in Aristotelis et theologorum doctrinam moralem*, Lyons, 1620).
- POINSOT, JOANNES A ('John of St Thomas'), *Cursus Philosophicus Thomisticus*, 3 vols. (Paris, 1883).
- SANCTO PAULO, EUSTACHIUS a, *Summa philosophiae quadripartita* (Paris, 1609, edition used Cambridge, 1640).
- SUÁREZ, FRANCISCO, *Opera omnia*, ed. C. Berton, 28 vols. (Paris, 1856–78).
- THOMA, JOANNES A S., *Cursus Philosophicus Thomisticus*, 3 vols. (Paris, 1883).
- VITORIA, FRANCISCO DE, *De iure felli*, in T. Urdanoz (ed.), *Obras Francisco de Vitoria: Relecciones teológicas* (Madrid, 1960). (English translation in A. Pagden and J. Lawrence (eds.), *Vitoria: Political Writings* (Cambridge, 1991), 295–327.

Secondary Literature

- ADAM, C., *Vie et œuvres de Descartes: étude historique* (Paris, 1910).
- ARIEW, R., 'Hypothesis and Moral Certainty in Descartes and some Late Scholastics', Forthcoming, 1–20.
- BARNES J., 'The Just War', in N. Kretzman, A. Kenny, and J. Pinborg (eds.), *The Cambridge History of Later Medieval Philosophy* (Cambridge, 1982), 771–84.
- BARRETT-KRIEGLER, B., 'Politique-s- de Descartes?', *Archives de Philosophie* 53 (1990), 371–88.
- BEYSSADE, J.-M., *Descartes au fil de l'ordre* (Paris, 2001), 237–58.
- BIARD, J., and RASHED, R. (eds.), *Descartes et le Moyen Age* (Paris, 1997).
- BLAKE, R., 'The Role of Experience in Descartes's Theory of Method', *Philosophical Review* 38 (1929), 125–43.
- BOEHM, A., 'L'Aristotélisme d'Honoré Fabri (1607–1688)', *Revue des sciences religieuses* 39 (1965), 305–60.
- BOX, I., *The Social Thought of Francis Bacon* (Lewiston, NY: Edwin Mellen Press, 1989).
- 'Bacon's Moral Philosophy', in M. Peltonen (ed.), *The Cambridge Companion to Bacon* (Cambridge, 1996), 260–83.
- BOYCE-GIBSON, A., *The Philosophy of Descartes* (London, 1932).
- BROCKLISS, L. W. B., *French Higher Education in the Seventeenth and Eighteenth Centuries: A Cultural History* (Oxford, 1987).
- BROWN, D. C., *Pastor and Laity in the Theology of Jean Gerson* (Cambridge, 1987).
- BUCHDAHL, G., *Metaphysics and the Philosophy of Science* (Oxford, 1969).

- BURROW, M. S., *Jean Gerson and De Consolatione Theologiae* (Tübingen, 1991).
- BYRNE, E. F., *Probability and Opinion: A Study in the Medieval Presuppositions of Post-medieval Theories of Probability* (The Hague, 1968).
- CARRAUD, C., 'Morale par provision et probabilité', in J. Biard and R. Rashed (eds.), *Descartes et le Moyen Age* (Paris, 1997), 259–82.
- CARUSO, E., 'Honoré Fabri gesuita e scienziato', in *Miscellanea scentesca: Saggi su Descartes, Fabri, White* (Milan, 1987), 85–126.
- CATON, H., 'Will and Reason in Descartes's Theory of Error', *Journal of Philosophy* 72 (1975), 87–104.
- CEÑAL, R., 'El P. Sebastián Izquierdo y su *Pharus Scientiarum*', *Revista de filosofía* I (1942), 127–54.
- CHAMBERS, C. J., 'The Progressive Norm of Cartesian Morality', *New Scholasticism* 42 (1968), 374–400.
- CLARKE, D., *Descartes's Philosophy of Science* (Manchester, 1982).
- COMARNESCO, P., 'The Social and Ethical Conceptions of Descartes', *Ethics* 52 (1942), 374–400.
- COURNAIRE, L., 'Commentaire détaillé de la première partie du Traité des Passions', in P. Dupond, M. Nodé-Langlois, and L. Cournaire (eds.), *Descartes, Passions et Sagesse* (Toulouse, 1997), 147–224.
- COTTINGHAM, J., *Philosophy and the Good Life* (Cambridge, 1998).
- CUMMING, R., 'Descartes's Provisional Morality', *Review of Metaphysics* 9 (1955–6), 207–35.
- CURLEY, E., 'Certainty: Psychological, Metaphysical and Moral', in S. Voss (ed.), *Essays on the Philosophy and Science of René Descartes* (New York and Oxford, 1993), 11–30.
- DASTON, L., *Classical Probability in the Enlightenment* (Princeton, 1988).
- DAVIES, R., *Descartes: Belief, Scepticism and Virtue* (London, 2001).
- DE ANGELIS, E., *Il methodo geometrico nella filosofia del Seicento* (Pisa, 1964).
- DE BLIC, J., 'Barthelemy De Medina et les origines du probabilisme', *Ephemerides Theologicae Lovanienses* 7 (1930), 46–83, 264–91.
- DEAR, P., *Mersenne and the Language of the Schools* (Ithaca, NY, 1988).
- DEMAN, Th., 'Probabilis au Moyen Age', *Revue des sciences philosophiques et théologiques* 22 (1933), 260–90.
- 'Probabilisme', in *Dictionnaire de Théologie Catholique*, 15 vols. (Paris, 1903–50), xiii (1936), cols. 416–619.
- DÖLLINGER, I. and REUSCH, F., *Geschichte der Moralstreitigkeiten in der römisch-katholischen Kirche seit dem 16. Jahrhundert*, 2 vols. (Nördlingen, 1889).
- DREYER, M., *Nikolaus von Amiens: Ars fidei catholicae—Ein Beispielwerk axiomatischer Methode* (Münster, 1993).
- DUPOND, P., 'Réflexions sur la Correspondance avec Élisabeth', in P. Dupond, M. Nodé-Langlois, and L. Cournarie (eds.), *Descartes, Passions et Sagesse* (Toulouse, 1997), 7–64.
- EBERLE, A., 'Das "probabile" bei Thyrsus Gonsalez als Grundlage seines Moralsystems', *Theologische Quartalschrift* 127 (1947), 295–331.
- ESPASA, J., 'Relación entre la fe infusa y la adquirida en Gregorio de Valentina', *Archivo Teológico Granadina* 8 (1945), 99–123.

