

wittgenstein & quine



edited by ROBERT L. ARRINGTON &
HANS-JOHANN GLOCK

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WITTGENSTEIN AND QUINE

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*Edited by Robert L. Arrington
and Hans-Johann Glock*



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ABBREVIATIONS

ABBREVIATIONS FOR WITTGENSTEIN'S WRITINGS CITED IN THE TEXT

Abbreviations are given in parentheses in the text. References are to page numbers unless otherwise indicated. Works are listed in order of composition.

- NB *Notebooks 1914–16*, ed. G.H.von Wright and G.E.M. Anscombe, tr. G.E.M.Anscombe (Blackwell, Oxford, 1961).
- TLP *Tractatus Logico-Philosophicus*, tr. D.F.Pears and B.F. McGuinness (Routledge and Kegan Paul, London, 1961).
- RLF ‘Some Remarks on Logical Form’, *Proceedings of the Aristotelian Society*, suppl. vol. ix (1929), pp. 162–71.
- WWK *Ludwig Wittgenstein und der Wiener Kreis*, shorthand notes recorded by F.Waismann, ed. B.F.McGuinness (Blackwell, Oxford, 1967). The English translation, *Wittgenstein and the Vienna Circle* (Blackwell, Oxford, 1979), matches the pagination of the original edition.
- LE ‘Lecture on Ethics’, *Philosophical Review*, 74 (1965), 3–26.
- PR *Philosophical Remarks*, ed. R.Rhees, tr. R.Hargreaves and R.White (Blackwell, Oxford, 1975).
- M ‘Wittgenstein’s Lectures in 1930–33’, in G.E.Moore, *Philosophical Papers* (Allen and Unwin, London, 1959).
- LWL *Wittgenstein’s Lectures, Cambridge 1930–32, from the Notes of John King and Desmond Lee*, ed. Desmond Lee (Blackwell, Oxford, 1980).
- PG *Philosophical Grammar*, ed. R.Rhees, tr. A.J.P.Kenny (Blackwell, Oxford, 1974).

LIST OF ABBREVIATIONS

- AWL *Wittgenstein's Lectures, Cambridge 1932–35, from the Notes of Alice Ambrose and Margaret MacDonald*, ed. Alice Ambrose (Blackwell, Oxford, 1979).
- EPB *Eine Philosophische Betrachtung*, ed. R.Rhees, in *Ludwig Wittgenstein: Schriften* 5 (Suhrkamp, Frankfurt, 1970).
- BB *The Blue and Brown Books* (Blackwell, Oxford, 1958).
- LFM *Wittgenstein's Lectures on the Foundations of Mathematics, Cambridge 1939*, ed. C.Diamond (Harvester Press, Sussex, 1976).
- RFM *Remarks on the Foundations of Mathematics*, ed. G.H.von Wright, R.Rhees and G.E.M.Anscombe, tr. G.E.M. Anscombe, rev. edn. (Blackwell, Oxford, 1978).
- PI *Philosophical Investigations*, 3rd edn, ed. G.E.M. Anscombe (Blackwell, Oxford, 1958).
- Z *Zettel*, ed. G.E.M.Anscombe and G.H.von Wright, tr. G.E.M.Anscombe (Blackwell, Oxford, 1967).
- CE 'Cause and Effect: Intuitive Awareness', ed. Rush Rhees, tr. Peter Winch, *Philosophia*, 6, 3–4 (Sept.-Dec., 1976).
- RPPI *Remarks on the Philosophy of Psychology*, vol. I, ed. G.E. M.Anscombe and G.H.von Wright, tr. G.E.M. Anscombe (Blackwell, Oxford, 1980).
- RPPII *Remarks on the Philosophy of Psychology*, vol. II, ed. G.H.von Wright and H.Nyman, tr. C.G.Luckhardt and M.A.E.Aue (Blackwell, Oxford, 1980).
- ROC *Remarks on Colour/Bemerkungen über die Farben*, ed. G. E.M.Anscombe, Linda L.McAlister and Margarete Schättle (Blackwell and University of California Press, Oxford, Berkeley, 1977, 1978, 1979).
- CV *Culture and Value*, ed. G.H.von Wright in collaboration with H.Nyman, tr. P.Winch (Blackwell, Oxford, 1980).
- LWPPI *Last Writings on the Philosophy of Psychology*, vol. I, ed. G.H.von Wright and Heikki Nyman, tr. C.G.Luckhardt and M.A.E.Aue (Blackwell and Chicago University Press, Oxford and Chicago, 1982).
- LWPPPII *Last Writings on the Philosophy of Psychology*, vol. II, ed. G.H.von Wright and Heikki Nyman, tr. C.G.Luckhardt and M.A.E.Aue (Blackwell and Chicago University Press, Oxford and Chicago, 1992).
- LC *Lectures and Conversations on Aesthetics, Psychology and Religious Belief*, ed. C.Barnett (Blackwell, Oxford, 1966).
- OC *On Certainty*, ed. G.E.M.Anscombe and G.H.von Wright, tr. D.Paul and G.E.M.Anscombe (Blackwell, Oxford, 1969).

LIST OF ABBREVIATIONS

- Nachlass* All references to unpublished material follow von Wright's catalogue *Wittgenstein*, 35ff. They are by MS or TS number followed by page number.
- EBT 'Early Big Typescript' (TS 211): a typescript composed from vols. VI–X, 1932.
- BT The 'Big Typescript' (TS 213): a rearrangement, with modifications, written additions and deletions, of TS 211, 1933.
- PLP *Principles of Linguistic Philosophy*, F. Waismann, ed. R. Harré (Macmillan and St Martin's Press, London and New York, 1965).

ABBREVIATIONS FOR QUINE'S WRITINGS CITED IN THE TEXT

Abbreviations are given in parentheses in the text. References will sometimes be to the title of a collection of essays and sometimes to an individual essay included in the collection—both the collection and the individual essay will have abbreviations. Books are listed first, next anthologies, then articles. Letters 'a', 'b', 'c' indicate, respectively, 1st, 2nd or 3rd editions. References are to page numbers unless otherwise indicated.

- FLPV_a *From A Logical Point of View*, 1st edn, Harvard University Press, Cambridge, Mass., 1953;
- FLPV_b 2nd edn, 1961;
- FLPV_c 2nd rev. edn, 1980.
- OWTI_{a, b or c} 'On What There Is'
- TDE_{a, b or c} 'Two Dogmas of Empiricism'
- WO *Word and Object*, MIT Press, Cambridge, Mass., 1960; paperback edn, 1964.
- WPE_a *Ways of Paradox and Other Essays*, 1st edn, Harvard University Press, Cambridge, Mass., 1966;
- WPE_b Rev. edn, 1976.
- TC_{a or b} 'Truth by Convention'
- CLT_{a or b} 'Carnap on Logical Truth'
- CVO_{a or b} 'Carnap's Views on Ontology'
- SLT_{a or b} 'Mr. Strawson on Logical Theory'
- SLS_{a or b} 'The Scope and Language of Science'
- LK_b 'The Limits of Knowledge'

LIST OF ABBREVIATIONS

ORE	<i>Ontological Relativity and Other Essays</i> , Columbia University Press, New York, 1969.
OR	'Ontological Relativity'
EN	'Epistemology Naturalized'
NK	'Natural Kinds'
PL	<i>Philosophy of Logic</i> , Prentice-Hall, Englewood Cliffs, N.J., 1970.
WB	<i>The Web of Belief</i> (with J.S.Ullian), New York, Random House, 1970.
RR	<i>The Roots of Reference</i> , Open Court, La Salle, Ill., 1973.
TT	<i>Theories and Things</i> , The Belknap Press of Harvard University Press, Cambridge, Mass., 1981.
TTPT	'Things and Their Place in Theories'
UPM	'Use and its Place in Meaning'
GW ^W	'Goodman's <i>Ways of Worldmaking</i> '
ML	<i>Methods of Logic</i> , 4th edn, Harvard University Press, Cambridge, Mass., 1982.
TML	<i>The Time of My Life</i> , MIT Press, Cambridge, Mass., 1985.
Q	<i>Quiddities</i> , The Belknap Press of Harvard University Press, Cambridge, Mass., and London, 1987.
PTa	<i>Pursuit of Truth</i> , 1st edn, Harvard University Press, Cambridge, Mass., 1990;
PTb	Rev. edn, 1992.
DH	<i>Words and Objections: Essays on the Work of W.V. Quine</i> , ed. D.Davidson and J.Hintikka, Reidel, 1969.
EPQ	<i>Essays on the Philosophy of W.V. Quine</i> , ed. R.W. Shahan and C.V.Swoyer, Oklahoma University Press, Norman, Okla., and Harvester Press, 1979.
FM	'Facts of the Matter'
PWVQ	<i>The Philosophy of W.V. Quine</i> , ed. L.E.Hahn and P.A. Schilpp, Open Court, La Salle, Ill., 1986.
AQ	'Autobiography of W.V. Quine'
RTC	'Replies to Critics'

LIST OF ABBREVIATIONS

POQ	<i>Perspectives on Quine</i> , ed. R.Barrett and R.Gibson, Blackwell, Oxford, 1990.
TI	'Three Indeterminacies'
CB	'Comment on Bergström'
MRCLT	'Methodological Reflections on Current Linguistic Theory', <i>Synthese</i> , 21 (1970).
PPLT	'Philosophical Progress in Language Theory' <i>Metaphilosophy</i> , 1 (1970).
RIT	'On the Reasons for Indeterminacy of Translation', <i>Journal of Philosophy</i> , 67 (1970).
EESW	'On Empirically Equivalent Systems of the World', <i>Erkenntnis</i> , 9 (1975).
NNK	'The Nature of Natural Knowledge', in <i>Mind and Language</i> , ed. Samuel Guttenplan (Oxford University Press, Oxford, 1975).
WIIAA	'What Is It All About?', <i>American Scholar</i> (1980).
MSP	'Reply to Stroud', <i>Midwest Studies in Philosophy</i> , 6 (1981).
TDR	'Two Dogmas in Retrospect', <i>Canadian Journal of Philosophy</i> , 21 (1991).
POS	'In Praise of Observation Sentences', <i>The Journal of Philosophy</i> , 90 (1993).
I	'Responses', <i>Inquiry</i> , 37 (1994).

EDITORS' INTRODUCTION

Quine and Wittgenstein rank as two of the leading philosophers of the twentieth century. Indeed, in the arena of analytic philosophy, they are arguably the two most important philosophers of the century. Wittgenstein's *Tractates Logico-Philosophicus* (1922) heralded the linguistic turn of twentieth-century analytic philosophy and inspired the logical positivists of the Vienna Circle, while his *Philosophical Investigations* (1953) was the major force behind the conceptual analysis which dominated anglophone philosophy until the seventies, and continues to stimulate contemporary philosophers. Quine is the most eminent post-positivist philosopher in America; his work marks a decisive watershed in the development of analytic philosophy and inaugurated a move away from both positivism and conceptual analysis. Consequently, a comprehension of the similarities and differences between the philosophies of Wittgenstein and Quine is essential if we are to have an understanding of recent and contemporary philosophical thought. A comparison of the two also leads us right into the heart of current debates in analytic philosophy. In their different ways, both Wittgenstein and Quine have brought out the intimate links between apparently remote topics such as meaning, logical necessity, knowledge, and the nature of philosophy itself.

Whatever their other differences or similarities, it is generally agreed that these two seminal thinkers propose different conceptions of the proper form of philosophical activity. Both reject the idea of a 'first philosophy', prominent in Plato and Descartes, according to which philosophy, by way of pure ratiocination, provides the foundations for the rest of human knowledge. But what they put in place of this foundationalist picture is strikingly different. Quine views philosophy as continuous with science and denies that there is any distinctive philosophical subject matter or method. For Quine, philosophy, like science, is concerned with matters of fact and is broadly empirical in its methodology, although it is concerned with the most general features of reality (a view that has been welcomed even by some

who are hostile to other aspects of Quine's philosophy, notably proponents of AI and cognitive psychology). The rationale for this conception of philosophy lies in Quine's radical empiricism, which leads him to reject the notion of logical necessity. He maintains that there is no qualitative difference between empirical propositions and the allegedly necessary propositions of logic, mathematics and metaphysics.

By contrast, Wittgenstein insists that the contrast between necessary and empirical propositions is even greater than traditionally assumed. Empirical propositions can be said to describe possible states of affairs, but necessary propositions cannot be said to describe necessary states of affairs. They do not represent either abstract entities inhabiting a Platonic hinterworld or the most general features of empirical reality. Their role is normative, not descriptive. They are what he calls 'grammatical propositions', which means that they express rules for the meaningful use of words. By the same token, Wittgenstein regards the assimilation of philosophy and science as a major source of philosophical confusion. The task of philosophy is not to describe or explain reality. Rather, it resolves the conceptual confusions which, to his mind, are at the heart of so much traditional and contemporary philosophizing, and it does so by clarifying 'grammar', the rules of our language.

The methodologies proposed by Quine and the later Wittgenstein are not the only ones to be found in recent and current Anglo-American thought. The form of analysis that the early Wittgenstein proposed in his *Tractatus Logico-Philosophicus*—and close variants of this methodology—is also much in evidence. It is difficult to see, however, how the attempt to discover logical forms hidden underneath the surface of natural languages can be sustained in the light of the penetrating criticisms that both Quine and Wittgenstein, from different directions, aim at it. In our opinion, the main options that ought to be on the menu for philosophers today are the scientific conception of philosophy proposed by Quine and the elucidatory or therapeutic one offered by Wittgenstein. But which one of the two? Philosophers need to come to grips with the conflicting nature of these options.

This book is an attempt to provide a forum for sustained discussions of the relationship between Wittgenstein and Quine. The methodological and substantive issues discussed in it are crucial to the future course of analytic philosophy. Moreover, since American philosophers have been prone to disregard Wittgenstein's contributions to important questions, while analytic philosophers in Britain and on the Continent have been reluctant to recognize the radical challenge which Quine's work poses to their way of thinking, a juxtaposition of the thought of these two philosophers is all the more important.

Commentators differ greatly on the relationship between Wittgenstein and Quine. On the one hand, some see them as saying much the same thing—in different ways and from different vantage points. If they are looked at in this fashion, similarities can be noted between, for example, Quine's thesis of the indeterminacy of translation and Wittgenstein's remarks on rule following. Likewise, the centrality of pragmatic considerations in the thought of these two philosophers can be emphasized. There is also a similarity between Wittgenstein's claim that empirical propositions can be hardened into grammatical propositions, while grammatical propositions can lose their normative status, and Quine's holistic attack on the analytic/synthetic distinction.

On the other hand, commentators of a different persuasion have rejected the above comparisons as superficial and have suggested radical opposition between the views in question. In fact, it has been said that Quine's attack on the analytic/synthetic distinction undermines the normativist picture of language that is at the heart of Wittgenstein's philosophy; conversely, Wittgenstein's insistence on the importance of recognizing the role of rules for the use of words in understanding language can be seen as threatening Quine's behaviourist conception of language.

The chapters in this book address many of the aspects of similarity and difference between the philosophies of Quine and Wittgenstein, and all of them have been written specifically for this volume. The first three are devoted to general comparisons and to methodological issues. P.M.S.Hacker provides a synoptic view of apparent similarities; he then proceeds to argue that many of them are superficial and that profound differences separate the two thinkers. He also indicates how some of Quine's positions might be challenged from a Wittgensteinian perspective. Burton Dreben's chapter focuses on the parallels between Russell and Quine. He suggests that these constitute a subtle if important contrast with the work of Wittgenstein, Christopher Hookway looks at the thought of Quine and Wittgenstein in relationship to the philosophy of Rudolph Carnap and the idea of a perspicuous representation of the logic of our language. He notes the ambivalent attitude that both thinkers have to this idea. On the one hand, Wittgenstein seeks perspicuous representations of grammar and Quine provides a canonical notation and a regimentation of the language of science. On the other hand, both are committed to what Hookway calls the 'shallowness of reflection': Quine denies that the progress of science requires absolute clarity and an answer to scepticism, and Wittgenstein denies that rationality requires deep reflection: the propositions at the basis of our belief structure are part of a practice that does not stand in need of rational support.

Knowledge and scepticism are the topics of the next two chapters. Roger Gibson finds illuminating similarities between the holistic views of Quine and what Wittgenstein has to say on the topic in *On Certainty*. Douglas Winblad approaches the two thinkers from the standpoint of their relationship to scepticism, and he notes interesting similarities between their responses to the sceptic.

The next two chapters are concerned with the philosophy of language. John Canfield is another commentator who views the relationship between Quine and Wittgenstein as being one of only superficial similarity. Canfield concentrates on their conceptions of 'use'. As a result of his investigations, he concludes that although Quine appeals to use and to language-games, what he means differs substantially from Wittgenstein's own conceptions. Like Hookway, he detects a conflict between Quine's monistic concern with science and Wittgenstein's pluralism of diverse language-games.

Turning to radical translation, Hanjo Glock detects in both Quine and Davidson the idea that linguistic understanding amounts to the construction of explanatory theories from non-semantic evidence. Using aspects of Wittgenstein's philosophy, he argues that such theory construction could never get off the ground. He also tries to develop an alternative account of radical translation from Wittgenstein's cursory remarks on forms of life which would avoid the idea of such theory-construction while preserving the insights contained in Quine's and Davidson's use of the principle of charity.

Dilman and Arrington look at what Quine and Wittgenstein have to say about ontology. They agree that Quine and Wittgenstein are far apart on this issue. Dilman mounts an uncompromising Wittgensteinian attack on Quine's science-based ontology, while Arrington investigates what Wittgenstein might have said about Quine's notion of ontological commitment by bringing together the scattered remarks on the notion of existence in Wittgenstein's work.

The concluding two chapters seek to relate Quine and Wittgenstein to other current theories. Shanker applies their thought to ideas in cognitive science, particularly constraint theory. He tries to show how Quine's thesis of the indeterminacy of translation may ironically have contributed to the rise of the highly mentalistic constraint theory. He also urges that Wittgenstein's philosophy provides the appropriate correction to both mentalism and behaviourism. Post's chapter is critical of both Quine and Wittgenstein. He argues that Quine's philosophy rests on outmoded scientific theory, and in the work of Millikan he finds a contemporary biological theory of language and thought which conflicts with much that Quine says. It is fair to say, however, that although Post rejects specific points

EDITORS' INTRODUCTION

in Quine's philosophy, he operates squarely within Quinean philosophical methodology. He provides philosophical generalizations from what he considers cutting-edge scientific thought, and he tries to show how such empirical theory demonstrates the failings of Wittgenstein's thought.

The editors hope that the chapters in this volume will generate widespread discussion of the relationship between the philosophies of Wittgenstein and Quine. Until this discussion occurs, philosophy in much of the English-speaking world will run the risk of splitting into two branches that are equally uncomprehending of each other.

WITTGENSTEIN AND QUINE

Proximity at great distance*

P.M.S.Hacker

QUINE AND WITTGENSTEIN: THE PROXIMITY OF INCOMPATIBLES

Logical positivism was to a large extent an offshoot of Wittgenstein's *Tractatus*. As the Circle understood (and often misunderstood) that book, it demonstrated how 'consistent empiricism', as they put it, is possible. It did so by showing, so they thought, that truths of logic and mathematics are tautologies, hence 'analytic', true by convention or true in virtue of the meanings of the constituent logical terms, and hence that pure reason alone can arrive at no substantive truths about reality.¹ From the *Tractatus*, members of the Circle derived their conception of the task of philosophy, namely the logico-linguistic analysis of 'scientific propositions', and the disclosing of pseudopropositions of 'metaphysics'. The contribution of philosophy is not to human knowledge, but to the clarification by means of logical analysis of what is known. They accepted the thesis of extensionality, the analysability of all empirical propositions into basic propositions, and the conception of a language as a calculus of signs connected to reality by means of 'concrete definitions' (ostensive definitions) of the primitive terms. From discussions with Wittgenstein, transmitted to the Circle by Schlick and Waismann, they derived the principle of verification.

Logical positivism constitutes the third great phase of twentieth-century analytic philosophy, following the pluralist Platonism of early Moore and Russell and the logical atomism of the early Wittgenstein and Russell. As a result of the rise of Nazism, most members of the Vienna Circle and of the affiliated Berlin Society for Scientific Philosophy fled to the USA. Though by the early 1940s orthodox logical positivism had been abandoned, the fundamental principles of the 'scientific world

view' were retained. The impact of these European emigrés upon American philosophy was colossal. Grafted onto the native stock of pragmatism, their conception of philosophy, of philosophical analysis and the relation of both to science determined the growth of post-war philosophy in the USA. The positivist legacy was, however, transmuted by the greatest of twentieth-century American philosophers, W.V. Quine. More than any other single figure, Quine is responsible for the turn away from the heritage of analytic philosophy, both in its Viennese phase and in its post-war Oxonian phase. As the former was derived from the early Wittgenstein, so the latter was inspired by the later Wittgenstein of the *Philosophical Investigations*.

Many of the *idées reçues* of contemporary American philosophy originate in Quine's writings, and are inimical to Wittgenstein's later philosophy.² This alone would make a comparison of Wittgenstein and Quine instructive, and fundamental to the understanding of the development of anglophone philosophy in the last three decades. But there is a further reason. A first glance at the philosophies of Quine and the later Wittgenstein suggests an extensive convergence of views. Given that Quine's philosophy has been a major factor in the waning of Wittgenstein's influence, and in the deep change in the conception of philosophy that has occurred, this may seem very surprising. The convergence of the incompatible needs explaining.

Quine and Wittgenstein converge, at least so it seems, over the following points:

(1) The meanings of words are neither ideas in the mind nor objects (Platonic or otherwise) in reality. Both philosophers deny that the concept of meaning can be explained mentalistically, i.e. by reference to mental acts of meaning or intending, or by reference to mental images or ideas. Wittgenstein remarked in 1931 that the concept of meaning is now obsolete save for such expressions as 'means the same as' or 'has no meaning' (M 258; AWL 30). Quine wrote in 1948 that

The useful ways in which people ordinarily talk about meanings boil down to two: the *having* of meanings, which is significance, and *sameness* of meaning, or synonymy. What is called *giving* the meaning of an utterance is simply the uttering of a synonym, couched ordinarily, in clearer language than the original.... But the explanatory value of special irreducible intermediary entities called meanings is surely illusory.

(OWTib 11f.)

(2) One of the most famous Wittgensteinian dicta is ‘Don’t ask for the meaning, ask for the use.’ Quine, in one of his relatively rare references to Wittgenstein, quotes it approvingly:

Wittgenstein has stressed that the meaning of a word is to be sought in its use. This is where the empirical semanticist looks: to verbal behaviour. John Dewey was urging this point in 1925. ‘Meaning’, he wrote, ‘...is primarily a property of behaviour.’ And just what property of behaviour might meaning then be? Well, we can take the behaviour, the use, and let the meaning go.

(UPM 46)³

(3) Quine denies the intelligibility of the analytic/synthetic distinction. Wittgenstein does not invoke it (save, very occasionally, to remark ironically that if anything is a candidate for being synthetic a priori, it is mathematical propositions (e.g. *RFM* 246)).

(4) Both philosophers reject the Vienna Circle’s view that logical truths are true by convention, or true in virtue of meanings. According to Quine, the idea that meanings of words, whether construed as ideas in the mind or as abstract entities, can determine truths or determine us to use words in a certain way is ‘the myth of a museum in which the exhibits are meanings and the words are labels’ (OR 27). According to Wittgenstein, to say, for example, that the truth of ‘ $p \sim \sim p$ ’ follows from the meaning of negation is to be committed to the mythical *Bedeutungskörper* (meaning-body) conception of meaning, which he condemned (*PG* 54, *PLP* 234ff.).

(5) Both deny that a natural language is a calculus with determinate rules which fix necessary and sufficient conditions for the application of all meaningful expressions in a language.

(6) Both deny the reducibility of all propositions or sentences to a set of propositions or protocol sentences which are conclusively verifiable by reference to what is immediately given in experience. Hence,

(7) Both repudiate classical foundationalism in epistemology. Quine’s stance is epitomized in the dictum that ‘There is no first philosophy.’ Holism displaces foundationalism, and ‘naturalized epistemology’, drawing upon psychology, neurophysiology and physics, replaces the investigation of the justification of knowledge claims with causal explanations. Wittgenstein’s private language arguments undermine classical foundationalism. It is replaced (in *On Certainty*) not by naturalized epistemology but by socialized epistemology.

(8) They agree that language learning rests upon training. Language acquisition presupposes neither thought nor innate knowledge.

(9) They agree that language learning involves ostensive teaching, and that the mere ostensive gesture by itself does not suffice to determine the use of the word in question (*RR* 44f.; *OR* 30f., 38f.)

(10) They agree that the way an expression was learnt, the manner of its introduction, as such, is irrelevant to its status and role. Quine argues that the conventional, legislative, introduction of definitions or postulates 'is a passing trait, significant at the moving front of science but useless in classifying the sentences behind the lines. It is a trait of events and not of sentences' (*CLTa* 112). Wittgenstein argues that 'the way we actually learn its meaning drops out of our future understanding of the symbol'; 'the history of how we came to know what [the colour-word 'green', for example] means is irrelevant' (*LWL* 23). 'The historical fact of the explanation is of no importance' (*LWL* 38). There is, he argued, 'no action at a distance in grammar', and what fixes the status of a proposition is its use, which may change over time or even from occasion to occasion of its employment.

(11) Both invoke radical translation, the translation of the language of a wholly alien people, as a heuristic device to illuminate the concepts of language, meaning and understanding. Like Quine, Wittgenstein approached philosophical questions in this domain (and others) from 'an ethnological point of view'. He wrote:

If we look at things from an ethnological point of view, does that mean we are saying that philosophy is ethnological? No, it only means that we are taking up a position right outside so as to be able to see things *more* objectively.

(*CV* 37)

Hence he remarked, as Quine would, 'The common behaviour of mankind is the system of reference by means of which we interpret an unknown language' (*PI* §206).

(12) Both recognize a problem of indeterminacy in the use of language and the interpretation of its use. Wittgenstein raises a problem of *apparent* radical indeterminacy in the applications of rules, since it seems that quite different courses of action can be made out to accord with a rule, given an appropriate interpretation. This leads to the paradox that there is no such thing as correctly or incorrectly following a rule (*PI* §201). That paradox must be defused, on pain of concluding

absurdly that there is no correct or incorrect application of rules, and hence no such thing as a correct, meaningful use of language. For Quine, there is a problem of radical indeterminacy of translation (both abroad and at home), and a problem of radical indeterminacy or inscrutability of reference. These too must be defused, on pain of concluding absurdly that all reference to objects is nonsense (OR 48).

(13) At first blush, both approach questions of understanding behaviouristically. Quine holds that

Semantics is vitiated by a pernicious mentalism as long as we regard a man's semantics as somehow determinate in his mind beyond what might be implicit in his dispositions to overt behaviour. It is the very facts about meaning, not the entities meant, that must be construed in terms of behaviour.

(OR 27)

Wittgenstein wrote: 'I conceive of understanding, in a sense, behaviouristically.... What is behaviourist in my conception consists only in that I do not distinguish between "outer" and "inner". Because psychology does not concern me' (BT 284).

(14) They converge in their conception of truth, repudiating correspondence and coherence theories alike, and, relative to those theories, trivializing truth Wittgenstein adopted a deflationary (Ramseian) account of truth (*NB* 9, *TLP* 4.062, *PG* 123f., *PI* §136), while Quine treats 'is true' as a disquotational device.⁴

(15) Holism with regard to understanding a language is common to both. Quine remarks: 'It is of theoretical sentences such as "neutrinos lack mass", etc. above all that Wittgenstein's dictum holds true: "Understanding a sentence means understanding a language"' (BB 5), and adds in a footnote 'Perhaps the doctrine of indeterminacy of translation will have little air of paradox for readers familiar with Wittgenstein's latter-day remarks on meaning' (*WO* 76f.).

(16) Both adopt holism with respect to the web of belief. They concur that the web consists of beliefs which are differently related to experience, some exposed to direct verification or falsification, others deeply embedded within the network. Wittgenstein wrote: 'All testing, all confirmation and disconfirmation of an hypothesis takes place within a system.... The system is the element in which arguments have their life' (*OC* §105). Again,

A child learns to believe a host of things. I.e. it learns to act according to these beliefs. Bit by bit there forms a system

of what is believed, and in that system some things stand unshakably fast and some are more or less liable to shift. What stands fast does so, not because it is intrinsically obvious or convincing; it is held fast by what lies around it.

(OC §144)

(17) Both agree that we hold mathematical statements immune to falsification. Quine's 'maxim of minimum mutilation' is one of the two guidelines⁵ of his holistic doctrine of accommodating the falsification of what he calls 'an observation categorical'⁶ which is implied by a hypothesis in conjunction with other sentences of the theory. We need not reject the hypothesis, but may instead reject some of the other sentences. However, 'The maxim constrains us, in our choice of what sentences... to rescind, to safeguard any purely mathematical truth; for mathematics infiltrates all branches of our system of the world, and its disruption would reverberate intolerably' (TI 11). Similarly, Wittgenstein remarks that we should never *allow* anything to prove that we are wrong in saying $12 \times 12 = 144$ (LFM 291). We deposit mathematical propositions 'in the archives' (RFM 165), and they are thereby *withdrawn* from doubt (RFM 363). A proof shows one how one *can hold fast* to the proposition without running any risk of getting into conflict with experience (RFM 436). The 'hardness of the logical "must"' indicates our refusal to depart from a concept (RFM 238).

(18) Both reject *de re* necessity. Quine continues the previously quoted remark by saying:

If asked why he spares mathematics, the scientist will perhaps say that its laws are necessarily true; but I think that we have here an explanation, rather, of mathematical necessity itself. It resides in our unstated policy of shielding mathematics by exercising our freedom to reject other beliefs instead.

So too Wittgenstein holds that the apparent inexorability of logic and mathematics is *our* inexorability in cleaving to them (RFM 37). What appear to be necessities in the world are merely the shadows cast by grammar.

To a large extent, the two philosophers were concerned with similar questions. Both explored all the issues above mentioned *in extenso*, tracing the threads that connect the conceptual manifold. But despite superficial appearances, the tapestry Wittgenstein wove is profoundly different from Quine's. The negative points of

convergence (*roughly* (1), (3–7), (10), (14) (18)) are genuine, although the reasons for them are often very different (especially (3), (7), (18)). The positive points, as we shall see, often mask profound disagreement (especially (2), (12), (15–18)). Even where there is a degree of methodological agreement ((11), (13)), the employment of the methodology is altogether distinct. For Wittgenstein's conception of language, unlike Quine's, is normative. This disagreement also infects the partial agreement over such points as (8). Similarly, the agreement over ostensive teaching (9) is superficial, since Quine does not conceive of ostensive definition as a rule for the use of a word or of a sample as belonging to the method of representation.

QUINE AND LOGICAL EMPIRICISM: THE END OF ANALYTIC PHILOSOPHY?

The most significant influence upon Quine was Carnap. He was, as Quine acknowledged, his 'greatest teacher'. 'Even where we disagreed', Quine wrote, 'he was still setting the theme; the line of my thought was largely determined by problems that I felt his position presented.'⁷

Quine shared much common ground with Carnap and members of the Circle:

(1) Like them, he was and remained an empiricist, holding that all knowledge is derived from experience. Unlike them, he came to explicate (or, as he put it, 'to make an analytic tool of') the concept of experience in neither phenomenalist nor physicalist terms, but rather in terms of stimulations of sense receptors. The common-or-garden concept of experience, he came to think, is 'ill-suited for use as an instrument of philosophical clarification' (*IT* 184f.).

(2) Like the scientifically trained philosophers of the Circle, Quine held that the paradigm of knowledge is scientific knowledge. It is science and scientific theory that yield the best picture of the nature of reality. All understanding is cut to the model of scientific understanding.

(3) The Circle cleaved to the doctrine of the unity of science. Quine held *analogously* that all knowledge can be unified in a single system, the foundations of which are given by the master science—physics. For 'every change of any kind involves a change in physical micro-states', and these are to be explained by physics. Physics gives us the fundamental description of reality, and all deep

explanations of phenomena are physical explanations, for the fundamental laws of the universe are physical laws. Explanations in less fundamental sciences, though not reducible to physics, are at best local generalizations supervenient upon physical law.

(4) Although Quine rejected the principle of verification, i.e. that 'the meaning of a statement is the method of confirming or infirming it' (TDEb 37), he did not reject verificationism:

The Vienna Circle espoused a verification theory of meaning but did not take it seriously enough. If we recognize with Peirce that the meaning of a sentence turns purely on what would count as evidence for its truth, and if we recognize with Duhem that theoretical sentences have their evidence not as single sentences but only as larger blocks of theory, then the indeterminacy of translation of theoretical sentences is the natural conclusion. And most sentences, apart from observation sentences, are theoretical. This conclusion, conversely, once it is embraced, seals the fate of any general notion of propositional meaning or, for that matter, state of affairs.

Should the unwelcomeness of the conclusion persuade us to abandon the verification theory of meaning? Certainly not.
(EN 80f.)

(5) Quine shared the Circle's (general, though not uniform) distaste for 'abstract entities' and the nominalist preference for austere 'desert landscapes' (OWTib 4). Although he came to 'accept' the existence of classes, functions and numbers, his philosophy is run through with a preference for, though not a commitment to, nominalism. Abstract entities are to be admitted into one's ontology only in so far as they are required for respectable science and philosophy, and in so far as sharp extensional criteria of identity for them are forthcoming. He is therefore a qualified, economical realist, but an unqualified 'extensionalist' (TT 182-4). Among what Quine thought of as illegitimate abstract entities are propositions, which he conceived of as the purported meanings of sentences.⁸ Meanings, and indeed 'intensions' of any kind, were banished from Quine's landscape as 'entities' wrongly posited by sundry theories.

Unlike the Vienna Circle, Quine had a substantial American heritage consisting of (a) pragmatism, derived from Dewey (and perhaps C.I.Lewis, who taught Quine at Harvard), and (b) behaviourism derived from Watson, and behaviourist language theory derived from Skinner.

Early and late, he believed that ‘in linguistics one has no choice but to be a behaviourist’. For ‘Each of us learns his language by observing other people’s verbal behaviour and having his own faltering behaviour observed and reinforced or corrected by others. We depend strictly on overt behaviour in observable situations’ (PTb 38). His behaviourism is the driving force behind his doctrine of the indeterminacy of translation (PTb 37). It is also the driving force behind his rejection of the analytic/synthetic distinction. Holism alone will not yield that result, as is evident from the fact that Carnap accepted Duhemian holism too, but that did not affect his acceptance of an explicated form of the analytic/synthetic distinction (see n. 10 below).

Sharing some of the basic tenets of Viennese logical empiricism, Quine nevertheless rejected three of its fundamental doctrines in the name of a purified empiricism, a verificationism revamped to the requirements of holism, and behaviourism:

(1) He rejected the intelligibility of the analytic/synthetic distinction, interpreted as a distinction between truths that are grounded in meanings, independently of facts, and truths that are grounded in empirical fact. Hence too, he rejected the pivotal positivist claim that so-called necessary truths are analytic, i.e. true in virtue of the meanings of their constituent expressions, or true by linguistic convention.

(2) He rejected the reductionism that had informed the early phases of Viennese logical positivism, i.e. the claim that all significant empirical sentences are reducible to what is given in immediate experience. This conception had informed the programme of logical construction apparently sanctioned by the *Tractatus* and pursued (most notably by Carnap in *Der logische Aufbau der Welt*) in the wake of Russell.

(3) He repudiated sentential verificationism, i.e. the claim that the unit of empirical significance is the sentence which is confirmed or disconfirmed in experience. Instead, Quine, following Duhem, defended a holistic conception of confirmation.⁹ Our statements about the external world face the tribunal of sense experience not individually but as a corporate body. It is, however, noteworthy that already in *The Logical Syntax of Language* Carnap too had accepted Duhemian holism with regard to the confirmation or disconfirmation of hypotheses, without renouncing, but rather insisting upon, the validity of the analytic/synthetic distinction.¹⁰

These anti-positivist doctrines undermine the Vienna Circle’s conception of philosophy, and not just that of the Circle, but that of

analytic philosophy from the 1920s onwards. Of course, it is not true that analytic philosophy in all its phases was committed either to sentential verificationism or to reductionism. Nor was it necessarily committed to upholding the analytic/synthetic distinction as traditionally conceived or as explicated by Carnap—Wittgenstein was not so committed. He distinguished rather between logical and grammatical truths on the one hand (which are not to be assimilated) and empirical truths on the other (which are not uniform—propositions of the *Weltbild*, which he discussed in *On Certainty*, occupying a special position). Nevertheless, a fundamental tenet of analytic philosophy, from its post-*Tractatus* phase onwards, was that there is a sharp distinction between philosophy and science. Philosophy in the analytic tradition, whether or not it was thought to be a cognitive discipline, was conceived to be a priori and hence discontinuous with, and methodologically distinct from, science.¹¹ Similarly, analytic philosophy in general held that questions of meaning antecede questions of truth, and are separable from empirical questions of fact. If Quine is right, then analytic philosophy was fundamentally mistaken. On Quine's view, philosophy is continuous with science (NK 126), and 'philosophy of science is philosophy enough'. In this respect Quine reverts to an older tradition, for example of Herbert Spencer, Samuel Alexander, and (with qualifications and inconsistencies) Russell in the 1910s. Contemporary philosophers who follow Quine have, in this sense, abandoned analytic philosophy. Or, to put the same point differently, if this conception is compatible with what is now to be called 'analytic philosophy', then analytic philosophy has become so syncretic as to lose any distinctive marks other than stylistic and thematic, and has severed itself from its roots and trunk in the philosophical developments that run from Moore and Russell, through the early Wittgenstein and the Vienna Circle, Cambridge Analysis, the later Wittgenstein, and Oxford analytic philosophy. Quine's conception places him in stark opposition to Wittgenstein's twofold revolution in philosophy (the first heralded by the *Tractatus*, the second by the *Investigations*).

QUINE AND WITTGENSTEIN: DIFFERENCES BENEATH SIMILARITIES

Evidently the convergences noted above stand in need of scrutiny. Some of them are indeed shared views. Others are mere apparent convergences, masking fundamental disagreements. In the following I shall draw out some of these differences with respect to the

following themes: (1) use; (2) meaning and synonymy; (3) analyticity and necessary truth; (4) ostensive teaching and explanation; (5) revisability of beliefs; (6) understanding, interpreting, translating and indeterminacy. Differences regarding ontology will not be discussed here. It should be stressed that the following discussion does not purport to adjudicate definitively between Wittgenstein and Quine. Although I have not masked my opinion that in the confrontation between the two philosophers it is Wittgenstein whose arguments carry the day, a proper refutation of Quine would require a book in its own right. The purpose of the ensuing discussion is to pinpoint the differences between the two protagonists and the grounds of their disagreements, and to indicate the trajectory of the further arguments that need to be pursued systematically and dialectically.

Use

Quine quotes the Wittgensteinian dictum ‘Don’t ask for the meaning, ask for the use’ with approval, construing ‘use’ as mere behaviour, and concluding ‘Well, we can take the behaviour, the use, and let the meaning go’ (see above, p. 3). But ‘the use’ of an expression, for Wittgenstein, signifies not merely behaviour, but rule-governed behaviour, or more generally, behaviour subject to standards of correctness. The use of a piece in a game, for example a chess piece, is not merely the way in which people move it, but the way they move it when they move it correctly—in accord with the rules for its use. In a passage in which he was addressing behaviourist conceptions of language, Wittgenstein wrote:

If when language is first learnt, speech, as it were is connected up to action—i.e. the levers to the machine—then the question arises, can these connections possibly break down? If they can’t, then I have to accept any action as the right one; on the other hand, if they can, what criterion have I for their having broken down?