- ESPINAS, A., *Descartes et la morale*, 2 vols. (Paris, 1925).
- FLORIDI, L., *Sextus Empiricus: The Transmission and Recovery of Pyrrhonism* (Oxford, 2002).
- FRANKLIN, J., 'The Ancient Legal Sources of Seventeenth-Century Probability', in S. Gaukroger (ed.), *The Uses of Antiquity* (Amsterdam, 1991), 123–44.
- *The Science of Conjecture: Evidence and Probability before Pascal* (Baltimore, 2002).
- GABAUDE, J.-M., 'The Dual Unity of Cartesian Ethics', in G. D. Moyal (ed.), *René Descartes: Critical Assessments*, 4 vols. (London, 1991), iv, 332–42.
- GAGON, M., 'Le rôle de la raison dans la morale cartésienne', *Laval Théologique et Philosophique* 25 (1969), 268–305.
- GARBER, D., *Descartes's Metaphysical Physics* (Chicago, 1992).
- 'J.-B. Morin and the Second Objections', in R. Ariew, and M. Grene (eds.), *Descartes and his Contemporaries* (Chicago, 1995), 63–82.
- *Descartes Embodied: Reading Cartesian Philosophy through Cartesian Science* (Cambridge, 2001).
- GARDEIL, A., 'La "Certitude Probable"', *Revue des sciences philosophiques et théologiques* (1911), 237–66, and 441–85.
- GAUKROGER, S. (ed.), *The Uses of Antiquity* (Amsterdam, 1991).
- *Descartes: An Intellectual Biography* (Oxford, 1995).
- GEWIRTZ (GEWIRTH), A., 'Experience and the Non-mathematical in the Cartesian Method', *Journal of the History of Ideas* 2 (1941), 3–21.
- GILSON, É., *La Liberté chez Descartes et la théologie* (Paris, 1913).
- (ed.), *Réne Descartes: Discours de la Méthode, Texte et Commentaire* (Paris, 1925).
- GLORIEUX, P., 'La vie et les oeuvres de Gerson', *Archives d'histoire doctrinale et littéraire du moyen âge* 25–6 (1950–1), 149–92.
- GLUCKER, J., 'Probabile, Veri Simile, and Related Terms', in J. G. F. Powell (ed.), *Cicero the Philosopher* (Oxford, 1995), 115–45.
- GORCE, M.-M., 'A Propos de Barthélemy de Medina et du probabilisme', *Ephemerides Theologicae Lovanienses* 7 (1930), 480–1.
- GRIMALDI, N., 'La morale provisoire et le découverte métaphysique de l'homme chez Descartes', in N. Grimaldi and J.-L. Marion (eds.), *Le Discours et sa méthode* (Paris, 1987), 303–19.
- *Six études sur la volonté et la liberté chez Descartes* (Paris, 1988).
- GROSSE, S., *Heilsgewissheit und Scrupulositas im späten Mittelalter. Studien zu Johannes Gerson und Gattungen der Frömmigkeitstheologie seiner Zeit* (Tübingen, 1994).
- GUEROULT, M., *Descartes's Philosophy Interpreted According to the Order of Reasons*, 2 vols., trans. R. Ariew (Minneapolis, 1985).
- HALDANE, E., *The Life of René Descartes* (London, 1905).
- HAMILTON, B., *Political Thought in Sixteenth-Century Spain* (Oxford, 1963).
- HELBING, M. O., *La filosofia di Francesco Buonamici, professore di Galileo a Pisa* (Pisa, 1989).
- HENTRICH, W., *Gregor von Valencia und der Molinismus* (Innsbruck, 1928).