(PR 64)

Language learning is indeed rooted in training, and such training is in some ways similar to setting up a causal mechanism by stimulus conditioning. It does not follow that in general ‘the pronouncement of a word is now a stimulus, now a reaction’ (PLP 113f.). Suppose we trained a dog to behave in such-and-such a way in response to the

stimulus of a sign 'p'. Now contrast (a) The sign 'p' means the same as the command to do so-and-so, and (b) The dog is so conditioned that the occurrence of the sign 'p' brings about so-and-so. The behaviourist account of language reduces the explanation given in (a) to the description of a causal nexus given in (b). But (a) specifies a rule or convention for the use of the sign 'p', an explanation within the network of rules of language. Whereas (b) describes a causal mechanism. The truth of (b) is independent of the truth of (a), and the rule is independent of the reactions of the dog. A dog, no matter how well trained, may misbehave. But that what it does *is* misbehaviour is determined by reference to the stipulated convention of meaning. Otherwise what meaning a sign has would always be a matter of a hypothesis about what reaction it will call forth, and its meaning would not be determinable in advance of the behavioural consequences of its use from occasion to occasion.¹²

The objection applies to Quine's behaviouristic conception no less than to Russell, Ogden, and Richards to whom it was addressed. Quine argues, correctly, that a learner has not only to learn a given word (for example 'red') phonetically; 'he has also to see the object; and in addition to this...to capture the relevance of the object' (OR 29). 'A child learns his first words and sentences by hearing and using them in the presence of appropriate stimuli' (EN 81). For the child 'is being trained by successive reinforcements and extinctions to say "red" on the right occasions and those only' (RR 42). But what, on a pure behaviourist account, makes a stimulus 'appropriate', an object 'relevant', or an occasion 'right'? It is, to be sure, conformity with the use of the rest of the speech community into which he is being acculturated—but, of course, only in so far as their uses are correct, and not misuses.¹³

The vast majority of the utterances of members of a speech community doubtless employ the expressions of the language correctly, that being presupposed by their being members of a speech community with a shared language. Hence any statistical sampling will collect what are predominantly correct instances of the use of the language. But it will not provide an adequate criterion to distinguish correct uses from misuses (let alone from divergent, metaphorical, poetical or secondary uses). For *correct use* is not merely a statistical concept.¹⁴ The use of an expression is not just the verbal behaviour of users of the expression, but their verbal and other behaviour *in so far as it accords with the acknowledged rules for the correct employment of that expression*, rules which the users themselves

acknowledge in their humdrum explanations of meaning, and of what they mean, and in their recognition of explanations by others of what certain expressions mean. These rules or conventions are not, of course, axioms or postulates of a formal system. Nor are they ‘implicit rules’ postulated by the field linguist. They are not ‘mental entities’. Nor are they mere history, for their role is not exhausted in the original teaching of the expressions.¹⁵ Far from being ‘explanatorily idle’ as Quine suggested in his criticism of Carnap (TCa 98f., CLTa 112f.), they are explanatorily indispensable, since they determine the difference between correct and incorrect use, as well as the difference between sense and nonsense.¹⁶ They are exhibited in explanations of meaning, which are as accessible to observations of behaviour as are descriptive uses of declarative sentences.

These explanations include answers to questions such as ‘What is a gavagai?’ (and Wittgenstein’s field linguist will fairly rapidly master the native technique of asking such simple questions). Such answers may take the form of ostensive definitions—many by reference to paradigmatic samples which are to be used as standards for the correct application of the definiendum.¹⁷ They may take the form of synonyms (precise or rough and ready), or of exemplification (‘Running is doing *this*’, ‘Hitting is *this*’), or of a series of examples (with a similarity rider) which are to be taken as a rule, or of paraphrase or contrastive paraphrase. (It can be presumed that the native will be willing to *teach* Wittgenstein’s field linguist, no less than he is willing to teach his own children.) The normative (i.e. rule-governed) *use* of words in sentences and the norms that are being complied with by speakers’ applications of words are perfectly accessible—as accessible as the difference between showing how to use a measure and a judgement of the length of an object. The field linguist can come to identify the native judgements of lengths, say, by observing their measuring activities, and, hesitantly no doubt and presuming upon native tolerance, by participating in the measuring practices. He will come to identify what the natives *call* ‘such-and-such a length’ (a foot, or a span), i.e. what their *standard* of measurement is, no less than he will come to identify their judgements that something is so-and-so many spans long. It is behaviour and participatory practice, and not something arcane and mysterious, that give us access to standards of measurement (and analogously to standards of correct use of terms) no less than to judgements of measurement (to correct applications of terms thus explained).

Quine and Wittgenstein agree that the genesis of an ability is

irrelevant to its later characterization—how and whether one learnt the use of an expression does not matter inasmuch as it is true that there is no ‘action at a distance’ in grammar. But Wittgenstein insists, and Quine denies, that rules, thus understood, play a constant role in the use of language—as standards of correct use, cited in explanations, appealed to in criticisms of use and in clarification of disagreements (to determine whether the disagreement is one in judgement or in definition), and employed in teaching. The relevance of teaching is not causal or genetic, but rather immanent: ‘what matters is *what is given in the explanation*’ (LWL 38, my italic). What is thus given is a rule, a standard, against which to judge the correctness of the application of an expression from case to case, and by reference to which we can generally differentiate between disagreements in judgements and disagreements in definitions.

It is explanations of meaning that constitute standards for the correct use of their explananda, and what *counts* as a correct application of an expression is exhibited in the practice of its application (and the critical reactions, as well as the uncomprehending questions, that are forthcoming when an expression is misused). For communication by means of language to be possible, Wittgenstein argued, there must be agreement not only in judgements (as Quine holds), but also in definitions or explanations of meaning—in standards of correct use (see *PI* §242). There is an internal relation between an explanation of meaning (definition, or a rule for the use of an expression) and applications of that expression, and understanding an expression is grasping that relation, i.e. grasping what counts as applying the expression correctly. For applying an expression in accord with its explanation is one criterion of understanding. Another is explaining it correctly in context—for someone who cannot say what he means by the use of an expression *in some way* (by paraphrase, contrastive paraphrase, exemplification, ostension, etc.) will be said to be speaking without understanding what he is saying. And if what he means by it deviates significantly from what it means, he will be said to be misusing it. A third criterion of understanding is reacting *appropriately* in context to the use of the expression, and what counts as ‘appropriate’ is partly determined by what the expression means, as given by an acceptable explanation of its meaning.

It may well be that, as Quine claims, the child’s early training in the use of language involves primarily one-word sentences, but surely not only observation sentences. Expressive sentences will be

at least as important—for example ‘Hurts!’, ‘Good!’, as will ersatz imperatives—for example ‘Want!’, ‘Drink!’, ‘Apple!’. And assent or dissent will be exhibited in responses to requests or demands no less than in responses to questions. However, he must rapidly progress beyond this to terms, and not by constructing analytical hypotheses (the child is no theorist or linguist), but by learning their use, mastering the technique of their application, including their combinatorial possibilities and impossibilities with other expressions. This is learnt not by theory construction, but by guided practice, subject to correction of error—which is not the same as conditioning and reinforcement. For what he learns includes, among other things, how to *justify* and give *reasons* for what he does by reference to the standards of correctness he learns, how to *criticize* and *correct* misuses, including his own. Once the child has learnt to ask ‘What is that?’, ‘What is this called?’ and ‘What does “such-and-such” mean?’, he has passed the stage of ostensive training and moved on to the stage of being taught, by ostensive and other explanations, the use—the meaning—of words. He must learn, in rudimentary form no doubt, the differences, from case to case, between sense and nonsense. And nonsensical or ungrammatical forms of combination which he employs can be, and often are, corrected by parents and teachers.

It is evident that although Quine and Wittgenstein agree that in a sense all the field linguist and child have to go on in learning the language is behaviour, that agreement masks profound disagreement. I shall defer for a moment consideration of the differences between Quine’s field linguist and Wittgenstein’s (see below, pp. 26–30). While Quine presents the child as being conditioned in the use of language, this conditioning being aided by the existence of innate responsive similarities and by induction, which is ‘animal expectation or habit formation’ (NK 125), Wittgenstein conceives of language learning as not just a matter of conditioned response. Although it rests on shared reactive propensities and discriminatory capacities, and begins with mere training, what are to be learnt are the techniques of a normative practice.¹⁸ Those rule-governed techniques are learnt by engaging in the practice, subject to correction, guided by example and explanation.

From the point of view of a normative conception of meaning such as Wittgenstein defends, a behaviouristic conception like Quine’s is simply no conception of meaning at all, not even an ersatz one.¹⁹ Indeed, it is no conception of *language*, for a language

stripped of normativity is no more language than chess stripped of its rules is a game.

Meaning and synonymy

Quine denies, rightly, that ‘meanings’ are ‘entities’. He claims that at best we can talk of expressions having a meaning, i.e. being significant, and of different expressions as having the same (or different) meaning. But we can speak of sameness of meaning, or synonymy, only if there are clear criteria of identity for meanings. He argues that none are forthcoming, since the concept of synonymy can only be explained by reference to equally problematic intensional notions like necessity, self-contradictoriness, definition, semantic rule, immunity to falsification by experience (unassailability come what may), and apriority. It is, however, important to note that he does not take the concept of synonymy to be incoherent. ‘The explicitly conventional introduction of novel notation for purposes of sheer abbreviation’ is perfectly licit.

Here the definiendum becomes synonymous with the definiens simply because it has been created expressly for the purpose of being synonymous with the definiens. *Here we have a really transparent case of synonymy created by definition;* would that all species of synonymy were as intelligible.

(FLPVc 26, my italics)

It is unclear whether we are to conclude that in such transparently intelligible cases, in which synonymy yields perspicuous criteria of identity, meanings *are* ‘entities’.

If stipulation can produce synonyms, then there is such a thing as two expressions having the same meaning (rather than being merely ‘stimulus synonymous’). If so, why *cannot* there be unstipulated synonyms in use, as manifest in the explanations that competent speakers give of the use of terms (which is precisely what lexicographers typically catalogue)? Maybe there are none, but at any rate, we understand what would *count* as a pair of synonymous expressions. Grice and Strawson compare Quine’s position here to a man who claims to understand what it is for two things to fit together if they are specially made to fit together, but denies that it is intelligible that things not so made should fit together. So far from that being unintelligible, they further argue, synonymy by explicit convention is

only intelligible if synonymy by usage is presupposed. There cannot be law where there is no custom, or rules where there are no practices.²⁰ To be able to stipulate that a novel expression is to mean the same as a previous one, one must already have a conception of synonymy. It may be that natural language so evolves as largely to exclude the kind of redundancy that is involved in the common existence of exact synonyms, but that is surely something to investigate, not to dismiss. If it be so, we may find it useful (as lexicographers do) to consider synonymy a matter of degree-context-and purpose-relative. But if so it be, that is a fact, not a defect.

Wittgenstein has no qualms about talking of the meaning of expressions. Meanings are indeed not 'entities'. To know the meaning of 'A', like to know the length of X, the age of Y or the price of Z, is not to be acquainted with an entity, but to know the answer to the question 'What does "A" mean?' ('What is the length of X, Y's age, or Z's price?'). The 'what' here is an interrogative pronoun, not a relative one. To say that 'A' has the same meaning as 'B' is not to say that there is some third thing they both mean, but rather that 'A' means (the same as) 'B', that they are used in the same way, that an explanation of what 'A' means will also serve as an explanation of what 'B' means, and indeed that citing 'A' will serve as an answer to the question 'What does "B" mean?' The meaning of an expression is determined by its use; it is given by what are accepted as explanations of meaning; it is what we understand when we understand or know what an expression means. And that is exhibited in the criteria of understanding. Expressions are synonymous if the explanation of what the one means will also serve as a correct explanation of what the other means. To be sure, expressions are typically more or less synonymous, or synonymous in some contexts and not in others or for some purposes and not others—the matter of synonymy is indeed often context-dependent and purpose-relative:

The question whether 'He can continue [the series 2, 4, 6, 8...]' means the same as 'He knows the formula $[A_n=2n]$ ' can be answered in several different ways: We can say 'They don't mean the same, i.e., they are not in general used as synonyms as, e.g., the phrases "I am well" and "I am in good health"'; or we may say '*Under certain circumstances* "He can continue ..." means he knows the formula.'

(BB 114f.)

Synonymy is not an all or nothing affair. For some purposes of describing spatial relations, 'on' and 'on top of' mean the same. 'The book is on the table' means the same as 'The book is on top of the table.' But 'Hillary is on Everest' does not mean the same as 'Hillary is on top of Everest.' The criterion of adequacy for a dictionary definition (specification of synonymy) is that the definiens should be *standardly* substitutable for the definiendum, but such specifications do not and need not indefeasibly license substitution. The demand for absolute, context-free and purpose-independent standards of synonymy is as absurd as the demand for completeness of definition or determinacy of sense (the exclusion not of vagueness, but of the very possibility of vagueness), prominent in Frege and the *Tractatus*.²¹

Analyticity and necessary truth

Quine takes so-called 'analytic truths' to be true in exactly the same way as empirical propositions, and does not see them as having any different role from any other propositions embedded in the web of belief. Like Carnap, who never abandoned his conviction that, at least in a constructed language, one can sharply differentiate analytic truths from empirical ones, Quine never raises the question of the role of such truths as 'Red is darker than pink', 'Bachelors are unmarried', 'Either it is raining or it is not raining.' Truth is truth, and there's an end to the matter; and no one would deny that such statements are true.

From Wittgenstein's point of view, this is like saying that knowing is knowing, no matter if it is knowing that grass is green, that green is a colour, or that nothing can be red and green all over; or that believing is believing, no matter whether what is believed is that it will rain tomorrow, that $2+2=4$, that Goldbach's conjecture is true, that one should not steal, that one's name is N.N., that the world has existed for many years. It is not that 'true', 'know' or 'believe' are ambiguous (as are 'bank' or 'port'—ambiguity being coincidental, and unlikely to be preserved through translation into another language, *save per accidens*), but rather that we need to investigate, from case to case, what it is for one kind of proposition (for example ' $2+2=4$ ') to be true as opposed to another (for example 'Grass is green', 'Kindness is a virtue'), what counts as knowing one sort of proposition rather than another, etc.²²

Like Carnap, Quine takes it that analytic truths, if there were any,

would be type-sentences, every token of which is analytic. Indeed, he assumes, wrongly, that Carnap and the Vienna Circle were committed to the view that if a sentence is analytic, its status cannot be changed—whereas Carnap's view was that an analytic truth cannot be falsified by experience, but that we can 'abandon' it, cease to count it as such. However, to abandon it is to change the meaning of its constituent terms.

Wittgenstein, unlike the Vienna Circle, did not explain analytic truths by reference to type-sentences which are either (instances of) laws of logic or reducible to a law of logic by the substitution of synonyms for constituent expressions in accord with definitions. Nor did he clarify the nature of so-called necessary truths by arguing that they are *consequences* of the meanings (definitions) of their constituent expressions. Indeed, Wittgenstein does not invoke the category of analytic truths in his later work. This may be due partly to a distaste for received jargon, partly to radical disagreement with the construal of such truths by the Vienna Circle and others, and partly to the fact that the concept of analyticity employed by his predecessors and contemporaries, no matter whether Kant, Frege or Carnap, does not cut along the distinction or distinctions that most concerned him, and hence, in his view, does not serve to explain or elucidate what it is for a proposition to be a 'necessary truth'. The Circle's account assimilated disparate linguistic phenomena, namely logical truths, mathematical truths and analytic truths as traditionally conceived. Further, it proved powerless to illuminate such 'meta-physically necessary propositions' as 'Red is darker than pink', 'Red is more like pink than like blue', 'There is no transparent white.' Instead, Wittgenstein distinguished between logical propositions, mathematical propositions and so-called metaphysical truths, the first being senseless but internally related to inference rules, the second being rules for the transformation of empirical propositions about quantities and magnitudes of things, and the last being rules for the use of their constituent expressions in the misleading guise of descriptions.

Whether a sentence expresses what we so misleadingly call 'a necessary truth' is a matter of what it is being used for, hence a feature of the use of token sentences. Two tokens of the same type-sentence *may* be differently used, now to express a 'necessary truth', now to express an empirical proposition. 'War is war', for example, is rarely used as an instance of the law of identity, and 'What will be, will be' is not typically used to express a theorem of tense logic.

'This is red' may be used to make an empirical statement about the carpet, or used as a 'grammatical proposition' ('This (colour) is red'), which can indeed be taken as a 'necessary truth', although, like 'Red is a colour', it is in effect a rule for the use of the word 'red'. 'Acids turn litmus paper red' was once used to define acids, i.e. as a grammatical proposition, but is no longer so used. Since criteria and symptoms in science often fluctuate, a proposition of physics may in one context be taken as an empirical law, and in another as a definition—depending on how it is employed in an argument. What Wittgenstein was adamant about was that no proposition could be used simultaneously to state an empirical truth and to express a grammatical rule, any more than a ruler can be used simultaneously as a measure and as an object measured ('measures' is irreflexive).

For Wittgenstein, the crucial question is: 'What is the use of so-called "necessary" or "analytic" truths?' We say that the following are all true: ' $2 \times 2 = 4$ ', ' $p \vee \neg p$ ', 'Red is a colour', 'Nothing can be red and green all over', etc. But what is their point? What information are we conveying to anyone? What go under the name of necessary truths are expressed by the use of a mixed bag of kinds of sentences, and Wittgenstein does not impose uniformity upon them, but rather explains why we think of them as 'necessary' and what is meant by calling them so. He does not try to explain what 'makes them true'—a dubious question, since they are unconditionally true (not made true by anything). *A fortiori* he does not claim that they are made true by a convention. In the sense in which 'The sun is hot' is made true by the sun's being hot, 'Red is a colour' or 'Either it is hot or it is not hot' are not made true by anything—although precisely because red is a colour, one may say that A's being red makes it coloured. Unlike the Vienna Circle, he never argued that any necessary truths are 'true in virtue of meanings', but condemned such a view as a mythology of meaning bodies. Unlike Quine, he did not hold that the truth of statements (by which Quine meant sentences) depends upon both language and extra-linguistic fact—it is not sentences that are truth-bearers, any more than it is sentences that are supported by evidence, believed or doubted, feared or suspected, but rather what is said by their use. What it is that is said by the use of a sentence depends upon language, but whether what is thus said is true or false does not (save in the case of empirical assertions about language). Unlike Quine, he did not hold that what we call 'necessary truths' are simply those which we 'shield' from empirical disconfirmation by exercising our freedom

to reject other beliefs instead (TI 11), although that is second cousin to the truth (see below).

Truths of logic, he held, are vacuous (senseless, i.e. limiting cases of propositions with a sense). Despite the fact that they all say the same, namely nothing, they nevertheless differ. For they are internally related to rules of inference, and different tautologies may be related to different rules of inference. Inference rules are in turn definitive of what we call 'thinking', 'arguing' and 'reasoning'. Mathematical truths are rules which belong to a vast system of interconnected rules, the essential point and purpose of which is the transformation of empirical propositions about the magnitudes or quantities of things, etc. Analytic truths are rules in the guise of descriptions: 'Bachelors are unmarried' is a grammatical proposition, an explanation of the meaning of the word 'bachelor', given in the material mode. It is a rule that licenses the inference from 'A is a bachelor' to 'A is unmarried.' Non-analytic necessary truths are similarly grammatical propositions, even though they are not transformable into logical truths by substitution of synonyms. For example, 'Red is darker than pink' is a rule licensing the inference from 'A is red and B is pink' to 'A is darker than B.' Where Quine argued that ' $(x)(x=x)$ ' can be said to depend for its truth upon the self-identity of everything (CLTa 106), Wittgenstein held that there is no finer example of a useless proposition than 'A thing is identical with itself', it being comparable to 'Every coloured patch fits into its surrounding' (*PI* §216). The proposition ' $a=a$ ' is a degenerate identity statement which says nothing (*LFM* 27, 283). 'An object is different from itself is nonsense, and so too is its negation. Although the law of identity seems to have fundamental significance, the proposition that this 'law' is nonsense has taken over its significance (BT 412).

Necessary truths are indeed unassailable. They persist unalterably, independently of all that happens—as the construction of a machine on paper does not break when the machine itself succumbs to external forces (*RFM* 74). Nothing is allowed to *falsify* them, but their 'necessity' is not explained merely by the fact that we refuse to abandon them—that indeed would not distinguish so-called necessary truths from truths of our world-picture, such as 'The world has existed for many years', 'I was born of parents', 'I have never been to the stars.' What is marked by the 'must' of 'If it is red, then it must be coloured', 'If there are ten Xs in each of ten rows, then there must be a hundred', 'If it is red, then it must

be darker than pink' is the normative role of such propositions as 'Red is a colour', 'Red is darker than pink', ' $10 \times 10 = 100$ '—they are rules, 'norms of representation' or 'norms of description'. 'Red is a colour' does not 'owe its truth' to red's being a colour in the sense in which 'Some dogs are white' owes its truth to the fact that some dogs are white (or to some dogs' being white). Its being true consists in its being an expression of a rule for the use of its constituent expressions 'red' and 'colour', as the truth of the proposition 'The chess king moves one square at a time' consists in its being the expression of a rule of chess. If we know that A is red and B is pink, we are entitled to infer without further observation that A is darker than B; if we know that there are ten Xs in each of ten rows, then we can infer without counting that there are a hundred Xs in all. If B turns out to be darker than A, then it was not pink, or A was not red, or one or the other has changed colour. If there are more or less than a hundred Xs, then there was a miscount, or some were added or removed. What we hold rigid is not a truth about the world, but a rule for describing how things are in the world.

It is true that we can transform an empirical proposition into a rule or norm of representation by resolving to hold it rigid. (But 'The world has existed for many years', which we could not abandon without destroying the web of our beliefs, is nevertheless not a rule, since its role is not to determine concepts or inference rules.) It was an empirical discovery that acids are proton donors, but this proposition was transformed into a rule: a scientist no longer calls something 'an acid' unless it is a proton donor, and if it is a proton donor, then it is to be called 'an acid', even if it has no effect on litmus paper. The proposition that acids are proton donors, like ' $25 \times 25 = 625$ ', has been 'withdrawn from being checked by experience, but now serves as a paradigm for judging experience' (see *RFM* 325). Though unassailable, so-called necessary truths are not immutable—we can, other things being equal, change them if we so please (with provisos concerning logic (see pp. 24f.), and appropriate qualifications when it comes to expressions that are so deeply embedded in our form of life as to be unalterable *by us*). *But if we change them, we also change the meanings of their constituent expressions*—here Carnap was right. If we abandon the proposition that red is a colour, we thereby change the meanings of 'red' and 'colour'; if we drop the law of double negation, we change the meaning of negation.

Ostensive teaching and explanation

The above characterization of the disagreement between Wittgenstein and Quine in the matter of analyticity and necessary truth makes it possible to deal briefly with an otherwise large and ramifying topic, the nature and role of ostensive teaching and definition.²³ The depth of the difference between a causalist viewpoint and a normative one is strikingly evident here.

Quine takes ostension to be a matter of conditioning and induction (OR 31), i.e. learning to associate a given stimulus with an utterance. It depends upon a snared innate standard of similarity (NK 123). In the case of what he calls 'direct ostension', 'the term which is being ostensively explained is true of something that contains the ostended point [i.e. the point where the line of the pointing finger first meets an opaque surface]' (OR 39).²⁴ Wittgenstein similarly argues that ostension presupposes shared behavioural dispositions (for example, to look in the direction of the pointing hand) and discriminatory capacities. But unlike Quine, he distinguishes ostensive training (which he is willing to take behaviouristically) from ostensive definition or explanation. Of course, an ostensive definition sets up a connection between a word and a 'thing' (namely a sample). But 'the connection doesn't consist in the hearing of words now having *this* effect, since the effect may actually be caused by the making of the convention. And it is the connection and not the effect which determines the meaning' (PG 190). An ostensive definition (the connection between word and sample) is an *explanation* of what a word means, and the explanation 'is not an empirical proposition and not a causal explanation, but a rule, a convention' (PG 68) for the use of the explanandum, a standard for its correct application—as is evident in cases in which the ostensive gesture, the utterance 'This', and the sample ostended can replace the definiendum in a sentence. Where a sample is employed, the sample is not an object of which the concept being explained is predicated, but rather *belongs to the method of representation*. It is the standard for the application of the term, not an instance of its application.

Revisability of beliefs

Quine takes everything within the web of belief to be capable in principle of being relinquished, including logic and mathematics—even though we are least willing to relinquish these in the face of recalcitrant experience. He argued that

The totality of our so-called knowledge or beliefs, from the most casual matters of geography or history to the profoundest laws of atomic physics or even pure mathematics and logic, is a man-made fabric which impinges on experience only along the edges.... Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. Even a statement very close to the periphery can be held true in the face of recalcitrant experience by pleading hallucination or by amending certain statements of the kind called logical laws. Conversely, by the same token, no statement is immune to revision.²⁵

(TDEb 42f.)

Similarly, he later claimed 'In science all is tentative, all admits of revision—right down...to the law of the excluded middle' (SLSa 232), 'mathematics...is best looked upon as an integral part of science, on a par with the physics, economics, etc., in which mathematics is said to receive its applications' (ibid., 231), and 'Logic is in principle no less open to revision than quantum mechanics or the theory of relativity.... If revisions are seldom proposed that cut so deep as to touch logic, there is clear enough reason for that: the maxim of minimum mutilation' (*PL* 100). His invocation of the principle of minimum mutilation is wholly pragmatic, and does not rest on any discernment of a difference in function of mathematical and logical truths from any other truths ('truth is truth'). Castigating Carnap for putting grammar and logic on the same footing (qua analogues of formation and transformation rules in a formal deductive system), Quine wrote:

We do better to abandon this analogy and think in terms rather of how a child actually acquires his language and all those truths and beliefs, of whatever kind, that he acquires along with it. The truths or beliefs thus acquired are not limited to logical truths, nor to mathematical truths, nor even to analytic truths, if we suppose some sense made of this last term. Among these truths and beliefs the logical truths are to be distinguished only by the fact...that all other sentences with the same grammatical structure are true too.

(*PL* 101)

Wittgenstein agreed that we can envisage a language without the law of double negation. Nevertheless, fundamental propositions of logic,

such as the law of non-contradiction ' $\sim(p \& \sim p)$ ', or the tautology ' $p \& (p \supset q) \supset q$ ', are renounceable only at the cost of renouncing all thought and reasoning. For these tautologies are internally related to inference rules which are constitutive of what we call 'reasoning', 'arguing', 'thinking'. And he takes propositions of mathematics as concept-forming rules, characteristically licensing inferences among empirical propositions. Moreover, he denies that even humdrum empirical propositions such as 'The world has existed for a long time', i.e. certain propositions of the *Weltbild*, can be revised or rejected. For their repudiation would tear apart the whole web of belief. It is these, and not the propositions of mathematics and logic, that are so deeply embedded in the web of belief that they cannot be revised, even though they are not 'necessary truths'.

On the other hand, propositions of logic are misconstrued as being akin to propositions of the *Weltbild*, i.e. so deeply embedded in the web of belief as to be impossible to extricate without total mutilation. Rather, they are the correlates of the inference rules *that constitute the connecting links between the nodes of the web*. It is the logical relations between beliefs that make for the difference between a web of beliefs and a collection of beliefs, for to believe that all As are F is *ipso facto* to believe that this A is F, as it is to believe that there are no As which are not Fs. The 'abandonment' of the law of noncontradiction would not be, as Quine suggests, 'inconvenient'. Nor would it simply mean that we would score a poor ratio of successes over failures in our predictions. It would mean that the web of belief collapsed into a knotted tangle of incoherence. The role of the fundamental laws of logic is *toto caelo* different from that of the beliefs they connect within the web.²⁶ Indeed, one cannot be said to *believe* them as we believe empirical propositions—to believe that either it is raining or it is not raining is not to have any belief about the weather, and to believe the principle of bivalence is simply to determine the concept of a proposition as that which can be either true or false.

Understanding, interpreting, translating and indeterminacy

Quine's thesis of indeterminacy of translation is rooted in empiricist qualms about the under-determination of theory by evidence. Wittgenstein's explicit *paradox* of rule following is, he argued, rooted in a misconception which turns on the under-determination of a function by a fragment of its extension. This paradox is defused

by the consequences of realizing that the relation between a rule and its extension is not akin to the relation between an empirical hypothesis and its evidence, since the relation is *internal*. A rule is not an explanatory hypothesis which explains the acts that constitute conformity with it. The instruction 'Observe a man's behaviour in the course of the day, and infer which of his acts were intentionally performed in conformity with rules given to him' is as absurd as 'Here is a husband: now tell me who is his wife.'²⁷ That a given activity (a game of chess, for example) is conducted according to such-and-such rules may indeed be a hypothesis or conjecture (of an observer who has not learnt the game), but it is quite wrong to suppose that there is no 'fact of the matter' as to how chess is to be played. It would doubtless be exceedingly difficult to pick up the rules from mere observation of moves alone, independently of observations of the discussions and explanations of the game, but then no one has to—rather we receive instruction and practice in playing the game.

Both Quine and Wittgenstein consider that reflection upon radical translation may be philosophically illuminating, and both approach radical translation behaviouristically—but each in a different sense. On Quine's official view, the problem set the field linguist is to map 'surface irritations' onto dispositions to verbal behaviour. What is to be studied is the relation between the 'meagre input' of 'certain patterns of irradiation in assorted frequencies, for instance', and the 'torrential output' (EN 83) of intricately structured talk of things (WO 26).²⁸ It is less than obvious that Quine cleaves to his rigorous behaviourism here, since behaviourism requires that behaviour be viewed as 'bare bodily movement', and speech as the emission of sounds, from which bare basis a translation is held to be derivable. The field linguist's point of access, according to Quine, is the one-word observation sentence, to which assent and dissent are allegedly identifiable inductively. But assent and dissent are intensional (as well as intentional) notions—a person assents not to a sentence, but to what is said by the use of a sentence, i.e. to an assertion *that thing are thus-and-so*, and assents to *what he understands* inasmuch as he *believes it to be true*.²⁹ The identification of assent and dissent therefore presupposes viewing the observed behaviour not as mere bodily movement, but intentionalistically³⁰—and it is not obvious that Quine's austere behaviourism entitles him to this intentionalist stance.

Wittgenstein's 'behaviourist' approach to radical translation is unconnected with Watsonian or Skinnerian behaviourism. What is

behaviourist about his conception of understanding is *only* that the distinction between the 'outer' and the 'inner' is irrelevant for him, since understanding is not a mental state, but akin to a capacity. The nature of the capacity, and the degree to which it is possessed, is to be seen in a person's behaviour, including his linguistic behaviour. Wittgenstein recognizes *ab initio* that the 'common behaviour of mankind' by reference to which we interpret an unknown language is behaviour intentionalistically conceived. When an explorer comes to a foreign land, he wrote, he can come to understand the native language

only through its connections with the rest of the life of the natives. What we call 'instructions', for example, or 'orders', 'questions', 'answer', 'describing', etc. is all bound up with very specific human actions and an order is only distinguishable as an order by means of the circumstances preceding or following //accompanying it//.

(MS 165, 97f.)

Hence, too, 'If a lion could talk, we could not understand him' (*PI*, p. 223), not because his growls are unclear, but because his behavioural repertoire is so profoundly different from human behaviour, human expression, gesture and mien, and the forms of possible interaction we can engage in (even with a tame lion) are so limited. Our human 'form (or forms) of life' is not shared with lions. But 'speaking a language is part of a form of life'. 'It is a feature of our language that it springs up //it grows// out of the foundations of forms of life' (MS 119, 148). 'Instead of the unanalysable, specific, indefinable: the fact that we act in such-and-such ways, e.g. *punish* certain actions, *establish* the state of affairs thus-and-so, *give orders*, render accounts, describe colours, take an interest in others' feelings. What has to be accepted, the given—it might be said—are facts of living //forms of life' (RPPI §630, with an MS variant).

According to Quine all understanding is translating. Understanding utterances of another in one's own language involves homophonic (and sometimes heterophonic) translation. To understand a language or conceptual scheme, to determine its ontological imports, is always to translate it into another language. 'It makes no sense to say what the objects of a theory are, beyond saying how to interpret or reinterpret that theory in another' (OR 50). 'Commonly of course the background theory will simply be a containing theory, and in this case no question of a manual of

translation arises. But this is after all just a degenerate case of translation still—the case where the rule of translation is the homophonic one’ (OR 55). For it only makes sense to ask what the references of terms are relative to a background language. Further, ‘questions of the reference of the background language make sense in turn only relative to a further background language’ (OR 49). But in practice ‘we end the regress of coordinate systems by something like pointing. And in practice we end the regress of background languages, in discussions of reference by acquiescing in our mother tongue and taking its words at face value’ (OR 49).

But understanding is not the same as translating or interpreting. The former is akin to an ability, while the latter are typically activities one engages in (although there is a use of ‘interpret’ which is synonymous with *one* use of ‘understand’, as in ‘He interpreted the order to mean...’, i.e. he took it (understood it) to mean). Nor can Quine licitly argue that all understanding *involves* translating or interpreting. Translating is a matter of rendering the utterances of one language in another. Interpreting is a matter of clarifying utterances by means of more perspicuous paraphrases, especially in cases where an utterance admits of divergent readings (legal statutes, poetry)—it is *this* interpretation as opposed to *that* one. Interpretation therefore presupposes understanding—where more than one way of understanding is on the cards, and interpretation weeds out the worse from the better way of understanding. If the speaker is still available, one is likely not to interpret his ambivalent utterance, but to ask him to explain what he meant—and he does not have to interpret his own words for himself. In cases where an utterance in one’s own language is not understood at all, one neither translates it nor interprets it, but rather, one explains it. ‘Homophonic translation’ is no more translating than photographing a painting is a kind of painting.

Understanding utterances of one’s own language is not exhibited by homophonic disquotation—this being neither necessary nor sufficient for understanding. A child exhibits understanding of the request ‘Shut the door!’ by shutting the door, not by engaging *sotto voce* in homophonic translation antecedently to shutting the door.³¹ Someone who has mastered the device of disquotation may exhibit this skill without manifesting any understanding at all. The fact that misunderstanding is rectified by interpretation and lack of understanding (of a foreign tongue) by translation does not show that understanding ordinarily involves either.

Wittgenstein argues that ‘any interpretation [of the expression of a rule in our own language] still hangs in the air along with what it interprets, and cannot give it any support’ (*PI* §198). Not all understanding can consist in assigning interpretations. How I understand something is shown not only by the interpretation I give of it if asked, but in what I do in response—which shows what I call ‘such-and-such’. In the case of an order, how I understand it is shown by what I do in compliance with it. Here ‘He has interpreted it to mean ...’ just means ‘He has understood it to mean...’, not ‘He has interpreted it to mean...and now he has acted on that interpretation.’ For, if all understanding required an interpretation, this would indeed generate a regress, since he would now have to interpret the interpretation he gave. Moreover, it would follow that what was understood was not the order given, but only the interpretation of it (*PG* 47). An interpretation is given in signs, so the idea that every sentence stands in need of an interpretation amounts to claiming that no sentence can be understood without a rider. But this is absurd since the rider would need an interpretation. We do sometimes interpret signs. But when asked what time it is, we do not; we react. We react, and our understanding is manifest in what we do (see *PG* 47). That a symbol could sometimes be further interpreted does not show that one does further interpret it. There is an internal relation between an order and what counts as compliance with it, as there is an internal relation between an assertion and what makes it true—and what one understands by an order or assertion is to be seen in one’s behaviour, which manifests one’s grasp thereof.

To be sure, Wittgenstein never considered Quine’s theses of indeterminacy of translation and of inscrutability of reference. Nevertheless, some of his remarks and general strategies can be brought to bear upon the matter. In the first place, he would reject Quine’s behaviourist methodology. For Quine, what is ‘given’ to the field linguist is surface irradiations and responses. In strict consistency, the latter should be characterized in terms of bare bodily movements and emission of sounds (a limitation which, as we have seen, Quine fails to recognize). For Wittgenstein’s field linguist, what is given is human forms of life, to be characterized intentionalistically. For Quine, the primary leverage to be employed by the linguist is prompting assent or dissent by one-word observation sentences in circumstances of appropriate stimulus. For Wittgenstein’s linguist, it is participation in the alien form of life and practices, engaging in discourse aided by gesture and facial expression (and not merely prompting Yes/No

answers from the native), requesting, ordering, thanking, expressing pleasure and dissatisfaction, warning and heeding warnings, commiserating with suffering, and so on.

Three associated Quinean presuppositions might be questioned from a Wittgensteinian perspective. First, the assumption that there is no role in the process of translation for explanations of meaning (construed normatively) given by the native, in particular none for ostensive definition by reference to samples and their use. 'Someone coming into a strange country will sometimes learn the language of the inhabitants from ostensive definitions that they give him' (*PI* §32). That 'he will often have to *guess* the meaning of these definitions; and will guess sometimes right, sometimes wrong' (*ibid.*) does not mean that there is no fact of the matter regarding correct understanding of them. For what counts as understanding such an explanation is manifest in correct application, which is internally related to the explanation.

Secondly, Quine pays no attention to the grammar (and grammatical form) of expressions that are being translated (this is an aspect of his disregard for any distinction between nonsense and falsehood). His claim that the term 'gavagai' may indifferently signify 'rabbit', 'rabbit stage', 'undetached rabbit part' or 'rabbithood' is wrong. For the grammar of these expressions, their combinatorial possibilities in language, is wholly different. If the linguist succeeds in translating 'Hungry!' (a fairly early achievement, one would think),³² then if gavagai (or a gavagai) is said to be hungry, he can be sure that 'gavagai' does not mean rabbithood or undetached rabbit part. A defender of Quine might respond that the native utterance might signify not 'This rabbit is hungry', but 'This undetached rabbit part is a part of a hungry animal.' It might—if it possessed the appropriate grammatical multiplicity. But if an expression might signify 'is a part of an F animal', then to be sure, it cannot, in another utterance, do service as the copula if such there be. An expression signifying a rabbit-stage can only be interchangeable in translation with one signifying a rabbit if the grammar of phase-sortals is indistinguishable from the grammar of their corresponding sortals—which it is patently not. The supposition that all grammatical categories are permutable in different translations compatible with making sense rests on no argument but only on Quine's bold assertion. One would like to see translations of a page of humdrum English prose into German in accord with such divergent 'translation manuals' which severally preserved intelligibility.

Finally, the use of language is embedded in the stream of human life. It is a part of the endlessly differentiated pattern of human behaviour. The thought that there can be two or more equally acceptable translation manuals for a given language, and no fact of the matter in choosing between them, rested for Quine foursquare on the translatability (in terms of stimulus synonymy) of observation sentences (on the basis of identification of assent and dissent), the alleged indeterminacy of translation of standing sentences, the underdetermination of theory by evidence, and the inscrutability of reference of terms in general. But the thought that the network of standing sentences is capable of divergent interpretation consistent with translation of observation sentences (including (*pace* Quine) expressive utterances and sentences containing indexicals), *and consistent with the intelligibility of the associated human behaviour* is misconceived. Learning a language is no more learning a theory than is learning any other normative practice, for example learning how to play a game. There are behavioural criteria for understanding words, i.e. for having mastered the techniques of their use, no less than there are behavioural criteria for understanding the moves of pieces in a game. It is striking (and no coincidence) that attempts by Quine's followers to defend his theses of indeterminacy of translation and inscrutability of reference take as examples not the natural languages of mankind, but one fragment or another of mathematics or logic which admits of sundry permutations or alternative projections into some other part thereof without affecting truth. It is evident that such examples do not exemplify radical translation at all, let alone indeterminacy of translation.

If understanding is not a matter of translating, and if 'homophonic translation' is no translation, then to be sure, radical translation does not begin at home. It is, trivially, understanding that begins at home. Does one not understand one's own utterances? Is there no fact of the matter about what one is referring to when one uses words? A person normally knows what he means when he says 'N.N. is in the next room', knows whom he means, and can say whom he means if asked. Quine argues that the question of what our words refer to is meaningless save in relation to 'a background language' (OR 49). From Wittgenstein's perspective, taken one way, this is right; taken another, it is wrong. 'The meaning of a word is *its use in the language*' (PI §43), and a word *has* a meaning only as part of a language. Moreover, 'It is only in a language that I can mean something by something' (PI, p.18n.). To put this hyperbolically, as

Wittgenstein does (*PI* §199), ‘To understand a sentence means to understand a language.’ For the sentence is the minimal unit for making a move in a language-game. It is comparable to a move in chess—and a move is only a move in the context of a game. Hence one might say that what a word refers to is a question that can only be raised and answered in relation to its use in a sentence of the language to which it belongs. But this does not make the question of its reference relative—as the question of the reference of an indexical in a sentence is relative to the context of its utterance. What Quine means, however, is quite different from this, and has no such justification. It is false that ‘If questions of reference of the sort we are considering make sense only relative to a background language, then evidently questions of reference for the background language make sense in turn only relative to a further background language’ (*OR* 49). For all questions of reference arise only, and receive their answer only, with respect to the use of words in sentences of a language. It is misconceived to suppose that a metalinguistic question such as ‘What does “rabbit” (as employed in an antecedent utterance) mean?’ involves regress to a different language from the (English) utterance in which the word ‘rabbit’ occurred. And it is equally misconceived to suppose that one cannot ask for an explanation of what a word signifies save by metalinguistic ascent—‘What is a rabbit?’ will do just as well. The supposition that there is a regress of different languages is as gratuitous as the relativity thesis. Quine’s manner of extricating himself from the absurdity is ‘That in practice we end the regress of background languages, in discussions of reference, by acquiescing in our mother tongue and taking its words at face value’ (*ibid.*). The truth of the matter is that there is no regress, and the question of inscrutability of reference does not arise, precisely because we use our mother tongue, having mastered the technique of its use, and we normally take its words ‘at face value’, since they are not normally used metaphorically or in a secondary sense, and we know, and can explain, what they mean. But that is not a conclusion Quine would wish to arrive at, or one to which his argument entitles him.

We began this discussion with a survey of apparent convergences between Quine and Wittgenstein. Closer scrutiny, however, reveals the two philosophers to be as proximate, and as distant, as members of the far Right and the far Left in the horseshoe-shaped French National Assembly—one must travel through the whole spectrum

of opinion to reach the one viewpoint from the other. The one is (to use Isaiah Berlin's Archilochean typology) an exemplary 'hedgehog', a methodological monist, a defender of scientism in philosophy, a naturalizing epistemologist and propounder of an ontology guided by physics and canonical notation. The other is a paradigmatic 'fox', a methodological pluralist appalled at the misguided idea that the only forms of knowledge and understanding are scientific, who viewed scientific method in philosophy as the source of misconceived metaphysics, who socialized epistemology without naturalizing it, and held that the canonical notation of mathematical logic had completely deformed the thinking of philosophers.

If Quine is right, then philosophy is an extension of science, and philosophical understanding is homogeneous with understanding the phenomena of nature as well as of mathematics and logic. It is part of the vast man-made web of belief with which we confront experience, differing from the rest only in its generality. The philosophical enterprise is part of the human endeavour to achieve knowledge of the world. If Wittgenstein is right, then philosophy is *sui generis*. It is a quest for understanding, not for knowledge. What it aims to understand is the structure of our familiar conceptual scheme, which is presupposed by all our knowledge of the world, and is partly constituted by logic and mathematics, which are a priori, and fundamentally distinct from science. It attains such understanding not by theory construction, hypotheses and explanation, but by description of the way we use words, and such arrangement of the rules for the use of expressions that enables us to see where entanglement in these rules leads us astray and generates the idiosyncratic problems of philosophy, which are categorially distinct from the cognitive problems of science. The resolution of these problems does not add to the sum of human knowledge about the world. What it produces is understanding, clarity about our own thought, and, to use a phrase from the *Tractatus* (*TLP* 4.1213) made famous by Quine, a correct logical point of view. Then we can see the world, and ourselves, and our place within the world aright (see *TLP* 6.54).

NOTES

*This chapter is a much-shortened version of chapter 7 of my forthcoming book *Wittgenstein's Place in Twentieth Century Analytical Philosophy* (Blackwell, Oxford). I am indebted to Dr H.-J. Glock, Professor O.Hanfling, Dr J.Hyman, Dr D.Isaacson and Dr Anat Matar for their comments on that longer version.

- 1 In fact the *Tractates* argued that logic is transcendental, that all the truths of logic flow from the *essential* (bipolar) nature of the proposition as such, that is, reflect the logical properties of the world, and that mathematical propositions are, technically speaking, nonsense.
- 2 I shall not be concerned here with the *Tractatus*.
- 3 Quine's references to Wittgenstein are few and sometimes, as here, betray little understanding. Wittgenstein did not suggest, as Dewey did, that meaning is a property of behaviour (see below, pp. 11–16). Dewey's conception of meaning was behaviouristic, 'use' being construed as behavioural effect. Congenial though this is to Quine, it is far removed from Wittgenstein's normative conception of use. Elsewhere (OR 27) Quine suggests that Dewey's claim that language presupposes the existence of an organized social group from which speakers have acquired their speech habits is a rejection of the possibility of a private language in Wittgenstein's sense. This is mistaken, since Wittgenstein is not concerned with the social genesis of a language. A private language in his sense (a language the individual words of which refer to the speaker's immediate private sensations, which can be known only by him) might, if it were possible at all, be thought to be acquired only in social interaction—as Augustine intimated (*PI* §1). Similarly, Quine suggests that Wittgenstein's conception of philosophy as dissolving philosophical problems by showing that there were none really there is satisfied by Carnapian explication (*WO* 260). This is the converse of the truth. If one wants to know how birds can fly, it avails little to be told how to build an aeroplane (I owe the simile to Avishai Margalit). Carnapian explication does not dissolve philosophical problems, but sidesteps them by banishing the words that give rise to them. Wittgenstein, by contrast, put those problem generating words and the contexts in which they generate problems under the microscope. He aimed to dissolve the philosophical problems by showing how entanglement in the grammar of those very words that a Carnapian explication banishes gives rise to the philosophical problem that bewilders us, and his solvent is the description of the use of the problematic expression, of its place in the grammatical network of related expressions, and of its grammatical differences from superficially similar expressions.
- 4 Ramsey's account is not disquotational. In his view, truth is ascribed primarily to propositions, not to sentences. Hence he claims not that '*p*' is true'=*p*', but rather that 'It is true that *p*'=*p*' ('Facts and Propositions', repr. in D.H.Mellor (ed.), *F.P.Ramsey: Foundations—Essays in Philosophy, Logic, Mathematics and Economics* (Routledge and Kegan Paul, London, 1978), pp. 44f.). Wittgenstein, although he asserted in the *Investigations* that "*p* is true"=*p*' (*PI* §136), had argued in the *Grammar* that 'the quotation marks in the sentence "*p* is true" are simply superfluous', since "*p* is true" can only be understood if one understands the sign '*p*' as a prepositional sign, not if '*p*' is simply the name of a particular ink mark (*PG* 124). Like Ramsey, he had no qualms about prepositional quantification, agreeing with him that 'What he says is true'='Things are as he says' (*PG* 123).

- 5 The other is the maxim of simplicity of theory.
- 6 A statement of the form 'Whenever p , q ', which is compounded of observation sentences. It specifies a generality to the effect that the circumstances described in the one observation sentence are invariably accompanied by those described in the other (*PTb* 10).
- 7 W.V.Quine, 'Homage to Carnap', in R.Creath (ed.), *Dear Carnap, Dear Van* (University of California Press, Berkeley, 1990), p. 464.
- 8 This is rather surprising, since most philosophers who cast propositions in the role of truth-bearers do not make the mistake of characterizing them as meanings of sentences. What is true (or false) is also what is believed, assumed or claimed to be true, but it makes no sense to believe, assume or claim the meaning of a sentence to be true. What is believed may be implausible, exaggerated or inaccurate, but the meaning of a sentence cannot be any of these. (See A.R.White, *Truth* (Macmillan, London, 1970), ch. 1.)
- 9 But it is noteworthy that he stretched Duhem's holism far beyond anything which Duhem would have countenanced.
- 10 'The test applies, at bottom', Carnap wrote, 'not to a single hypothesis but to the whole of system of physics as a system of hypotheses (Duhem, Poincaré)' (*The Logical Syntax of Language* (Routledge and Kegan Paul, London, 1937), p. 318). Daniel Isaacson has pointed out that analyticity, according to Carnap, is relative to pragmatic constraints on theory. We can relinquish any kind of statement in the face of experience, but to relinquish L-valid truths is different from relinquishing empirical truths. The former, but not the latter, involve change of meaning. The one involves admitting falsehoods, the other change of concepts (D.Isaacson, 'Carnap, Quine and Logical Truth', in D.Bell and W.Vossenkuhl (eds), *Subjectivity and Science* (Akademie Verlag, Berlin, 1993), pp. 114–16.
- 11 Even in its pre-*Tractatus*, Russellian phase, analytic philosophy, though construed as cognitive and continuous with science, was committed to, indeed limited to, reductive and constructive analysis—and this too is repudiated by Quine.
- 12 For more detailed discussion of Wittgenstein's objections to behaviourist accounts of meaning, see P.M.S.Hacker, *Wittgenstein: Meaning and Mind, Volume 3 of An Analytical Commentary on the Philosophical Investigations* (Blackwell, Oxford, 1990), in an essay entitled 'Behaviour and Behaviourism', §§2–3, from which the above remarks are derived.
- 13 See S.Shanker, 'The Conflict between Wittgenstein and Quine on the Nature of Language and Cognition and its Implications for Constraint Theory', in this volume, pp. 212–51.
- 14 If it were, then, *inter alia*, there would be no deferring to experts to explain the use of technical and quasi-technical terms (appeal to socio-linguistic surveys would suffice).
- 15 For detailed exposition of Wittgenstein's normative (rule-governed) conception of language, see G.P.Baker and P.M.S.Hacker, *Wittgenstein: Understanding and Meaning, Volume 1 of an Analytical Commentary on the Philosophical Investigations* (Blackwell, Oxford, 1980), *passim* and *Wittgenstein: Rules, Grammar and Necessity, Volume 2 of an*

- Analytical Commentary on the Philosophical Investigations* (Blackwell, Oxford, 1985), *passim*. For criticism of theoretical linguists' failure to apprehend correctly the normative character of language and speech, see G.P.Baker and P.M.S.Hacker, *Language, Sense and Nonsense* (Blackwell, Oxford, 1984), chs 7–10. For criticism of Kripke's reduction of rule-following practices of language use to social regularities of behaviour, see G.P.Baker and P.M.S.Hacker, *Scepticism, Rules and Language* (Blackwell, Oxford, 1984), ch. 2.
- 16 For lucid criticism of Quine's view that speaking a language is not a normative practice and that invoking rules in philosophical elucidation of language and its features is explanatorily idle, see H.-J.Glock, 'Wittgenstein vs. Quine on Logical Necessity', in S.Teghrarian, *Wittgenstein and Contemporary Philosophy* (Thoemmes Press, Bristol, 1994), pp. 211–20.
 - 17 Quine makes room for ostensive instruction, but interprets it causally rather than normatively, thus failing to distinguish ostensive training from ostensive teaching, ostensive definition and explanation of meaning (see below, p. 23).
 - 18 It should be noted that not everything that is not normative (rule-governed) is conditioning. Innumerable purposive activities, skills and techniques, for example how to whistle tunes or tell jokes, are neither normative or theory-construction nor a matter of stimulus/response conditioning. They are typically open-ended and 'plastic'—adaptable to indefinitely many circumstances.
 - 19 Quine's concept of stimulus meaning is allegedly an ersatz behaviourist concept of meaning, trimmed to the demands of rigorous science. The affirmative stimulus meaning of an observation sentence (for a speaker) is the class of all stimulations that would prompt his assent—stimulations taken as the impact of radiation, etc. on his sense receptors. This, he claims, 'is a reasonable notion of meaning' for such observation sentences as 'Rabbit' or 'The tide is out' (WO 44). But it is a notion of meaning that has broken all connection with what we understand by 'meaning'. This will not disturb Quine, but may give pause to those who are less cavalier about our workaday concepts. (1) It violates the grammar of 'meaning': for some stimulus meanings are larger than others (since some classes are larger than others), some stimulus meanings include members which are exclusively sound waves (for example the stimulus meaning of 'Noise!'), and some stimulus meanings consist exclusively of painful stimuli (for example 'Hurts!', 'Stings!', 'Burns!'). But the meaning of a oneword sentence cannot intelligibly be said to be larger than that of another, the meaning of the exclamation 'Noise!' (or of the sentence 'There is a noise') cannot be said to include sound waves among its members, and the meaning of 'Hurts!' or 'Stings!' does not include members that are painful or pleasurable stimuli—since the meaning of an expression is not a class of anything. On the other hand, the meanings of some sentences are hard to grasp, difficult to explain, impossible to render precisely in French—but classes of stimulations that prompt assent are neither easy nor difficult to grasp, cannot—in the relevant sense—be explained (since there is nothing in the semantic

dimension to explain), and there is no rendering classes of stimuli in French. (2) It provides no standard by reference to which the use of an expression can be said to be correct or incorrect. The class of stimuli (construed in terms of surface irritations) that prompt one's assent to 'Gavagai', let alone those that prompt another's assent, is not only inaccessible (since, scientists apart, few speakers know anything about the character of surface irritations and their description) but also no standard of correct use. (3) It bears no connection to understanding an expression. For to understand an expression is to have mastered the technique of its use, and that is a normative skill, not a conditioned response.

- If this is correct, it is far from obvious why Quine's notion should be characterized as a concept of *meaning* (even an ersatz one) at all. Saccharine is ersatz sugar, but something that is neither sweet nor water soluble is not.
- 20 H.P.Grice and P.F.Strawson, 'In Defense of a Dogma', repr. in H.P. Grice, *Studies in the Way of Words* (Harvard University Press, Cambridge, Mass, and London, 1989), p. 207.
 - 21 For more extensive discussion, see G.P.Baker and P.M.S.Hacker, *Language, Sense and Nonsense* (Blackwell, Oxford, 1984), pp. 211–18.
 - 22 For a detailed discussion of Wittgenstein's strategy in this matter, see G.P.Baker and P.M.S.Hacker, *Wittgenstein: Rules, Grammar and Necessity, Volume 2 of an Analytical Commentary on the Philosophical Investigations* (Blackwell, Oxford, 1985), in the chapter entitled 'Grammar and Necessity', §4, 'The Psychology of the A Priori'.
 - 23 For detailed discussion, see G.P.Baker and P.M.S.Hacker, *Wittgenstein: Understanding and Meaning, Volume 1 of an Analytical Commentary on the Philosophical Investigations* (Blackwell, Oxford, 1980), in a chapter entitled 'Ostensive Definition and its Ramifications'.
 - 24 Yet it is noteworthy that one can ostensibly define directions of the compass. And one can ostensibly define smells and sounds by reference to samples, even though one does not, strictly speaking, point at an object (see 'Ostensive Definition and its Ramifications', §2).
 - 25 Even the Law of Non-Contradiction has the same status as all else. It is just that 'without it we would be left making mutually contrary predictions indiscriminately, thus scoring a poor ratio of successes over failures' (see Quine's 'Comment on Quinton', in *POQ* 309).
 - 26 See A.M.Quinton, *The Nature of Things* (Routledge and Kegan Paul, London, 1973), pp. 216f., and his 'Doing without Meaning', in R.Barrett and R.Gibson (eds), *Perspectives on Quine* (Blackwell, Oxford, 1990) p. 307, and Glock, 'Wittgenstein vs. Quine on Logical Necessity', pp. 210–11.
 - 27 For detailed argument, see G.P.Baker and P.M.S.Hacker, *Scepticism, Rules and Language* (Blackwell, Oxford, 1984), pp. 92f.
 - 28 It is curious that Quine should think the input 'meagre'. What would it be like if it were richer? Even more 'irradiations', incessant noise and flashing of lights? In *Word and Object*, he wrote:

We have been reflecting in a general way on how surface irritations generate, through language, one's knowledge of the

world.... The voluminous and intricately structured talk that comes out bears little evident correspondence to the past and present barrage

of non-verbal stimulation; yet it is to such stimulation that we must look for whatever empirical content there must be.

(WO 26)

This is equally curious. If the 'input' is to be described in terms of surface irritations, then the 'output' should be described in terms of bare physical movements and the generation of sound waves. If the output is to be described in terms of structured talk (and human action), then the input should be described in terms of what is perceived, the visible and audible, etc. environment, including the voluminous and intricately structured talk of our fellow human beings.

- 29 Assent to a sentence, according to Quine, is passing a *verdict* on its truth, which may be *mistaken*. The subject is held to *believe* what is uttered (UPM 48). The observation sentences which are the 'entering wedge in the learning of language' are vehicles of scientific *evidence*, verbalizing the predictions which *check* scientific theories (PTb 4f.). Consequently the concept of assent which he deploys is intimately interwoven with epistemic and intensional concepts. Invoking the principle of charity as a pragmatic guideline for translation makes this evident.
- 30 The primacy of behaviour viewed intentionalistically is a *leitmotif* of G. H. von Wright's extensive writings on the explanation of human action, from *Explanation and Understanding* (Routledge and Kegan Paul, London, 1971) onwards.
- 31 For detailed discussion, see G.P.Baker and P.M.S.Hacker, *Language, Sense and Nonsense* (Blackwell, Oxford, 1984), ch. 8.
- 32 And one regarding which it would be difficult to argue, given the associated behaviour, that there is no fact of the matter about the translation of the term, no less than about the one-word sentence.

QUINE AND WITTGENSTEIN

The odd couple

Burton Dreben

I shall try to be precise, but not, I hope, at the risk of clarity. Thus rigour will sometimes be consciously compromised in favour of perspicuity.¹

There is a string, Σ , consisting of seven signs or typographic shapes, an expression, a linguistic form, that has nine occurrences in Quine's *Word and Object*. The first occurrence of a sign in Σ is an occurrence of double-yu, the twenty-third letter of the English alphabet; the second occurrence of a sign in Σ is an occurrence of eye, the ninth letter of the English alphabet; the third and fourth occurrences of signs in Σ are two occurrences of tee, the twentieth letter of the English alphabet; the fifth occurrence of a sign in Σ is an occurrence of gee, the seventh letter of the English alphabet; the sixth occurrence of a sign in Σ is an occurrence of ee, the fifth letter of the English alphabet; the seventh occurrence of a sign in Σ is an occurrence of en, the fourteenth letter of the English alphabet; the eighth occurrence of a sign in Σ is an occurrence of ess, the nineteenth letter of the English alphabet; the ninth occurrence of a sign in Σ is the third occurrence of tee; the tenth occurrence of a sign in Σ is the second occurrence of ee; the eleventh occurrence of a sign in Σ is the second occurrence of eye; and the twelfth occurrence of a sign in Σ is the second occurrence of en. Thus, although only seven signs, seven letters, occur in Σ , there are twelve occurrences of these signs in Σ . Each of eye, ee, and en occurs twice in Σ , and tee occurs thrice. In brief, Σ spelt out is

double-yu*eye*tee*tee*gee*ee*en*ess*tee*ee*eye*en,

where the asterisk '*' indicates concatenation of expressions, in this case letters. (To spell a string of signs, to spell a linguistic form, is to generate from the names of the signs a name of the string by

intercalating a sign of concatenation.² At times concatenation is indicated by juxtaposition alone.) Further perspicuity is gained if we now adopt the common practice of forming a name of an expression, whether the expression is a single sign or a string of signs, by quoting the expression, that is, 'by putting the named expression in single quotation marks; the whole, called a *quotation*, denotes its interior.'³ (Thus Juliet's question, 'What's *in* a name?') Then? is 'w*'i*'t*'t*'g*'e*'n*'s*'t*'e*'i*'n', whence 'wittgenstein'(or is it 'Wittgenstein?').

I

Simple questions—not dissimilar to those posed by Russell in Peking—leap at once to the lips. Just what sort of thing is this relation N, called 'name of in the preceding paragraph, that holds between the quotation of a string of signs and the string, and also holds between 'double-yu' and 'w', 'eye' and 'i', 'tee' and 't', 'gee' and 'g', 'ee' and 'e', 'en' and 'n', and 'ess' and 's' Σ (That double-yu='w', eye='i', tee='t', gee='g', ee='e', en='n', and ess='s' needs no saying.⁴) Indeed, does the relation N hold between Σ , that is, the string, the linguistic form, 'wittgenstein' and a princely patron of Beethoven, or between Σ and a certain controversial schoolteacher in Lower Austria in the 1920s, or between Σ and the author of the epigram 'When Mr. N.N. dies one says the bearer of the name dies, not the meaning dies' Σ Clearly, even if the relation N does hold between Σ and (say) a certain Austrian schoolteacher, surely we would be fully justified in finding it highly implausible that it does so because Σ is the result of enclosing that person in single quotes. A closer investigation of the relation N and of the string Σ is mandatory.

We begin with Σ , and in the words of the author of 'It Tastes Like Chicken',

We have first of all to ask, what is an occurrence? what kind of thing e.g. is the third occurrence of an expression [tee] in [the] expression [Σ], as distinct from the mere expression or typographic shape [tee] itself Σ ⁵

That is, 'Just what sort of thing, then, is an occurrence'⁶ of a letter in the linguistic form 'wittgenstein'⁷ A suggestion⁸ of our author leads us to construe it as the initial string, initial segment, of 'wittgenstein' up to and including the letter. (Let me hasten to say to readers of

mine—few in number, I'm sure—not familiar with the finer points of American post-war short fiction, and hence requiring, as did George IV in earlier but somewhat analogous circumstances, help in identification, that our author is easily identified as someone famed not only as the inveterate albeit frustrated observer of the doings of Bernard J. Ortcutt, the bane of *de re* modality, but even more as someone inveterately albeit reluctantly committed to the existence of abstract objects. I trust that at least here the old bogey whether description fixes reference holds no terror.⁹) Thus, for example, the first of the three occurrences of tee is the linguistic form 'wit', the second is the linguistic form 'witt', and the third is the linguistic form 'wittgenst'. This construal, this explication, does succeed in distinguishing each occurrence of a letter in 'wittgenstein' from all other occurrences of the same letter and from all occurrences of any other letter. True, an air of artificiality accompanies the explication, and there are apparent anomalies. The second occurrence of en in 'wittgenstein' is 'wittgenstein' itself, and the first—and only—occurrence of double-yu is double-yu itself, i.e. 'w'. Does the artificiality matter? Do the anomalies matter? The questions are empty until we specify matter for what. The fundamental (only?) context in which we systematically talk about occurrences of expressions as opposed to expressions is when we count the occurrences differently from the expressions, as I did in the first paragraph above. To insist that a string of signs can never be an occurrence of a sign ending the string or that the initial member of a string can never be an occurrence of itself is to put demands on the usage of the expression 'occurrence of a sign' that go, in the diagnostic words of *Pursuit of Truth*, 'beyond where linguistic usage has been crystallized by use'.¹⁰ Such insistence graphically illustrates the endemic philosophical vice of asserting in the guise of claims to knowledge—in the present case knowledge about the putative nature of certain abstract objects—what are at best strictures on the usage of an expression that harden its fluidity. More important, such insistence graphically demonstrates (exhibits) a deep misconstrual of the nature of the investigation upon which we are embarked, for it deeply misconstrues, for example, the question 'What is an occurrence?' (as asked by us above in concert with the author of 'It Tastes Like Chicken'), since it deeply misconstrues what would constitute an answer by deeply misconstruing the conditions that any satisfactory answer must satisfy (the conditions of so-called 'material adequacy'). It is to deeply

misconstrue what it is (for us) to construe. Less cryptically, it is to miss the heart of what a (the) pre-eminent exponent of ‘meaning is use’¹¹—no bearer of Σ —says about the nature of philosophical explication, philosophical analysis:

[In] every case of explication: *explication is elimination*. We have, to begin with, an expression that is somehow troublesome. It behaves partly like a term but not enough so, or it is vague in ways that bother us, or it puts kinks in a theory or encourages one or another confusion. But also it serves certain purposes that are not to be abandoned. Then we find a way of accomplishing those same purposes through other channels, using other and less troublesome forms of expression. The old perplexities are resolved.

According to an influential doctrine of Wittgenstein’s, the task of philosophy is not to solve problems but to dissolve them by showing that there were really none there. This doctrine has its limitations, but it aptly fits explication. For when explication banishes a problem it does so by showing it to be in an important sense unreal; viz., in the sense of proceeding only from needless usages.¹²

(The string just quoted contains the sixth occurrence of Σ in *Word and Object*.)

More analysis of analysis is given thus:

This construction [namely Wiener’s definition of the ordered pair $\langle x, y \rangle$ as the unordered class $\{\{x\}, \{y, \emptyset\}\}$, where \emptyset is the empty class] is paradigmatic of what we are most typically up to when in a philosophical spirit we offer an ‘analysis’ or ‘explication’ of some hitherto inadequately formulated ‘idea’ or expression. We do not claim synonymy. We do not claim to make clear and explicit what the users of the unclear expression had unconsciously in mind all along. We do not expose hidden meanings, as the words ‘analysis’ and ‘explication’ would suggest; we supply lacks. We fix on the particular functions of the unclear expression that make it worth troubling about, and then devise a substitute, clear and couched in terms to our liking, that fills those functions. Beyond those conditions of partial agreement, dictated by our interests and purposes... we are free to allow the explicans all manner of novel connotations never associated with the

explicandum.... Any air of paradox comes only of supposing that there is a unique right analysis.... It is ironical that those philosophers most influenced by Wittgenstein are largely the ones who most deplore the explications just enumerated [namely Russell's explication of singular descriptions; Frege's explication of the indicative conditional; Frege's explication of 'nothing', 'everything' and 'something']. In steadfast laymanship they deplore them as departures from ordinary usage, failing to appreciate that it is precisely by showing how to circumvent the problematic parts of ordinary usage that we show the problems to be purely verbal.¹³

(The string just quoted contains the seventh occurrence of Σ in *Word and Object*.)

Undoubtedly, the discerning reader having performed an act of discernment will discern¹⁴ that no mention of instance, no use of the string 'instance', has yet occurred. Mention has been made only of occurrences of signs in strings of signs, thus of occurrences of universals in universals, those entities that so beset and bedevilled the Middle Ages. For signs, that is, typographic shapes, and all strings thereof—Peirce's types—are the very exemplars of abstract objects, of universals. And in Quine's book occurrences of universals are themselves universals.¹⁵ On the other hand, instances of universals, instances of types—Peirce's tokens—are concrete objects, particulars, denizens of space-time. To quote Quine, 'Tokens occur in tokens, types in types.'¹⁶ Counting is again the key. When we ask 'How many books has Quine written?'—twenty—we count differently from the way we (and the Internal Revenue Service) count when we ask 'How many books has Quine sold this year?'—plenty. In the first case we are using the string 'book', a so-called word, to be true of abstract objects, universals, types; in the second to be true of concrete objects, instances, tokens. These 'two contrasting senses in which we use'¹⁷ the string 'book' are paradigmatic of the two contrasting senses in which we use the string 'letter', the string 'word', the string 'sentence' and the string 'string'. Each of these strings is itself an abstract object, a universal, a type that through two different uses has two different senses, two different meanings: in one it is true of, i.e. it denotes, abstract objects, universals, types; in the other it is true of concrete objects, instances, tokens. (A delicate question—one that has reverberated through the centuries, three in number—is whether the strings 'There is' and 'true' each has more than one use, hence more than one sense or meaning. Quine,

staunch naturalist though he be, has, we all know, sided with Duns Scotus against Carnap (and Russell) in insisting on the ‘univocity of being’.¹⁸ A second question, less delicate: how does one use a string? If one is Quine by uttering or inscribing an instance of the string. More anon in Section II below.) Thus Σ , occurring nine times in *Word and Object*, has nine instances $\sigma_1, \sigma_2, \sigma_3, \sigma_4, \sigma_5, \sigma_6, \sigma_7, \sigma_8, \sigma_9$, nine tokens, nine inscriptions, occurring in the unique concrete object *WO* that is my token, my so-called copy, of *Word and Object*. (Presumably, Σ is also inscribed nine times in your copy, which is not, of course, *WO*. Do I know this by induction?) Each such inscription σ_i is a concrete object that occurs once in *WO* and consists of twelve inscriptions, twelve distinct concrete objects, twelve dribbles of ink, each of which is an instance of a sign, of a letter, occurring in Σ . Thus, for example, the third, fourth, and ninth components of σ_3 are each distinct instances of tee and are all distinct from the third, fourth, and ninth components of σ_5 , all of which are also distinct instances of tee. (Tell a typesetter that these distinctions do not matter, especially when correcting page proofs!) And what, for example, is an instance in σ_3 of the first occurrence of tee in Σ , i.e., what is an instance of the type ‘wit’? It is an inscription consisting of an instance of double-yu followed by an instance of eye followed by an instance of tee. More insight ensues, if we now look at σ_3 (rigour is being consciously compromised here;¹⁹ strictly, each reader, discerning or not, has to look at the correlate of σ_3 in his or her own instance of *Word and Object*). We see that a token *t* of the type double-yu *eye*tee*aitch that is, the type ‘with’, immediately precedes σ_3 . Hence, we see that not only an instance of the type tee occurs in the token *t*, but also an instance of the type, first occurrence of tee in Σ , occurs in the token *t*. (For ease of reference, I quote the local contexts of the third and fifth occurrences of Σ —that of the third also includes the second—in *Word and Object*:

Theoretical sentences such as ‘Neutrinos lack mass’, or the law of entropy, or the constancy of the speed of light, are at the other extreme [from observation sentences]. It is of such sentences above all that Wittgenstein’s dictum holds true: ‘Understanding a sentence means understanding a language’ (BB 5). (Perhaps the doctrine of indeterminacy of translation will have little air of paradox for readers familiar with Wittgenstein’s latter-day remarks on meaning.)²⁰

There are philosophers who stoutly maintain that ‘true’ said of logical or mathematical laws and ‘true’ said of weather

predictions or suspects' confessions are two usages of an ambiguous term 'true'. There are philosophers who stoutly maintain that 'exists' said of numbers, classes, and the like and 'exists' said of material objects are two usages of an ambiguous term 'exists'. What mainly baffles me is the stoutness of their maintenance. What can they possibly count as evidence? Why not view 'true' as unambiguous but very general, and recognize the difference between true logical laws and true confessions as a difference merely between logical laws and confessions? And correspondingly for existence? (For examples of what I am protesting see Ryle, *Concept of Mind*, p. 23, and Russell, *Problems of Philosophy*, Ch. IX. For a critical examination of the matter see White, *Toward Reunion in Philosophy*, Ch. IV. See further Wittgenstein, *Blue and Brown Books*, p. 58 and Richman, 'Ambiguity and Intuition' [*Mind* 68 (1959), 87–92].)²¹

The impatient reader whose patience by now has been tried beyond measure impatiently mutters (nay growls):

Duns Scotus is aptly called. Truly a dunce. Never have I been exposed to anything so 'monumentally redundant, a monument to everything multiplicacious that William of Ockham so rightly deplored'.²² Not even the most fastidious typesetter needs all these distinctions. Who could possibly think they play a role in our gaining knowledge of the relation N, the relation called 'name of? Or that they play a role in telling us whether N carries ? to anything?

Who indeed? Try the first inscriber (or utterer) of:

explicit controversy is almost always fruitless in philosophy, owing to the fact that no two philosophers ever understand one another.²³

II

The opening paragraph of chapter X, entitled 'Words and Meaning', of Russell's *The Analysis of Mind*²⁴ reads thus:

The problem with which we shall be concerned in this lecture is the problem of determining what is the relation called 'meaning'. The word 'Napoleon', we say, 'means' a certain person. In saying this, we are asserting a relation between the

word 'Napoleon' and the person so designated. It is this relation that we must now investigate.²⁵

The second paragraph is even more instructive, both in the distinctions it draws and in those it doesn't.

Let us first consider what sort of object a word is when considered simply as a *physical* thing, apart from its meaning. To begin with, there are many instances of a word, namely all the different occasions when it is employed. Thus a word is not something unique and particular, but a *set* of occurrences.... From the point of view of the speaker, a single instance of the use of a word consists of a certain *set* of movements in the throat and mouth, combined with breath. From the point of view of the hearer, a single instance of the use of a word consists of a certain series of sounds, each being approximately represented by a single letter in writing, though in practice a letter may represent several sounds, or several letters may represent one sound. *The connection between the spoken word and the word as it reaches the hearer is causal...*we may say that a single instance of the spoken word consists of a series of movements, and the word consists of a whole *set* of such series, each member of the set being very similar to each other member. That is to say, any two instances of the word 'Napoleon' are very similar, and each instance consists of a series of movements in the mouth [my italics].²⁶

In 1959, almost forty years later, Russell comments on these paragraphs in *My Philosophical Development*.

It was in [the spring of] 1918²⁷...that I first became interested in the definition of 'meaning' and in the relation of language to fact. *Until then I had regarded language as 'transparent' and had never examined what makes its relation to the non-linguistic world.* The first result of my thinking on this subject appeared in Lecture X of *The Analysis of Mind*.

The first thing that struck me was exceedingly obvious but seemed to have been unduly ignored by all previous writers on the subject. This was that a word is a universal of which the instances are the occasions on which an instance of the word is spoken or heard or written or read. Those who philosophised about universals realised that DOG is a universal because there are many dogs, but they failed to notice that the word 'dog' is a

universal in exactly the same sense. Those who denied universals always spoke as though there were one word which applied to all the instances. This is quite contrary to the fact. There are innumerable dogs and innumerable instances of the word 'dog'. Each of the instances of the word has a certain relation to each of the instances of the quadruped. But the word itself has only that metaphysical status (whatever this may be) that belongs to the Platonic DOG laid up in heaven. *This fact is important since it makes words much less different than they had been thought to be from the objects that they 'mean'*. It also becomes obvious that 'meaning' must be a relation between an individual instance of a word and an individual instance of what the word means. That is to say, if you want to explain the meaning of the word 'dog' you have to examine particular utterances of this word and consider how they are related to particular members of the canine species [my italics].²⁸

The impatient reader roars in protest:

How dare Russell say in 1959 that not until the spring of 1918 did he become interested in 'meaning', in the relation of language to fact! Had he forgotten 'On Denoting'(1905), let alone the numerous occurrences of 'meaning' that span the fifteen years from *The Principles of Mathematics* (1903)—Appendix A even examines critically Frege's 'Sinn und Bedeutung'—through *The Philosophy of Logical Atomism* (lectures given 22 January 1918–12 March 1918)?

The discerning reader discerningly sniffs, 'A little learning is a dangerous thing.' (Mr Pope's sentiment exactly, but still full of discernment.) The 87-year-old Russell was not inaccurate, just a bit elliptical. Let us look at three key passages, the first in *Principles*, the second nine years later in *The Problems of Philosophy*, and the third in *The Philosophy of Logical Atomism* six years after *Problems*.

To have meaning, it seems to me, is a notion confusedly compounded of logical and psychological elements. *Words all have meaning, in the simple sense that they are symbols which stand for something other than themselves*. But a proposition, unless it happens to be linguistic, does not itself contain words: it contains the entities indicated by words. *Thus meaning, in the sense in which words have meaning, is irrelevant to logic* [my italics].²⁹

In addition to our acquaintance with particular existing things, we also have acquaintance with what we shall call *universal*, that is to say, general ideas, such as *whiteness*, *diversity*, *brotherhood*, and so on. *Every complete sentence must contain at least one word which stands for a universal, since all verbs have a meaning which is universal* [my italic]. . . . Awareness of universals is called *conceiving*, and a universal of which we are aware is called a *concept*.³⁰

When I speak of a symbol I simply mean something that ‘means’ something else, and as to *what I mean by ‘meaning’ I am not prepared to tell you*. I will in the course of time enumerate a strictly infinite number of different things that ‘meaning’ may mean but I shall not consider that I have exhausted the discussion by doing that. I think that *the notion of meaning is always more or less psychological, and that it is not possible to get a pure logical theory of meaning, nor therefore of symbolism* [my italics].³¹

These three passages (and the two paragraphs from *The Analysis of Mind*) coupled with the two paragraphs quoted earlier from *My Philosophical Development* that so exercised our Impatient Reader signal that the major shift which Russell is highlighting in those paragraphs is a major shift in attitude towards the string ‘psychology’ and towards the string ‘language’. By late spring of 1918, Knowledge by Acquaintance together with The Knowing Subject—the very core of what had been (Analytic) Epistemology for Russell—disappear. (By the winter of 1917, Logic had already ceased to be substantial; it had become ‘tautological’, no longer synthetic a priori, owing to conversation and correspondence with an extraordinarily wealthy young Austrian in 1913.³²) For the first time the nature of language *per se* is on centre stage, and Russell seeks a naturalist, indeed physicalist and broadly behaviourist account of it and of all other so-called mental activities.³³ In his reply to F.C.Schiller (and H.H.Joachim) in the 1920 Symposium ‘The Meaning of “Meaning”’, Russell asserts:

It is perhaps fair to call (say) Hegel an intellectualist, since he believed in an affinity between the cosmic process and the process of thought; but the term can hardly be applied to one who regards *thought as merely one among natural processes, and hopes that it may be explained some day in terms of physics*. . . . The essence of meaning lies in the *causal efficacy*

of that which has meaning, and this *causal efficacy is, in the main, a result of habit... meaning is an observable property of observable entities, and must be amenable to scientific treatment* [my italics].³⁴

Thirty-four years later Quine states the full implications:

I am a *physical* object sitting in a physical world. Some of the forces of this physical world impinge on my surface. Light rays strike my retinas; molecules bombard my eardrums and fingertips. I strike back, emanating concentric air waves. These waves take the form of a torrent of *discourse* about tables, people, molecules, light rays, retinas, air waves, prime numbers, infinite classes, joy and sorrow, good and evil.

My ability to strike back in this elaborate way consists in my having assimilated a good part of the culture of my community, and perhaps modified and elaborated it a bit on my own account. All this training consisted in turn of an impinging of *physical* forces, largely other people's *utterances*, upon my surface, and of gradual changes in my own constitution consequent upon these physical forces. All I am or ever hope to be is due to irritations of my surface, together with such latent tendencies to response as may have been present in my original germ plasm. And all the lore of the ages is due to irritation of the surfaces of a succession of persons, together, again, with the internal initial conditions of the several individuals [my italics].³⁵

Hence the fundamental theme of *Word and Object*—indeed, of all of Quine:

In a general way, therefore, I propose...to ponder our *talk* of physical phenomena as a *physical phenomenon*, and our *scientific imaginings* as activities *within* the world that we imagine [my italics].³⁶

And therefore meaning is (obtained through) use.

Both ['Two Dogmas'] and... 'The problem of meaning in linguistics', reflected a dim view of the notion of meaning. A discouraging response from somewhat the fringes of philosophy has been that my problem comes of taking words as bare strings of phonemes rather than seeing that they are strings with meaning. Naturally, they say, if I insist on meaningless strings I

shall be at a loss for meanings. They fail to see that a bare and identical string of phonemes can *have* a meaning, or several, in one or several languages, through its *use* by sundry people or peoples, much as I can have accounts in several banks and relatives in several countries without somehow containing them or being several persons.... I hope this paragraph has been superfluous for most readers [my italics].³⁷

But, like Russell, Quine insists that in a scientific account of language linguistic entities are abstract entities, universals, and that a sharp distinction must be drawn between a linguistic entity and its concrete instances. (There can be no causal relations between abstract entities as such—only between their instances.)

A sentence is not an event of utterance (or an inscription), but a universal: a repeatable sound pattern...a linguistic form that may be uttered [or inscribed] often, once, or never; its existence is not compromised by failure of utterance. But [then] we must...[consider] more precisely what these linguistic forms are. If a sentence were taken [merely] as the class of its utterances, then all unuttered sentences would reduce to one, viz., the null class...all distinction lapses among them. But there is another way of taking sentences and other linguistic forms that leaves their existence and distinctness uncompromised by failure of utterance...take each linguistic form as the *sequence*, in a mathematical sense, of its successive characters or phonemes. A sequence a_1, a_2, \dots, a_n can be explained as the class of the n [ordered] pairs $\langle a_1, 1 \rangle, \langle a_2, 2 \rangle, \dots, \langle a_n, n \rangle$. We can still take each component character a_i as a class of utterance events, there being here no risk of non-utterance.³⁸

Not that Quine and Russell are one in the status they assign to abstract objects³⁹ or in their attitudes towards the strings 'meaning', 'truth' and 'knowledge'. Far from it. Their differences run deep. Quine, of course, has no general 'theory of meaning', and hence no 'causal theory of meaning'. ('Meaning is use' is no theory.) But these differences always stem from Quine's being more consistently naturalist, more consistently physicalist, more consistently behaviourist—and more consistently consistent. (Just look again at Quine's specification of what is a sentence and then at Russell's specification, some paragraphs above, of what is a word.) Russell

would not write: Neurath has likened science to a boat which, if we are to rebuild it, we must rebuild plank by plank while staying afloat in it. The philosopher and the scientist are in the same boat. If we improve our understanding of ordinary talk of physical things, it will not be by reducing that talk to a more familiar idiom; there is none. It will be by clarifying the connections, causal or otherwise, between ordinary talk of physical things and various further matters which in turn we grasp with the help of ordinary talk of physical things...our questioning of objects can coherently begin only in relation to a system of theory which is itself predicated on our interim acceptances of objects. We are limited in how we can start even if not in where we may end up. To vary Neurath's figure with Wittgenstein's, we may kick away our ladder only after we have climbed it...the proposition that external things are ultimately to be known only through their action on our bodies should be taken as one among various coordinate truths, in physics and elsewhere, about initially unquestioned physical things. *It qualifies the empirical meaning of our talk of physical things, while not questioning the reference* [my italics].⁴⁰

(The string just quoted contains the first occurrence of Σ in *Word and Object*.)