- HOFFMAN, P., 'The Passions and Freedom of the Will', in B. Williston and A. Gombay (eds.), *Passion and Virtue in Descartes* (Amherst, NY, 2003), 261–300.
- JAMES, S., *Passion and Action: The Emotions in Seventeenth Century Philosophy* (Oxford, 1997).
- JANOWSKI, Z., *Cartesian Theodicy* (Dordrecht, 2000).
- JONSEN, A., and TOULMIN, S., *The Abuse of Casuistry* (Berkeley, CA, 1988).
- KAMBOUCHER, D., *L'Homme des passions: Commentaires sur Descartes*, 2 vols. (Paris, 1995).
- KENNY, A., 'Descartes on the Will', in R. J. Butler (ed.), *Cartesian Studies* (Oxford, 1972), 1–31.
- KNEBEL, S., *Wille, Würfel und Wahrscheinlichkeit. Das System der moralischen Notwendigkeit in der Jesuitenscholastik 1550–1700* (Hamburg, 2000).
- KRAYE, J., 'Renaissance Commentaries on the *Nicomachean Ethics*', in O. Weijers (ed.), *The Vocabulary of Teaching and Research between Middle Ages and Renaissance, Proceedings of the Colloquium: London Warburg Institute, 11–12 March 1994* (Turnhout, 1995), 96–117.
- 'Seventeenth Century Moral Philosophy', in M. Ayers and D. Garber (eds.), *The Cambridge History of Seventeenth Century Philosophy*, 2 vols. (Cambridge, 1997), ii. 1279–1316.
- LINES, D., *Aristotle's Ethics in the Italian Renaissance (ca. 1300–1650): The Universities and the Problem of Moral Education* (Leiden, 2002).
- LOHR, C., 'Jesuit Aristotelianism and Sixteenth-Century Metaphysics', in H. George II and M. B. Schulte (eds.), *Paradosis: Studies in Memory of Edwin A. Quinn* (New York, 1976).
- 'The Pseudo-Aristotelian *Liber de causis* and Latin Theories of Science in the Twelfth Century', in J. Kraye et al. (eds.), *Pseudo-Aristotle in the Middle Ages: The 'Theology' and Other Texts* (London, 1986), 53–62.
- *Latin Aristotle Commentaries, II: Renaissance Authors* (Corpus Philosophicum Medii Aevi, Subsidia IV; Florence, 1988).
- 'Les Jésuites et l'aristotélisme du XVIe siècle', in L. Giard (ed.), *Les Jésuites à la Renaissance. Système éducatif et production du savoir* (Paris, 1995).
- LOTTIN, O., 'Le tutorisme du treizième siècle', *Recherches de théologie ancienne et médiévale* 5 (1933), 292–301.
- MANCOSU, P., *Philosophy of Mathematics and Mathematical Practice in the Seventeenth Century* (New York and Oxford, 1996)
- MARKIE, P., *Descartes's Gambit* (Ithaca, NY, 1986).
- MARSHALL, J., *Descartes's Moral Theory* (Ithaca, NY, 1998).
- 'Descartes's *morale par provision*', in B. Williston and A. Gombay (eds.), *Passion and Virtue in Descartes* (Amherst, NY, 2003), 191–238.
- MARTINET, M., 'Jean-Baptiste Morin (1583–1656)', in P. Costabel and M. Martinet (eds.), *Quelques savants et amateurs de science au XVIIe siècle: Sept notices biobibliographiques caractéristiques* (Paris, 1986), 69–87.
- MEHL, E., 'Les méditations stoïciennes de Descartes. Hypothèses sur l'influence du stoïcisme dans la constitution de la pensée cartésienne (1619–1637)', in P.-F. Moreau (ed.), *Le Stoïcisme au XVI et au XVII siècles* (Paris, 1999), 251–80.

- MENSARD, P., *Essai sur la morale de Descartes* (Paris, 1936).
- MERCKAERT, N. F., de, 'Les trois moments moraux du Discours de la Méthode', *Revue philosophique de Louvain* 73 (1973), 607–27.
- MODESTO, L., PÉREZ, *The Common Good as a Fundamental Principle of Law according to Suárez* (Rome, 1994).
- MOREAU, P.-F. (ed.), *Le Stoïcisme au XVI et au XVII siècles* (Paris, 1999).
- (ed.), *Le Scepticisme au XVI et au XVII siècle* (Paris, 2001).
- MORGAN, V. G., *Foundations of Cartesian Ethics* (Atlantic Highlands, NJ, 1994).
- NYE, A., *The Princess and the Philosopher: Letters of Elizabeth of the Palatine to René Descartes* (Lanham, 1999).
- OLIVARES, E., 'Juan de Lugo (1583–1660): Datos biográficos, sus escritos, estudios sobre su doctrina y bibliografía', *Archivo Teológico Granadino* 47 (1984), 5–129.
- OLIVIO, G., '“Une patience sans espérance”? Descartes et le stoïcisme', in P.-F. Moreau (ed.), *Le Stoïcisme au XVI et au XVII siècles* (Paris, 1999), 234–50.
- POPKIN, R., *The History of Scepticism from Erasmus to Spinoza*, 2nd edn. (Berkeley, CA, 1979).
- RADNER, D., 'The Function of the Passions', in B. Williston and A. Gombay (eds.), *Passion and Virtue in Descartes* (Amherst, NY, 2003), 175–90.
- RENAULT, L., *Descartes ou la félicité volontaire* (Paris, 2000).
- RODIS-LEWIS, G., *La Morale de Descartes* (Paris, 1957).
- 'Maîtrise des passions et sagesse chez Descartes', in M. Gueroult and M. Gouhier (eds.), *Cahiers de Royaumont* (Paris, 1957), 214–30.
- *Descartes: Biographie* (Paris, 1995).
- ROMMEN, H., *Die Staatslehre des Franz Suárez* (München-Gladbach, 1926).
- RUSSELL, F. H., *The Just War in the Middle Ages* (Cambridge, 1975).
- SARASHON, L., *Gassendi's Ethics: Freedom in a Mechanistic Universe* (Ithaca, NY, 1996).
- SCHMITT, C., *Cicero Scepticus* (The Hague, 1972).
- 'Aristotle's Ethics in the Sixteenth Century: Some Preliminary Considerations', in *The Aristotelian Tradition and Renaissance Universities* (London, 1984).
- SCHMUTZ, J., 'Sebastián Izquierdo (1601–1681)', in C. Nativel (ed.), *Centuriae latinae II offertes à Marie-Madeleine de La Garanderie* (Geneva, 2003).
- SCHNEEWIND, J. B. (ed.), *Moral Philosophy from Montaigne to Kant: An Anthology*, 2 vols. (Cambridge, 1990).
- *The Invention of Autonomy: A History of Modern Moral Philosophy* (Cambridge, 1988).
- SCHOULDS, P., *Descartes and the Possibility of Science* (Ithaca, NY, 2000).
- SCHRIMM-HEINS, A., 'Gewissheit und Sicherheit. Geschichte und Bedeutungswandel der Begriffe certitudo und securitas. I', *Archiv für Begriffsgeschichte* 34 (1991), 123–213.
- SCHÜLING, H., *Die Geschichte der axiomatischen Methode im 16. und beginnenden 17. Jahrhundert* (Hildesheim and New York, 1969).

- SCHÜßLER, R., *Moral im Zweifel. Band 1: Die scholastische Theorie des Entscheidens unter moralischer Unsicherheit* (Paderborn, 2003).
- SHAPIRO, B., *Probability and Certainty in Seventeenth-Century England* (Princeton, 1983).
- SKINNER, Q., *Reason and Rhetoric in the Philosophy of Hobbes* (Cambridge, 1996).
- SPIEGELBERGER, H., 'Indubitables in Ethics: A Cartesian Meditation', *Ethics* 55 (1947–8), 35–50.
- SORELL, T., *Hobbes* (London, 1986).
- 'Morals and Modernity in Descartes', in T. Sorell (ed.), *The Rise of Modern Philosophy: The Tension between the New and Traditional Philosophies from Machiavelli to Leibniz* (Oxford, 1993), 273–88.
- SOUSEDIK, S., 'La obra filosófica de Rodrigo de Arriaga', *Ibero-Americana Pragmática* 15 (1981), 103–46.
- SOUTHGATE, B. C., *'Covetous of Truth': The Life and Work of Thomas White, 1593–1676* (Dordrecht, 1993).
- SPAEMANN, S., 'La morale provisoire de Descartes', *Archives de Philosophie* 35 (1972), 353–67.
- SPECHT, R., 'Francisco Suárez über den Krieg', in N. Brieskon and M. Riedener (eds.), *Suche nach Frieden: Politische Ethik in der Frühen Neuzeit*, 1 (Cologne, 2000).
- STONE, M. W. F., 'The Origins of Probabilism in Late Scholastic Moral Thought: A Prolegomenon to Further Study', *Recherches de théologie et philosophie médiévales* 58 (2000), 114–57.
- 'Scrupulosity, Probabilism, and Conscience: The Origins of the Debate in Early Modern Scholasticism', in H. Braum and E. Vallence (eds.), *Contexts of Conscience in Early Modern Europe, 1500–1700* (London, 2004), 1–16, 182–8.
- 'The Nature and Significance of Law in Early Modern Scholasticism', in F. D. Miller Jr. (ed.), *A History of Philosophy of Law from the Ancient Greeks to the Scholastics* (A Treatise of Legal Philosophy and General Jurisprudence, Volume 6; Dordrecht, 2004).
- 'Scholastic Schools and Early Modern Philosophy', in D. Rutherford (ed.), *The Cambridge Companion to Early Modern Philosophy* (Cambridge, 2005).
- TAVUZZI, M., *Prierias: The Life and Works of Silvestro Mazzolini da Prierio, 1456–1527* (Durham, NC, and London, 1997).
- THORNDIKE, L., 'The *Cursus philosophicus* before Descartes', *Archives internationales d'histoire de la science* 4 (1951), 16–24.
- TUCK, R., 'Hobbes's Moral Philosophy', in T. Sorell (ed.), *The Cambridge Companion to Hobbes* (Cambridge, 1996), 175–207.
- TUMMERS, P. M. J. E., 'Geometry and Theology in the XIIIth century', *Vivarium* 18 (1980), 112–42.
- VAN LEEUWEN, H. G., *The Problem of Certainty in English Thought 1630–1690* (The Hague, 1969).
- VAN REIJEN, W. L., 'Freiheit und Moral in der Philosophie Descartes', *Zeitschrift für philosophische Forschung* 26 (1974), 125–37.

- VOSS, S., 'Scientific and Practical Certainty in Descartes', *American Catholic Philosophical Quarterly* 67 (1993), 569–85.
- (ed.), *Essays on the Philosophy and Science of René Descartes* (New York and Oxford, 1993).
- VROOMAN, J. R., *Réne Descartes: A Biography* (New York, 1970).
- WALLACE, W., *Prelude to Galileo* (Dordrecht and Boston, 1981).
- 'The Certitude of Science in Late Medieval and Renaissance Thought', *History of Philosophy Quarterly* 3 (1986), 281–91.
- WIELAND, G., *Ethica, scientia practica: Die Anfänge der philosophischen Ethik im 13. Jahrhundert* (Münster, 1981).
- WILENIUS, R., *The Social and Political Theory of Francisco Suárez* (Helsinki, 1963).
- WILLISTON, B. and GOMBAY, A. (eds.), *Passion and Virtue in Descartes* (Amherst, NY, 2003).

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BIBLIOGRAPHY

1964

'Function', *Philosophical Quarterly* 14 (1964), 289–302.

1969

'Aristotle and Oxford Philosophy', *American Philosophical Quarterly* 6 (1969), 127–35.

1971

'Aristotle on demarcating the Five Senses', *Philosophical Review* 80 (1971), 55–79.

1972

Aristotle on Memory (London, 1972).

'Aristotle, Mathematics and Colour', *Classical Quarterly*, NS 22 (1972), 293–308.

1974

'Aristotle on the Role of Intellect in Virtue', *Proceedings of the Aristotelian Society* 74 (1974), 107–29; reprinted in A. O. Rorty (ed.), *Essays on Aristotle's Ethics* (Berkeley, 1980), 201–19.

'Body and Soul in Aristotle', *Philosophy* 49 (1974), 63–89; reprinted in M. Durrant (ed.), *Aristotle's de Anima in Focus* (London and New York, 1993), 162–96.