But Russell did write:

Scientific scripture, in its most canonical form, is embodied in physics (including physiology). Physics assures us that the occurrences which we call 'perceiving objects' are at the end of a long causal chain which starts from the objects, and are not likely to resemble the objects except, at best, in certain very abstract ways. We all start from 'naive realism', i.e., the doctrine that things are what they seem. We think that grass is green, that stones are hard, and that snow is cold. But physics assures us that the greenness of grass, the hardness of stones, and the coldness of snow, are not the greenness, hardness and coldness that we know in our own experience, but something very different. The observer, when he seems to himself to be observing a stone, is really, if physics is to be believed, observing the effects of the stone upon himself. Thus science seems to be at war with itself: when it most means to be objective, it finds itself plunged into subjectivity against its will. Naive realism leads to physics and physics, if true, shows that naive realism is false. Therefore naive realism, if true, is false; therefore it is

false. And therefore the behaviorist, when he thinks he is recording observations about the outer world, is really recording observations about what is happening in him.

These considerations induce doubt, and therefore lead us to a critical scrutiny of what passes as knowledge. This critical scrutiny is 'theory of knowledge'...or 'epistemology', as it is also called.⁴¹

And Quine—see the analysis of (a paradigm of) analysis in Section I—would certainly not write:

Pierce had developed a logic of relations, but had treated a relation as a class of couples. This is technically possible, but does not direct attention naturally towards what is important. What is important in the logic of relations is what is different from the logic of classes, and my philosophical opinion on relations helped to make me emphasise what turned out to be most useful.

I thought of relations, in those days [1900], almost exclusively as *intensions*. I thought of sentences such as, 'x precedes y', 'x is greater than y', 'x is north of y'. It seemed to me—as, *indeed, it still seems* [1959]—that, although from the point of view of a formal calculus one can regard a relation as a set of ordered couples, it is the intension alone which gives unity to the set. The same thing applies, of course, also to classes. What gives unity to a class is solely the intension which is common and peculiar to its members. This is obvious whenever we are dealing with a class whose members we cannot enumerate. In the case of infinite classes, the impossibility of enumeration is obvious; but it is equally true of most finite classes. Who, for example, can enumerate all the members of the class of earwigs? Nevertheless, we can make statements (true or false) about all earwigs, and we do this in virtue of the intension by which the class is defined. Exactly similar considerations apply in the case of relations. We can say many things about order in time because we understand the word 'precede', although we cannot enumerate all the couples x, y such that x precedes y. There is, however, a further argument against the view of relations as classes of couples: the couples have to be *ordered* couples, that is to say, we must be able to distinguish the couple x, y from the couple y, x. *This cannot be done except by means of some*

*relation in intension. So long as we confine ourselves to classes and predicates, it remains impossible to interpret order or to distinguish an ordered couple from a class of two terms without order [my italics].*⁴²

Russell's shift in attitude, remarked earlier, towards the string 'psychology' is nicely illustrated in his shift in attitude towards the string 'prepositional attitude'. In the fourth lecture (12 February 1918) of the course *The Philosophy of Logical Atomism*, Russell asked:

What sort of name shall we give to verbs like 'believe' and 'wish' and so forth? I should be inclined to call them 'prepositional verbs'. This is merely a suggested name for convenience, because they are verbs which have *the form* of relating an object to a proposition. As I have been explaining, that is not what they really do, but it is convenient to call them prepositional verbs. *Of course you might call them 'attitudes', but I should not like that because it is a psychological term, and although all the instances in our experience are psychological, there is no reason to suppose that all the verbs I am talking of are psychological [my italics].*⁴³

Compare what we have just read with two sentences from a manuscript written by Russell in early spring (before 9 April) 1920 in the hope of gaining a favourable hearing from the publisher Reclam for an impecunious Austrian war veteran and would-be schoolteacher struggling to bring out his first book.

The problem at issue is the problem of the logical form of belief, i.e. what is the schema representing what occurs when a man believes. Of course, the problem applies not only to belief, but also to a host of other mental phenomena which may be called *propositional attitudes*: doubting, considering, desiring, etc. [my italics].⁴⁴

Russell's shift in attitude towards 'propositional attitude' became the source of the current interest in the string. In *The William James Lectures for 1940* at Harvard, he said:

In the analysis of what I call 'prepositional attitudes', i.e. occurrences such as believing, doubting, desiring, etc., which are naturally described by sentences containing subordinate

sentences, e.g. 'I think it will rain', we have a complicated mixture of empirical and syntactical questions.⁴⁵

(The local context of the eighth occurrence of Σ in *Word and Object* is:

There are characteristic efforts in philosophy, those coping e.g. with perplexities of...believing...that resemble logic in their need of semantic ascent as a means of generalising beyond examples...(Wittgenstein's characteristic style, in his later period, consisted in avoiding semantic ascent by sticking to the examples.))⁴⁶

Russell's turn towards language was rather precipitous. On 9 February 1918 he was tried, convicted, and sentenced to six months of hard labour in prison for 'having in a printed publication made certain statements⁴⁷ likely to prejudice His Majesty's relations with the United States of America'.⁴⁸ On advice of 'friends, who were trying to get his prison sentence set aside on appeal [they didn't succeed] or, failing that, to have him serve it in the first division [they did succeed] where he could work at philosophy',⁴⁹ Russell prepared a brief statement of his intentions in philosophy, that is, about the work 'if circumstances permit...upon which I shall be engaged in the immediate future:

Plan for a work on 'Things, Words, and Thoughts', being the section dealing with cognition in a large projected work, *Analysis of Mind*. Part I. *Facts*. Part II. *Meaning*. Part III. *Judgment*.⁵⁰

Part I contains nothing new. Part III and especially Part II do. (A judgement totally consonant with the opening footnote of the 1919 paper 'On Propositions: What They Are and How They Mean', the first published product of Russell's Plan:

In what follows, the first section, on the structure of facts, contains nothing essentially novel, and is only included for the convenience of the reader.... On the other hand, later sections contain views which I have not hitherto advocated, resulting chiefly from an attempt to *define* what constitutes 'meaning' and to *dispense* with the 'subject' except as a logical construction [my italics].⁵¹

The discerning reader—learned, of course—upon discerningly reading Part II is struck by how much of Russell's work over the

next thirty years is foreshadowed, and is even more struck by the recognition that, as Russell goes to prison for inscribing one sentence critical of the Army of the United States as potential strikebreakers, what he intends to work on—and does work on—is primarily inspired by William James, John Dewey, John B. Watson and the American ‘Neo-Realists’. The American Army did not occupy England, but American philosophy occupied the greatest English philosopher of the twentieth century. In the summer of 1918, while in Brixton Prison, Russell accepted James’s and the Neo-Realists’ ‘neutral monism’, a position he had long resisted, and studied intensively, much of it favourably, Dewey’s and Watson’s forms of behaviourism. (He continued to insist against Watson on the role of images,⁵² and never accepted Dewey’s—or James’s—account of truth.) The result was *The Analysis of Mind*.⁵³

Here is Part II of the Plan:

MEANING. [Words]

A. *General Account of the nature of meaning.*

1. Meaning belongs to bodily acts when (a) they are caused by a certain stimulus; (b) they arouse an ‘image’ of the stimulus, or something in some way connected with the stimulus. (A discussion of ‘images’ is necessary at this point.) The essence of a *symbol* is that it is, by association, a causal link between an object and what might be called the ‘idea’ of the object. Its ‘meaning’ is ‘understood’ when the association in question exists: there need not be any reflection or conscious apprehension.

2. Meaning not *purely* conventional. Conventionality of language a development, like that of hieroglyphics. Essential point is causal connection with object as cause and ‘idea’ as effect.

3. Meaning largely, not wholly, *social*, consisting in effect on hearer.

4. Roughly speaking, symbols have an objective and a subjective meaning; approximately, the former is their cause, the latter their effect.

B. *Words.*

1. *Names.* A name is a class of similar noises causally associated with a class of similar particulars which form what are called appearances of one ‘person’ or ‘thing’.

2. *Verbs* (and predicates). How they involve the prepositional form. Sense in which they have meaning in isolation and sense in which they have not.

3. *Emphatic Particulars.* I, this, here, now, etc. Nearest approach in language to names for particulars.

C. *Propositions.*

1. *Positive Atomic Propositions.* These *are* facts, of the same form as the facts that make them true if they are true—or, more exactly, they are classes of facts (e.g. in the symbol 'xRy', the function of 'R' is to create a relation between 'x' and 'y'). Their truth or falsehood may be defined *formally* by this sameness of form or its absence.

2. *Negative Atomic Propositions.* These *are positive* facts, not negative ones.

3. *Existence Propositions.* These are existence-facts. '($\exists x$). $\emptyset x$ ' and '($\exists y$). $\emptyset y$ ' are the same proposition: all that counts is that *there is* a letter where 'x' or 'y' occurs.

4. *Universal Propositions.* These also are existence facts; thus they correspond to 2, and 3 to 1 (above).

5. *Molecular Propositions.* Different nature of their 'meaning'. No disjunctive *facts*. Are there molecular facts of other kinds?

D. *Can Meaning be explained without introducing anything mental?*

Here will be examined William James on 'consciousness'; neutral monism, and behaviorism. None of these, so far, have attacked the difficult parts of their problem, of which a discussion will only become possible after the foregoing theory of symbols.⁵⁴

The impatient reader—surly as ever, and perhaps a philistine to boot—with a growl mutters:

Enough, enough! Enough of history, textual and otherwise. Just tell us what is the relation N, the relation called 'name of, and does Σ stand in that relation to anything, i.e. is Σ a name?

The discerning reader discerningly sighs, 'None so blind as those that will not see'—the very heart of Wittgenstein.

NOTES

- 1 Cf. Quine in *Mathematical Logic* (revised edn, Norton, New York, 1951), p. v.
- 2 See *PTb* 69.
- 3 *Mathematical Logic* (revised edn, 1951), p. 23.
- 4 The fourth occurrence of Σ in *Word and Object* occurs on p. 117 thus:

Wittgenstein's mistake is more clearly recognizable, when he objects to the notion of identity that 'to say of two things that they are identical is nonsense, and to say of one thing that it is identical with itself is to say nothing' [*Tractatus*, 55303]. Actually of course the statements of identity that are true and not idle consist of unlike singular terms that refer to the same thing.

5 *Mathematical Logic* (revised edn, 1951), p. 297.

6 *Q* 218.

- 7 Notice that the question is *not* the more complex question, 'Just what sort of thing...is an occurrence of a letter in *an occurrence* of the linguistic form "wittgenstein"?'.
 8 Q 218–19.
 9 For example, we certainly know that our author is not to be confused with the Christopher Columbus who wrote on Sunday 21 October 1492, 'At 10 o'clock in the morning I arrived at Cabo del Isleo and anchored.... I saw a serpent.... The people here eat them and the meat is white and tastes like chicken.' *The Log of Christopher Columbus*, tr. Robert H. Fuson (International Marine Publishing Company, Camden, Me., 1987).
 10 PTb 100.
 11 See Section II below.
 12 WO, 260.
 13 Ibid, 258–61.
 14 'Many analytic psychologists—Meinong for example—distinguish three elements in a presentation, namely, the act (or subject), the content, and the object.' Bertrand Russell, 'On Propositions: What They Are and How They Mean', *Aristotelian Society Supplementary Volume II* (1919), p. 25 (reprinted in Russell, *Logic and Knowledge: Essays 1901–1950*, ed. Robert Charles Marsh (George Allen and Unwin, London, 1956), p. 305).
 15 Q 218–19.
 16 Ibid., 218.
 17 Ibid., 217.
 18 See my papers 'Quine', *Perspectives on Quine*, ed. Robert Barrett and Roger Gibson (Blackwell, Oxford, 1990), pp. 81–95 and 'Cohen's Carnap, or Subjectivity is in the Eye of the Beholder', in *Science, Politics and Social Practice*, ed. Kostas Gavroglu, John Stachel and Marx W. Wartofsky, Boston Studies in the Philosophy of Science 164 (Kluwer, Boston, Mass, 1995), pp. 27–42 for a discussion of Quine's insistence to Carnap that truth is truth and existence is existence, the core of Quine's difference with Carnap over the string 'analytic'.
 19 And not only here. For example, does ? have just nine instances in WO? Does 'wit' have but one instance in s₃?
 20 WO, 76–7.
 21 Ibid, 131.
 22 TT, 18.
 23 Russell, *Our Knowledge of the External World as a Field for Scientific Method in Philosophy*, rev. edn (George Allen and Unwin, 1926) p.29.
 24 Garth Hallett rightly writes in *A Companion to Wittgenstein's 'Philosophical Investigations'* (Cornell University Press, Ithaca, 1977), p.35:

For a clear understanding of what Wittgenstein was about, a comparison of the *Investigations* with Russell's *Analysis of Mind* is almost as revealing as a comparison with the *Tractatus*.

I would just add that acquaintance with *The Analysis of Mind*, its companion *The Analysis of Matter* and its sequel *An Inquiry into Meaning and Truth* is equally revealing for a clear understanding of

what Quine is about. (Revelation, naturally, works in mysterious ways. Quine never read either *Analysis*, but he did review *Inquiry*.)

- 25 Russell, *The Analysis of Mind* (Unwin, Woking, 1921), p. 188.
- 26 Ibid.
- 27 During my time in prison in [May 1–September 14] 1918, I had become interested in the problems connected with meaning, which in earlier days I had completely ignored. I wrote something on these problems in *The Analysis of Mind* and in various articles [‘On Propositions: What They Are and How They Mean’; ‘The Meaning of “Meaning”’] written at about the same time. (*The Autobiography of Bertrand Russell* (3 vols, Little, Brown & Co., Boston, Mass., 1967), vol. 2, p. 291)
- See also Appendix II in *The Collected Papers of Bertrand Russell*, vol. 8, ed. John G. Slater (George Allen and Unwin, Boston, Mass., 1986), discussed below.
- 28 Russell, *My Philosophical Development* (George Allen and Unwin, London, 1959), p. 108.
- 29 Russell, *The Principles of Mathematics*, 2nd edn (Cambridge University Press, Cambridge, 1938) p. 47.
- 30 Russell, *The Problems of Philosophy*, rev. edn (Oxford, Oxford University Press, The Home University Library, 1946), p. 52.
- 31 Russell, *The Philosophy of Logical Atomism*, ed. Marsh, p. 186.
- 32 See Burton Dreben and Juliet Floyd, ‘Tautology: How Not to Use a Word’, *Synthese*, 87 (1) (April 1991), 23–49.
- 33 For the pre-linguistic Russell, see P. Hylton, *Russell, Idealism and the Emergence of Analytic Philosophy* (Oxford, Oxford University Press 1990). For the disappearance of the subject, see David Pears, *Bertrand Russell and the British Tradition in Philosophy* (Collins, The Fontana Library, London, 1967).
- 34 Russell, ‘The Meaning of “Meaning”’, *Mind* (October 1920), 398–401.
- 35 SLSb 228.
- 36 WO 5. For further discussion, see also my ‘Putnam, Quine—and the Facts’, *Philosophical Topics*, 20 (1) (1992) 293–316.
- 37 Quine, 1980 foreword, *FLPv* viii.
- 38 WO, 191, 194–5. For a discussion of Quine’s Platonism about linguistic entities, see my ‘In Mediis Rebus’, *Inquiry*, 37 (1994), 441–7.
- 39 For example, see the quotation of the local context of the fifth occurrence of ? given above.
- 40 WO 3–4.
- 41 Russell, *An Inquiry into Meaning and Truth: The William James Lectures for 1940* (Penguin, Baltimore, 1962), p. 13.
- 42 Russell, *My Philosophical Development*, p. 67.
- 43 Russell, *The Philosophy of Logical Atomism*, ed. Marsh, p. 227.
- 44 Russell, ‘Introduction to Wittgenstein’s *Tractatus*, 1921 and 1922 versions’, in *The Collected Papers of Bertrand Russell*, vol. 9, ed. John G. Slater with the assistance of Bernd Frohmann (Unwin Hyman, Boston, Mass., 1988, p. 109.
- 45 Russell, *An Inquiry into Meaning and Truth*, p. 159.

46 WO 274.

47

The American garrison, which will by that time be occupying England and France, whether or not they will prove efficient against the Germans, will no doubt be capable of intimidating strikers, an occupation to which the American army is accustomed when at home. I do not say that these thoughts are in the mind of the Government. All the evidence tends to show that there are no thoughts whatever in their mind, and that they live from hand to mouth, consoling themselves with ignorance and sentimental twaddle.

(*The Autobiography of Bertrand Russell*, vol. 2, p. 105)

48 Ronald Clark, *Bertrand Russell and his World* (Thames and Hudson, 1981), p. 58.

49 *The Collected Papers of Bertrand Russell*, vol. 8, p. 247.

50 *Ibid.*, p. 313.

51 Russell, 'On Propositions: What They Are and How They Mean', *Aristotelian Society Supplementary Volume II* (1919), p. 1, n. (reprinted in *Logic and Knowledge*, p. 285 n.).

52 However, on p. 117 of his 1926 review of *The Meaning of Meaning* (*Dial*, 81 (August 1926), 114–21), Russell wrote, 'These authors [Ogden and Richards] urge—rightly, as I now think—that "images" should not be introduced in explaining "meaning".' The review concludes, 'It will be seen that the above remarks are strongly influenced by Dr. Watson, whose latest book, *Behaviorism*, I consider massively impressive' (p. 121).

53

This book has grown out of an attempt to harmonize two different tendencies, one in psychology, the other in physics, with both of which I find myself in sympathy, although at first sight they might seem inconsistent. On the one hand, many psychologists, especially those of the behaviourist school, tend to adopt what is essentially a materialistic position, as a matter of method if not of metaphysics. They make psychology increasingly dependent on physiology and external observation, and tend to think of matter as something much more solid and indubitable than mind. Meanwhile the physicists, especially Einstein and other exponents of the theory of relativity, have been making 'matter' less and less material. Their world consists of 'events', from which 'matter' is derived by a logical construction. Whoever reads, for example, Professor Eddington's *Space, Time and Gravitation* (Cambridge

University Press, 1920), will see that an old-fashioned materialism can receive no support from modern physics. I think that what has permanent value in the outlook of the behaviourists is the feeling that physics is the most fundamental science at present in existence. But this position cannot be called materialistic, if, as seems to be the case, physics does not assume the existence of matter.

The view that seems to me to reconcile the materialistic tendency of psychology with the anti-materialistic tendency of physics is the

view of William James and the American new realists, according to which the 'stuff' of the world is neither mental nor material, but a 'neutral stuff, out of which both are constructed. I have endeavoured in this work to develop this view in some detail as regards the phenomena with which psychology is concerned.

(The first two paragraphs of the preface to *The Analysis of Mind*)

54 *The Collected Papers of Bertrand Russell*, vol. 8, pp. 313–14.

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3

PERSPICUOUS REPRESENTATIONS

Christopher Hookway

INTRODUCTION

For many philosophers, the search for an adequate or perspicuous representation of the contents of our thoughts, concepts and theories has been very important. The whole project of philosophical analysis, for example, involves just such a search. It emphasizes the possibility of a kind of semantic investigation which leads to a representation of a thought that renders all of its content fully explicit. Semantic complexity hidden within individual words or concepts is brought out into the open, and the misleading connotations of the familiar expressions of our thoughts can be overcome.

This vague description could fit a wide range of philosophical projects designed to meet a number of different philosophical needs. An early modern paradigm is provided by Descartes's use of clear and distinct ideas. If I can replace my vague idea of matter or God by a clear and distinct alternative, then I attain an idea which contains nothing that is unclear. And, supposedly, when I obtain a clear and distinct perception of something, I can see that it is true: the confusion and obscurity which make doubt possible are absent. Replacing my confused perception with a clear one—or obtaining a clear perception of what my confused perception confusedly contained—is of value as a means of reaching the truth. In the same vein, we may judge that an axiomatization of a geometrical theory provides a perspicuous representation of a range of facts which renders their contents and the grounds of their truth wholly explicit. Other paradigms can be provided by Kant's metaphysical deduction: if only we possess a perspicuous representation of the structure of all possible thoughts about the empirical world, then we can derive the categorial structure of that world from an examination of formal

features of these representations. And a variety of empiricist and pragmatist philosophers have supposed that an attempt at unpacking the meanings of propositions, employing a general theory of the form that such unpacking should take, will enable us to see that some of them have no real content at all. The search for such canonical clear or perspicuous representations can be a tool for discovering truths about reality, formulating philosophical theories and guarding against metaphysical illusion.

Any project of this kind involves two distinct elements: a set of philosophical motivations which make a search for clarity desirable, and a view about the sorts of features which must be brought to the surface if such clarification is to be possible. One could be sceptical of the value of such projects either by denying the interest or importance of the purposes to which such clarification is intended to lead or by questioning whether such clarification is genuinely possible. Both Wittgenstein and Quine, it seems to me, stand in rather ambivalent relations to such projects. Quine, for example, introduces a canonical notation for the expression of scientific theories which is supposed to yield philosophical insights and, through questioning the analytic/synthetic distinction, rejects the idea that propositions and beliefs have a semantic content which can actually be clarified. Wittgenstein, through his use of the notion of grammar and through his explicit emphasis on the value of a perspicuous description of features of our practices, shows sympathy for some aspects of such projects. On the other hand, there are other features of his views which are alien to them. I want to explore these possible connections between their views by suggesting that both take seriously an idea which I shall call the *shallowness of reflection*. Since it is plausible that both reached their positions through critical reflection on views defended by Rudolf Carnap, I shall use their varying reactions to his positions as a focus for what I want to say. After a sketch of Carnap's ideas about clarity and explication (second section), I shall use them to discuss Quine's dispute with Carnap about analyticity and the bearing of his commitment to a naturalistic approach to epistemology (third section) before turning to some Wittgensteinian themes.

EXPLICATION AND LOGICAL CONSTRUCTION

The writings of Carnap provide a good illustration of some of these themes, and there are good reasons for introducing them here.

Many of Quine's philosophical views were constructed through sympathetic criticism of Carnap's philosophy. And not only were Carnap's views developed under the influence of his attempts to understand Wittgenstein's *Tractatus Logico-Philosophicus*, but some of the developments in Wittgenstein's thought after 1930 were a reaction to the work of Carnap and those in the Vienna Circle who were under his influence. I hope that we can begin to understand the complex relations between Quine and Wittgenstein by comparing their reactions to Carnap.

Carnap recommends that we provide rational reconstructions of areas of our knowledge by constructing axiomatic systems.¹ These linguistic frameworks or constructional systems embody a system of logical rules, together with fundamental classifications. There are explicit rules which determine the criteria to be employed in applying the predicates that make up these classificatory systems. Among the true sentences which can be formulated by someone using such a system, a distinction is to be drawn between those which express the rules of the system and others which use those rules to make 'substantial' statements. This distinction between L-truths and P-truths corresponds to the more familiar distinction between analytic and synthetic truths. Carnap's views about the character of these constructional systems and about the reasons for developing them evolved. However, there are several themes that can be noted in general terms without the need to become involved in scholarly details.

There is a clear sense in which such a rational reconstruction is intended to provide an account of a theory or body of knowledge which renders its structure wholly open to view: nothing is hidden and all is perspicuous. This perspicuity is obtained through explicitly listing the primitive vocabulary of the framework and laying down the logical and other linguistic rules which are used in evaluating sentences expressed using this vocabulary. The advantages of constructing such systems are several. First, if the rules which constitute a system of knowledge are made explicit, then all will agree upon the bearing of (say) a piece of evidence upon a theory. Irresolvable differences of opinion will probably turn out to be due to differences in the linguistic rules employed by different inquirers. It promises an ideal of rule-governed rationality which may help to explain the progress of, and inter-subjective agreement secured within, the sciences. Secondly, the construction provides a system of categories, offering a set of fundamental classifications. Moreover,

the sorts of categories employed by Kant will be described in a constructional system which we use for describing the structure of linguistic frameworks in general. The rules of our framework specify the *form* of an area of knowledge; this form provides a background against which genuine assertions can be made.

The linguistic framework/constructional system also promises philosophical insight. First, some apparently deep metaphysical issues are reformulated as apparently innocuous grammatical issues about the structure of linguistic frameworks. If somebody asks, in the 'material mode', 'Are numbers objects?', they can appear to pose a deep ontological puzzle. Within the theory of linguistic frameworks, this can be reformulated as: 'Are words for numbers singular terms?' or 'Is quantification over numbers first-order quantification?' A puzzling issue receives a clear sense. Metaphysical illusion results from turning these questions from 'formal-mode' questions about forms of language into 'material-mode' questions purporting to be about the structure of reality.² We might suppose that, correctly formulated, our question about numbers should be 'Will the correct linguistic framework contain singular terms for numbers?', but Carnap rejects this notion of a 'correct linguistic framework'. When we debate whether to make use of a linguistic framework, we are not concerned with its truth: acceptance of the framework 'can only be judged as being more or less expedient, fruitful, conducive to the aim for which the language is intended'.³ In *The Logical Syntax of Language* Carnap enunciated his 'principle of tolerance': '*In logic there are no morals*. Everyone is at liberty to build up his own logic, i.e. his own form of language, if he wishes'⁴, and he later urged us 'to be cautious in making assertions and critical in examining them, but let us be tolerant in permitting linguistic forms'. There are no 'facts' about which linguistic frameworks should be adopted: this is a pragmatic matter concerning how well they serve our current intellectual purposes. Talk of fact and objectivity makes sense only relative to a linguistic framework.

Thus in his first major book, Carnap sketched two possible constructional systems. One, which he called 'autopsychological', attempted to 'reduce' physical object language to sentences about subjective experiences.⁵ The other, which was 'heteropsychological', attempted the reverse 'reduction'. There was no suggestion that one of these was correct, or that one correctly reflected the contents of our thoughts or the structure of the world. Which we should use would depend upon our purposes: the first, he suggested, would

be useful for epistemology, while the second would be a better vehicle for psychological research.

One further point of importance. We clarify one area of our practice—for example our attempts to do epistemology—by developing a constructional system, a linguistic framework in which all of the rules employed are carefully and explicitly formulated. There is no suggestion that this framework provides a fully explicit description of our pre-theoretical practice: it does not provide clarification by making explicit what we know implicitly. Rather it offers clarification by providing a linguistic tool which is better than our confused everyday ways of speaking: it achieves all of the purposes that are worth pursuing with the aid of such a framework, but it is clearer and more perspicuous than the area of discourse which it reconstructs. For example, the framework we construct will embody an explicit distinction between L-truths and P-truths. These need not map onto truths which (pre-theoretically) we treat as analytic and synthetic respectively. Indeed, tracing an analytic/synthetic distinction in our ordinary discourse may be simply impossible because of the vagueness and imperfection of natural languages: all the more reason, Carnap may argue, for reconstructing our knowledge in a form which introduces this invaluable distinction.

In one sense, as we have seen, Carnap's theory is 'pluralistic': he advocates the development of a range of competing and complementary linguistic frameworks so that the strengths and weaknesses of each can be appreciated. But this pluralism belongs within a philosophical outlook which is strongly scientific: Carnap is ambitious to render philosophy scientific and to provide a philosophical reconstruction of scientific knowledge and the methods we employ in seeking it. He has no interest in the reconstruction of non-scientific areas of discourse. The process of rational reconstruction, and the defence of what we have identified as a form of pluralism, are both internal to science: they are to be justified by the contribution they can make to understanding scientific reasoning and facilitating scientific progress.

So far we have noted some different motivations that Carnap's constructional systems were designed to meet: epistemological, ontological and anti-metaphysical. It will be important for the ensuing discussion to notice some general characteristics of Carnap's approach. First, constructional systems are *constructions*: they are formal systems which are made by human beings and used for a

variety of purposes. Consequently these systems can always be held at arm's length, described and evaluated: we can always sensibly ask questions about how well they serve our purposes. Secondly, they rest upon the assumption that maximal clarity can be achieved by laying down a body of *rules*. We need to be clear about the logical and grammatical *form* of the areas of discourse we are concerned with, and we should ideally impose a clear formal structure upon it. In general, Carnap appears to believe that it is both *possible* and *desirable* to render all of the norms which govern our processes of belief formation fully explicit. Although holistic pragmatic evaluations have a role in the growth of knowledge, such evaluations are most perspicuously presented as concerned with our choice of systems of rules. If we reconstruct our knowledge in that manner, we shall gain benefits. And thirdly, as is exemplified during the 1930s, when Carnap develops a framework described as 'general syntax', philosophical insight is to be gained by constructing a general theory of frameworks: describing the different status of internal and external questions, for example, and drawing general philosophical conclusions from this.

QUINE, CARNAP, ANALYTICITY AND NATURALIZED EPISTEMOLOGY

Quine's attitude towards these Carnapian themes is complex. In *Word and Object* he describes a canonical notation for science—essentially extensional first-order logic with identity. In giving his motivation for doing so, he hints at a comparison with Kant's search for a system of categories.⁶ Moreover, when we express a theory in this canonical notation, we are not revealing a structure that is claimed to be already implicit within it: we are not describing its semantical content. Instead we seek a reformulation which promotes clarity and serves a definite purpose: only by doing this can we make the theory's ontological commitments explicit and, ultimately, reveal the groundlessness of questions of ontology.

However, Quine's attitude towards the autopsychological construction of the *Logische Aufbau* is altogether less sympathetic. His own story of how beliefs about an objective external world are related to sensory inputs is, in many respects, close to the one that Carnap defends. And when he discusses Carnap's venture in 'Epistemology Naturalized', he acknowledges that to achieve such a reconstruction would be 'a great achievement'. He then continues:

But why all this creative reconstruction, all this make believe? The stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not settle for how this construction really proceeds? Why not settle for psychology?

(EN 75)

Notice that Quine does not seem to be questioning the possibility of carrying out Carnap's project. He is, rather, questioning its point: the suggestion seems to be that we do not need the kind of ultra-clear perspicuous representation of the matter which Carnap's project offers. And he offers an alternative recipe for becoming clear about our ways of acquiring knowledge: a psychological theory of cognition gives us all we need. For epistemological purposes, clarity does not require an account of linguistic frameworks; it needs only a theory of how our knowledge grows. A naturalized epistemology provides as perspicuous an account of epistemological matters as we could require.

In the following paragraph, Quine notes one circumstance in which it would be useful: if we could show that we could '*translate science into logic and observation terms and set theory*', we could use our rational reconstruction in order to show that theoretical terms were dispensable, thus solving some fundamental epistemological problems. But if this benefit is not to be achieved—as Quine and Carnap agree it is not—rational reconstruction has no advantages over psychology. Quine's naturalized epistemology and Carnap's autopsychological constructional system tell rather similar stories about how objectivity and inter-subjective agreement are based upon sensory stimuli, so the debate concerns the way in which these stories are to be told. Quine thinks that Carnap's reconstructions are worth having (or are worth the effort that goes into their construction) only if they allow us to *eliminate* reference to theoretical entities.

Since Carnapian construction differs from Quinean regimentation primarily in its use of a distinction between L-truths and P-truths, it is plausible that Quine's position is linked to his rejection of the analytic/synthetic distinction. However, there is an interesting question about the direction of this linkage. Are Carnapian constructions to be dispensed with because they rely upon a flawed distinction between analytic and synthetic statements? Or is rejection of the analytic/synthetic distinction grounded in the fact that we have no need for

Carnapian reconstructions that make use of the distinction? Such questions rarely have clear-cut answers, and Quine's criticisms of modal logic may suggest the first direction: he thinks that such constructions are internally incoherent or fail to measure up to standards of clarity desirable in a system of logic. However, I think that the best way to understand the argument of 'Two Dogmas of Empiricism' (for example) is to focus on the second direction of linkage: we simply have no need for reconstructions of our scientific knowledge which employ this distinction (*FLPVa*, ch. 2).

A central puzzle concerning the analyticity debate is that the epistemological picture ('moderate holism') which Quine obtains by rejecting the analytic/synthetic distinction is apparently endorsed by Carnap himself in *The Logical Syntax of Language*, a book in which he explicitly uses it. Carnap insists that the empirical testing of a theory '*applies, at bottom, not to a single hypothesis, but to the whole system of physics as a system of hypotheses*' (Duhem, Poincaré).⁷ And he insists that: 'No rule of the physical language is definitive; all rules are laid down with the reservation that they may be altered as soon as it seems expedient to do so.' This applies not only to P-rules (fundamental physical hypotheses) but also to analytic truths, including principles of logic. Both thinkers agree that confirmation has a holistic character, and both think that analytic propositions are revisable—presumably under pressure of experience.⁸

It is possible to see how a retention of the analytic/synthetic distinction is compatible with this holistic perspective. Imagine two scientists who have agreed upon a rational reconstruction of their shared body of theoretical knowledge. In the course of doing so, they adopt a system of formal logic and a suitably formulated confirmation theory. They undertake to use this constructional system as a tool in their inquiry. It is easy to see how the decisions they have to make about how to revise their beliefs can be divided into different kinds. In some circumstances, when they face a new experience, their confirmation theory and logic may leave relatively little room for manoeuvre when they ask where adjustments should be made in order to accommodate the new information. In other cases, they may need to make use of criteria of overall coherence and simplicity in choosing between a number of revisions which would be licensed by the rules of their logic and confirmation theory. And in yet further cases, shaken by the growing recalcitrance of the world and the emerging incoherence of their system of ideas, they may appeal to 'pragmatic' considerations in questioning their system

of L-truths, their confirmation theory or even their logic. The constructional system is of value, then, in enabling them to keep track of these different kinds of decisions: it makes perspicuous the kinds of criteria that should be employed on these different occasions. The constructional system serves a purpose.

This picture is more than a little grotesque: we cannot conceive that inquirers actually could or would employ constructional systems in this way. However, it might still be insisted that it provides a useful ideal type, revealing to us the kinds of error that we risk through falling short of this ideal. This response would have to rest upon believing that rationality requires us to be as reflective as possible, and holding that reflection is guided ultimately by rules. In practice we lack the time or ability to reflect as deeply as we might. And this means that we are not guided by norms or rules as ideal rationality would require; and this is a bad thing.

A rational reconstruction is judged by two standards: we must ask whether it preserves those features of our everyday practice which are worth preserving; and we must evaluate the improvements (in clarity and precision) which it offers. A defence of the analytic/synthetic distinction must rest upon claiming either that the distinction is nascent or implicit in our ordinary practice, or that the lack of such a distinction is a flaw in this practice. The latter view would have to depend upon the view that rationality requires rules, reflection and explicit representations of our norms and opinions.

How might such a distinction be implicit or nascent in our practice? We might distinguish what we are sure of from those opinions that are more tentative, or we could link the analytic to what is obvious to us. Alternatively we might notice that some of our beliefs seem wholly indubitable: any doubt of them would be an empty paper doubt; we cannot imagine any experience that leads us to question them; they are taken for granted in the ways in which we formulate questions, design experiments or interpret their results. It is undeniable that there are such beliefs, even if there is no *sharp* distinction between them and others that form part of our corpus. Would there be a case for seeking a reconstruction of our body of opinions which explicitly identifies the opinions which occupy this position? Could this be our nascent analytic/synthetic distinction?

One reason to deny this is that talk of analyticity offers a distinctive kind of explanation of the role occupied by such opinions, and beliefs could occupy the position just described merely on account of their obviousness or familiarity, without being

analytic in Carnap's sense. With philosophers of the common sense school, it could be said of these beliefs simply that 'everything counts for them and nothing counts against them'.⁹ Moreover, all such beliefs are unlikely to be general rules or principles of the kind normally thought of as analytic. Presumably for Quine the sentence 'There is such a place as Boston' serves this role, but it is not a candidate for analyticity. Moreover, Carnap's analytic truths are not all as obvious as this: the L-rules of a tentatively adopted constructional system will be analytic in spite of the fact that they are used with no great confidence that they will not soon be abandoned.

In fact, Quine does not actually reject the analytic/synthetic distinction (see RR 78ff., and *I* 503–6). He admits that something like the traditional notion of analyticity can be captured by reference to truths which are learnt as part of learning the words that they contain. This explains the analyticity of 'All bachelors are unmarried' and of much of logic: one could doubt or reject such claims only by changing their meanings. By this criterion, the existence of Boston may also be an analytic matter. And, presumably, he could also allow that some truths about (say) protons or electrons will have to be acknowledged if one is to belong to a community that can carry out inquiries into theories using such notions. What he rejects is the claim that this is of any philosophical interest: we learn little about scientific rationality, about how theories are based upon experience, about the differences between mathematics and empirical science, by offering general explanations using this distinction. There is no philosophical benefit in trying to list or describe analytic truths, or in specifying 'framework principles'. It is of no importance for science.

A second way to deny this importance is simply to question the point of labelling such beliefs, of giving them a special kind of status: we never need to appeal to this in order to explain anything. Consider Quine's account of how we do (and presumably should) revise our opinions. It accords with his empiricism that we seek theories that accord with experience; when confronted with a surprising experience, we are to favour the least change that will accommodate the new experience and remove the appearance of contradiction; and we seek simplicity: scientific method is 'a matter of being guided by sensory stimuli, a taste for simplicity in some sense and a taste for old things' (*WO* 23). The standards of simplicity that guide our inductions are 'implicit in unconscious steps [of inference] as well as half explicit in conscious ones' (*ibid.*, 20); but

'this supposed quality of simplicity is more easily sensed than described' (ibid., 19). Quine's emphasis on 'the looseness' of the ideal of simplicity, and on the passiveness of our judgements of evidence and simplicity, suggests that he doubts whether this ideal could usefully be encapsulated in rules and principles. Evolution has equipped us to be reasonably good at induction, and we are unwise to push reflection and the search for principles too far. Epistemic reflection is generally shallow: where reflection has a role, the only relevant epistemic standards are provided by empirical psychology.¹⁰ If we do best to trust our epistemic endowment and not to demand explanations of why each application of our sense of simplicity is legitimate, then we have no need for the complex apparatus of rules and principles offered by Carnapian constructional systems¹¹. We do better to trust our sense of simplicity and to weigh evidence in a passive manner than to seek the depths of reflection that Carnap purports to offer.

There is clear evidence that Quine believes that we are guided by implicit or tacit norms which we cannot, and need not try to, make explicit. As we have noted, he insists in the first chapter of *Word and Object* that we are guided by judgements of simplicity in deciding how to revise theories in the light of new experiences. He is doubtful that we can formulate principles of simplicity or a formal system of inductive logic which will describe the basis of our practice and enable us to carry it out under the guidance of explicit norms. Normative standards that are grounded in our genetic inheritance or, presumably, in our scientific training are operative in the growth of scientific knowledge, although they are not explicit. Moreover, the anti-conventionalist argument of 'Truth by Convention' shows that it would not be possible to make explicit all of the norms or rules that we rely upon (TCb 77ff.). Explicit rules are general formulations which have to be applied to particular cases. In applying them, we must use rules and norms specifying how they should be applied. If these too must be explicit, we embark on a regress of rules. Hence some norms must be manifested in the ways that we interpret and apply explicit rules and norms without themselves being explicit.

For Quine, we are always in the middle of things, trying to answer questions against a background partly constituted by our evolving body of theory. We cannot stand back and assess our beliefs as a whole, measuring them against some transcendental measure of truth or rationality. The understanding of theory and language that we rely upon in trying to make sense of our practice is itself part of science.

Like Carnap's, Quine's conception of philosophy involves a double reference to science: philosophy is itself part of science; and its chief aim is to make sense of our scientific knowledge. One of his differences with Carnap lies in his doubt that we can best clarify our ideas about how theory relates to evidence by developing constructional systems that embody systems of precise rules. The assessment of theory and evidence is generally 'passive', and there is no reason to suppose that the attempt to make norms explicit in the form of rules and definitions is likely to be successful or useful. If there are 'analytic truths', this is not interesting. There is no reason to suppose that we can uncover an underlying 'form' which specifies the logic of a theory. Tools for clarification, systems of canonical clarification, are constructed for distinctive purposes as part of our total science.

WITTGENSTEIN AND GRAMMAR

There are puzzling similarities between views found in Wittgenstein's later writings and the views of both Quine and Carnap. The discussion of rule following in the *Philosophical Investigations* has many points of contact with Quine's claim that it is impossible that all norms or rules should be explicitly formulated: following a rule is, at root, a practice. They share, too, the view that the search for philosophical analyses (lists of analytic necessary and sufficient conditions for the applications of concepts) is misplaced. The Quinean suggestions about 'analyticity' mentioned at the end of the previous section may also find echoes in Wittgenstein's work, and they could share the view that if there are 'analyticities', these will include singular propositions which appear to be 'empirical' (for example, 'This is a hand') as well as the general formulations employed by Carnap. But Wittgenstein's attempt to describe our varied linguistic practices and to identify grammatical propositions reflects an approach to philosophical issues radically at variance with Quine's. Given the resemblances I have just noted, why does Wittgenstein find it important or useful to identify sentences which have this distinctive kind of status?

The latter suggests similarities between Wittgenstein and Carnap; and we might suppose that the former's emphasis on the variety of our linguistic practices bears similarities to Carnap's pluralistic insistence that we should be liberal in allowing many linguistic frameworks to bloom. But this impression fades when we notice Wittgenstein's determination to describe our practices rather than

replace them with finely honed rational reconstructions. The goal of his descriptions appears to be the avoidance of philosophical error rather than the encouragement of scientific rationality. However, in other respects there are similarities. Wittgenstein's account of necessity shares a conventionalist flavour with Carnap's, although their versions of conventionalism are very different. And consider some passages from *On Certainty*. Wittgenstein emphasizes the special status of those propositions which form 'the scaffolding' (§211) of our inquiries. He notes that 'the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn', and he emphasizes that their possessing this status 'belongs to the logic of our scientific investigations' (§§341–2). This all suggests that philosophers can try to understand the form of an area of our knowledge, identifying propositions with a distinctive 'rule-like' status. Even if his claim that these 'propositions' are '*in deed* not doubted' accords with the idea that they express norms which are implicit in our practice, and which we do not need to formulate explicitly, it is hard to deny his un-Quinean adherence to a rough dualism of propositions which might be supposed to encourage a Carnapian direction.

One theme in *On Certainty* indicates that this would be wrong. The attempt to make these propositions explicit, to formulate them and inquire about their status, is seen as a temptation to philosophical error: if we ask how we know them, we shall never block scepticism; and what belongs to the logic of science is the very fact that they are '*in deed* not doubted'; 'It is our *acting* which lies at the bottom of the language game' (§204). If it is philosophically important to identify some propositions of this sort and to note their special status, this is not because we thereby approach some ideal of reflective rationality: it will not make us better scientists. Reflection is shallow: rationality does not even require us to *notice* these propositions. Here Wittgenstein is closer to Quine than to Carnap. But that only reinforces the question of why such propositions are philosophically important to the former but not to the latter.

For Wittgenstein, the systems of concepts we employ reflect our interests and concerns and general facts about the nature of our environment. Considering our colour vocabulary, he remarks that 'one is tempted to justify rules of grammar by sentences like "But there really are four primary colours"'. He continues:

We have a colour system as we have a number system. Do the

systems reside in our nature or in the nature of things? How are we to put it? Not in the nature of numbers or colours.

Then there is something arbitrary about the system? Yes and No. It is akin both to what is arbitrary and to what is not arbitrary.

(Z §§357–58)

They are arbitrary in the sense that ‘the world’ does not require a unique colour system. They are non-arbitrary in that the system we use is wholly natural given our concerns and the general facts about the world in which we live.¹² Compare Quine: ‘The lore of our fathers... is a pale gray lore, black with fact and white with convention. But I have found no substantial reasons for concluding that there are any quite black threads in it, or any white ones’ (CLTb 132).

The explanation of these differences lies in Wittgenstein’s attitude towards science. As Stephen Hilmy has emphasized, Carnap’s search for a scientific philosophy stands in marked contrast to Wittgenstein’s disdainful repudiation of such an activity.¹³ Where Carnap insisted that all of the ‘emotional needs’ that fuel our philosophical endeavours can be met by ‘clarity of concepts, precision of methods, responsible theses, achievement through cooperation in which each individual plays his part’,¹⁴ Wittgenstein announced that ‘I am not aiming at the same target as the scientists and my way of thinking is different from theirs.’¹⁵ Wittgenstein saw philosophical and metaphysical puzzlement as stemming from intellectual needs that could not be addressed by a scientific philosophy. He saw a need to provide descriptions of our practices which would enable us to come to terms with those demands without allowing them to be transformed into a search for a philosophical or pseudo-scientific theory. Carnap’s ‘pluralism’ involved attaching value to the development of a range of alternative scientific frameworks; Wittgenstein, by contrast, was open to the variety of non-scientific outlooks forming part of our complex cultural response to our surroundings. In spite of his many differences with Carnap, Quine never doubts that philosophy should be scientific in its approach, and his philosophical interest has always been in making sense of science.

This difference is reflected in contrasting attitudes towards the philosophical tradition. The legacy of the philosophical tradition is complex, and it contains features of at least two distinguishable kinds. Consider, for example, Descartes’s *Meditations*. We may derive from our reading of it a sense of the need to reflect upon the sources of

knowledge, the character of the inferences we employ and the possible sources of error and illusion in our opinions, if we are to make secure progress in our search for knowledge. If this is all that we derive from it, then it will remain an open question whether we should try to execute this project in the same way as Descartes himself. For example, we may not share his view that confronting the most radical sceptical arguments is the best way to do this. Reflecting on the ways in which errors are uncovered as scientific inquiry progresses, and confident in the ability of a community of fallible inquirers to make steady progress, we may dismiss Descartes's strategy as neurotic and flawed, as placing obstacles in the way of scientific progress which should be simply swept aside. In this spirit, we may see an exponent of naturalized epistemology acknowledging the continuities of his work with the earlier epistemological tradition while impatient of anyone who feels an obligation to engage seriously with the details of Descartes's sceptical arguments, his proof that the mind is better known than the body or the intricacies of the Cartesian Circle. These issues, it will be claimed, arise out of the details of Descartes's own flawed response to more general issues that are better addressed in other ways. And the best defence of this may be simply to address those issues in a naturalistic spirit without engaging with these other possibilities: an 'anti-Cartesian' approach to epistemology can be vindicated by its success in providing for the possibility of reflective and responsible belief formation. The search for a distinctively philosophical foundation for scientific knowledge then seems an unessential part of this tradition.

A second response to the philosophical tradition finds in it a body of distinctively philosophical arguments which inexorably draw our thought in unappealing directions which resist easy refutation. The reader of Descartes may be drawn into philosophical reflection by the apparent impossibility of showing that one is not dreaming or by the problems presented by the philosophical arguments for the real distinction between mind and body. A sensitivity to (and a susceptibility to the force of) these arguments can then control what seems to be required of any serious epistemological work. Philosophy then becomes a permanent possibility for us because of the challenges presented by these distinctively philosophical problems and arguments.

Carnap's work suggests both of these responses. He provides an account of rationality which is supposed to facilitate responsible and reflective belief formation. And the rational reconstructions he offers

enable him to provide a diagnosis of the source of these distinctively philosophical problems and a way of dismissing them. Sceptical problems arise, for example, because we treat external questions (questions about the choice of framework) as questions of fact. And apparently fundamental ontological issues all emerge from our misidentifying questions about the formal structure of a linguistic framework as material questions about the nature of reality. Constructional systems provide us with representations of theories and reality which help us to avoid those problems: Carnap appears to be sensitive to the force of these distinctively philosophical problems and anxious to disarm them. Quine, by contrast, seems to be simply impatient of these traditional concerns. If he is aware that we are tempted down unappealing philosophical pathways, he believes that an adequate scientific understanding of language and science is all that is required to restore us to the straight and narrow. It is no part of his philosophical endeavour to engage with them, appreciating their force and undermining it. When they are referred to, they are diagnosed as overreactions to scientific information about perceptual illusion and error. This aspect of the legacy of the philosophical tradition does not appear to present him with any challenge. The representations of our beliefs provided by his canonical notation and offered by his search for a naturalized epistemology have nothing to contribute to this kind of wrestling with philosophical demons.

If one is open to the beguiling nature of traditional philosophical arguments and problems, and if one thinks that these result from kinds of intellectual bewitchment produced by our misunderstandings of how our language functions, then we might have good reasons for describing how our language does in fact function: when we recognize that a 'proposition' is functioning as a 'rule' rather than like the empirical proposition it appears to be, this is a matter of great philosophical importance. If we think that the attempt to approach all subject matters in a scientific spirit is itself one cause of (or symptom of) such misunderstandings, then we have good reasons for paying close attention to the differing rules and logical patterns exhibited by our reasonings in the different areas. A clear description of the norms that guide us becomes essential to philosophical progress.

We have noticed two differences between Quine and Wittgenstein, and we shall conclude with a brief speculation about their relations. The primacy of scientific knowledge drives Quine's philosophy, leaving him with few grounds for doubt that the

understanding to be obtained from science will suffice to dispose of the sources of philosophical bewitchment. What I have called Wittgenstein's pluralism, his resistance to this idea that serious philosophical problems are scientific ones, prevents his attempting to combat philosophical puzzlement in this way. Detailed description of our linguistic practices, identifying what functions as scaffolding and what is unsupported, becomes essential for distinguishing those practices which are of value from those which manifest the bewitchment and confusion which are characteristic of much traditional philosophy.

NOTES

- 1 Carnap's views developed from the 1920s until the end of his life, but these developments are not relevant to the points I wish to make. I shall refer to three texts: *The Logical Structure of the World*, tr. R. George (University of California Press, Berkeley and Los Angeles, 1967)—this is a translation of *Der Logische Aufbau der Welt*, first published in 1928; *The Logical Syntax of Language* (Routledge and Kegan Paul, London, 1937); and *Meaning and Necessity*, 2nd edn (University of Chicago Press, Chicago, 1956). The ideas about rational reconstruction and constructional systems discussed here are found in *The Logical Structure of the World*.
- 2 This theme becomes prominent in *The Logical Syntax of Language*.
- 3 *Meaning and Necessity*, p. 214.
- 4 *The Logical Syntax of Language*, p. 52.
- 5 *The Logical Structure of the World*, section 58.
- 6 'The quest of the simplest clearest overall pattern of canonical notation is not to be distinguished from a quest of ultimate categories, a limning of the most general traits of reality' (WO 161).
- 7 *The Logical Syntax of Language*, p. 318.
- 8 In *Quine: Language, Experience and Reality* (Polity Press, Oxford, 1988), I suggested that it was a mystery that Carnap did not see that this admission undermined his distinction (p. 37). The present discussion allows that the position is more complex than I there admitted.
- 9 As we shall see later, this would not be an adequate account of Quine's own position. It suggests that the analytic/synthetic distinction is to be abandoned because all propositions are synthetic: these 'obvious' truths are synthetic, but we can only gesture towards the mass of evidential support they receive. We cannot articulate it. It is difficult to guess what Quine would say of this, but we should recall Quine's insistence that conventional decision does have a role in the formation of our system of opinions:

The lore of our fathers is a fabric of sentences. In our hands it develops and changes, through more or less arbitrary and deliberate revisions and additions of our own, more or less directly occasioned by the continuing stimulation of our sense organs. It

is a pale gray lore, black with fact and white with convention. But I have found no substantial reasons for concluding that there are any quite black threads in it, or any white ones.

(CLTb 132)

Note that Wittgenstein was equally unsympathetic to these 'commonsense' formulations.

- 10 I have discussed Quine's views about epistemic evaluation and the limits of epistemic reflection in 'Naturalized Epistemology and Epistemic Evaluation', *Inquiry*, 37 (1994), 465–85. See pp. 476–9. The parallels between the views of the relation of evidence to knowledge found in Quine's naturalized epistemology and in Carnap's auto psychological construction are explicitly signalled in the first two chapters of Quine's *From Stimulus to Science* (Harvard University Press, Cambridge, Mass., 1995).
- 11 Although Quine is happy to appeal to evolutionary considerations to explain the reliability of (for example) our inductive habits. See, for examples, I 503.
- 12 I have borrowed a sentence or two here from 'Wittgenstein and Knowledge: Beyond Form and Content', *Journal of Speculative Philosophy*, 7 (1993), 77–91, p. 86. This paper contains a more extended discussion of related themes in Wittgenstein's thought.
- 13 Stephen Hilmy, *The Later Wittgenstein* (Blackwell, Oxford, 1987).
- 14 Discussed by Hilmy, *ibid.*, pp. 213f. The quotation is from Carnap's *The Logical Structure of the World*, p. xv.
- 15 Cited by Hilmy, *op. cit.*, p. 191.

QUINE, WITTGENSTEIN AND HOLISM

Roger F. Gibson

INTRODUCTION

'Holism' has become a 'buzz-word' of contemporary philosophy. It figures prominently in current discussions in philosophy of language, philosophy of mind, philosophy of science, and epistemology. However, as is frequently the case with 'buzz-words', its meaning rarely remains fixed from context to context or even within a single context.

Two prominent philosophers whose writings have contributed significantly to the recent "holism" phenomenon' are W.V. Quine and Ludwig Wittgenstein. In particular, the Quine of 'Two Dogmas of Empiricism' (1951) and later and the Wittgenstein of *On Certainty* (1969) both evince holistic tendencies, but are their holistic tendencies comparable? One might doubt that they are. After all, in the sources just cited Quine's holism emerges largely in reaction to Rudolf Carnap's philosophy, while Wittgenstein's holism emerges largely in reaction to G.E. Moore's. I shall address this question of sameness and difference after first explaining Quine's holistic tendencies and then Wittgenstein's.

QUINE'S HOLISM

The primary reference for my holism is 'Two Dogmas'.

(W.V. Quine)

In 'Two Dogmas of Empiricism', Quine repudiates the analytic/synthetic distinction (dogma 1) and reductionism (dogma 2). Dogma 1 purports to distinguish those statements that are true by virtue solely of their meanings, independently of how the world is (the analytic ones), from those statements that are true by virtue of their

meanings together with how the world is (the synthetic ones). Dogma 2 purports 'that each statement, taken in isolation from its fellows, can admit of confirmation or infirmation at all' (TDEc 41).

In TDE Quine's repudiation of both dogmas, but especially his repudiation of the dogma of reductionism, relies on his advocacy of an *extreme holism*: 'My countersuggestion [to reductionism], issuing essentially from Carnap's doctrine of the physical world in the *Aufbau*', Quine explains, 'is that our statements about the external world face the tribunal of sense experience not individually but only as a *corporate body*' (ibid., my italics). What makes this holism *extreme* is Quine's taking 'corporate body' to mean *the whole of science*: 'The unit of empirical significance', he writes, 'is the whole of science' (ibid., 42). However, by the time Quine published *Word and Object* (1960) he had come to see that a *moderate holism* is both more faithful to scientific practice and still sufficient for undercutting reductionism (and the analytic/synthetic distinction). Let's look more closely at Quine's moderate holism:

It is holism that has rightly been called the Duhem thesis and also, rather generously, the Duhem-Quine thesis. It says that scientific statements are not separately vulnerable to adverse observations, because it is only jointly as theory that they imply their observable consequences. Any one of the statements can be adhered to in the face of adverse observations, by revising others of the statements.

(EESW 313)

Quine emends, and thus moderates, this formulation of holism, or the Duhem thesis, by adding the following two reservations:

One reservation has to do with the fact that some statements are closely linked to observation, by the process of language learning. These statements are indeed separately susceptible to tests of observation; and at the same time they do not stand free of theory, for they share much of the vocabulary of the more remotely theoretical statements. They are what link theory to observation, affording theory its empirical content. Now the Duhem thesis still holds, in a somewhat literalistic way, even for these observation statements. For the scientist does occasionally revoke even an observation statement, when it conflicts with a well attested body of theory and when he has tried in vain to reproduce the experiment. But the Duhem

thesis would be wrong if understood as imposing an equal status on all the statements in a scientific theory and thus denying the strong presumption in favor of the observation statements. It is this bias that makes science empirical.

(*ibid.*, 314)

So, Quine's *first reservation* regarding holism is that a given statement's susceptibility to tests of observation is a matter of degree, with observation statements representing a limiting case. Thus, holophrastically construed, observation statements are indeed separately susceptible to tests of observation because they are learnt (or could be learnt) by being conditioned to fixed ranges of confirming and infirming patterns of sensory stimulation. In time, however, these same observation statements become linked to theoretical statements (statements which are remote from sensory stimulation) by virtue of their sharing some vocabulary. For example, the holophrastic observation statement 'This+is+water' can become linked to the theoretical statement 'Water is H₂O' in a person's web of belief just as soon as that person learns both to parse the holophrastic statement 'This+is+water' into the analysed statement 'This is water' and, of course, some chemical theory (POS 107–16).

Thus, observation statements enjoy a double life: holophrastically construed, they are conditioned to patterns of proximal stimuli; analytically construed, they are linked to other statements, including theoretical ones, by virtue of a shared vocabulary. The former connection accounts for observation statements' susceptibility to being confirmed or infirmed individually; the latter connection accounts for how consideration of systematic efficacy for theory can sometimes override the former connection.

Quine's *second reservation* regarding holism 'has to do with breadth. If it is only jointly as a theory that the scientific statements imply their observable consequences, how inclusive does that theory have to be? Does it have to be the whole of science, taken as a comprehensive theory of the world' (EESW 314), as Quine maintained in TDE? Quine now thinks that it does not:

Science is neither discontinuous nor monolithic. It is variously jointed, and loose in the joints in varying degrees. In the face of a recalcitrant observation we are free to choose what statements to revise and what ones to hold fast, and these alternatives will disrupt various stretches of scientific theory

in various ways, varying in severity. Little is gained by saying that the unit is in principle the whole of science, however defensible this claim may be in a legalistic way.

(EESW 314–15)

So, Quine's moderate holism recognizes (1) that, in general, a statement's susceptibility to tests of observation is a matter of degree and that some statements (observation statements) are individually susceptible to such tests, and (2) that it is more accurate of current scientific practice to think of *significant stretches of science*, rather than the whole of science, as having observable consequences.

QUINE'S GROUNDS FOR HOLISM

As we have seen, in TDE Quine proffered holism as a 'countersuggestion' to the dogma of reductionism. However, apart from the plausible story that Quine tells there about his countersuggestion, there is but one meagre argument for holism to be found in TDE. That argument is the following *reductio*: if reductionism were true, then we ought to be able to come up with an explicit theory of confirmation, but as Quine notes, 'apart from prefabricated examples of black and white balls in an urn' (TDEc 41), this endeavour has not met with success. Thus, it is *likely* that reductionism is false (and, therefore, that holism is true).

However, searching beyond the pages of TDE for further sources of support for holism, we find that Quine relies on two further arguments. One is what one might call the *language-learning argument*.¹ This argument is extracted from some of Quine's speculations regarding how theoretical (i.e. non-observational) language is learnt. The crucial idea is that while a person can learn the observational part of language by extrapolating along lines of observed (subjective) similarities, theoretical language cannot be learnt that way. Rather, the learning of theoretical language requires irreducible leaps of analogy on the part of the learner. These analogies forge multifarious and somewhat tenuous links among a person's repertoire of statements. And since a person's language is learnt from other people, many of those links in an individual's web of belief come perforce to resemble those of other people, thereby making communication possible. More to the present point, however, if some cluster of a person's statements which includes theoretical ones implies a particular observation statement which subsequent observation shows to be false, then (because of the

aforementioned multifarious and tenuous links) there is some latitude as to which statement(s) in the implying cluster to cull so as to block the false implication, i.e., there is holism. This language-learning argument for holism also goes some way towards explaining why moderate holism occurs. If human language consisted entirely of observation statements, each one learnable by extrapolating over observed similarities, then each would have its own unique sets of confirming and infirming patterns of sensory stimulation. Holism, then, would not occur—but then neither would theoretical science; as Quine says, ‘I see no hope of a science comparable in power to our own that would not be subject to holism, at least of my moderate sort. Holism sets in when simple induction develops into the full hypothetico-deductive method’ (RTC 364).

Another of Quine’s arguments for moderate holism is what one might call the *scientific practices argument*. This argument maintains that as a matter of empirical fact scientists involved in testing some hypothesis H must assume the truth of various auxiliary assumptions A , and that H can always be saved by making drastic enough adjustments to A . Suppose, for example, that the conjunction of H and A entails the observation statement O . Suppose also that upon inspection O turns out to be false. Quine’s claim is that H could always be saved from refutation by replacing A with A' such that the conjunction of H and A' would no longer entail (the false) O . Notice that this claim is much weaker than the dubious claim that H could always be saved by replacing A with A' such that the conjunction of H and A' entails *not*- O . Quine disavows this stronger claim (PTb 16). Of course, it is also true that H could be saved, without altering A , were one to refuse to accept the falsification of O . If one’s giving up the truth of O portends cataclysmic consequences for one’s web of belief, one might choose to hold fast to the truth of O in spite of a seemingly recalcitrant observation. A person might even go to the extreme of pleading hallucination in order to maintain O ’s truth (*ML* 2; *TDEc* 43).

In sum, there is a dialectic of epistemic values at work in Quine’s conception of moderate holism; these values include observation, on the one hand, and considerations of conservatism, simplicity and generality of theory on the other. Moreover, conservatism, simplicity and generality are themselves competitors in the dialectic. For example, simplicity of theory can give way to complexity, if great gains in generality are to be achieved; but generality can occasionally bow to simplicity, if complexity makes the theory unwieldy. It is important to recognize that for Quine there is no recipe, no algorithm,

for adjudicating conflicts within this dialectic of values; he would say that the values are incommensurable. Finally, as we noted previously, observation statements are holophrastically conditioned to the ranges of proximal stimuli, which tend to confirm/ infirm them. However, these very same observation statements are connected in a piecemeal fashion to various theoretical statements by sharing vocabulary with them. Thus are observation statements pulled in opposite epistemic directions: towards sensory stimulation, on the one hand, and towards considerations of systematic efficacy for theory, i.e. towards conservatism, simplicity and generality of theory, on the other.

HOW QUINE USES HOLISM

The Duhem thesis, moderate holism, plays a major part in Quine's systematic philosophy. As we have noted, he relies on it in arguing against the two dogmas of empiricism, namely the analytic/synthetic distinction and reductionism, but he also relies on it in accounting for mathematical truth, in supporting his thesis of indeterminacy of translation, and in responding to global scepticism.

The two dogmas

If, in the light of the considerations canvassed in the preceding section, we conclude that moderate holism is true, then not only is reductionism false, but it is also very unlikely that there are analytic statements, statements that are true by virtue solely of their meanings, independently of how the world is. As Quine has argued, any statement can be held true independently of how the world is, if we make drastic enough revisions to others of our statements. According to moderate holism, then, the statements most likely to count as analytic are those that are extremely remote from sensory stimulation, including statements like 'There have been black dogs'. But surely advocates of analyticity do not want such statements to count as analytic. Has Quine therefore proved that there are no bona fide analytic statements? I think not, but what he has done is to supplant a less adequate theory of the relation between scientific theory and the world (reductionism) with a more adequate theory (moderate holism): 'Holism in this moderate sense is an obvious but vital correction of the naive conception of scientific sentences [statements] as endowed each with its own separable empirical content' (*PTb* 16).

Mathematics

According to the logical positivists, notably Carnap and A.J.Ayer, mathematical truths lack empirical content and are necessary. These philosophers argue that both of these traits of mathematical truths are explicable in terms of analyticity: mathematical truths are devoid of empirical content because they are analytic, i.e. they make no claims about the world. And they are necessary because they are analytic, i.e. they are true solely in virtue of the meanings of their terms. Thus, by relying on analyticity, and without abandoning their empiricist scruples, these philosophers can cheerfully admit that some truths are indeed necessary.

But how is an empiricist like Quine, one who shuns analyticity, to respond to these two problems?

I answer both [Quine writes] with my moderate holism. Take the first problem: lack of content. Insofar as mathematics gets applied in natural sciences, I see it as sharing empirical content. Sentences of pure arithmetic and differential calculus contribute indispensably to the critical semantic mass of various clusters of scientific hypotheses, and so partake of the empirical content imbibed from the implied observation categoricals.

(TDR 269)²

What of the second problem, the necessity of mathematical truths?

This again is nicely cleared up by moderate holism, without the help of analyticity. For...when a cluster of sentences with critical semantic mass is refuted by an experiment, the crisis can be resolved by revoking one *or* another sentence of the cluster. We hope to choose in such a way as to optimize future progress. If one of the sentences is purely mathematical, we will not choose to revoke it; such a move would reverberate excessively through the rest of science. We are restrained by a maxim of minimum mutilation. It is simply in this, I hold, that the necessity of mathematics lies: our determination to make revisions elsewhere instead. I make no deeper sense of necessity anywhere. Metaphysical necessity has no place in my naturalistic view of things, and analyticity hasn't much.

(*ibid.*, 269–70)

So, by relying on moderate holism, and without abandoning his empiricist scruples, Quine believes that he can account for both the empirical content and the apparent necessity of mathematical truth.

Indeterminacy of translation

One of Quine's more contentious philosophical claims is that two linguists working independently of one another on translating some hitherto unknown language could end up constructing manuals of translation which 'might be indistinguishable in terms of any native behavior that they give reason to expect, and yet each manual might prescribe some translations that the other translator would reject. Such is the thesis of indeterminacy of translation' (*PTb* 47–8). Quine summarizes a central argument supporting his thesis in the following passage:

If we recognize with Peirce that the meaning of a sentence turns purely on what would count as evidence for its truth, and if we recognize with Duhem that theoretical sentences have their evidence not as single sentences but only as larger blocks of theory, then the indeterminacy of translation of theoretical sentences is the natural conclusion.

(EN 80–1)

Quine has other arguments for indeterminacy of translation, but this one clearly rests upon his commitment to Duhem's thesis, moderate holism.

Global scepticism

One of Quine's finest essays, one that is frequently overlooked by his critics and commentators, is 'The Scope and Language of Science'. This essay is important because it contains an early statement of Quine's reciprocal containment thesis. This thesis says, in effect, that ontology (the theory of what there is) and epistemology (the theory of method and evidence) contain one another but in different ways. This notion of reciprocal containment plays an important role in Quine's response to global scepticism, so let us examine it in some detail.

Quine is emphatically a naturalist. A naturalist of his ilk rejects first philosophy and accepts the view that it is up to science to tell us what exists (ontology) as well as how we know what exists (epistemology). As a naturalist, Quine accepts a physicalist ontology (including sets) and an empiricist epistemology. He does so because he believes that physicalism and empiricism are themselves empirical hypotheses championed by our best current (if tentative)

scientific theories. Also as a naturalist, Quine believes that ontology contains epistemology in the sense that empiricism is to be articulated in physicalistic terms, for example in terms of physical forces impinging on nerve endings. On the other hand, he believes that epistemology contains ontology in the sense that physicalism is our own construction and projection from those very same empiricist resources.

Some of Quine's readers have thought that this talk of ontology being a construction and projection from some meagre empiricist input inexorably leads to global scepticism (or, perhaps, to instrumentalism or to idealism). For example, one might reason as follows:

It is thus our very understanding of the physical world, fragmentary though that understanding be, that enables us to see how limited the evidence is on which that understanding is predicated [i.e. *ontology contains epistemology*]. It is our understanding, such as it is, of what lies beyond our surfaces, that shows our evidence for that understanding to be limited to our surfaces [i.e. *epistemology contains ontology*]. But this reflection arouses certain logical misgivings: for is not our very talk of light rays, molecules, and men then only sound and fury, induced by irritation of our sensory surfaces and signifying nothing? The world view which lent plausibility to this modest account of our knowledge is, according to this very account of our knowledge, a groundless fabrication [i.e. *global scepticism*].
(SLSb 229)

However, to reason so, Quine explains, is to succumb to fallacy, a peculiarly philosophical fallacy, and one whereof philosophers are increasingly aware. *We cannot significantly question the reality of the external world*, or deny that there is evidence of external objects in the testimony of our senses; for, to do so is simply to dissociate the terms 'reality' and 'evidence' from the very applications which originally did most to invest those terms with whatever intelligibility they may have for us.
(*ibid.*, my italics)

Beyond this sort of paradigm case argument against global scepticism, Quine explains why we should 'accept physical reality, whether in the manner of unspoiled men in the street or with one or another degree of scientific sophistication' (*ibid.*, 230):

We imbibe an archaic natural philosophy with our mother's milk. In the fullness of time, what with catching up on current literature and making some supplementary observations of our own, we become clearer on things. But the process is one of growth and gradual change: we do not break with the past, nor do we attain to standards of evidence and reality different in kind from the vague standards of children and laymen. Science is not a substitute for common sense, but an extension of it. The quest for knowledge is properly an effort simply to broaden and deepen the knowledge which the man in the street already enjoys, in moderation, in relation to the commonplace things around him. *To disavow the very core of common sense, to require evidence for that which both the physicist and the man in the street accept as platitudinous, is no laudable perfectionism; it is a pompous confusion*, a failure to observe the nice distinction between the baby and the bath water.

(*ibid.*, 229–30, my italics)

Thus, given Quine's naturalistic stance, the fact that the best scientific theory of method and evidence (empiricism) under-determines the best scientific theory of what there is (physicalism) is not a reason for repudiating the latter together with common sense.

Before concluding my discussion of Quine's holism, I should like to point out two further extremely important points regarding the passage last quoted. *First*, it endorses both coherentist and foundationalist elements of knowledge. There can be no doubt that both elements are found throughout Quine's writings on the nature of natural knowledge. He sounds like a coherentist when he talks about theoretical statements and considerations of systematic efficacy for theory, but he sounds like a foundationalist when he talks about holophrastic observation statements and evidence. This is just what one would expect from an empiricist advocate of moderate holism. *Second*, in the last quotation Quine accords a special status to common sense: 'to disavow the very core of common sense, to require evidence for that which both the physicist and the man in the street accept as platitudinous, is no laudable perfectionism; it is a pompous confusion'. Quine's view of the status of core commonsense beliefs is similar to those of Moore and Wittgenstein, but, as we shall see, each of the three gives a different explanation of the grounds of their view.

WITTGENSTEIN'S HOLISM

When we first begin to *believe* anything, what we believe is not a single proposition, it is a whole system of propositions. (Light dawns gradually over the whole.)

(Ludwig Wittgenstein, OC §141)

Wittgenstein died on 29 April 1951—three months after the publication date of ‘Two Dogmas of Empiricism’ in *The Philosophical Review*, and four months after Quine read the paper at the Eastern Division of the American Philosophical Association in Toronto. For four separate periods during his final eighteen months Wittgenstein concerned himself with certainty and related topics. In fact, the last entry in his notes on these topics was made just two days before he died. In 1969 these notes were published in their entirety in book form under the title *On Certainty*.

The notes that comprise *On Certainty* were largely precipitated by three papers that G.E.Moore published between 1925 and 1941, papers in which Wittgenstein took a keen and lasting interest: ‘A Defense of Common Sense’ (1925), ‘Proof of the External World’ (1939) and ‘Certainty’ (1941). In *On Certainty* Wittgenstein is concerned with some of the same topics that Moore addressed in these three papers. In particular, Wittgenstein agrees with Moore’s view articulated in ‘A Defense of Common Sense’ (hereafter ADCS) that there is a core of common-sense beliefs which can neither be justified nor doubted, though Wittgenstein rejects Moore’s account of why this is so. Wittgenstein also rejects Moore’s view, articulated in ‘Proof of the External World’ (hereafter PEW), that a proof of the external world is needed and can be given.

In ADCS, Moore articulated a great number of beliefs belonging to what he called the Common-Sense view of the world, beliefs which he claimed to know with certainty to be true, but which could not be justified, beliefs such as:

There exists at present a living human body, which is *my* body. This body was born at a certain time in the past, and has existed continuously ever since, though not without undergoing changes.... Ever since it was born, it has been either in contact with or not far from the surface of the earth; and, at every moment since it was born, there have also existed many other things, having shape and size in three dimensions.³

Two further beliefs that Moore says that he knows with certainty to

be true are (1) that he has two hands, and (2) that there is an external world. Indeed, in PEW he argues that he can prove (2) by appealing to (1), though he admits that he cannot prove (1) since he cannot prove that he is not dreaming.

As I understand *On Certainty*, Wittgenstein agrees with Moore's view found in ADCS that there is a core of common-sense beliefs that are certain (i.e. cannot be doubted), but he denies that Moore *knows* such beliefs. For Wittgenstein, Moore's utterance of 'I know I have two hands', or 'I know there is an external world', or the like, involves a misuse of the idiom 'I know.' According to Wittgenstein, 'I know' is used correctly only when it is possible to muster evidence for or against the relevant claim, and mustering evidence is a public activity. However, it is not possible to muster evidence for or against those core common-sense beliefs that both Moore and Wittgenstein regard as certain. Thus, Wittgenstein is driving a logical or grammatical wedge between certainty and knowing. It is correct to say 'I am certain there is an external world', but not 'I know there is an external world.' It is correct to use 'certain' in contexts where giving evidence or doubting are inappropriate. Moore's tendency to conflate certainty and knowledge might be due to his assuming that both certainty and knowledge are mental states, accessible to introspection. Wittgenstein, of course, denies that certainty and knowledge are mental states. Finally, Wittgenstein rejects Moore's assumption that philosophers' utterances such as 'This is a hand', or 'There is an external world', or the like, express sensible propositions at all. For Wittgenstein, such utterances are *without sense* (senseless), but *not nonsense*.⁴

In sum, then, Wittgenstein rejects the following three of Moore's assumptions: (1) that 'I know' is being used correctly by a philosopher who says things like 'I know there is an external world'; (2) that knowing is a mental state, accessible to introspection; and (3) that philosophers' utterances like 'This is a hand' express sensible propositions. It follows that Wittgenstein also rejects the proof of the external world that Moore proffers in PEW, since he regards both the 'premisses' and the 'conclusion' of Moore's 'proof' as senseless.

Wittgenstein does a great deal more in *On Certainty* than criticize Moore. In particular, he provides a positive account of the grounds for the insight that he and Moore share, namely that there is a core of common-sense beliefs that are certain and, therefore, impervious to doubt. In an excellent new book entitled *Moore and Wittgenstein on Certainty*, Avrum Stroll argues persuasively

that Wittgenstein provides not one but two logically distinct accounts of the ground of such certainty. Following Stroll, let's refer to these two accounts as relative foundationalism and absolute foundationalism.⁵

Relative foundationalism

Here are a few quotations from *On Certainty* which indicate the nature of Wittgenstein's relative foundationalism:

144. The child learns to believe a host of things. I.e. it learns to act according to these beliefs. Bit by bit there forms a system of what is believed, and in that system some things stand unshakeably fast and some are more or less liable to shift. What stands fast does so, not because it is intrinsically obvious or convincing; it is rather held fast by what lies around it.

152. I do not explicitly learn the propositions that stand fast for me. I can *discover* them subsequently like the axis around which a body rotates. This axis is not fixed in the sense that anything holds it fast, but the movement around it determines its immobility.

225. What I hold fast to is not *one* proposition but a nest of propositions.

96. It might be imagined that some propositions, of the form of empirical propositions, were hardened and functioned as channels for such empirical propositions as were not hardened but fluid; and that this relation altered with time, in that fluid propositions hardened, and hardened ones became fluid.

97. The mythology may change back into a state of flux, the river-bed of thoughts may shift. But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is no sharp division of the one from the other.

98. But if someone were to say 'So logic too is an empirical science' he would be wrong. Yet this is right: the same proposition may get treated at one time as something to test by experience, at another as a rule of testing.

99. And the bank of that river consists partly of hard rock, subject to no alteration or only to an imperceptible one, partly of sand, which now in one place now in another gets washed away or deposited.

So, as children we learn a system of beliefs, some of which are certain and indubitable, while others are more or less susceptible to doubt. Those beliefs that stand fast do so by virtue of those that shift: 'The game of doubting itself presupposes certainty' (ibid., §115). However, we do not explicitly learn the propositions that stand fast, but we can subsequently discover that we have acquired them. Also, what is held fast is not one proposition but a nest of propositions. Such propositions have *the form* of empirical propositions, but they are not empirical propositions, for they are not functioning as empirically testable propositions but, rather, as rules of such testing. The point of the river-bed analogy is that there is a difference between empirical propositions and propositions merely of the form of empirical propositions and, further, that in different situations one type of proposition may take on the role of the other. Hence the aptness of Stroll's referring to this position as *relative* foundationalism. However, one might quibble with the aptness of calling Wittgenstein's position *foundationalism*, in so far as that term is often opposed to holism, for there certainly are holistic tendencies in the passages just quoted.

There are similarities and differences between Wittgenstein's relative foundationalism and Quine's moderate holism. One similarity is that virtually every proposition is up for revision, but not equally so. Revising certain propositions might be avoided because revising them would be too disruptive for the system. On the other hand, though Wittgenstein admits that there is no sharp division between the propositions making up the river-bed and those comprising the waters, he tends to think of them as different in kind and not merely different in degree. For example, he sometimes refers to the river-bed-type propositions as 'rules of testing', 'grammatical rules', 'world pictures', 'scaffolding for our thoughts', and so on. Moreover, Wittgenstein maintains that such propositions are outside the language-games which they make possible. Even so, I am reluctant to saddle Wittgenstein with anything as severe as an analytic/synthetic distinction. I would be more inclined to say that he embraces something like the internal-question/external-question dichotomy. However one characterizes Wittgenstein's view, it nevertheless seems at odds with Quine's in so far as Wittgenstein thinks that there is a difference in kind between those (senseless) propositions that stand fast and regular empirical propositions.

Absolute foundationalism

Stroll claims that as Wittgenstein's thought progressed in *On Certainty* Wittgenstein gradually came to favour absolute (non-propositional) foundationalism over relative (propositional) foundationalism. Stroll explains:

We have seen that one metaphor Wittgenstein uses for certainty is 'standing fast'. I believe this concept is ambiguous as he employs it, that it denotes two different notions. On the one hand, it is hinge propositions that are said to stand fast; on the other, each in a set of non-propositional features is said to stand fast.⁶

The hinge propositions that Stroll here refers to derive from Wittgenstein's claim that 'the *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn' (OC §341). Stroll continues with his explanation of Wittgenstein's propositional and non-propositional accounts of what is said to stand fast:

We shall begin with the propositional account. It is marked by three characteristics: (i) that foundational propositions form a system and (ii) that some hinge propositions do not stand absolutely but only relatively fast, and (iii) that some hinge propositions—'that the earth exists', for example stand absolutely fast. The emphasis he gives to the propositional theory stresses its relativistic character; the absolutist version is more hinted at than explicitly stated. In holding this propositional account, Wittgenstein thus differs from Descartes, who thinks of the *cogito* as the sole foundational item and from Moore, whose common sense propositions do not form a system, and from both Descartes and Moore, who think all foundational propositions hold absolutely. In his later view Wittgenstein's foundationalism abandons principles (i) and (ii) of the propositional account. Since the new view is non-propositional, it cannot be a system of propositions, and the foundations it describes are absolutist in character.⁷

According to Stroll, the new view, absolute foundationalism, is developed by Wittgenstein along three lines: '(1) that certainty is something primitive, instinctual, or animal, (2) that it is acting, and (3) that it derives from rote training in communal practices'.⁸

I am convinced by Stroll and by my own reading of *On Certainty* that the view that Stroll calls absolute foundationalism is present in *On Certainty*. However, I am unconvinced by the main thrust of the final chapter of Stroll's book, where he pits Wittgenstein's absolute foundationalism against Quine's holism (or, better, Quine's fallibilism). 'The central issue is', Stroll writes, 'whether there is something that stands fast in the sense that it is neither eliminable nor revisable.'⁹ His view is, of course, that nothing stands fast for Quine, while something does stand fast for Wittgenstein—and Stroll sides with Wittgenstein, for certainty and against global scepticism.