1975

Articles on Aristotle, co-edited with J. Barnes and M. Schofield, vol. i: *Science* (London, 1975).

1976

'Aristotle on the Instant of Change', *Proceedings of the Aristotelian Society* suppl. 50 (1976), 69–90.

1977

Articles on Aristotle, co-edited with J. Barnes and M. Schofield, vol. ii: *Ethics and Politics* (London, 1977).

Aristotle: A Selective Bibliography, compiled with J. Barnes and M. Schofield (Oxford, 1977).

1979

Articles on Aristotle co-edited with J. Barnes and M. Schofield, vol. iii: *Metaphysics* (London, 1979).

Articles on Aristotle co-edited with J. Barnes and M. Schofield, vol. iv: *Psychology and Aesthetics* (London, 1979).

1980

Necessity, Cause and Blame (London and Ithaca, 1980), 250–82.

‘Causation, Laws and Necessity’, in M. Schofield, M. Burnyeat, and J. Barnes (eds.), *Doubt and Dogmatism. Studies in Hellenistic Epistemology* (Oxford and New York, 1980).

1981

‘Aristotle’s Attack on the Idea that Whatever happens has a Cause’, in I. N. Theodorakopoulos (ed.), *Proceedings of the world congress on Aristotle. Thessaloniki, August 7–14, 1978* (Athens, 1981).

‘Definitions: Why Necessary and in what Way?’, in E. Berti (ed.), *Aristotle on science: the ‘Posterior Analytics’*. *Proceedings of the eighth symposium Aristotelicum. Padua, September 7–15, 1978* (Padua, 1981), 205–44.

1982

‘Atoms and Time-Atoms’, in N. Kretzmann (ed.), *Infinity and Continuity in Ancient and Medieval Thought* (Ithaca, 1982), 37–86.

‘Myths about Non-propositional Thought’, in M. Schofield and M. Nussbaum (eds.), *Language and Logos. Studies in Ancient Greek philosophy presented to G. E. L. Owen* (Cambridge and New York, 1982), 295–314.

‘Infinity and the Creation’, Inaugural Lecture at King’s College London, March 16, 1982 (London, 1982).

‘Is Time Real? Responses to an Unageing Paradox’, *Proceedings of the British Academy* 68 (1982), 189–213.

1983

Time, Creation and the Continuum. Theories and Antiquity and the Early Middle Ages, (London and Ithaca, 1983).

‘Selezione bibliografica della letteratura antica minore su spazio e tempo’, *Bollettino del Centro Internazionale A. Beltrame di storia dello spazio e del tempo* 1 (1983), 63–70.

‘Per una bibliografia su Giovanni Filopono’, *Bollettino del Centro Internazionale A. Beltrame di storia dello spazio e del tempo* 1 (1983), 71–3.

1984

‘I concetti di spazio e tempo nell’antichità e nel pensiero antico cristiano’, *Bollettino del Centro internazionale A. Beltrame di storia dello spazio e del tempo* 2 (1984), 19–25.

1986

‘Analyses of Matter, Ancient and Modern’, Presidential Address, *Proceedings of the Aristotelian Society* 86 (1986), 1–22.

‘Closed Space and Closed Time’, *Oxford Studies in Ancient Philosophy* 4 (1986), 215–31.

'Works of Philoponus and Secondary Literature', *Bolletino del Centro Internazionale A. Beltrame di storia dello spazio e del tempo* 4 (1986), 71–6.

1987

(ed.), *Philoponus and the Rejection of Aristotelian Science* (London and Ithaca, 1987).

'John Philoponus', in *Philoponus and the Rejection of Aristotelian Science*, 1–40.

'Infinity and the Creation', in *Philoponus and the Rejection of Aristotelian Science*, 164–78. Reprinted with minor alterations from an Inaugural Lecture at King's College London, 16 March 1982 (as above 1982).

'Bibliography', in *Philoponus and the Rejection of Aristotelian Science*, 231–45.

'Simplicius: Prime Matter as Extension', in I. Hadot (ed.), *Simplicius: sa vie, son œuvre, sa survie. Actes de Colloque International de Paris, 28 sept.–1er oct. 1985* (Berlin, 1987), 148–65.

'Proclus on Place and the Interpenetration of Bodies', in J. Pépin and H. D. Saffrey (eds.), *Proclus: lecteur et interprète des anciens. Actes du Colloque International du CNRS, Paris 2–4 octobre 1985* (Paris, 1987), 293–304.

1988

Matter, Space and Motion. Theories in Antiquity and their Sequel (London and Ithaca, 1988).

Aristotle: A Selective Bibliography, compiled with J. Barnes and M. Schofield, new edition prepared with the assistance of T. Cristodoulou (Oxford, 1988).

'John Philoponus' in C.-J. Thornton (ed.), *Theologische Realenzyklopädie* (Berlin, 1988), xvii. 144–50.

'Theophrastus on Place', in W. Fortenbaugh and R. W. Sharples (eds.), *Theophrastean studies on natural science, physics and metaphysics, ethics, religion, and rhetoric* (Rutgers University Studies in Classical Humanities 3 [1988], 139–66).

'The Greek Origins of the Idea of Chemical Mixture: Can Two Bodies be in the Same Place?', in J. Cleary and D. C. Shartin (eds.), *Proceedings of the Boston Area Colloquium in Ancient Philosophy* 4 (1988), 35–63.

'The Lays of Ancient Tuscany', Preface to J. Barnes and M. Mignucci (eds.), *Matter and Metaphysics* (Naples, 1988), 9–10.

1990

(ed.), *Aristotle Transformed: The Ancient Commentators and their Influence* (London and Ithaca, 1990).

'The Ancient Commentators on Aristotle', in *Aristotle Transformed: The Ancient Commentators and their Influence*, 1–30.

'Select Bibliography of Secondary Literature', prepared collaboratively, *Aristotle Transformed*, 485–524.

'Comments on J. Barnes. State Power: Aristotle and 4th Century Philosophy', in G. Patzig (ed.), *Aristoteles 'Politik'. Akten des XI. Symposium Aristotelicum. Friedrichshafen/Bodensee. 25.8.-3.9.1987* (Göttingen, 1990), 264–76.

- 'Infinite Power Impressed: The Transformation of Aristotle's Physics and Theology', in J. Henry and S. Hutton (eds.), *New Perspectives on Renaissance Thought: Essays in the History of Science, Education and Philosophy in Memory of Charles B. Schmitt* (London, 1990), 148–62.
- 'Perceptual Content in the Stoics', *Phronesis* 35 (1990), 307–14.
- 'Foreword', in G. Dunstan (ed.), *The human embryo: Aristotle and the Arabic and European tradition* (Exeter, 1990), pp. ix–x.

1991

- 'From Aristotle to Brentano: The Development of the Concept of Intentionality', in H. Blumenthal and H. Robinson (eds.), *Aristotle and the later tradition* (Oxford Studies in Ancient Philosophy suppl. 1991), 227–59.
- 'Du droits des animaux: dans la pensée antique', *Alliage* 7–8 (1991), 41–51.

1992

- 'Intentionality and Physiological Processes: Aristotle's Theory of Sense Perception', in M. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's de Anima* (Oxford, 1992), 195–225.
- 'Aristote et les commentateurs anciens', in M. A. Sinaceur (ed.), *Penser avec Aristote* (Paris 1992), 75–91, translated from *Aristotle Transformed: the Ancient Commentators and their Influence*, 1990.
- 'Conceptions non-aristotéliennes de la causalité', in M. A. Sinaceur (ed.), *Penser avec Aristote*, 293–306, translated from *Time Creation and the Continuum*, 1983.
- 'Animal Minds', *Southern Journal of Philosophy* 31 suppl. (1992), 1–18.

1993

- Animal Minds and Human Morals. The Origins of the Western Debate* (London and Ithaca, 1993).
- 'Intenzionalità e processi fisiologici: la teoria aristotelica della percezioni sensibile', in G. Cambiano and L. Repice (eds.), *Aristotele e la conoscenza* (Milan, 1993), 37–89. Translated from M. Nussbaum and A. O. Rorty (eds.), *Essays on Aristotle's de Anima*, 1992.
- 'Les droits des animaux: débats antiques et modernes', in M. Canto (ed.), *L'actualité de la philosophie morale: Le renouveau britannique* (Paris, 1993). Translated and modified from *Animal Minds and Human Morals*.

1995

- 'Bibliography', compiled with J. Barnes and M. Schofield in J. Barnes (ed.), *The Cambridge Companion to Aristotle* (Cambridge, 1995), 295–384. New edition of *Aristotle: A Selective Bibliography*, 1977.

1996

- 'Rationality', in M. Frede and G. Striker (eds.), *Rationality in Greek Thought* (Oxford, 1996), 311–34.
- 'The Ancient Greek Origins of the Western Debate on Animals', *Journal of the Indian Council of Philosophical Research* 13 (1996), 69–76.

'Philoponus', *Oxford Classical Dictionary* (Oxford, 1996), 1168–9.

'Simplicius', *Oxford Classical Dictionary* (Oxford, 1996), 1409–10.

1997

(ed.), *Aristotle and After* (Bulletin of the Institute of Classical Studies, suppl. 68 [1997]).

'Is Stoic Philosophy Helpful as Psychotherapy?', with reply by Bernard Williams in *Aristotle and After*, 197–213.

'Esprits d'animaux', in B. Cassin and J.-L. Labarrière (eds.), *L'animal dans l'antiquité* (Paris, 1997), 355–73.

'Anthony Charles Lloyd. 1916–1994', *Proceedings of the British Academy* 97 (1997), 347–55.

1998

'Chrysippus, Posidonius, Seneca: A High-Level Debate on Emotion', in T. Engberg Petersen and J. Sihvola (eds.), *The emotions in Hellenistic philosophy* (Dordrecht, 1998), 149–69.

'Is Theophrastus a Significant Philosopher?', in J. M. van Ophuijsen (ed.), *Theophrastus, Reappraising the Sources* (Rutgers University Studies in Classical Humanities, 8 [1998], 203–21).

'Boethius, Ammonius and their Different Greek Backgrounds', introductory essay to Ammonius, *On Aristotle On Interpretation 9*, tr. D. Blank with Boethius, *On Aristotle On Interpretation 9*, tr. N. Kretzmann (Ithaca, 1998).

'The Three Deterministic Arguments opposed by Ammonius', introductory essay to Ammonius, *On Aristotle On Interpretation 9*, tr. D. Blank with Boethius, *On Aristotle On Interpretation 9*, tr. N. Kretzmann (London and Ithaca, 1998), 3–23.

'Aristotle Commentators', in E. Craig (ed.), *Routledge Encyclopaedia of Philosophy* (London and New York, 1998), 1, 435–7.

1999

'Soul and Self in Ancient Philosophy', in M. J. C. Crabbe (ed.), *From Soul to Self* (London, 1999), 8–32.

'Therapy of Desire. Discussion of Martha Nussbaum', *Philosophy and Phenomenological Research* 59 (1999), 799–804.

'Aspasius on Emotion', in A. Alberti and R. W. Sharples (eds.), *Aspasius: the earliest extant commentary on Aristotle's ethics* (Berlin, 1999), 99–106.