I believe that Stroll might have come closer to the mark if he had not based his construal of Quine's position entirely on a few passages from TDE. One must remember that in TDE Quine overstates his holism, and when he proffers the claim that any statement can be held true come what may, his target is the doctrine of analyticity. I believe that a more balanced construal of Quine's position can be achieved by recalling two points: (1) Quine's formulation of the holism thesis refers explicitly to scientific theories, not to common sense, and (2) in 'The Scope and Language of Science', Quine said that to 'disavow the very core of common sense, to require evidence for that which both the physicist and the man in the street accept as platitudinous, is no laudable perfectionism; it is a pompous confusion'. The sentiment is surely one that both Wittgenstein and Moore would have found congenial.

Finally, while I do think that Quine would find Wittgenstein's account of relative foundationalism uncongenial (because it turns on something like an analytic/synthetic distinction), I also think that he would find absolute foundationalism congenial. After all, there is nothing non-naturalistic about that position, nothing about the community and its practices that is not susceptible to scientific study.

In the final analysis, I believe that it is fair to claim modestly that Quine's and Wittgenstein's holistic tendencies are not as dissimilar as either their respective historical precursors (Carnap and Moore) or their different philosophical methods might at first suggest—which proves once again that great (original) minds (sometimes) think alike!

NOTES

- 1 See Roger F. Gibson, Jr, *Enlightened Empiricism* (University of South Florida Press, Tampa, 1988), pp. 33–42.

- 2 Observation categoricals are standing sentences composed of two holophrastic observation sentences of the form 'Whenever this, that': 'Whenever it's raining, it's wet.'
- 3 G.E.Moore, 'A Defense of Common Sense', in Moore, *Philosophical Papers* (George Allen and Unwin, London, 1959), p. 33.
- 4 See Avrum Stroll, *Moore and Wittgenstein on Certainty* (Oxford University Press, Oxford, 1994), p. 114.
- 5 Ibid., pp. 138ff.
- 6 Ibid., pp. 155–6.
- 7 Ibid., p. 156.
- 8 Ibid., p. 157.
- 9 Ibid., p. 166.

SCEPTICISM, SCIENCE, QUINE AND WITTGENSTEIN*

Douglas G. Winblad

Philosophers exhibit a variety of attitudes towards scientific inquiry. Quine and Wittgenstein appear to lie at opposite ends of the spectrum in this regard. Quine is a scientific or scientific philosopher, Wittgenstein a philosopher of ordinary language who holds that the 'preoccupation with the method of science' leads philosophers into 'complete darkness' (*BB* 18). Throughout his career, Quine has attached comparatively little philosophical importance to ordinary or everyday non-scientific language. Recently, however, he has called science 'a particular language game, in Wittgenstein's phrase', one he contrasts with 'other good language games such as fiction or poetry' (*PTb* 20). This conception of science draws Quine much closer to Wittgenstein than many have believed him to be.

Nowhere is their kinship more striking than in their treatments of scepticism. Both, I shall argue, accuse the sceptic of departing in an unmotivated or improperly motivated way from the practices they take to be basic. From Quine's perspective, at present scepticism diverges from proper scientific practice. For Wittgenstein, the sceptic's use of epistemic terms departs from their ordinary non-scientific use. In so far as scientific practice for Quine includes what I shall call 'ordinary scientific language', the strategies Quine and Wittgenstein employ with respect to scepticism are similar. Neither takes what Quine calls 'linguistic usage' (*PT* 100) to be sacrosanct. But both question whether sceptical departures from established usage are warranted. The issue of what counts as a properly motivated departure from accepted usage is central to my concerns here. It bears on the question of whether Quine and Wittgenstein are unable in the end to fend off the sceptic's onslaughts. It also bears on the question whether and to what extent their stances

complement or conflict with each other. Some have claimed that Quine's and Wittgenstein's strategies for dealing with scepticism ultimately fail. I argue in the first and second sections of the chapter that they do not, at least not in some of the better-known ways in which it has been suggested they do.

From a Wittgensteinian point of view, presumably one way to justify a departure from ordinary usage is to argue that it serves a scientific purpose—that it does some explanatory work. Were Quine confronted with the charge that his own divergence from ordinary usage is problematic, this seems to be a rationale that would be available to him. Whether, on the contrary, in Quine's case 'language goes on holiday' (*PI* §38), as Wittgenstein puts it, is a complex issue, one that points up Quine's commitment to the assumption that science can explain everything. I address the issue in the third section, where I argue that there is reason to question whether this assumption is correct.

QUINE, UNDER-DETERMINATION AND EXPLANATION

Quine rejects the distinction between analytic and synthetic truths, and, along with it, the possibility of a 'first philosophy' prior to natural science, a 'transcendental philosophy' above it (see TDE). But he does not deny that one may have legitimate doubts about specific scientific theories. In particular, he admits that the data on which 'our' theory of the world rests are compatible with alternative theories. Some have suggested that such under-determination commits Quine to scepticism.¹ But Quine himself does not take the underdetermination of theories to have much sceptical force on its own. He maintains, in fact, that the *mere* compatibility of the alternatives with the evidence on which our own theory is based is 'irrelevant' (see *POQ*, *PT* §§41–3 and TI).

Quine acknowledges that there are contexts in which rival theories can play a successful role in calling our current theory into question. If our theory's predictive success were to diminish, and if a rival theory were simultaneously to prove more predictively successful, then, assuming that the rival theory also exhibited to a sufficiently high degree the other virtues—such as simplicity—that Quine demands of theories, a sceptic would be justified, in Quine's view, in doubting our current theory (*MSP* 475; cf. *TT* 22).² When evaluated from the standpoint of sound scientific practice—the only stance Quine seriously considers here—the sceptic who doubts our theory of the world on the basis of

the bare possibility that the theory is false is a poor scientist. I suggest that this is at least in part the import of Quine's claim that such a sceptic is 'overreacting' (MSP 475; cf. *TT* 22). All other things being equal, the scientific cause of prediction is not advanced by doubting a predictively successful theory without putting one that is more predictively successful in its place.³ And while a sceptic may not find this consideration compelling, for Quine there is no higher court of appeal than scientific method that can adjudicate the dispute. This is what it is to reject the idea of a first or transcendental philosophy that can pass judgement on the deliverances of science.

Later I shall consider a form of sceptical resistance to this approach. Meanwhile, I want to stress what is from one point of view the utter innocuousness of Quine's acknowledgement that it is possible that at some point in the future, it will behove us to abandon our current theory. For this is the sort of admission any scientist can make without obviously casting his present theory into serious doubt. Given Quine's conception of scientific practice, doubts based on the mere possibility that one's theories are false seem unmotivated. What the sceptic needs in order to make his doubts scientifically respectable is a rival theory that meets the standards of scientific theory-choice. In the absence of such a theory, Quine seems to think, it is completely appropriate for him to rest content in his 'robust realism' regarding 'sticks, stones, electrons, and molecules' (MSP 474). This is what he thinks the best theory available to us tells us there is. Ontology, like epistemology, is to be carried out within science, within our current theory of the world. Some of us may be inclined to wonder just how robust such realism is, but that is another matter.

At present, from Quine's standpoint, we are not forced to decide whether to give up our current theory of the world in favour of another, more successful theory, because, as far as we know, no such theory exists. But Quine and others have been increasingly interested in cases of under-determination that concern various imaginary rival theories. The case that vexes Quine the most is one in which there is a theory that is logically compatible with our own 'overall' theory, empirically equivalent to it—in the sense that both theories yield the same predictions—and equally simple, but that nevertheless contains theoretical terms for which no equivalent expressions can be found in our theory (see *PTb* §§41–2 and *TI*).⁴

For reasons that will emerge shortly, it is important to stress that Quine treats this case as an imaginary one, one that science does not now face, and may never have encountered. Such cases are

rare, if they have ever existed. In fact, Quine characterizes his reflections about the case as a ‘thought experiment’ (*PTb* 100). What he is trying to determine in these reflections is, I suggest, what ‘we’—presumably, we scientists—would, qua scientists, say and do about such a case, were it to arise. Apart from the stress on science, the strategy has obvious affinities with Wittgenstein’s reflections on what we would say about the hypothetical cases he considers.

At any rate, Quine rejects the response of simply combining the rival theory with our own into a ‘tandem theory’. Such a theory would lack the simplicity of either of the original theories. But he has been drawn to two other responses, and admits to vacillating between them. The first, ‘sectarian’, response has it that the irreducibly ‘alien’ terms of the alternative theory are meaningless. One does not, therefore, count the other theory as true.⁵ The second, ‘ecumenical’, solution derives from Davidson’s suggestion that one couch both theories in an inclusive metalanguage, and count them both as true, where truth is understood disquotationally, in Tarskian terms. The appeal of this solution, in Quine’s view, ‘is empiricism: reluctance to discriminate invidiously between empirically equivalent and equally economical theories’ (*PT* 99; see also *TI* 14–15).

Bergström has identified and argued for a third position, an agnostic stance, according to which one believes *neither* of the two theories to be true.⁶ If we have reason to believe that a theory we do not accept is empirically equivalent to, just as simple as, but nevertheless irreducible to the theory we do accept, then, on Bergström’s view, we are no longer justified in believing either theory. Because he thinks this stricture applies to possible theories, and not just actual ones, Bergström argues that under-determination commits those who endorse it to a kind of scepticism.

What would decide among these alternatives? If our method for deciding issues is the scientific method, as it is for Quine, then it is to scientific practice—in particular the scientific practice of using words like ‘true’ and ‘justified’—that we must look for guidance in settling the matter.⁷ By ‘practice’ I mean something normative, something akin to ‘correct usage’.⁸ But scientific practice may not contain guidelines that are so precisely circumscribed as to hand down a ruling in this case. If, as I suggested earlier, scientists have rarely if ever had to confront the sort of case Quine is envisioning, it would not be surprising if this were so. No pressing concerns would have forced scientists to delimit their methods in this way. The rules of the science-game, like the rules of other games, do not

address every possible eventuality. Nor do they need to in order to serve their purpose. This is not to say that no unforeseen or unlikely circumstances will ever lead us to change or refine the rules. But, as Quine writes in a somewhat different connection, 'It is idle to bulwark definitions against implausible contingencies' (*PTb* 21).

Quine explains his attitude towards the case as follows:

The fantasy of irresolubly rival systems of the world is a thought experiment out beyond where linguistic usage has been crystallized by use. No wonder the cosmic question whether to call two such world systems true should simmer down, bathetically, to a question of words. Hence, also, meanwhile, my vacillation.

(*PTb* 100–1)

This is a juncture at which Quine strongly resembles Wittgenstein, for whom the use of expressions is not circumscribed by perfectly precise rules (cf. *PI* §80—the 'disappearing chair' passage). By 'linguistic usage', I take it, Quine is here referring to the linguistic usage of scientists, to ordinary *scientific* usage. Such usage, he is claiming, does not clearly single out one or the other of the ecumenical and sectarian solutions to the problem of rival systems of the world. Nor, I take it, does it single out Bergström's solution.

It is unclear why we now need to alter the usage of 'true' and 'justified' in such a way that it would be clear how to apply these terms to rival systems of the world. Nor is it clear, if we were to alter their usage in this way, what the scientific motivation would be for doing it in such a way that scepticism is the nominal outcome. In particular, it is far from clear that scientific practice commits one to Bergström's stricture. The under-determination of theories, it seems, hardly forces Quine into scepticism.

Let us turn, briefly, to a second way in which it has been thought that Quine's approach leads to some sort of scepticism. In absorbing philosophy into science, among other things Quine naturalizes epistemology, transforming it into the scientific explanation of scientific theorizing. Stroud has objected that naturalized epistemology as Quine conceives of it cannot explain how one's own knowledge is possible.⁹ Quine takes our theory of the world to be a 'construction or projection from stimulations' (*EN* 83). In the third-person case, Stroud maintains, we are in a position to compare these constructions with the subject's environment in order to determine whether in fact they bear the sort of relationship to that

environment that qualifies them as knowledge. But in one's own case, there is no measure that is independent of one's own stimulations of whether one's projections bear this sort of relationship to one's environment. Scepticism, Stroud suggests, is right around the corner.

Quine replies that putting ourselves in the subject's place 'must be seen not transcendently but as a routine matter of analogies and causal hypotheses within our scientific theory. True, we must hedge the perhaps too stringent connotations of the verb "know", but such is fallibilism' (*MSP* 474).¹⁰ Quine is suggesting that one take one's own epistemic situation to be analogous to that of others, that one hypothesize that one's situation is akin to theirs. Here, as elsewhere in science, one's conjectures are fallible. Earlier we saw that Quine resists what he takes to be insufficiently motivated sceptical departures from current scientific usage. In the present instance, however, he advocates linguistic reform in the interests of making his naturalistic account of 'knowledge' general enough to apply to the first-person case.

From the standpoint of scientific practice, altering an expression's definition or use is perfectly legitimate if it serves an explanatory purpose. Einstein does not define or use 'mass' in the same way that Newton does, but relativistic mechanics explains more data than does Newtonian mechanics. If one shares Quine's scientific bent, if one rejects 'first philosophy', it is hard to see why the progress of science should be halted by an allegiance to an earlier construal of 'know'. It would be like saying that physicists should still employ 'mass' in a strictly Newtonian fashion.¹¹

The question then arises what bearing a Quinean naturalized epistemology has on questions about knowledge that exercise philosophers like Stroud. If 'know' as Quine chooses to use it does not have the same connotations it has when the sceptic employs it, in what sense can he be said to have addressed scepticism? We have already encountered the answer. Quine's response to the sceptic derives from his understanding of science—in particular, his understanding of ordinary scientific language—and his rejection of any procedure more authoritative than the scientific method. From this standpoint, the sceptic is, at present, practising bad science, going far beyond what the scientific method and linguistic usage now prescribe, even impeding scientific progress. Since for Quine philosophy is not distinct from science, in his view scepticism is not just bad science; it is bad philosophy as well.

WITTGENSTEIN, CRITERIA AND ORDINARY USAGE

For Quine, all justification is ultimately hypothetico-deductive in character. Given his rejection of necessary truth in general, and analyticity in particular, even the truths of logic and mathematics turn out to be extremely high-level empirical generalizations, subject to revision in the interests of bringing our 'theory of the world' (*PTb* 100), our 'web of belief (see *WB*) into conformity with observation.

Wittgenstein adverts to a form of justification, namely criterial justification, that is distinct from hypothetico-deductive justification.¹² Wittgensteinian criteria, it is generally agreed, are supposed to be necessarily evidence for what they are criteria of. The sort of necessity at issue is sometimes labelled 'grammatical necessity', and may be expressed by what Wittgenstein calls 'grammatical propositions', propositions that express rules about what one can and cannot meaningfully say. Wittgenstein contrasts such propositions with contingent, 'empirical propositions' (*PI* §251).

The distinction may appear to run afoul of Quine's scruples against analyticity. But there are important differences between Wittgenstein's distinction and the object of Quine's attack. One is that the former concerns propositions, not sentences. The same sentence can function as a grammatical proposition and an empirical proposition.¹³ Another, even more important, difference is that grammatical propositions are subject to revision. Wittgenstein compares the relationship between grammatical and empirical propositions to the relationship between a riverbed and the water that flows through it. Riverbeds are more stable than water, but they too are subject to alteration over time. The metaphor represents a conception that is in the crucial respect akin to the one Quine conveys by speaking of the difference between more and less central strands in the 'web of belief (see *OC* §§97–9).¹⁴

Some may feel uneasy with the idea of revisable necessities. The idea is not *prima facie* absurd, however. Certain ways of moving pawns are prohibited by the rules of chess; in a sense, one cannot move them in these ways. But the rules of chess can be changed in such a way that what was once prohibited is now permitted, or even required. Grammatical necessity, which determines what it makes sense to say in Wittgenstein's view, functions similarly.¹⁵

In any event, some Wittgensteinians have held that criterial justification provides a means of avoiding certain forms of scepticism, in particular scepticism about 'other minds'.¹⁶ On this

view, our knowledge of other minds does not—at least not always—rest either on simple induction or on applications of the hypothetico-deductive method. Rather, one is at least sometimes justified in believing that another is, for example, in pain, on the basis of the fact that she exhibits ‘pain-behaviour’, behaviour that is a *criterion* of pain, and is related to pain as a matter of grammatical necessity.

Wright has raised an objection to this view that takes as its point of departure the common conceit that while Wittgensteinian criteria of x are necessarily evidence for x , they are not conclusive evidence for x .¹⁷ Rather, such criteria constitute *defeasible* evidence, evidence which circumstantial factors can ‘defeat’ or render epistemically impotent. As long as it is possible for criteria of pain to be present even when pain is absent, Wright in effect argues, it is possible for one’s beliefs about others’ being in pain to be false even if those beliefs are based on criteria of pain. In fact, one can maintain, it is possible for one’s beliefs about the mental lives of others in general to be false. If this possibility were actualized, criterial justification would systematically lead one into error. It would constitute an extremely unreliable justificatory practice. If this is possible, as it seems to be on the view of criteria at issue, then it is unclear whether criteria can be said to constitute necessarily *good* evidence. For it is not clear that evidence that *can* always lead one into error *must* be good evidence.

Assuming that the point of a justificatory practice is to conduce to true beliefs, in the case we just considered criteria for the mental states of others no longer serve their purpose (see *PI* §142). Linguistic reform would be in order, were it not for the fact that presumably we would be none the wiser regarding our epistemic predicament. And now the sceptical question arises, are we in this predicament now? Is there anything to say about whether we can rule this possibility out? Although Wright takes his objection to be damning, there is a way of understanding Wittgensteinian criteria that sidesteps it. According to this interpretation, criteria constitute conclusive evidence for what they are criteria of, although whether something *is* a criterion of something else depends on the context.¹⁸ On this conception, whether certain bodily movements count as criteria of pain is context-dependent. But in the *right* context, the presence of such behaviour *guarantees* that one who exhibits it is in pain.

Both construals of criteria clearly acknowledge the context-dependence of criterial support. The first has it that how telling that

support is depends on the circumstances. According to the second, whether there is a criterial relation of a certain sort at all depends on the context. Neither requires that just what the contexts at issue are can be specified—a point to which I shall return shortly. Nor is it clear on either view that, for every x with respect to which there are criteria, there is a well-defined class of criteria of x . Both views are also compatible with the idea that there is such a thing as the ‘characteristic expression’ (*PI* §142) of a mental state such as pain or joy. On this conception, it is a fact that people in, say, pain tend to exhibit certain sorts of behaviour. Such facts may even be taken to be what gives criterial relations their ‘point’.¹⁹

The second construal, however, closes the gap between criteria and what they are criteria of that the concept of defeasibility, so central to the first account, opens up in the first place. If in fact criteria of pain are present, on the second conception of what a criterion is, one who exhibits them must be in pain. The sceptic cannot therefore find a foothold in the way that she did before. In circumstances in which, on the first interpretation, one would say that a criterion of x has been defeated, the second construal tells us that the alleged criterion is not really a criterion of x after all. Thus, on the second view of criteria, there is no possible scenario in which a criterion of x is present but x itself is not.²⁰ And therefore the argument to the effect that criteria are not necessarily good evidence for what they are criteria of misfires.

Nevertheless, the second account of criteria does not leave the sceptic completely powerless. Since on this conception, whether something is in fact a criterion of x —of pain, for example—depends on the circumstances in which it is embedded, she can raise higher-order doubts about whether something *really* is a criterion of x , whether the circumstances *really are* such as to render a certain bit of behaviour, say, a criterion of pain. Moreover, she can turn to her advantage the idea that there is no way to specify the totality of circumstances that undermine something’s claim to being a criterion of the sort at issue. How, the sceptic may ask, can one rule out every possible undermining circumstance if these circumstances cannot be precisely delimited to begin with?²¹

Even if one cannot rule out such possibilities, however, what one has before one may actually be the criterion one thinks it is. Thus, unless we take knowing that p and being justified in believing that p to require higher-order knowledge and justification—the knowledge that one knows that p , and the justified belief that one is justified in

believing that p —it is not clear how the sceptical doubt on the table undermines the possibility of criterial justification or knowledge. And it should hardly surprise us to discover that Wittgenstein does not think lower-order epistemic states require higher-order ones. So far, it appears, Wittgenstein has not lost to the sceptic.

Does scepticism fare better with regard to Wittgenstein's famous appeals to what we ordinarily say and do? In a discussion of whether it is possible to doubt all of a body of facts, Wittgenstein observes that 'Our not doubting them is simply our manner of judging, and therefore of acting' (OC §232). It is simply characteristic of our epistemic practices, he seems to hold, that this is the way we proceed.²²

But, a sceptic might respond, it does not follow from this that *uncharacteristic* doubts are *illegitimate*. After all, even on the accounts of Wittgensteinian criteria discussed above, it is possible that things are not as we may be inclined to think or take it for granted that they are. First-order doubt, the sceptic can argue, can find a home in the first construal of criteria, second-order doubt in the second. Why not conclude that, regardless of what we ordinarily say, we really do not know what others feel, or at least that we do not know that we know it?

The issue here is whether we must rule out the possibilities on which the doubts in question purport to be based in order to know such things. Our ordinary use of 'know' does not place this demand on us. 'Use' here means 'correct use', use in accordance with the 'rules of the game', with the norms of ordinary language which grammatical propositions express. From a Wittgensteinian standpoint, because it diverges from the ordinary *use* of the word in this sense, there is a serious question about whether the sceptic's use of 'know' distorts or departs from its ordinary *sense* as well. From this point of view, the sceptic who appears to deny that we do or can know certain things because we have not ruled out—or cannot rule out—certain sceptical possibilities may actually fail to contradict our ordinary knowledge claims.²³

The divergence between what the sceptic says and our ordinary use of 'know' seems incontrovertible. What is controversial is whether the sceptic violates the ordinary sense of 'know'.²⁴ Wittgenstein may be interpreted in two ways in this connection. According to the first, he takes the view that the meaning of a sentence is exhausted by its 'assertability conditions'.²⁵ On this construal, the fact that it is appropriate to assert that one knows something under conditions considerably weaker than those the

sceptic demands shows that the sceptical employment of 'know' is deeply misguided.

This interpretation is problematic. If we spell out assertability conditions in terms of criteria that justify one in asserting a sentence, it is hard to see how one could specify these conditions in their entirety. As I noted above, on neither of the two accounts of criteria discussed earlier is it clear that one can speak of *the* criteria of x for every x . On the first, it is unclear whether one can delimit the contexts that render a criterion epistemically efficacious. On the second, it seems that one cannot demarcate the contexts that render a bit of behaviour a criterion of something. It may even prove difficult to specify the assertability conditions for a sentence in such a way as to make it clear that there cannot be a context in which something at least nominally akin to a sceptical challenge is appropriate.²⁶

Besides, the sceptic is likely to resist the assimilation of meaning to assertability conditions, perhaps on anti-verificationist grounds. As long as it is at least possible that they are distinct, she can argue, the attempt to combat her position by appealing to ordinary usage is inconclusive. If they *are* distinct, the sceptic may after all be using 'know' in its ordinary *sense*, even if she does not use it in the ordinary *way*.²⁷

The second interpretation of the Wittgensteinian approach to the sceptic's use of 'know' does not impute to Wittgenstein a positive theory of sentence meaning, whether an assertability conditions approach, a criterial semantics, or some other variety.²⁸ Although his work has provided one of the major sources of inspiration for antirealist theories of meaning,²⁹ on this view, which I favour, he is not himself an anti-realist. Rather, he challenges the view that there is something in which meaning consists, something which a theory of meaning, whether anti-realist or not, can capture. Wittgenstein does appear to rely on the idea that when a word is used in a new way, it does not necessarily carry its old meaning with it into the new linguistic context. But this idea does not, I think, commit one to antirealism. Applied to scepticism, however, it lends some urgency to the question whether the sceptic has properly motivated her departures from ordinary usage.

Some philosophers have objected that the view that the meaning of a word depends on the context in which it is used leads to the implausible conclusion that *any* change in context will generate a change in meaning. I take it, however, that Wittgenstein is not subject to this criticism. The sort of dependence he has in mind resembles

the form one encounters in mathematical functions like the squaring function, which, although their values depend on the arguments they take, nevertheless do not always yield different values when evaluated at different arguments. Squaring 2 yields 4, but so does squaring -2. It must be admitted, however, that Wittgenstein has no general answer to the question of just how different two linguistic contexts must be in order to cast doubt on whether occurrences of the same word in both differ in meaning; here, as elsewhere, he tackles the matter on a case-by-case basis.³⁰

On the alternative account of Wittgenstein's approach that we are considering, it must also be admitted that the sceptic has not been conclusively refuted, that it has not been proven that her claims are meaningless, or that they do not mean what she thinks they mean. Such a refutation would require a theory of meaning, and, on this construal, Wittgenstein lacks such a theory. But it is unclear that one must conclusively refute scepticism in order to challenge and resist it successfully. Because she departs from ordinary usage, and because new uses do not necessarily preserve meaning, a Wittgensteinian can say, there is a serious possibility that the sceptic's words do not mean what she thinks they mean. They may not mean anything at all. Until this possibility is ruled out, there is a lacuna in the sceptic's 'argument'.

The sceptic may urge that even though she has not conclusively demonstrated her scepticism to be meaningful and true, she has reasons to believe that it is. If she does, one must then determine whether these reasons are stronger than those that call her position—if indeed it is a position—into question. It has yet to be established that the neo-Humean conception according to which the meaning and truth of a sentence are relegated to the philosopher's study, and the criteria or assertability conditions for its legitimate employment to the practical affairs that lie outside it, is preferable to alternatives that are less congenial to scepticism.³¹ Even if its superiority were to be demonstrated, this view would not compel us to accept the *sceptic's* construal of 'know'. The sceptic would still need to argue convincingly that this construal is better than the alternatives. So far the literature has not found in the sceptic's favour in this regard.³²

SCEPTICISM AND SCIENCE

I have suggested that Quine's and Wittgenstein's responses to scepticism share a common feature. Both hold that the sceptic

departs in insufficiently motivated ways from the practices they take to be basic: science—which includes scientific linguistic practice—and ordinary non-scientific language. Initially, the sceptic may find such charges unconvincing. Why, she may ask, should one take scientific method as seriously as Quine does? And why should one take ordinary non-scientific usage as seriously as Wittgenstein does? From the sceptic's standpoint, it can seem that Quine and Wittgenstein are simply legislating scepticism out of existence, and doing so by means of somewhat arbitrary standards.³³ Because they do not offer—and do not believe in the possibility of—metajustifications of scientific method and ordinary nonscientific language, it may appear that Quine and Wittgenstein have no response to this sceptical retort.

To see the matter thus, however, is to risk overlooking what is distinctive about their challenge to the sceptic. They are not attempting to demonstrate conclusively the falsity of scepticism. Rather, they are charging that the sceptic's grounds for embracing scepticism are inadequate. If Quine is right, her divergence from scientific usage has not yet received a proper scientific rationale. If the sceptic appeals to an authority higher than science, Quine can invoke his attack on analyticity by way of challenging its existence.³⁴ If Wittgenstein is right, the sceptic's departures from ordinary non-scientific language have as yet not been properly motivated, putting the meaningfulness of her words in jeopardy. If she invokes a theory of meaning by way of defence, then of course it must be examined. But this sceptical strategy, as I pointed out above, has yet to prove decisive.³⁵

This is not to say that the sceptic cannot persist in her divergence from ordinary scientific and non-scientific usage. She may even accuse Quine and Wittgenstein of meaning-blindness, of an incapacity to appreciate that beneath the surface of ordinary scientific and non-scientific usage are epistemic concepts that yield the truth of scepticism. Although this accusation may not be demonstrably false, it is far from clear that it does much to support the sceptic's case. Quine and Wittgenstein need not bear the burden of ruling out the possibility that the sceptic is right. What is at issue is whether the sceptic can provide reasons for accepting scepticism that are stronger than the ones they give by way of challenging it.³⁶ Although Quine and Wittgenstein may not have established conclusively that scepticism is false, they have not fallen prey to it in any obvious way either. In their visions of our epistemic predicament, we are not torn between the truths of the philosopher's study and the practical press of the street. If we start with

Quine's science or Wittgenstein's language of everyday, we are not forced to see ourselves as divided against ourselves in the way in which Hume would have us think that we are.

But which should we start with? Even the somewhat Wittgensteinian Quine I have presented is after all a far cry from Wittgenstein himself. Let me conclude, then, with a few observations about the relation of scientific to non-scientific ordinary language. The first is that we do in fact begin with non-scientific ordinary language; it is the language we initially acquire. Scientific language is added on later. The two are of course connected; their vocabularies overlap to a considerable degree. But they also diverge in numerous ways. Scientific language is rife with obviously technical terminology designed to serve the specialized aims of scientific inquiry. Some technical terms are borrowed from non-scientific discourse and assigned new meanings. 'Mass', which we discussed earlier, is a case in point. 'Know', if we follow Quine, may turn out to be another. The mere fact that science and ordinary language share an expression does not guarantee that they employ it in the same way, or with the same sense.

From a Wittgensteinian perspective, there is some risk of confusion in using the same word in two significantly different ways in scientific and non-scientific discourse. But there is nothing problematic in principle about borrowing a non-scientific word and giving it a technical sense, when doing so enables the term to serve a legitimate explanatory purpose. As I noted earlier, it is precisely Quine's ability at least to seem to offer this sort of rationale for diverging from ordinary usage that makes him of particular interest to the Wittgensteinian. If Quine's own departures do real scientific work, they do not count as cases of language on holiday. This is not to say that they will not confuse their audience. But confusion and meaninglessness are two different things.

Nevertheless, there remains a serious question whether the sort of speculative theorizing Quine's writings about naturalized epistemology exemplify is in fact sufficiently tied down by successful predictions to do the kind of real explanatory work that would clearly justify a departure from ordinary non-scientific usage. For the Wittgensteinian, the worry is that at least some of Quine's work is 'like an engine idling' (*PI* §132). Linguistic changes put forward in the name of explanatory progress may well be empty if they are backed up only by speculative sketches of explanations, and not actual, fully developed scientific explanations. The Quinean

response we considered to Stroud's charge that naturalized epistemology cannot account for one's own knowledge hangs in the balance, for that response turns on what at least purports to be a scientific motivation for linguistic reform.

One thing to do at this juncture would be to scrutinize one of Quine's departures from ordinary non-scientific—or even ordinary scientific—usage in an attempt to determine whether the general concern I have just outlined is misplaced. I shall confine myself instead to a few brief remarks about the status of the concern itself.

Although I shall not attempt to substantiate the claim here, it is not *prima facie* implausible to suppose that hypothesis formation and theory construction in the sciences often involve a period of initial speculation in which words may be used in new ways without being directly or indirectly tied down to observation. Any theory that could provide them with a definite explanatory role may be at most a gleam in a scientist's eye. In the context of discovery terms may therefore lack the definite sense they acquire in the context of justification. They may have a sense quite different from the one the scientist thinks that they have. They may in fact not have a sense at all.

Even if they do not, perhaps science would be crippled if in the course of such speculations, departures from ordinary use were too closely scrutinized. Once we shift our focus from successful scientific theories to the activity of devising such theories, we may discover that vague, confused or incoherent speculation, and even *nonsense that scientists are not aware is nonsense*, plays a crucial role in the ongoing scientific enterprise. Science might suffer if it were drawn to the scientist's attention during such periods that she had given no meaning to her words, or confused their meanings with others. Perhaps linguistic lapses are required if one is to achieve the sort of detachment from prior points of view that is necessary for real scientific innovation. If this is the case, divergence from ordinary scientific or unscientific usage—even when it is devoid of sense—may sometimes be justified in terms of its potential contribution to the genesis of acceptable scientific theories.

One might be able to defend full-blown philosophical speculation—or pseudo-speculation—along similar lines. Scientists do not, after all, devise scientific theories in a social and intellectual vacuum. Philosophy often informs scientific research. For some scientists, it may in fact play a practically necessary part in this regard. Particularly in cases of this sort, it is possible that blows meant for philosophy would injure science as well.

In the end, it is a complex empirical question whether Wittgensteinian scruples regarding departures from ordinary linguistic usage actually pose a threat to scientific progress, to the prospects for a scientific epistemology of the sort Quine envisions in particular. I shall not attempt to answer the question here. A related question, about whether there are circumstances in which it would be wise to impede the growth of science, does not seem to me to be wholly empirical.

It can be argued that the devastating results that applied science has occasionally produced justify a critical attitude towards certain forms of scientific research, and towards at least some of the varieties of philosophical speculation that may support them. Wittgenstein's own hostility to science, to which I alluded earlier, does not, however, appear to be grounded in this way (see, for example, CV 48–9). It is difficult to say *exactly* what undergirds his attitude in this connection. But it is fairly clear that part of what bothers him about modern science is a conviction that frequently informs both its practice and its interpretation: the conviction that everything can in principle be explained scientifically (see CV 40; *TLP* 6.37f.; also *PI* §158 and *BB* 18). Wittgenstein parts company with those who believe that eventually nature will yield its secrets to scientific inquiry. From his point of view, it is far from clear that we are warranted in assuming that scientific progress can be made with regard to everything that remains unexplained at present.

If this assumption *is* unwarranted, the defence of 'nonsense' canvassed above—that it may contribute to scientific progress, and should not therefore be too harshly criticized in every case—is at least to some extent weakened. For if we are no more warranted in believing that scientific progress is forthcoming in a domain than we are in believing the contrary, the bare possibility that nonsense will contribute to legitimate science in that domain does not count for very much. It may not so contribute, and it will not if the phenomenon under investigation is doomed to elude scientific explanation.

Are we unwarranted in assuming that in principle scientific progress knows no bounds? One might attempt to justify the assumption inductively. But past explanatory success lends inductive support to the claim of future progress only if data that have been explained are relevantly similar to data that have not yet been explained. It remains to be seen whether all unexplained phenomena satisfy this condition. In any case, it seems to be consistent with what we now know about the universe that not all

such phenomena are sufficiently regular to submit to subsumption under universal or statistical laws.³⁷ Besides, one might urge, even if we were to succeed in subsuming all empirical data under such laws, there is still a sense in which we would not have explained everything. The possibility may well remain of further unification or simplification, the higher-order subsumption of our most general laws, for example, under still more general laws. And while it might be objected that such augmentations would be empirically equivalent to the theories they augment, it is not clear that they could not be simpler, and of some scientific value as a result. A regress of higher-order laws threatens. If the regress never halts, there is never a point at which everything is explained. If, on the other hand, it does come to an end, explanation stops short, unless we are willing to countenance the odd prospect of self-subsuming explanatory principles.³⁸ However the issue of whether everything can be explained plays itself out, Quine's rhetoric, if nothing else, suggests that he and Wittgenstein differ in their attitudes towards it. Quine speaks of the 'illusion' that there is 'only one solution to the riddle of the world', implying that there is or can be more than one (NNK; see also *PTb* 102). I have argued that pluralism of this sort does not commit Quine to scepticism. Wittgenstein, however, would have us wonder whether there is *any* solution to this 'riddle'.

It may be objected, of course, that the very idea that there may be meaningful but unanswerable questions is problematic. Like the early Wittgenstein, Quine has at times appeared to endorse this objection. 'If a question could in principle never be answered', the latter writes in 'The Limits of Knowledge', 'the question has no meaning' (LKb; cf. *TLP* 6.5). But views of this sort, among them Wittgenstein's own, have proven notoriously difficult to spell out coherently.³⁹

We appear to be left, then, with the possibility that science cannot explain everything, even all empirical data.⁴⁰ Acknowledging this possibility is not in itself a species of scepticism, it seems to me. To say that science may not be able to explain everything is different from saying that it cannot do so. But at present we have reason to wonder whether the view that it *can* do so is, to borrow Quine's characterization of the distinction between analytic and synthetic truths, 'an unempirical dogma of empiricists, a metaphysical article of faith' (*TDE* 37). We have seen how this view can be employed in a defence of nonsense. It might be false. If it is, the cost associated with accepting it may be that one needlessly tolerates, and even

endorses, distorted ways of looking at oneself and the universe one lives in that *never* contribute to the development of legitimate scientific explanations.

NOTES

*I am grateful to Robert Arrington, Randall Havas, Karen Lucic, C. Grant Luckhardt and my colleagues at Vassar College for helpful comments.

- 1 See Lars Bergström, 'Quine, Underdetermination, and Skepticism', *The Journal of Philosophy*, 90 (1993), and 'Quine on Underdetermination', in *POQ*. See also Barry Stroud, *The Significance of Philosophical Scepticism* (Oxford University Press, Oxford, 1984), ch. 6, and 'The Significance of Naturalized Epistemology', *Midwest Studies in Philosophy*, 6 (1981).
- 2 I take it that the reasonableness of the doubt in question does not *require* diminishing predictive success on the part of our current theory. This aspect of the scenario, however, makes it possible to discount the role which the virtue of conservatism plays in hypothesis formation and theory-choice in this case. For a discussion of this virtue, and others, see W.V. Quine and J.S. Ullian, *The Web of Belief*, rev. edn (Random House, New York, 1978).
- 3 In putting the point thus, I do not mean to suggest that Quine thinks that prediction is the primary goal of science. Its primary goals, he suggests, are 'technology and understanding'. Nevertheless, he maintains that prediction 'is what decides the game'—the science game, that is. See *PTb* 20 and also Quine's 'Reply to Haack'—in *POQ*—in which he mentions other scientific goals as well.
- 4 Quine considers other cases too, but deals with them by means of various manoeuvres which he seems to think are successful.
- 5 Quine allows, however, that one may grant it warrant, in so far as it yields the same predictions as does one's own theory. The sectarian approach may thus commit Quine to the view that certain sentences in the rival theory are both warranted and meaningless. For individual sentences arguably draw warrant from warranted theories in which they play a part, and sentences that contain meaningless terms are presumably meaningless themselves.
- 6 'Quine, Underdetermination, and Skepticism', 343ff.
- 7 I am not trying here to attribute to Quine an empiricist theory of truth of the sort he has repudiated. Empiricism enters into the picture for Quine when one tries to decide what to *count* as true.
- 8 For a discussion of whether it is possible to reconcile Quine's commitment to normativity with his naturalism, see Hilary Putnam, 'Why Reason Can't be Naturalized', in his *Realism and Reason* (Cambridge University Press, Cambridge, 1983).
- 9 See 'The Significance of Naturalized Epistemology' and *The Significance of Philosophical Scepticism*, ch. 6.