2000

Emotion and Peace of Mind: From Stoic Agitation to Christian Temptation (Oxford, 2000).

'Is the True Self an Individual in the Platonist Tradition?', in O. Goulet-Caze (ed.), *Le Commentaire entre tradition et innovation. Actes du Colloque International de l'Institut des Traditions Textuelles. Paris et Villejuif 22–25 septembre 1999* (Paris, 2000), 293–9.

2001

'Aristotle on Sensory Processes', in D. Perler (ed.), *Ancient and Medieval theories of intentionality*, 49–61.

- 'Why the Neoplatonists did not have Intentional Objects of Intellection', in D. Perler (ed.), *Ancient and Medieval theories of intentionality* (Leiden and Boston, 2001), 105–14.
- 'Afterword', in C. Sorabji, *India Calling. The Memories of Cornelia Sorabji, India's First Woman Barrister*, C. Lokugé ed. from the 1936 edition (Oxford and New Delhi, 2001), 213–16.

2002

- 'Latitude of forms in Ancient Philosophy', in C. Leijenhorst, C. Lüthy and J. Thijssen (eds.), *The dynamics of Aristotelian natural philosophy from antiquity to the seventeenth century* (Leiden, Boston and Cologne, 2002), 57–63.
- 'Emotion and Peace of Mind. From Stoic Agitation to Christian Temptation. Summary', *Philosophical Books* 43 (2002), 169–72.
- 'Emotion and Peace of Mind. From Stoic Agitation to Christian Temptation. Reply to Tad Brennan and Peter Brown', *Philosophical Books* 43 (2002), 209–20.
- 'Philosophy of Mind: Aristotle's Contribution in Relation to Other Schools', in T. Buchheim, H. Flashar and R. A. H. King Hr., *Kann man heute noch etwas anfangen mit Aristoteles?* (Hamburg, 2002), 110–22.
- 'Zeno of Citium on Emotions', in T. Scaltsas (ed.), *Zeno of Citium* (Cyprus, 2002), 221–38.

2003

- 'The Mind–Body Relation in the Wake of Plato's Timaeus', in G. Reydam-Schils (ed.), *Plato's Timaeus as Cultural Icon* (Notre Dame, 2003), 152–62.

2004

- 'The Concept of the will from Plato to Maximus the Confessor', in T. Pink and M. Stone (eds.), *The Will and Human Action: From Antiquity to the Present Day* (London and New York, 2004), 6–28.

Work Forthcoming

- 'Epictetus on proairesis and the Self', in T. Scaltsas (ed.), *Epictetus*.
- 'Stoic First Movements in Christianity', in S. Strange and J. Zupko (eds.), *Stoicism: Traditions and Transformations*.
- 'Sordid Deals and Divine Names in Ammonius' Alexandria', in A. Smith (ed.), *Neoplatonism and Society*.
- 400 Years of Transition: Sourcebook on the Aristotle Commentators, 200–600 AD.*

Work in Preparation

The Self in Ancient Philosophy.
Gresham Lectures in Philosophy.

- 'Persistence of Individuals over Time in Greek Philosophy'
- 'Natural Law and the Ancient Background to the Conquistadors'
- 'Just War: The Ancient Background to Islamic Jihad and the Spanish Conquistadors'

Ancient Commentators on Aristotle Project

Richard Sorabji is the founder and director of the Ancient Commentators on Aristotle project, whose aim is to make accessible a period of 400 years of Philosophy from 200 to 600 AD, a missing link in the History of Western Philosophy. Founded in 1987, the project has involved sixty translators and 120 collaborators in fourteen countries. A total of approximately seventy volumes is planned, of which the following have appeared:

- Philoponus, *Against Aristotle on the Eternity of the World*, tr. C. Wildberg (London and Ithaca, 1987).
- Alexander of Aphrodisias, *On Aristotle Metaphysics 1*, tr. W. Dooley (London and Ithaca, 1989).
- Simplicius, *On Aristotle Physics 6*, tr. D. Konstan (London and Ithaca, 1989).
- Alexander of Aphrodisias, *Ethical Problems*, tr. R. W. Sharples (London and Ithaca, 1990).
- Dexippus, *On Aristotle Categories*, tr. J. Dillon (London and Ithaca, 1990).
- Philoponus, *Corollaries on Place and Void*, tr. D. Furley with Simplicius, *Against Philoponus On the Eternity of the World (Fragments)*, tr. C. Wildberg (London and Ithaca, 1991).
- Ammonius, *On Aristotle Categories*, tr. G. Matthews and M. Cohen (London and Ithaca, 1991).
- Philoponus, *On Aristotle On the Intellect*, tr. W. Charlton with the assistance of Fernand Bossier (London and Ithaca, 1991).
- Alexander of Aphrodisias, *On Aristotle Prior Analytics 1.1–7*, tr. J. Barnes, S. Bobzien, K. Flannery, and K. Ierodiakonou (London and Ithaca, 1991).
- Alexander of Aphrodisias, *On Aristotle Metaphysics 2*, tr. W. Dooley with Alexander of Aphrodisias, *On Aristotle Metaphysics 3*, tr. A. Madigan (London and Ithaca, 1992).
- Simplicius, *Corollaries on Time and Place*, tr. J. O. Urmson, notes L. Siorvanis (London and Ithaca, 1992).
- Alexander of Aphrodisias, *Quaestiones 1–2.15*, tr. R. W. Sharples (London and Ithaca, 1992).
- Porphyry, *On Aristotle Categories*, tr. S. Strange (London and Ithaca, 1992).
- Simplicius, *On Aristotle Physics 4.1–5 and 10–14*, tr. J. O. Urmson (London and Ithaca, 1992).
- Alexander of Aphrodisias, *On Aristotle Metaphysics 5*, tr. W. Dooley (London and Ithaca, 1993).
- Alexander of Aphrodisias, *On Aristotle Metaphysics 4*, tr. A. Madigan (London and Ithaca College, 1993).
- Philoponus, *On Aristotle Physics 2*, tr. A. R. Lacey (London and Ithaca, 1993).
- Philoponus, *On Aristotle Physics 5–8*, with Simplicius, *On Aristotle on the void*, tr. P. Lettinck and J. O. Urmson (London and Ithaca, 1994).
- Simplicius, *On Aristotle Physics 7*, tr. C. Hagen (London and Ithaca, 1994).
- Philoponus, *On Aristotle Physics 3*, tr. M. Edwards (London and Ithaca, 1994).
- Alexander of Aphrodisias, *Quaestiones 2.16–3.15*, tr. R. W. Sharples (London and Ithaca, 1994).

- Simplicius, *On Aristotle On the Soul 1–2.4*, tr. J. O. Urmson, notes P. Lautner (London and Ithaca, 1995).
- Ammonius, *On Aristotle's On Interpretation 1–8*, tr. D. Blank (London and Ithaca, 1996).
- Alexander of Aphrodisias, *On Aristotle's Meteorology 4*, tr. E. Lewis (London and Ithaca, 1996).
- Themistius, *Paraphrase of Aristotle on the Soul*, tr. R. Todd (London and Ithaca, 1996).
- Simplicius, *On Aristotle Physics 2*, tr. B. Fleet (London and Ithaca, 1997).
- Simplicius, *On Aristotle Physics 5*, tr. J. O. Urmson, (London and Ithaca, 1997).
- Simplicius, *On Aristotle On the Soul 2.5–2.12*, tr. C. Steel with Priscian, *On Theophrastus on Sense Perception*, tr. P. Huby (London and Ithaca, 1997).
- Ammonius, *On Aristotle On Interpretation 9*, tr. D. Blank with Boethius, *On Aristotle On Interpretation 9*, tr. N. Kretzmann (London and Ithaca 1998).
- Alexander of Aphrodisias of Aphrodisias, *On Aristotle Prior Analytics 1.8–13 with 1.17, 36b35–37a31*, tr. I. Mueller with J. Gould; introduction, notes and appendices by I. Mueller (London and Ithaca, 1999).
- Alexander of Aphrodisias, *On Aristotle Prior Analytics 1.14–22*, tr. I. Mueller with J. Gould; Introduction, notes and appendices by I. Muller (London and Ithaca, 1999).
- Philoponus, *On Aristotle On Coming-to-be and Perishing 1.1–5*, tr. C. J. F. Williams (London and Ithaca, 1999).
- Philoponus, *On Aristotle On Coming-to-be and Perishing 1.6–2.4*, tr. C. J. F. Williams (London and Ithaca, 2000).
- 'Philoponus', *On Aristotle On the Soul 3.1–8*, tr. W. Charlton (London and Ithaca, 2000).
- 'Philoponus', *On Aristotle On the Soul 3.9–13*, with Stephanus *On Aristotle On Interpretation* tr. W. Charlton (London and Ithaca, 2000).
- Simplicius, *On Aristotle On the Soul 3.1–5*, tr. H. Blumenthal (London and Ithaca, 2000).
- Porphyry, *On Abstinence from Killing Animals*, tr. G. Clark (London and Ithaca, 2000).
- Alexander of Aphrodisias, *On Aristotle On Sense Perception*, tr. A. Towey (London and Ithaca, 2000).
- Simplicius, *On Aristotle Categories 9–15*, tr. R. Gaskin (London and Ithaca, 2000).
- Alexander of Aphrodisias, *On Aristotle Topics 1*, tr. J. M. Van Ophuijsen (London and Ithaca, 2000).
- Simplicius, *On Aristotle Physics 8.6–10*, tr. McKirahan (London and Ithaca, 2000).
- Simplicius, *On Aristotle's Categories 5–6*, tr. F. de Haas and B. Fleet (London and Ithaca 2001).
- Simplicius, *On Aristotle Cateories 7–8*, tr. B. Fleet (London and Ithaca, 2001).
- Simplicius, *On Aristotle Physics 8,6–10*, tr. R. McKirahan (London and Ithaca, 2001).
- Aspasius, *On Aristotle Nicomachean Ethics 8* with Anon., *Paraphrase of Aristotle Nicomachean Ethics 8 and 9* and Michael of Ephesus, *On Aristotle Nicomachean Ethics 9*, tr. D. Konstan (London and Ithaca, 2001).

- Simplicius, *On Aristotle On the Heavens 1–14*, tr. J. Hankinson (London and Ithaca, 2001).
- Simplicius, *On Aristotle Physics 3*, tr. J. O. Urmson, notes P. Lautner (London and Ithaca, 2001).
- Simplicius, *On Epictetus' Handbook 1–26*, tr. T. Brennan and C. Brittain (London and Ithaca, 2002).
- Simplicius, *On Epictetus' Handbook 27–53*, tr. T. Brennan and C. Brittain (London and Ithaca, 2002).
- Simplicius, *On the Heavens 1.1–4*, tr. J. Hankinson (London and Ithaca, 2002).
- Simplicius, *On Aristotle's Categories 7–8*, tr. Barrie Fleet (London and Ithaca, 2002).
- Simplicius, *On Aristotle's Physics 3*, tr. J. O. Urmson, notes P. Lautner (London and Ithaca, 2002).
- Themistius, *On Aristotle's Physics 4*, tr. R. Todd (London and Ithaca, 2003).
- Proclus, *On the existence of evils*, tr. J. Opsomer and C. Steel (London and Ithaca, 2003).

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