- 10 Quine's use of 'perhaps' may render his use of the definite article in connection with 'connotations' in this passage consistent with his attack on the idea of definite word meanings.
- 11 This is the sort of case, of course, that leads philosophers of science like Kuhn to talk about the incommensurability of theories. See Thomas Kuhn, *The Structure of Scientific Revolutions*, 2nd edn (University of Chicago Press, Chicago, 1970). See also Donald Davidson's critique of Kuhn in 'On the Very Idea of a Conceptual Scheme', in his *Inquiries into Truth and Interpretation* (Oxford University Press, Oxford, 1985). And see Quine's response to Davidson in his 'On the Very Idea of a Third Dogma', in *TT*, where, on p. 41, he claims that to imagine that there are discrete concepts that are expressed by words is to indulge in the 'myth of a museum of labeled ideas'.
- 12 Chihara and Fodor have suggested that Wittgenstein's distinction between 'symptoms' and 'criteria' is intended to be exhaustive in a way that allows no room for hypothetico-deductive justification. See Charles S. Chihara and J.A. Fodor, 'Operationalism and Ordinary Language: A Critique of Wittgenstein', in George Pitcher (ed.), *Wittgenstein: The Philosophical Investigations* (University of Notre Dame Press, Notre Dame, 1968). For Wittgenstein's discussion of the distinction, see, for example, *BB* 24–5 and *PI* §354. I remain unconvinced of the acceptability of Chihara and Fodor's interpretation.
- 13 Wittgenstein uses 'proposition' to mean something like 'meaningful sentence'. But he does not reify sentence meanings.
- 14 It is worth emphasizing that Quine does not reject every use of 'analytic' and 'meaning'. He opposes the use to which 'intuitive semantics' puts these expressions, but introduces what in his view are acceptable behaviourist replacements, namely 'stimulus analytic' and 'stimulus meaning'. See *WO* for his definitions of these terms, which resemble the intuitive notions of meaning and analyticity in name only.
- 15 Some may wish to claim that necessity of this sort must be undergirded by what one might call 'practice-transcendent meanings' of the sort Wittgenstein—and Quine—reject. Much of *Philosophical Investigations* is designed to call this view into question, in part by attacking the idea that such meanings enable us to explain linguistic norms.
- 16 See, for example, Norman Malcolm, 'Wittgenstein's *Philosophical Investigations*', in Pitcher, op. cit.
- 17 Crispin Wright, 'Second Thoughts About Criteria', in his *Realism, Meaning and Truth*, 2nd edn (Blackwell, Oxford, 1993).
- 18 See Malcolm, op. cit.
- 19 See John McDowell, 'Criteria, Defeasibility, and Knowledge', *Proceedings of the British Academy*, 67 (1982), 469, n. 1.
- 20 The sort of impossibility in question has to be understood in the light of the idea, mentioned above, that grammatical necessity, expressed by grammatical propositions, is subject to revision.
- 21 See Stanley Cavell, *The Claim of Reason: Wittgenstein, Skepticism, Morality, and Tragedy* (Oxford University Press, Oxford, 1979), ch. 2.
- 22 Wittgenstein makes the further point that it is not possible to doubt everything, because doubting requires that something 'stand fast'. If

- Gibson is right, Quine takes a similar view. See Gibson, 'Stroud on Naturalized Epistemology', *Metaphilosophy*, 20 (1989).
- 23 This is not to say, however, that there are not contexts in which, as a matter of what our ordinary linguistic practices dictate, we do need to rule out possibilities that resemble the sceptical ones in order to know certain things. Imagine a courtroom scene in which a defence attorney asks a witness whether she really knows that she saw the witness at the scene of the crime, given that she might have merely dreamt that she did. The question loses its philosophical cast, and becomes more clearly relevant to the proceedings, in the face of testimony from an expert to the effect that the witness suffers from a rare disorder that renders it difficult for her to distinguish waking experiences from dreams.
 - 24 See *The Significance of Philosophical Scepticism*, ch. 2.
 - 25 See Michael Dummett, *Truth and Other Enigmas* (Harvard University Press, Cambridge, Mass., 1978).
 - 26 See n. 22 above.
 - 27 Again, see *The Significance of Philosophical Scepticism*, ch. 2. See also Barry Stroud, 'Transcendental Arguments', *The Journal of Philosophy*, 65 (1968).
 - 28 See Hilary Putnam, 'Does the Disquotational Theory Really Solve All Philosophical Problems?', *Metaphilosophy*, 22 (1991).
 - 29 See Dummett, op. cit., and Saul Kripke, *Wittgenstein on Rules and Private Languages* (Harvard University Press, Cambridge, Mass., 1982).
 - 30 For a further reply to the objection that Wittgenstein's way of 'counting concepts' is counter-intuitive, see John V. Canfield, 'Discovering Essence', in Carl Ginet and Sydney Shoemaker (eds), *Knowledge and Mind: Philosophical Essays* (Oxford University Press, Oxford, 1983).
 - 31 See Peter Unger, *Philosophical Relativity* (University of Minnesota Press, Minneapolis, 1984), and Charles Travis, *The Uses of Sense* (Oxford University Press, Oxford, 1989).
 - 32 See Michael Williams, *Unnatural Doubts: Epistemological Realism and the Basis of Scepticism* (Blackwell, Oxford, 1991). Should the sceptic's construal gain the upper hand, Wittgensteinians might consider the strategy of linguistic reform, for which there may be a precedent in *PI* §201. Wittgenstein there attempts to defuse the 'paradox' having to do with the alleged possibility of multiple interpretations of rules by claiming that we *ought* to restrict the use of 'interpretation' to the substitution of one expression for another. This remark can be read as a point about correct present usage, but may also be construed as a call for linguistic reform.
 - 33 I owe this way of putting the concern, and the impetus for the remarks that address it, to Randall Havas.
 - 34 Of course, this attack has been challenged. But philosophers are far from agreed that the challenges—Grice and Strawson's, say, or Putnam's—have been successful. See H.P. Grice and P.F. Strawson, 'In Defense of a Dogma', *The Philosophical Review*, 65 (1956), and Hilary Putnam, "'Two Dogmas" Revisited', in his *Realism and Reason* (Cambridge University Press, Cambridge, 1983).
 - 35 See nn. 31 and 32 above.

- 36 I discuss this sort of issue further in my forthcoming 'Doubting Scepticism'.
- 37 See Nancy Cartwright, *How the Laws of Physics Lie* (Oxford University Press, Oxford, 1983).
- 38 For a discussion of explanatory self-subsumption, see Robert Nozick, *Philosophical Explanations* (Harvard University Press, Cambridge, Mass., 1981), ch. 2.
- 39 See my 'What Might not be Nonsense', *Philosophy*, 68 (1993) for a critique of Cora Diamond's recent account of Wittgenstein in this connection.
- 40 It may be that *no* form of inquiry, scientific or otherwise, can explain everything.

6

THE PASSAGE INTO LANGUAGE

Wittgenstein versus Quine

John V. Canfield

The basic evil of Russell's logic, as also of mine in the *Tractatus*, is that what a proposition is is illustrated by a few commonplace examples, and then pre-supposed as understood in full generality.

(Wittgenstein (*RPPI* §38))

Quine and Wittgenstein are two sides of the same coin—or so one hears around Cambridge, Mass. This lore appears in Putnam's approving report about one of Quine's colleagues and chief exegetes: 'Burton Dreben...has long insisted on the deep similarities between central parts of the philosophies of Quine and Wittgenstein' (*POQ* 424). Many others see deep similarities here, for better or worse. For worse, for instance, in the case of Chomsky. For better, or a nuanced better, above all in the case of Quine himself.

I believe that the similarity between the two writers is superficial; they are worlds apart. Far from reinforcing Quinean points, Wittgenstein's later thought helps us see the central flaw in Quine's philosophy: its distorted picture of the nature of language.

My aim here will be to describe a certain salient difference. It concerns precisely the main point of concurrence claimed by Quine: the idea that meaning is use. I shall show how disparate Quine's and Wittgenstein's uses of 'use' are. One who sees the disparity I have in mind and something of its implications will no longer call the two philosophers 'deeply similar'.

Although my preference for Wittgenstein's position will be clear, what follows is meant solely as an exercise in comparison, aimed at a more accurate appreciation of both writers.

QUINE'S WITTGENSTEIN

Quine thinks that he shares three theses with Wittgenstein: (1) language is social, (2) there are no meanings qua mental or mind-resident entities, and (3) meaning, such as it is, is use. Let me rehearse these points.

Quine portrays himself as agreeing with Wittgenstein that language is social in essence:

Language is a social art, socially inculcated. The importance of the matter was stressed by Wittgenstein and earlier by Dewey.
(*TT* 192)

Similar couplings of Wittgenstein's views with Dewey's are frequent in Quine. For example, in *Ontological Relativity and Other Essays* (26–7) he cites Dewey as a major influence on his views, and mentions Wittgenstein as having come to a latter-day recognition of truths Dewey had long since discovered. He starts with praise of Dewey's 'naturalism', adding that:

With Dewey I hold that knowledge, mind, and meaning are part of the same world that they have to do with, and that they are to be studied in the same empirical spirit that animates natural science.

When the 'naturalistic philosopher' turns to language he finds, again, that language is social:

Language is a social art which we all acquire on the evidence solely of other people's overt behaviour under publicly recognizable circumstances.
(*ORE* 26–7)

Since language is social, meanings must find their home in the social as well, and therefore they cannot be mental, as he goes on to say:

Meanings, therefore, those very models of mental entities, end up as grist for the behaviourist's mill. Dewey was explicit on the point: 'Meaning...is not a psychic existence; it is primarily a property of behaviour.'

Here is where Wittgenstein comes in. That meaning is a property of behaviour shows, without further ado, that 'there cannot be, in any useful sense, a private language', a point allegedly 'stressed by Dewey in the twenties' (*ibid.*). Quine continues:

Years later, Wittgenstein likewise rejected private language. When Dewey was writing in this naturalistic vein, Wittgenstein still held his copy theory of language.

(*ibid.*)

Wittgenstein scholars will find this behaviourist rendition of the private-language argument simplistic and unconvincing. On the other hand, it is of course true that both Quine and Wittgenstein reject—in some way—meanings qua mental or abstract entities. In Quinean terms they refuse to postulate, hypothesize, or admit to their ‘ontologies’ *meanings*. They repudiate anything like Fregean *sense*, any appeal to some extant *idea* a word expresses, or to meanings qua *mental representations*, and so on. Thus Quine: ‘there is no place in the theory of meaning for meanings, commonly so called’ (*Q* 131). And Wittgenstein: ‘The mistake is to say there is anything that meaning something consists in’ (*Z* §16).

Treating language as social also leads to the third idea I listed—the central one—that meaning, such as it is, is use. Quine: ‘Meaning, or use, yes; meanings, no’ (*Q* 131). Wittgenstein: ‘Don’t ask for the meaning, ask for the use.’

Quine writes:

But John Dewey, and in later years Ludwig Wittgenstein, stressed...that there is no more to the meaning of an expression than the overt use that we make of the expression.

(*Q* 130)

He enlists himself among those who defend use over meaning, justifying the thesis in a way that we have already encountered:

Language is a skill that each of us acquires from his fellows through mutual observation, emulation, and correction in jointly observable circumstances. When we learn the meaning of an expression we learn only what is observable in overt verbal behaviour and its circumstances.

(*ibid.*)

Again:

a legitimate theory of meaning must be a theory of the use of language.

(*TT* 192)

I note, finally, one way in which Quine puts these various claimed concurrences to use. He holds, in *Word and Object*, that

Wittgenstein's ideas prepare us for the acceptance of what is in fact the archetypical Quinean claim:

Perhaps the doctrine of indeterminacy of translation will have little air of paradox for readers familiar with Wittgenstein's latter-day remarks on meaning.

(WO 77n)

We have, then, a trio of allegedly shared ideas: language is social; meanings are not mental; meaning is use. The first of these points is vague, and the second, being merely negative—the more-or-less-in-common denial of meanings qua mental entities—itself proves little in the way of deep similarity. But when we take the two points together they do mark our authors off from the herd. Vague or not, the thesis that language is social separates our pair from thinkers like Chomsky and his many cohorts, as well as from philosophers like Fodor and allied thinkers. That leaves, however, the vast expanse of the various anti- or a-Chomskian schools: ethnographers of language, students of language socialization, Vygotsky-inspired observers of gestural language, and so on. These are separated out by the second claimed concurrence. For the truth is that if you scratch your common or garden social theorist of language—your Vygotsky, Lock or Bruner—you find a mentalist. Thus there are indeed grounds for saying that Wittgenstein and Quine are similar: together with some stubborn behaviourists they stand virtually alone among theorists of language. So Quine wishes them to flock together. When we take the next step, however, and examine the respective doctrines of use, the great disparity hiding behind the likeness comes to light.

The best way to see how different those concepts of use are is to explore a fourth, in this case little noted, similarity between the two philosophers. Both place great importance on the question of how a child might come to learn language. One might say that both thinkers ground their philosophy in the primitive. Both move in the direction of simplicity, towards the simplest uses of language, which are then somehow to serve as helping us understand its further development.

The following strategy, then, works for both thinkers: to discover how a word is used, begin with the simplest cases and work towards complexity. By observing the passage into language one sees what the language being learnt (entered) is—one sees its nature. But in fact their descriptions of the primitive, foundational cases differ enormously, and so too do their conceptions of use.

QUINE'S 'USE'

Quine has said that his overall aim in philosophy is to understand the relationship between the claims registered in 'total science' and the evidence for those claims (*PTb* 19). Total science includes 'our systematic theory of the external world'. And 'the evidential support of science' is 'seen as a relation of stimulation to scientific theory' (*PTb* 2). Observational grounding is thus understood as a grounding in stimulation, and that in turn is specified thus: 'By the stimulation undergone by a subject on a given occasion I just mean the temporally ordered set of all those of his exteroceptors that are triggered on that occasion' (*ibid.*).

One is reminded here of those positivists who wanted to trace the epistemological and justificatory links between science and sense data. Sensory stimulations take the place of sense data, but the agenda is broadly the same, as is the hypothesis of the unity of science. There is to be one overarching system of laws, hypotheses and claims, the whole anchored in our perceptions, now in the sense of our sensory stimulations.

But theory is couched in sentences, and 'logic connects sentences to sentences' (*ibid.*). So to trace out the evidential connection, we need to introduce sentences at the lowest level, that of sensory stimulation. Such sentences will be linked with the triggering of our exteroceptors. Intuitively the idea is simple. When one sees a rabbit, receptor cells in the eyes are stimulated in a certain way. A certain set of such stimulations are present in the case of rabbit sightings. So for a given observer the simple affirmation, 'Rabbit!' or 'Lo, a rabbit!' can be correlated with the corresponding stimulations. The underlying picture is that when my 'Lo, a rabbit!' is true, there will occur stimulations from within a certain range. Similarly for the cases in which such an affirmation would be false: a contrasting range of stimulations that indicate no rabbit.

We want to pass from stimulations to language. For we want to be able to go on to trace out connections between language at that basic, foundational level and the language and affirmations of total science. To do that we need to introduce language at the base level and correlate it with stimulations. We do so by assuming that the child enters language by learning to make exactly the correlation our system needs, that between sensory stimulations and simple affirmations.

Quine calls those simple affirmations 'observation sentences'.

They are 'occasion sentences'—which means that their truth value is tied to an occasion of utterance. Sometimes 'Lo, a rabbit!' is true, and sometimes it is false. Observation sentences have several additional features. As indicated, their truth criteria are in terms of the presence or absence of certain sensory stimulations. Each observation sentence 'should be associated affirmatively with some range of one's stimulations and negatively with some range' (*PTb* 3). This is a mapping of truth onto a limited sequence of sensory stimulations, for what happened before the stimulation and what after, as well as the question of what the observer is up to at the time, are said to be irrelevant to the truth of the observation sentence: 'The sentence should command the subject's assent or dissent outright, on the occasion of a stimulation in the appropriate range, without further investigation and independently of what he may have been engaged in at the time' (*ibid.*).

Observation sentences have the additional feature of being intersubjective: 'unlike a report of a feeling, the sentence must command the same verdict from all linguistically competent witnesses of the occasion' (*ibid.*). Inter subjectivity is problematic because, to paraphrase Quine (*PTb* 40), the truth criteria for observation sentences involve the activation of sensory receptors and no two people share their sensory receptors. Quine finds himself in a neural solipsism. However, he believes that he can lay the difficulty to rest by appealing to a notion of empathy (*PTb* 41). This is not an issue I shall be concerned with here.

In line with these remarks, then, Quine envisages one and only one type of foundational language. It is the holophrastic utterance, made in response to some perceptual stimulation: 'Rabbit!', for example, understood as the claim 'Lo, a rabbit!'

I emphasize that Quine takes those simple cases to be foundational in two ways. They mark the learner's transition into language, and they provide an epistemological grounding for and a justification of scientific theory.

Perhaps the clearest idea of those observation sentences can be gathered from the following remark: 'The really distinctive trait of observation terms and sentences is to be sought not in concurrence of witnesses but in ways of learning. Observational expressions are expressions that can be learned ostensively.'¹ In the clearest cases the world causes similar sensory stimulations in learner and teacher, and the teacher utilizes this fact to communicate the use of 'Rabbit!'.

However, we have not yet linked science and stimulation, for we

must see how the eternal sentences of scientific theory link up with observational occasion sentences. The link is through what Quine calls observation categoricals. These are if-then statements such as 'If it's a raven, then it's black.' The relevant feature of these is that they are eternal sentences, as opposed to occasion ones, and hence can stand in logical relations to the eternal sentences of scientific theory. Once we have the implied categorical, we can test its truth by finding an appropriate observation sentence. Thus 'Lo, a white raven!' might count against the categorical in question. Observation categoricals link observation sentences with theoretical ones.

We can see then how observation sentences serve 'as vehicles of scientific evidence' and as the 'entering wedge into language' (*PTb* 5). That they do so is no wonder, for they 'are the link between language, scientific or not, and the real world that language is all about' (*ibid.*).

To return to the question of ostensive learning: how does the learning take place? There is really not much to say. It is said to be a matter of 'simple conditioning or imitation' (*ibid.*). More theoretically:

The infant's first acquisitions in cognitive language are rudimentary observation sentences, including 'Mama', 'Milk', and the like as one-word observation sentences. They become associated with stimulations by the conditioning of responses. (*ibid.*)

Quine puts this in a more relaxed way, and more plausibly, as follows:

We hear our fellow speakers affirming and denying the sentences on just the occasions when we are stimulated in the characteristic ways, and we join in.

(*PTb* 5, 6)

Now, what idea of 'use' do we derive from these reflections? What is 'use' for Quine? Well, we have one good example of use. The child has mastered—whether by imitation or conditioning or just joining in—the appropriate sensory criteria and can now remark 'Lo, a rabbit!' This is used in conformity to community—wide standards set in terms of sensory stimulations.

What is the sentence used to do? To make a simple one—word affirmation. The child sees a rabbit and announces 'Rabbit!', thereby alerting others to the fact that a rabbit is present. Or if the others

already see the rabbit, the child might say the one-word sentence anyway, just because there is a rabbit there.

That affirming aspect of use is inherited by all the higher levels of sentence use, whether observation categoricals or more abstract theoretical claims. All language—or all the language Quine cares about—has the same use: to make truth claims. And all those truth claims that are not themselves observation sentences have such sentences as their evidential base.

The view here is that of the logician-cum-philosopher. The sentences of total science fall within the purview of logic. Sentences within the scope of logic all have a truth value. Being directly or indirectly about the world, they are true or false in virtue of how things stand there, and that in turn is given in terms of sentences that make immediate claims annexed to sensory stimulations.

The important point here is that there is one and only one way of tying language to the world: by means of learnt correlations between sensory stimulations and occasion sentences. By learning those correlations the child passes into language. And, at least as far as Quine's central interest goes, there is one and only one thing one does with language. It is the same as the first thing one learnt to do with words: one makes affirmations. Total science is the totality of particular and general affirmations—the totality that fits best with the true occasion sentences. To use language is to make affirmations. End of story.

My thesis is not the simple-minded one that besides affirmations there are other uses of language, such as questions or commands. My point is rather that in fixing on that one route by which a child is said to enter language Quine overlooks the way in which speech is an extension of action. Correspondingly, or so Wittgenstein would say, Quine fails to observe that multiplicity of distinct language-games within which, and only within which, words have uses.

WITTGENSTEIN'S 'USE'

As I have remarked, Wittgenstein and Quine both claim that observing the child's passage into speech will reveal something about the nature of language. I turn now to the details of Wittgenstein's understanding of that claim.² For him the use of a word is its function in the language-game (see, for example, *PI* §21). But, he says, 'One cannot guess how a word functions. One has to look at its use and learn from that' (*PI* §340). One way of

'observing' use is to follow his often-given advice and consider how a child might learn a given piece of language. One way of doing that, in turn, is actually to examine how a child learns language.

Wittgenstein is not here involved in a genetic fallacy, nor is he advocating a merely empirical study. Rather he is doing something that such a study would presuppose, namely investigating the essence or nature of language. Here someone might object that since Wittgenstein takes 'language' to be a family-resemblance concept, it has no essence. And of course it is true for him that in the sense of having no definition in terms of necessary and sufficient conditions, language has no essence. Rather the question 'What is language?' must be answered by citing various examples: it is this, and this, and this, where one points to and makes clear the nature of various language-games. My remark about 'essence' has reference to such a piecemeal, family-resemblance concept of language. What I mean by 'investigating the nature of language' involves finding the right examples and describing them perspicuously.

Reference to such an enterprise is implicit in the following remark by Wittgenstein, for example:

Am I doing child psychology? I am making a connection
between the concept of teaching and the concept of meaning.
(Z §412)

One might say that he claims there to make a *grammatical* connection between the concept of teaching and the concept of meaning. It is meaning as use that is in question, and the connection is this: when we examine how the child is taught language, or how it learns it, we come to see clearly what it is it learns. We see the context in which it employs a given word, and the use it makes of it in that context. That context is connected internally to use. And to the various contexts there correspond various uses.

To utter a word in a given context is to engage in a language-game. Language-games are customs (*PI* §199). In learning to speak the child is acculturated: it acquires one by one a mastery of the customs that make up language.

We here reach the point that I particularly want to emphasize: the language-games qua customs are rooted in natural or instinctive actions and interactions. The latter are the 'contexts' I have been referring to. In observing the child learning language-customs we come upon contexts of interaction. We thus come to see how words

function within the naturally occurring patterns of interaction that form the bedrock of speech.

The underlying idea, that language emerges from action, is often stated by Wittgenstein. For example, he writes in ‘Cause and Effect’:

It is characteristic of our language that the foundation on which it grows consists in steady ways of living, regular ways of acting.

Its function is determined above all by action, which it accompanies.

We have an idea of which ways of living are primitive, and which could only have developed out of these. We believe that the simplest plough existed before the complicated one.

(CE 420)

The language-game is rooted in action, or better, interaction—hence the ‘game’ in ‘language-game’. In particular, language grows out of instinctive or naturally occurring human activity. Language is an extension of action. Thus he says the following about pain, in what Lars Herzberg has called an ‘unequivocally anthropological remark’:³

—Being sure that someone else is in pain, doubting whether he is, and so on, are so many natural, instinctive, kinds of behaviour towards other human beings; and our language is but an auxiliary to, and further extension of, this relation. Our language-game is an extension of the more primitive behaviour. (For our *language-game* is behaviour.) (Instinct.)

(RPPI §151)

We have already seen the generalized form of that observation about the language-game with ‘pain’. He writes, in the same general vein:

The origin and the primitive form of the language-game is a reaction; only from this can more complicated forms develop. Language...is a refinement, ‘im Anfang war die Tat’.

First there must be firm, hard stone for building, and the blocks are laid rough-hewn one on another. *Afterwards* it’s certainly important that the stone can be trimmed, that it’s not *too* hard.

(CE 420)

In these and related remarks Wittgenstein approaches language

through its primitive roots in action. In turn, one can investigate those roots by studying how children learn to speak.

That he believes we can follow such a line of inquiry is implicit, for example, in his remark that, 'As children we learn concepts and what one does with them simultaneously' (*LWPP*II, 43). The connection in question between speech and action also shows up in this comment:

The basic concepts are interwoven so closely with what is most fundamental in our way of life that they are therefore unassailable [and could not be abolished by legislation, for example].

(ibid., 43, 44)

How do we find out what particular forms those interweavings take? Well, to return to my first quotation in this section, we must rely on observation. So Wittgenstein too allows for a certain 'naturalized' philosophy. But his naturalism has a different target from Quine's and diametrically opposite results.

When we actually make a study of early language learning from a Wittgensteinian perspective, it appears that there are a number of distinct patterns of interactive behaviour that form the basis for the development of language.⁴ Language can only exist within such patterned acts. Those primitive, 'instinctive' behavioural patterns I call the proto language-games. The natural, untutored behaviour of one pre-linguistic hominid helping another it sees is hurt would be an example of such a proto language-game. Proto language-games are biologically given particular configurations of behaviour; part of the species' inheritance. In passing into language the child goes from these into corresponding primitive language-games: mini-customs in which culturally sanctioned sounds take on the functions that observed behaviour and natural gesture previously served.

For Wittgenstein, on this understanding of him, there are a number of distinct entrance ways to language, and not merely one, the conditioned simple affirmation. The different paths into language correspond to the distinctively different various activity patterns—the different proto language-games—within which words come to be used, to function. The point becomes much clearer when we examine some of those different entrance ways. I shall discuss two of them briefly and list some others. In doing so I shall be making certain empirical claims; as I have indicated, this is fair enough for someone writing in the shadow of an allegedly 'naturalized epistemology'.

I shall be examining human custom, so that generalizations from a few examples are legitimate, provided they are borne out by what others can observe. In fact we are here dealing with that 'common behaviour of mankind' Wittgenstein spoke of:

The common behaviour of mankind is the system of reference by means of which we interpret an unknown language.

(*PI* §206)

Requests

The child's earliest request utterances have their roots in 'instinctive' or naturally occurring behaviour. It is the behaviour of one person responding helpfully to what he or she observes the other is after. While many animals react in that way to one another, and especially to their young, the pattern is more obvious in animals with a long period of infant dependency, such as humans and apes; although, of course, the response is not confined to infant-adult interactions. In apes we find clear examples of request interactions.⁵ In a limited way mothers will share food with their babies. Older apes beg from others, sometimes successfully. Apes will in effect ask, often successfully, to be groomed. There are similar interactions in humans. At the simplest level the hungry baby cries and the mother brings it to her breast. At a later stage the baby reaches for something it cannot get, and the mother reaches over and supplies it. Here the giver's response is based simply on observing the natural behaviour of the recipient. Subsequently the child may begin to employ natural gestures—stylized versions of parts of its earlier natural behaviour. For example, it may spontaneously develop the following gesture: being after something it cannot get on its own, it reaches towards the thing while looking at the mother and making an opening and closing gesture with its outstretched hand. This soon becomes accepted by the primary group as a clear request: give me that thing. The gesture would have no sense (use)—or not the sense it has—outside the interactive behaviour pattern of one party wanting or being after something, and the other responding, often helpfully. Language proper makes its debut on the back of the two earlier stages. At some point the child enters spontaneously into language, using a word picked up from the common vocabulary of the group to make a request. The word stands in for a gesture, which in turn stood in for observed behaviour indicative of what we call wanting. The gesture took over for the adult the function of the child's observed

goal-directed or goal-manifesting behaviour (such as reaching for something or crying when hungry). The word in turn takes over the function of the gesture. The word's use is to accomplish the same thing accomplished by the gesture: to bring forth on the part of the other an appropriate response. It can have that use only in the context of the proto language-game, that naturally existing, species-wide pattern of interactive behaviour consisting of one party reaching towards, moving after, and so on, and the other responding in typical ways.

Intention utterances

Here the pattern of response focuses not on something the one party is after, but rather on what the one party is up to, is engaged in doing. The mother has the ability to anticipate what the infant is going to do, and the concern to respond appropriately, perhaps by accompanying the child, or warning it off, and so on. This is the proto language-game: A anticipates B's actions and responds. B in turn may anticipate A's response to B's future act, and react appropriately, as when an ape in the process of being weaned anticipates its mother's rejection and disguises its approach by undertaking to groom the mother's chest. This piecemeal approach to a forbidden goal may often be observed in children. Again, a gestural stage develops from the proto one. For instance, by deliberately, flamboyantly moving in a certain direction, in sight of the mother, ape or child may alert the mother to where it is going or what it is up to, putting the mother in a position to respond appropriately, for instance by accompanying the child. The child's earliest intention utterances function inside that particular proto language-game. In the holophrastic case, the single word takes over the role a gesture could have served inside that pattern of interaction. The utterance 'Down!', for instance, may serve to inform the mother that the child is going to get down from its chair.

The same utterance could have functioned in the earlier language-game, when it would have had a different use. That is, 'Down!' in a different context can function as a request-word. If someone has difficulty distinguishing requests from intention utterances, I offer the following comparison. In the well-known simple language-game of section 2 of the *Philosophical Investigations*, a builder calls out 'Slab' and a helper fetches one; he calls out 'Beam' and then that article is supplied, and so on. That is a pared-down version of what happens between parent and child in the case of one-word requests.

We can get a similar, pared-down version of intention utterances. Imagine that the builder-helper society evolves into an egalitarian one. A person who now utters 'Slab' will subsequently himself go and fetch a slab, bring it to the building site and begin to work it into the structure. The response of his fellow builders will be appropriate. Some may move to begin to prepare the work of adding a slab; some may call out the names of other materials that will be needed next, after the slab is added, and then proceed to get them, and so on. Contrasting this model with the earlier one makes clear the difference between request and intention utterances.

In addition to the two utterance types just discussed I shall list a number of others. All have their roots in—grow out of—biologically given human abilities and naturally occurring interactions. In all cases the simple language-games and many subsequent elaborations of them cannot exist out of the context of the type of behaviour constituting the corresponding proto language-game. Other proto and primitive language-games are: Greeting; refusal; make believe; claims of possession; utterances of fear, surprise, delight.

In addition to these and others there is an early-occurring language-game of simply naming, or as one might say, in sensitivity to Quine's qualms, 'simply "Loling"'. Here the child learns to respond with a word naming (or 'saying') the thing presented to it, as in 'Rabbit!'. The child's grasp of such a simple language-game is neither necessary nor sufficient for its mastery of the more humanly significant language-games of the types I have listed. Having learnt '[Lo, a] rabbit!' does not itself enfranchise the child to request a rabbit or to say, in a one-word intention utterance, that it is off to fetch one. To adapt Wittgenstein's figure slightly, learning to 'Lo!' things properly is like learning to put the pieces on the board correctly. Unless there are some games one knows how to go on to play, setting up the board is a rather fruitless enterprise. Similarly it is a mistake to think that chimpanzees have mastered language just because they have learnt to respond with the right name to a given presentation. They can also learn to make requests in symbols and to state intentions, but those are further, distinct skills.

FURTHER REFLECTIONS ON THE TWO CONCEPTS OF USE

If one rejects the idea of meanings as mind-resident, or for that matter as Fregean universals somehow contacted by minds, one is

left, in the first instance, with sentences and words as mere noises. This point must be kept in mind, in approaching our authors. What then, for them, breathes life into a noise and makes it a symbol, makes it language, or part of language? Both answer: use. Now, if use is anything, it is a matter of rule-governed or rule-sanctioned acts and responses on the part of those who employ the noises.

Thus we are left with this bare picture: noises count as part of language when they are used: exchanged between people. What is that exchange, that interaction, like? Here we get divergent answers.

Use for Quine—at least at the lowest level—is simply a matter of rule-governed affirmation, on the part of the speaker, and a corresponding agreement or disagreement (actual or potential) on the part of the hearer. The rule for the hearer is that the response is to be affirmative—a nodding of approval, or the like—if, in the hearer's judgement, the speaker has correctly matched the particular noise against the appropriate sensory stimulus; otherwise, the response is to be negative—a shaking of the head, a gesture of dismissal or rejection, or whatever. The speaker's rule is correspondingly a question of matching noise and stimulation. The *function* of the noise-cum-word is then to express the speaker's match between noise and stimulation, and to elicit the hearer's confirmation or denial of that match. The hearer's response is determined by the same rule of correlation between noise and stimulation. The stimulation may be had by the hearer or conjectured on the basis of 'empathy'.

For Quine, then, language arises when noises take on the function of affirming a particular type of stimulus-noise match, and of eliciting a corresponding affirmation or denial on the part of the hearer. Noises, we might say, become words or sentences by functioning in the 'Lo, an X!' language-game. The language-game of science is an extension of the 'Lo, an X!' language-game: its noises are affirmed or denied holistically, in response to how the total set fits the base-level 'Lo!'ings. And to complete the picture: the language-game of science is It.

For Wittgenstein, in contrast, noises take on functions by being voiced inside the confines of some or another of the various proto or gestural language-games that precede the advent of language proper, both for the child and the species. Words—including the holophrastic words of early language mastery—have a variety of functions corresponding to the variety of the proto and simple language-games and their subsequent extensions. The march from

childhood to adult language involves a progressive complication, extension and intertwining of the earliest, foundational language-games. Science must be conceived as growing piecemeal out of that enriched set of language-games. It has its roots in technology, and it never outgrows them. It is not one thing, but a collection of different language-games joined at best by family resemblance.

The 'function' I have been speaking of is an extension from our talk of the function of parts of artifacts and machines. Quine's universe—at its foundational stage—can be compared to a world containing but one very simple machine with one functioning part. Wittgenstein's universe, at that same level, contains a significant number of different machines, doing different jobs, and with parts that function to achieve those various aims. In Quine the homogeneity of function is never lost, just supplemented by inference-yielding sentences qua noises. In Wittgenstein the original diversity is retained and gives rise to an enormous further diversity.

In Quine's story the speaker's actions drop out of the picture. The (internal) purpose of speech is to respond appropriately to what registers on one's sensory organs. That is not to deny what is obvious, namely that the speaker may have to act, to move his body through space, in order to be in a position to make certain observations, to have his sensory organs stimulated. He may have to leave the house and walk to the field to see a rabbit. But his actions do not bear on the content of speech in any direct way, as Quine himself insists; they do not form, so to speak, part of the logic of speech. They function only to get the speaker to a certain position for observing. In Wittgenstein, on the other hand, action is connected with speech in a full-blooded way. Without the various action patterns—seeking and being given, striving and being cooperated with, and so on—words-cum-noises could not become language. It is that *internal* connection with action that Quine does not see. Nor could he, since he has not seen the patterns of action in question. He does not have Wittgenstein's conception of a language-game.

SO WHAT?

It might be objected that the differences I have focused on do not matter. For, it might be said, Quine nowhere denies the existence of other language-games: he just pretty much ignores them. He focuses on one particular one—namely the one that lies at the root of

science; for it is science he wishes to study. One might as well chide an astronomer for not studying ducks.

And indeed Quine has apparently acknowledged, both explicitly and implicitly, other uses of language in addition to affirmation within total science. As remarked earlier, he speaks of the language-game of science, and notes the existence of two other language-games:

I see [myself] as defining a particular language-game, in Wittgenstein's phrase: the game of science, in contrast to other good language-games such as fiction and poetry.

(*PTb* 20)

Again, he refers to *questions* as eliciting observation sentences, and it would be no stretch of the imagination to suppose him aware of other uses such as *commands* or *requests* (*WO* 2). So it is wrong to say that for Quine language has one use, whereas for Wittgenstein it has many.

In reply, my point is that Quine does not have Wittgenstein's conception of a language-game. Hence he cannot be said without equivocation either to acknowledge or to ignore language-games other than science. Correspondingly, if the concept of use is seen as tied to the concept of a language-game, and we avoid equivocation, he cannot be said to acknowledge other uses, in Wittgenstein's sense.

Wittgenstein would not treat all of science as one language-game, under the direction of one set of rules. Still less would he be inclined to treat everyday truth-affirmations that concern the world, as opposed to the world of fiction, as belonging all to that one language-game (total science). Just as mathematics is a 'motley' for Wittgenstein, so too must science proper be. Here I can only wave in the direction of some of the differences constitutive of that 'motley'. For example, cosmology with its highly theory-driven claims about black holes and big bangs contrasts with more bean-counting branches of science that in part simply record phenomena, such as earthquakes, population growth, neolithic sites, epidemics, animal behaviour, human customs, and so on. Various criteria operate in those realms. Or compare investigations into biological function with those done under the heading of 'functionalism' in sociology. Not to mention the wild and wonderful variety of life forms—the various noisome paradigms—flourishing in the soft sciences in general, where Marx, Freud or Derrida can be one's theoretician of choice, as opposed,

say, to Newton or Darwin. From Wittgenstein's perspective science divides into units operating according to their own distinct criteria, with their own distinctive aims, fashions and passions, and their own distinctive forms of life. He would reject an amalgamation of them into one overarching interconnected system. Despite the fact that concepts and techniques developed in one science can enter into the considerations of another, as in micro-biology, the idea of science as one great inference-connected network of statements strikes me as fantasy left over from the heyday of positivism; fantasy that is in fact under the influence of Wittgenstein's own great oversimplification, the *Tractatus*.

It might be argued that surely we *can* group lower-level language-games into categories, and name these larger groups language-games. Thus from the fact that Quine speaks of *the* language-game of science it doesn't follow that his and Wittgenstein's uses of 'language-game' (and hence their uses of 'use') differ. True enough—it doesn't follow; the use of the phrase 'the language-game of science' could perhaps be justified in this way, other things being equal. But they are not equal. The point at issue is not how to count language-games; that would be relative to the breadth of one's categories. The point rather is to understand what it is we are counting.

One way to show that Quine and Wittgenstein have radically different ideas of what a 'language-game' is, is to focus on certain differences among Wittgensteinian language-games, differences that Quine's conception implicitly denies. Certain distinctions emerge when one sees speech in terms of Wittgenstein's unique concept of a language-game, and Quine misses those distinctions. Chief among them, as we shall see below, is Wittgenstein's central contrast between utterances that count as *Äusserungen* and those that do not.

Well then, one might ask, what is that alleged unique concept of a language-game? The concept cannot be introduced in terms of general abstract properties. It must be given in terms of examples, like those I have listed, and others. It is a family-resemblance concept to be learnt in a bottom-up manner.

I have emphasized dissimilarities between the two thinkers' treatments of use at the level of the passage into language. My aim now is to show how those different views of use lead to markedly disparate interpretations of psychological concepts. In the face of such divergences the claim of 'deep similarity' must collapse.

QUINE AND WITTGENSTEIN ON PSYCHOLOGICAL CONCEPTS

From early on Quine repudiates 'mental entities', doing so on what he conceives of as broadly scientific grounds. Thus he writes in 'On Mental Entities' (1952):

The issue is...whether...it is efficacious so to frame our conceptual scheme as to mark out a range of entities or units of a so-called mental kind in addition to the physical ones. My hypothesis, put forward in the spirit of a hypothesis of natural science, is that it is not efficacious.

(FLPVa 214)

In his latest writings Quine adheres to the tenor of his earlier claims, only complicating matters somewhat by adding in Davidson's thesis of anomalous monism.

The basic idea is to identify mind with body, and the motive is still said to be broadly scientific: a matter of a simpler overall scheme of things. He puts the matter elegantly in *Quiddities*:

Every mental event reflects some bodily one.... Granted this much, it becomes a flagrant breach of...Ockham's maxim of parsimony to admit mind as a second substance at all.... Better to drop the duplication and just recognize mental activity as part of the activity of the body. It is only thus, indeed, that the enigma of mind-body interaction is disposed of.

(Q 132)

Thus, for example:

Each individual episode of someone's thinking about Vienna ... is a neural event, which we could describe in strict neurological terms if we knew enough about the specific case and its mechanism.

(Q 133)

But this does not mean that any 'mental predicate' such as 'thinking about Vienna' or, to enter another example, 'having the intention of going to Vienna', can be translated into physical terms. Rather the two classification systems, mental and physical, are incommensurate:

Mental events are physical, but mentalistic language classifies them in ways incommensurable with the classifications expressible in physiological language.

(Q 133)

This is a plausible view, but one Wittgenstein would reject. For him the false move would come in with the identification of the at-first-assumed-to-be-mental entities—the so-called propositional attitudes. The seemingly mental X said first to ‘reflect’ and then by Ockham’s razor to be identical with some physiological Y is itself merely a grammatical illusion. Quine’s physicalism rests upon a false reading of such psychological concepts as thinking or intention. To see this we first need to get clear about those putative mental entities which Quine deems physical. To do that we must in turn ask how, according to Quine, one might learn to speak of those states. And at this point we must notice that there is, apparently, a small glitch in Quine’s system.

The glitch arises from the inconsistency of three theses which Quine must seemingly adhere to. The first is that observation sentences correlate sounds with the stimulations of one’s *exteroceptors*—that is, stimulations in one’s sensory organs. The second is that first-person psychological utterances are seemingly observation sentences of some sort or other, and moreover *descriptions*. The third is that in fact such first-person utterances cannot be thought of as being descriptions of stimulations brought to us by our sight, hearing or any other sensory organs. Only the third thesis requires defence. Someone else might observe me and conclude correctly that I intend to go upstairs. When I say that I intend to go upstairs, I do not do so on the basis of observing my own behaviour. I do not sense the movement of my limbs from the inside, as it were, and on that basis say that I intend to go upstairs. In general I do not base my first-person psychological utterances on the data of my exteroceptors. So the glitch is that Quine must change his definition of observation sentences; those fundamental sentences cannot be restricted to noises correlated with sensory stimuli. They must include noises correlated with internal states of the nervous system: not merely exteroceptor states, but neural states in general. (Or he could try to say that utterances like ‘I intend to go upstairs’ are not ‘observation sentences’ at all, but theoretical ones. But then the question would arise of how these are grounded in observation sentences, and Quine would then be stuck with the unacceptable idea that such first-person claims are based—now indirectly—on external observation.)

A broadening of the claim in *The Pursuit of Truth* seems required; on the other hand, it costs Quine little, and in fact it seems that he all along, if implicitly, adopts the broadened view. Thus it seems in general agreement with his system to say that there are two kinds of

elementary sentences at the bottom of the chains of inference of total science. One is correlated with states of the exteroceptors. The other is correlated with such brain states as underlie (and are in fact identical with) such things as having thoughts or having intentions.

How, then, does talk of the propositional attitudes arise? Quite analogously to talk of physical matters. There is a certain type of perceived electro-chemical *buzz*. When I have it I hear my teacher say something like ‘You are in pain’ (see Quine’s discussion in *WO*, 5–8) or, in the sort of case we are now interested in—the propositional attitudes—‘You are afraid of the spider.’ And thus I learn to produce the noise ‘I am afraid of the spider’ when I have another of that class of buzz. Similarly, my empathic teacher judges that I have the intention of going upstairs, and says something like, ‘You intend to go upstairs’, and thus I, cleverly able to change the pronoun, am enabled to describe buzzes of the particular type he spoke of by saying ‘I intend to go upstairs.’ Or better: am enabled to respond to buzzes of that particular type by making the noise, ‘I intend to go upstairs.’

In what I know of his later writings Quine is never quite explicit about how psychological affirmations are learnt. But as my previous remarks indicate, the sense I have of his position is that it is at this point quite traditional. We have privileged access to our own mental states—propositional attitudes. Others can attribute mental states to us on the basis of that well-worn argument: he is acting the way I act when I want...believe...intend...therefore he wants...and so on. Quine here speaks of ‘empathy’. Instantiations of this sort of argument for other minds allow adults to teach their children to express their own mental states in words. The ‘content clause’ in the following quotation is simply a sentence—a noise—associated with the given inner state (propositional attitude)—some state of wanting, believing, intending, and so on:

Empathy is why we ascribe a propositional attitude by a content clause.... The content clause purports to reflect the subject’s state of mind rather than the state of things. From the ascriber’s point of view it figures holophrastically; its component terms do not necessarily refer, here, as he means them to when he speaks for himself.

(PTb 68)

On this view the teacher through empathy takes it that the student is in propositional attitude A. The teacher says something to the

effect that, 'You are lo, A!', and thus the student learns to say in response to a perceived inner state, 'Lo, an A!' Instead of perceiving—having the proper exteroceptors stimulated—the student introspects. Here presumably the proper neurons are stimulated. He then describes the content of his introspective act in terms of the noises he has learnt to associate with that class of inner states. Quine does sometimes speak explicitly of such introspection: 'Purpose is one of various mentalistic notions drawn from introspection of one's mental life' (*PTb* 75).

To return to the case of intention utterances, and Quine's physicalism, it is a certain 'buzz'—the thing I describe in the language of intention—that is, as a matter of broad scientific fact, physical and not mental, allegedly. Again: the in-fact physical thing in question, the buzz qua state of neural agitation, is the object of my description when I say 'I intend...'. But it is exactly that buzz, that allegedly described thing, that is a figment of Quine's language-befuddled imagination. Or so Wittgenstein would say. For him, when I state my intention I do not describe any inner state, whether physical or mental.

By seeing language as an extension of action Wittgenstein comes to conceptions of intention, and of the propositional attitudes in general, altogether different from Quine's ideas of them. I shall make my point in terms of the example already discussed, first-person intention utterances. I have described the proto language-game those utterances grow out of. The gestural stage of the proto language-game is best thought of as involving signals. The child has a certain project, for example to climb the stairs. It manifests that project in its actions, and in addition at some point in its development is also able to signal the end point of its project. The signal might be just a pause in its crawling towards the stairs, accompanied by making eye contact with the mother. Later a word—'Upstairs!'—may replace the gestural signal. The word still functions as a signal; and its purpose or function, in the interaction between child and parent, is to indicate the end point of the child's project, for example, that it is going upstairs. Upstairs is where it is headed. In learning later to give more socially acceptable, multi-word intention utterances the child at first merely learns to enlarge its intention signal in keeping with the reigning syntactic proprieties. It learns to say, for example, 'I am going upstairs': an intention utterance. And later, perhaps: 'I intend to go upstairs.' This is still a signal of what the end point of the project is. It is not a description of anything inner. As Wittgenstein so nicely puts it:

Does something happen when I...intend this or that?—Does nothing happen?—That is not the point; but rather: why should what happens within you interest me? (His soul may boil or freeze, turn red or blue: what do I care?)

(RPPI §215)

The concept of an *Äusserung* is a central one for Wittgenstein. Certain first-person present-tense psychological utterances, including intention utterances, are *Äusserungen*. One cannot give a definition of 'Äusserung' in terms of syntax, because some descriptions are syntactically identical to true *Äusserungen*. The latter have the characteristics of not being descriptions, and of being governed by a criterion of truthfulness, so that if one grants the speaker's sincerity one cannot doubt the truth of what he or she says. For Wittgenstein there is a great logical difference between *Äusserungen* and corresponding third-person utterances. The latter are descriptions, and are not subject to a criterion of truthfulness. This distinction is missed by Quine. For him the only difference between a first- and a third-person basic sentence, whether describing the external or the 'internal', concerns the vantage point of the speaker. The first-person speaker has the stimulus or the neural activity right in front of him, so to speak. The other has access to it only through 'empathy'. Because of his narrow conception of the nature of 'use' Quine misses Wittgenstein's distinction.

WITTGENSTEIN'S QUINE

The pay-off of these differences is, again, that what for Quine is a broadly empirical claim—the identity of the mental and physical—is for Wittgenstein disguised nonsense, born of a misrepresentation of the nature of our talk about intentions and the other so-called prepositional attitudes. This is hardly a small consequence of the two thinkers' general views, since the divergence cuts across the entire range of psychological discourse. That is, the class of Wittgensteinian *Äusserungen* is a large one—it includes: I want, I intend, I think, I believe, I fear, I hope, and so on. It is pretty much co-extensive with the class of prepositional attitudes, so called. A philosopher's understanding of these ideas must be of fundamental importance to his system of thought. From Wittgenstein's point of view, Quine's account of them is throughout, as in the case of intention that I have focused on, nonsensical. In other words, the prepositional attitudes that for Quine turn out, by scientific hypothesis, to be physical in

nature are for Wittgenstein grammatical fictions, the result of an extremely bad understanding of the respective concepts. The two philosophers' seeming similarity is real enough. They do both see language as social and do both eschew mentalism. But they do so in different ways. And the similarities that are there mask divergent conceptions of what 'use' is. In the light of the consequences that divergence has for their respective understanding of psychological utterances, one might say it is a difference none, or at least few, greater than which can be conceived.

I noted earlier that both thinkers eschew a mentalistic account of meaning. But they differ radically in how they reject meanings. That divergence is like the one holding in the case of the propositional attitudes, and it reflects a central methodological difference between the two systems of thought. Quine presumably holds that total science has no room for meanings qua mental entities; that such things exist is false, in the way that any high-level claim in science may be false. In contrast, Wittgenstein views meanings qua mental entities as a species of grammatical fiction; one who affirms them speaks not falsely but nonsensically. The methodological difference is this: Quine's concern is to describe, at a high level of abstraction but nevertheless empirically, an assumed elegant, overarching total science, wherein all truths of real moment are contained. Wittgenstein's goal, on the other hand, is strictly negative: to show, piece by piece, how 'metaphysics' (including large chunks of what actually goes under the name of 'science'—'cognitive science', for example) is disguised nonsense. Wittgenstein's Quine is a metaphysician led astray by language.

CONCLUDING OBSERVATIONS

Quine sees Wittgenstein as a latter-day pragmatist who echoes some truths long since discovered, by Dewey in particular, and central to Quine's system. Wittgenstein is thus useful in helping prepare the way for the understanding and acceptance of that system. Not a father figure; Dewey seems to get that role, although in truth Carnap deserves it. Rather a distant, somewhat slow off the mark, eccentric but supportive uncle.

As so often, Wittgenstein anticipated the misunderstanding:

But aren't you a pragmatist? No. For I am not saying that a proposition is true if it is useful.

The usefulness, i.e. the use, gives the proposition its special sense, the language-game gives it...

(*RPP I* §266)

Of course, Quine doesn't attribute to Wittgenstein the doctrine of truth as a function of usefulness. But Quine does count Wittgenstein a pragmatist of sorts, on the grounds that he, like Dewey, sees meaning as use. And the answer Wittgenstein gives above applies in this case too: to get Wittgenstein's concept of use we must deploy *his* concept of a language-game. In the context of the language-game as so understood the proposition has a use. Language-games must be grasped in a bottom-up way, in terms of examples of the sort I have mentioned or alluded to above. They are multifarious and have their roots in action; they cannot be understood if those primitive roots are not clearly seen. The various ways we pass into language indelibly mark our subsequent deployment of it. That concept of a language-game is unique to Wittgenstein, and Quine, although he uses the term 'language-game', has not grasped the concept. Correspondingly, and as I hope to have shown, Quine's use of 'use' should not be confused with Wittgenstein's. The two philosophers are deeply dissimilar.

One bent on finding similarities will do much better turning to the early Wittgenstein, as my opening citation suggests. Given Quine's descent though Carnap, deep affinities *there* will not be surprising.

NOTES

- 1 'On Empirically Equivalent Systems of the World', *Erkenntnis*, 9 (1975), 316; quoted by Lars Bergström, 'Quine on Underdetermination', POQ 39.
- 2 This section presents an interpretation of Wittgenstein which I have defended elsewhere ('Wittgenstein's Intentions', in *Wittgenstein's Intentions*, ed. John V. Canfield and Stuart Shanker (Garland Press, New York, 1993), pp. 1–37; and 'The Living Language: Wittgenstein and the Empirical Study of Communication', *Language Sciences*, 15 (3) 165–93). It is a development of a reading supported by Norman Malcolm, for example in his paper 'Language as Expressive Behaviour', in *Nothing is Hidden* (Blackwell, Oxford, 1986), pp. 133–53. The interpretation focuses in particular on some notes of Wittgenstein's published under the title 'Cause and Effect' (CE). There Wittgenstein states more clearly than anywhere else a view of language as tied to primitive, instinctive human action. The voices of children lead us to that fundamental level. See also the discussion by Lars Hertzberg in

'Primitive Reactions—Logic or Anthropology?', in *Midwest Studies in Philosophy, Vol. XVII: The Wittgenstein Legacy*, ed. Peter A. French, Theodore I. Uehling, Jr., and Howard K. Wettstein (University of Notre Dame Press, Notre Dame, Ind., 1992).

- 3 Herzberg, op. cit., n. 4. See the remarks and references in my 'The Rudiments of Language', *Language and Communication*, 15 (1995).
- 4 See the observations reported upon in 'The Living Language', op. cit.
- 5 I have discussed several examples of 'proto language-games' among apes, including those relevant to request stating and intention utterance. See the remarks and references in my 'The Rudiments of Language', op. cit.

ON SAFARI WITH WITTGENSTEIN, QUINE AND DAVIDSON

Hans-Johann Glock

A striking feature of contemporary analytical philosophy is its concern with exotic anthropological scenarios, stories in which we encounter an isolated and completely alien tribe and try to understand its language and activities. The most important source of this interest is Quine's discussion of radical translation, which was continued by his most eminent follower Davidson under the label of radical interpretation. Radical translation/interpretation is interpretation *from scratch*, the attempt to understand the actions and utterances of a completely unknown community without the benefit of any previous acquaintance.¹ Both Quine and Davidson use the idea of such anthropological encounters as a heuristic device. Its purpose is to ensure that we approach linguistic behaviour and the problem of meaning from a perspective which they deem proper. The expedition into the jungle is a campaign in support of a philosophical anthropology, a philosophical account of language and human behaviour in general. In Quine, and until recently in Davidson, this heuristic function has been linked to the idea that 'radical translation starts at home': all linguistic understanding is based on radical translation, and we have to interpret even our own utterances. Elsewhere I have argued that this is a mistake.² In my view it is related to an error which Wittgenstein pinpointed in *PI* §§198–202, namely that of supposing that since it may always become necessary to interpret a rule, all rule following *must* involve interpretation.

To deny that we always engage in radical translation when we communicate is not to reject Quine's and Davidson's approach to genuine cases of radical translation. Indeed, the consideration of radical translation may serve a heuristic role in a philosophical anthropology precisely because it is such a special case. At any rate,

this was the view of Wittgenstein, whose remarks on deviant practices and alternative forms of life are the second important source of the analytical debate. Before Quine, Wittgenstein discussed, albeit briefly, the ‘ethnological point of view’ or ‘anthropological method’ which we adopt when coming to understand such an (actual or invented) alien community.³ Like Quine and Davidson, Wittgenstein thought that we can learn something about the concept of understanding by investigating the question of whether and how radical translation is possible, and something about the concept of language by investigating the question of whether there are minimum requirements which a form of linguistic behaviour must meet in order to be intelligible to us.

In this chapter I argue that although Quine and Davidson provide important insights into radical translation, their overall conception of it is flawed, and should be corrected by reference to Wittgenstein’s contribution. I start by arguing that Quinean translation cannot even reach the meagre results it countenances without tacitly relying on hermeneutic assumptions and methods which he explicitly condemns in his arguments for indeterminacy. The second section of the chapter indicates how Davidson’s conception of radical interpretation departs from Quine, but it criticizes him for retaining the idea that radical translation is a matter of constructing a theory on the basis of non-semantic evidence. While the first two sections employ Wittgensteinian ideas to challenge Quine and Davidson, the final section develops Wittgenstein’s own alternative. It ends by sketching very briefly the consequences which conflicting conceptions of radical translation have for the topic of conceptual relativism.

QUINE: THE INDETERMINACY OF RADICAL TRANSLATION

Quine’s discussion of radical translation aims to provide a scientific theory which explains how a ‘meagre input’ of sensory stimulation gives rise to a ‘torrential output’ of structured verbal theorizing. According to Quine, human beings must be seen as black boxes whose ‘dispositions to verbal behaviour’ are triggered by external stimuli—‘physical irritations of the subject’s surface’ (*ORE* 83; *WO* 207, 235). Verbal behaviour must not be described in terms of meanings, or as correct or incorrect, but only in terms of statistical regularities obtaining between movements, sounds and the environment. This reductionist behaviourism is sketched in chapter

1 of *Word and Object*, which provides the essential background for the celebrated discussion of radical translation in chapter 2. The discussion of radical translation serves as a thought experiment which describes language in purely extensional and behaviourist terms. The only evidence for radical translation which Quine allows is what sentences the natives assent to or dissent from in what circumstances. The master-problem he addresses is: 'how much of language can be made sense of in terms of stimulus conditions?' (WO 26; see also *PTb* 37, 48).

Quine's answer is: very little. Beyond certain limits the translation of a completely alien language is 'indeterminate'. There are mutually incompatible 'translation manuals' (WO 27–8), different ways of correlating native sentences with ours, all of which fit the facts about the natives' linguistic behaviour equally well. What we *can* establish, according to Quine, is (WO 68):

- (1) the 'stimulus-meaning' of native 'observation sentences'. This means that we can determine the circumstances (set of stimulations) under which the natives assent to simple utterances like 'this is red' which report observable features of the external world (WO 31–4, 41–4);
- (2) whether a native sentence is 'stimulus-analytical', i.e. accepted under any circumstances, come what stimulation may (WO 55, 66);
- (3) whether two native sentences are 'stimulus-synonymous', i.e. assented to under the same circumstances by all speakers (WO 46–7);
- (4) what native expressions are truth-functional connectives (WO 57–8).

In order to get even this far we need more than a description of the native tongue in terms of stimulus and response. We also need the famous 'principle of charity'. According to this principle, our translation manuals should minimize the ascription of false beliefs, especially as regards observation sentences and logical connectives. For, Quine argues, it is 'less likely' that the interpretees hold obviously silly beliefs, such as contradictions, than that our translation is wrong (WO 59).

Even with the assistance of the principle of charity, however, translation remains indeterminate in several respects (*ORE* 67). The first results from semantic holism (WO §9). What has a specifiable empirical content, and hence a specifiable stimulus meaning, is not an individual

sentence, but the 'language' or 'theory' as a whole. Semantic holism has striking consequences for radical translation. We can establish what sentences of the native language are stimulus-synonymous, but we cannot univocally translate these sentences into our language. For we may translate a given sentence differently by making compensating adjustments in the translation of other native sentences. Hence, there are mutually incompatible ways of pairing individual sentences which fit the totality of the natives' behaviour equally well.

A second dimension of indeterminacy is the 'inscrutability of reference' (WO §12). Even if we could assign an objective meaning to the native sentences, we could not establish the referents of the terms occurring in these sentences, since that would depend on how we translate certain other native expressions. Assume that we have established that the stimulus meaning of the native sentence 'gavagai' is identical with that of our 'There's a rabbit.' It nevertheless remains impossible to tell what the extension of 'gavagai' is, whether it refers to a rabbit, to an undetached rabbit part, or to something else. We cannot even tell whether it is a concrete general or an abstract singular term which refers for example, to a recurring universal, namely rabbithood. For the only way of removing these uncertainties is to ask in the native language questions like 'is this the same gavagai as that?' But that presupposes a prior translation of 'the apparatus of individuation', expressions like 'the same', articles, pronouns, etc. Once more there are different ways of construing the overall behavioural data.

The final dimension is 'ontological relativity'. Understanding a language—determining its meanings and ontological imports—is doubly relative: not only to one of several possible translation manuals, but also to the choice of one of several possible languages to translate into. We are forced to project the ontology of some 'background language' or 'theory' onto the native language (ORE 49, 67–8; PL 81–2).

Quine uses the indeterminacy thesis to conclude that the notions of meaning and synonymy, and with them all other intensional notions, are illegitimate, since there are no criteria of identity for 'meanings' (PL 1–2, 67–8; ORE 23). There are various ways in which this conclusion might be resisted. One is to insist that talk about meaning does not require any criteria of synonymy. According to this line, even if there is no way in principle to *establish* whether two expressions mean the same, this epistemological result is irrelevant to the *ontological* question whether 'meanings' exist.⁴ Both Wittgenstein and Quine tried to avoid such a reification of meanings

by replacing talk of meanings with talk of synonymy (M 258; *AWL* 30; *FLPVa* 11–12; Q 131–2). Quine would maintain, and Wittgenstein deny, that criteria of identity in general and of synonymy in particular must be context-independent and clear-cut (cf. *WO* 203 and *PI* §§ 214–16, 223–7). However, both would insist that talk of meaning presupposes that there are ways of telling whether two expressions mean the same. Although I cannot argue their case here, I think that they are right. Ascribing meaning to a word is not to relate it to an entity, let alone a verification-transcendent one. Such ascriptions would be senseless if there were no ways of explaining what a word meant, which in turn requires the possibility of providing synonyms.

Another reaction to the indeterminacy thesis is to question its specific components, notably the inscrutability of reference. For example, even by Quine's austere standards it seems possible to determine whether 'gavagai' is a count-noun referring to a living animal, and hence is to be translated as 'a rabbit', or a mass-noun like 'roast rabbit'. We watch a rabbit being turned into roast rabbit in a native's company, and check whether the native still assents to the application of 'gavagai'.

Yet another reaction is to increase the yield of radical translation through introducing mentalist elements into the behaviourist picture. Thus Dummett and Evans have argued that while a Quinean translation manual which merely pairs native and English sentences is indeterminate, this does not hold for a theory of meaning which would explain how the natives calculate the meaning of sentences from the semantic properties of their constituents.⁵ But it would seem that Quine can happily reply that the only legitimate evidence we have for such processes is the natives' behaviour.

In order to resist the thesis of indeterminacy one must undermine the behaviourist methodology on which it rests. One way of doing this is to show that Quine's method of translation cannot yield even the meagre results it is supposed to, without tacitly smuggling in either a prior understanding of the natives, or hermeneutical methods and intensional notions which he disowns. The answer to the question 'How much of language can be made sense of by Quinean theory-construction?' is not 'very little' but 'none whatsoever!' Either there is a better approach to radical translation than that of Quine, or such translation is impossible.

Given the paradoxical nature of the second possibility, it is tempting to regard this as a *reductio ad absurdum* of Quine's behaviourist approach. Quine rejects that accusation (*PTb*, 37–8).⁶

His rationale is that ‘the behaviorist approach is mandatory’, because in learning a language ‘we depend strictly on overt behavior in observable situations’. But although there is no alternative to learning the natives’ language on the basis of what they say and do, there *is* an alternative to describing what they say and do in the behaviourist idiom of stimulus and response, an alternative to be found in Wittgenstein. If this is correct, the strategy of showing that Quinean translation is a non-starter holds out the promise of a *reductio* of behaviourism.⁷

Such a strategy must avoid armchair anthropology by keeping apart factual and conceptual issues. Both Wittgenstein and Quine rightly agree on the anti-genetic point that it does not matter how a language is acquired (see *BB* 12; *PG* 188 and *RTC* 138, 95, 206; *WPEb* 119–20). There is no contradiction in supposing that creatures might start to speak English without having learnt it at all. Equally, Quine and Davidson might return from the jungle with a perfect grasp of the native tongue, however austere their procedures. The question is whether they distort radical translation through a mistaken account of *what it is* to learn a completely alien language.

This anti-genetic lesson applies to *a prima facie* plausible misgivings about Quine’s method. Even sympathetic commentators sometimes complain that the Quinean discussion tends to ignore the fact that radical translation involves *interaction* between translator and native.⁸ However, as it stands, this objection is doubly inaccurate. For one thing, the Quinean translator is not in the hopeless position of someone who attempts to learn a language with the exclusive aid of tape-recorders and microphones dangling from trees.⁹ For he also observes the natives’ movements and their environment. Nor is he confined to observation. Rather, Quine tells us, he ‘takes the initiative’ (*WO* 29) by trying to elicit responses by uttering native observation sentences, for example in the identification of assent and dissent (see below). For another, contrary appearances notwithstanding, interaction is *not* an essential precondition for successful translation. Imagine an invisible translator along the lines of H.G. Wells’s *Invisible Man*, who can move freely among the natives without interacting with them or being noticed. There is no *a priori* reason why such an invisible translator should not be able to pick up the native language by observing the linguistic instructions given to native children. If they can do it, why shouldn’t he? Like them, he would (as a matter of fact) need to be privy not just to the initial stimulations and explanations given by the natives, but also to the corrections and

clarifications with which they react to their children's first attempts. Of course, his learning would be facilitated if he could ask questions and have his own mistakes corrected. In principle, however, the invisible translator could learn through mere observation, just as prodigies have learnt chess.

Consequently, Quine cannot be accused of ignoring the need for interaction. What he can be accused of is mischaracterizing this interaction. He is committed to describing the translator's interference in native affairs as a matter of providing stimuli for a black box, a piece of verbal machinery with a certain input and output. It is partly because of this reductionist behaviourism that Quine cannot even reach the meagre result he promises. There is also another aspect of Quine's method which has this effect. As we have seen, in his argument for the inscrutability of reference, Quine thinks that any procedure which is based on assumptions that are optional is unable to provide evidence for translation. This stands in stark contrast to what is known as the *hermeneutical circle*, the idea that in understanding a remote text or culture we have to start by making certain *prima facie* plausible assumptions about specific passages or actions, the validity of which is then checked against the plausibility of the overall interpretation to which it leads, which in turn is modified by reference to the rectified understanding of the specific passage, and so on. This approach would avoid inscrutability of reference in a realistic fashion. Unless we have reason to believe that the natives are more interested in rabbit parts or Platonic ideas than they are in rabbits, we shall start with the assumption that 'gavagai' refers to the whole animal. On the basis of that assumption, and others of a similar kind, we then provide a translation of the natives' apparatus of individuation, which is tested by its plausibility in other cases, and so on. Quine is committed to ruling out this procedure as inadequate. But, as I shall argue, he himself tacitly relies on it in reaching his own results. He insists on a *presuppositionless* method in denying the scrutability of reference, but he is a closet hermeneuticist in the translations he licenses. Hence, we can either translate much more than Quine allows, or nothing at all. There are three prominent points at which this objection might apply, namely the move beyond observation sentences, the translation of the truth-functional connectives, and the identification of assent/dissent.

In order to get beyond the threshold of observation sentences like 'it is raining' to which all speakers assent in the same situations, independently of their background information, we need to 'go

bilingual' first; that is, we must learn the native language as children do, and then translate 'by introspected stimulus-synonymy' (WO 46–7). Unfortunately, it is unclear what that phrase means, or even whether it is meant seriously. The most plausible gloss on it is that the bilingual translator observes things like 'Whenever I would assent to "Ich bin ein Berliner" I would also assent to "I am a doughnut."' But according to that gloss the translator does not introspect anything. Rather, he observes his own behaviour and makes inferences about his dispositions, just as he has previously done with the natives. Yet it is highly implausible to suggest that a bilingual person needs to establish his behavioural dispositions in order to explain the words of one language in terms of the other.

By Quine's own acknowledgement, 'going native' transcends his method of translation; but it does not transcend his overall account, since he provides a behaviourist account of language acquisition (WO, ch.1). In any event, this first breakdown need not disturb him excessively, since the move beyond observation sentences is not listed among the results of his method. By contrast, univocal translation of the truth-functional connectives is. At first blush this seems justified. We can translate, for example, the native 'blip' as 'and' if for any two native sentences ' p ' and ' q ' the native assents to ' p blip q ' if and only if he will assent to p and to q . However, this account already relies on assumptions which seem no less problematic than those which Quine deplores vis-à-vis the inscrutability of reference. Just as distinguishing between rabbits and rabbit stages presupposes prior translation of the apparatus of individuation, translating truth-functional connectives presupposes that

- (1) all uses of 'blip' are truth-functional, which does not hold of our 'and' (WO 58 recognizes the problem, but does not indicate how it is to be solved);
- (2) sentences can be distinguished from words or other components of sentences. This will create particularly severe problems if, for example, the conditional is expressed by a term like 'if... then', which is not only compound but both parts of which play roles other than that of a truth-functional connective ('She is clever, if superficial', 'Then she left the room');
- (3) declarative sentences can be distinguished from questions, commands, subjunctives, etc. The ability to do so, however, goes hand in hand with the translation of words like interrogative pronouns and a rough grasp of speech-act patterns.

The final breakdown of Quine's method, concerning the identification of assent/dissent, is the most fatal, since it would prevent Quinean translation from even *getting off the ground*. Radical translation cannot proceed by observing what situations prompt what utterances, since the motives for making or withholding an utterance vary widely. As the critics of earlier behaviourist theories of meaning pointed out, even the perspicuous presence of a rabbit may not lead the native to say 'gavagai': he may be too accustomed to or fed up with the sight of rabbits. To avoid these pitfalls, Quine insists that the translator himself must volunteer sentences in appropriate circumstances, 'asking only for a verdict of true or false' (*TT* 48). But at the same time it is essential to his behaviourist approach that the dispositions to assent or dissent which this procedure is thought to establish provide the *only* starting point of radical translation.

This restriction of the basis of radical translation is implausible. Putnam has urged that the evidential basis of radical translation should be extended from assent or dissent to declarative sentences, to include the natives' questions or demands for explanation like 'What does this word mean?', which are no more difficult to identify than assent or dissent.¹⁰ This is plausible: even an invisible translator who cannot ask for explanations will have to recognize when the natives *explain* something to their offspring, and how they *correct* mistakes. But this is not just a low-key modification of Quine's approach, as Putnam seems to suppose. For, as Wittgenstein showed, explanations of meaning are standards of correctness by reference to which subsequent applications of a word are assessed as correct or incorrect, meaningful or nonsensical (*PI* §54; *PG* 68, 143; *M* 276). Taking into account explanations and corrections introduces the idea that radical translation involves learning certain linguistic norms, a point of disagreement between Quine and Davidson on the one hand and Wittgenstein on the other (see the second section below).

If one accepts Quine's behaviourist approach, and hence that the evidence of radical translation is confined to assent/dissent, the question is whether this evidence is available to a Quinean translator. Quine suggests that native assent/dissent can be identified as follows:

in asking 'Gavagai'...in the conspicuous presence of rabbits ...he has elicited the responses 'Evet' and 'Yok' often enough to surmise that they may correspond to 'Yes' and 'No', but has no notion which is which. Then he tries echoing the native's

own volunteered pronouncements. If thereby he pretty regularly elicits 'Evet' rather than 'Yok' he is encouraged to take 'Evet' as 'Yes'.... However inconclusive these methods, they generate a working hypothesis.

(WO 29–30; see RIT 181n.)

Note in passing that it is unclear what sort of behavioural evidence could lead one to surmise that 'Evet' and 'Yok' are expressions of assent or dissent without indicating which one expresses assent and which one expresses dissent. I shall also leave aside the problem that our 'Yes' and 'No' have other functions besides the expression of assent and dissent. The real trouble is that this procedure is not presuppositionless. For a start, it presupposes that the translator has correctly translated the observation sentence—in our case 'gavagai'—which he uses to elicit assent and dissent from the native. But that translation is subject to the vagaries which the improved behaviourist procedure of relying on assent and dissent was supposed to exclude, namely that the natives utter or fail to utter 'gavagai' for reasons that are extrinsic to the presence or absence of rabbits. Moreover, Quine's procedure presupposes a mutual understanding between native and translator to which he is not entitled. It is assumed that the native understands that the translator's 'gavagai' is meant as a question concerning the meaning of that expression, and not as a religious ritual involving rabbits, an attempt to query his hunting-rights, or simply a dumb repetition. In that last case, an 'Evet' in response to the translator's echoing the native's utterances would not be a sign of assent, but a rebuke for parroting.

These possibilities of misunderstanding are illustrated by the (apocryphal) etymology of the English term 'kangaroo'. Supposedly one of the first Europeans pointed at a kangaroo and asked 'What is this?', to which the aborigines replied 'kangooroo', which in their language means 'I haven't a clue what you are talking about!' There is also the all too real story of the head-hunters in New Guinea who gave their children the names of slain members of other tribes. Before killing their victims, they always asked them for their names. However, they often attacked distant communities with languages completely unknown to the head-hunters. As a result, the replies they got at knife-point were phrases like 'Go to hell!' or 'Have mercy!', which they nevertheless duly incorporated as proper names into their language.¹¹ A more amusing case is that of the first French translation of Tongan. That language does not contain numerals above twenty.

But when the French translator Labillardière persisted in asking for such numerals, he received expletives in reply, which he solemnly noted as Tongan numerals.¹² Finally, a case I have personally witnessed. On the summit of a peak in the Alps a Prussian asked a local for the name of one of the many mountains to be seen. The local replied 'Wehler?', the Bavarian version of the High-German 'Welcher?' (Which one?). The Prussian was content with what he took to be an answer, and descended in the belief that he had seen the impressive Wehler-peak.

Such possible and actual misunderstandings demonstrate that Quine's procedure presupposes that interpreter and native engage in a *specific kind of dialogue*, that is, perform certain types of speech-acts. Quine takes for granted that the native tries to teach his language to the translator, which (among other things) means that he will apply words in paradigmatic situations, and will try to correct the translator's attempts to imitate his usage. Quine's austere procedures do not, and cannot, account for this mutual understanding. But the only alternative to taking it for granted is to assume that the native knows that the bald white man from Harvard is trying to establish the stimulus meaning of his words. For Quinean translation to work, the natives had better read a translation of *Word and Object!*

To this one might object that Quine acknowledges that his method is 'inconclusive' and merely generates a 'working hypothesis' (WO 30). However, without assuming a framework of interaction, identifying assent/dissent would not just be hypothetical, a reasonable if inconclusive guess: it would be completely arbitrary. There would be no reason to suppose that the native's reaction is at all relevant to assent or dissent. Moreover, *any concession* that the identification of assent/dissent is not presuppositionless means that Quine is here applying different standards from those at work when he propounds the inscrutability of reference. If there is no fact of the matter as to whether 'gavagai' refers to rabbits, then, by parity of reasoning, there is no fact of the matter as to whether the native assents to or dissents from the translator's 'gavagai'. Within Quine's framework that would remove the possibility of translating anything, and hence lead to the nihilistic conclusion that understanding is impossible.

There is yet another problem with Quine's procedure. In characterizing the native's reaction as assent and dissent, he describes the output of the behaviourist experiment in *richer* terms than the input. The former is held to consist of surface irritations, more specifically, of patterns of stimulation at the surface of the

perceptual organs. Quine prefers neural stimulations to sense data, because the empirical foundations of knowledge and language are intersubjectively accessible (a point urged by the physicalists of the Vienna Circle against the phenomenologists). But this has the disadvantage that the epistemic subjects are *not aware* of the alleged foundations of their beliefs. Quine realizes that most sentences are *not about* surface irritations, but insists that ‘some of them are elicited by surface irritations, and others are linked to surface irritations in less direct and more tenuous ways’ (*TT* 40). However, this amounts to a confusion of the causes of our beliefs—which include neural stimulations—with the evidence on which they are based, which the subject must be able to adduce, at least when prompted. Only the subject’s evidence is relevant to describing conditions of assent or dissent. For assent and dissent are not mechanical reactions, but forms of *intentional* (linguistic) behaviour. If the native screams ‘Yok’ because of being stung by a hornet, he has not dissented from the anthropologist’s ‘gavagai’. They are also *intensional*. One assents to or dissents from *what is said*, namely that things are thus-and-so. Against this last point Quine might insist that one assents to *token sentences*, since he regards ‘events of utterance’ as the bearers of truth and falsity (*PL* 13–14). But even if that view were tenable, it would not solve the problem at hand. For Quine himself states that to assent to a sentence is to pass a *verdict on its truth* which may be mistaken, and that the subject *believes* what is uttered (*TT* 48). This in turn implies that assent and dissent are not mechanical reactions, but responses to something that the native has *understood*, namely the anthropologist’s utterance.

This shows that the concept of assent that Quine actually deploys is intimately interwoven with epistemic and intensional notions. Quine might try to escape the objection by admitting (consistently with his treatment of semantic notions) that he should not really talk about assent or dissent but only about a behaviourist ersatz. It is unclear, however, what this ersatz could look like. To speak simply of positive and negative responses to verbal stimuli, for example, leaves open in what sense responses are so classified. In any event, Quine could not settle for such an ersatz. Unless assent expresses what the native believes to be true, it (and hence the notion of stimulus meaning which is defined by reference to it) becomes irrelevant not just to questions of meaning, which Quine might happily accept, but also to *epistemology* including his own ‘naturalized epistemology’. There would be no point in trying to

minimize ascription of false beliefs, as the principle of charity bids us do. More generally, Quine's whole discussion of radical translation would lose its point, which was to explain the link between our beliefs and theories and the data on which they rest.

Another way of putting the point is this. Quine defines the (positive) stimulus meaning of a sentence as the class of all stimulations which would prompt assent. Stimulus meaning and stimulus-synonymy are not supposed to be *more than* a behaviourist ersatz of the discarded intensional notions (WO 66). However, they are not supposed to be *less than* Carnapian 'explications' of these notions. That is to say, they are alternatives which avoid the drawbacks of the originals (in our case, lack of criteria of identity), while serving their cognitive purposes (WO §§53–4). In our case this means that the notions of stimulus meaning and stimulus-synonymy should capture the ideas of *cognitive significance* and *cognitive equivalence* respectively (TT 47–51). This in turn means that stimulus meaning must include only stimuli which the speaker understands, and which are hence relevant to his beliefs. Unlike our intensional notions, a consistent behaviourist ersatz would lack the conceptual connections with epistemic concepts like belief, knowledge, etc. Quine repudiates our intensional concepts in the name of a reductionist behaviourism. But if my line of argument is correct, he must tacitly rely on these concepts, if his discussion is to have the implications he assigns to it.¹³

DAVIDSON: RATIONALITY AND THEORY- CONSTRUCTION IN RADICAL INTERPRETATION

Davidsonian 'radical interpretation' differs from Quine's radical translation in four important respects.¹⁴ Davidson rightly rejects Quine's notion of stimulus meaning, on the grounds that it is based on the empiricist dogma that epistemic intermediaries, in our case neural stimulations, intervene between the world and our sentences. Consequently, he describes the conditions of utterance not in terms of surface irritations but in terms of macroscopic objects and events. Secondly, Davidson seeks to provide a 'theory of meaning' rather than a mere translation manual. Whereas the latter merely correlates the native sentences with ours, such a theory is supposed to specify what the sentences of both languages mean, namely by stating their truth-conditions. Although he is not consistent on the matter, Davidson often disowns the claim that competent speakers tacitly know his

complex theory (which would introduce elements of which the subject is unaware, like Quine's neural stimuli). Rather, he confines himself to the claim that someone who did know the theory would be able to speak the language. Thirdly, unlike Quine (at least in his early and middle writings), Davidson does not reject psychological terminology. Consequently he describes the task of interpretation as one of assigning meaning to the natives' utterances, attributing 'mental states' to them (in particular propositional attitudes like beliefs and desires) and understanding their actions. These tasks hang together holistically (*ITI* 127). We could ascribe meaning to the natives' utterances if we knew their beliefs and desires, and vice versa. Alas, at the start of radical translation we know neither what the natives mean, nor what they believe and desire. This holism of meanings, beliefs and desires leads to a final difference. Davidson treats charity not just as a pragmatic maxim of interpretative theorizing, but as a principle which is essential to the correctness of an interpretation. An interpretation which fails to make the natives' beliefs come out as largely true, and their desires as largely intelligible, is not just *less likely* to be adequate: it *must be* inadequate. Davidson's rationale for taking this line is that our only way of breaking into the holism of meanings, beliefs and desires is to maximize agreement with the interpretees, by assuming that most of their beliefs are true, and hence chime roughly with our own beliefs. If we find that translation is impossible because we cannot construe the natives' beliefs and desires as by and large rational, we end up not with a less probable translation, but with the conclusion that they do not speak a language and do not engage in intentional action. Accordingly, we could never be in a position to judge that the natives had beliefs and desires radically different from ours (*ITI* 197). This introduces a normative element into linguistic understanding. We can make sense of others only in so far as we can treat them as agents who abide by certain standards of rationality.

To a considerable extent, therefore, Davidson's philosophical anthropology moves away from Quine's reductionist behaviourism. At the same time, however, this move is half-hearted and leads to tensions. To begin with, it is unclear whether Davidson can square his professed aim of ascribing meaning to utterances with his explicit acceptance of Quine's thesis of the inscrutability of reference.¹⁵ Moreover, using charity as a normative principle that is *constitutive* of linguistic understanding seems incompatible with Davidson's claim that Quine's rejection of the analytic/synthetic distinction 'has saved

the philosophy of language as a serious discipline'.¹⁶ Obviously, there is no logical guarantee that native forms of behaviour which we might encounter will be rational in the sense required by the principle of charity. The normative force of the principle must be that unless we can treat the natives as rational, we cannot describe their behaviour as language. This suggests that this normative force derives from what we call 'language', 'intentional action', 'rational behaviour', etc. Hence it was only natural for David Lewis to put it to Davidson that on his account it must be analytic that anybody to whom we can ascribe propositional attitudes must satisfy the conditions of the principle of charity. As a Quinean, Davidson rejected that slanderous imputation.¹⁷ More recently, however, he found himself compelled to admit that it 'cannot be a factual question' whether a creature with propositional attitudes is approximately rational.¹⁸ Davidson needs to treat his own pronouncements on rationality as conceptual in precisely the sense he denounces elsewhere.

More serious than this straying from the Quinean line is that in other respects Davidson follows Quine too closely. For one thing, like Quine, Davidson identifies *language* and *theory*. But a language like English is *not* a theory. Even if Quine and Davidson were right in treating a language as a set of sentences, it is not a theory, since it must contain both sentences *and* their negations, which a coherent theory cannot. Moreover, the identity of a language is determined not by sentences, but by the principles for the formation of sentences, i.e. what Wittgenstein calls grammatical rules. The fact that Americans do not use the sentence 'God save the Queen!' does not show that their language differs from that of the British, since the rules of both idioms allow for the construction of that sentence. Finally, unlike a theory, a language does not predict anything, nor does it fit or face reality, and it cannot be true or false. Rather, it is statements *in* a language which do so, and which are potential constituents of theories.

In line with this assimilation, Davidson characterizes *learning a language* as *constructing a theory*. Equally, domestic understanding, for example my understanding of a particular utterance in English, is characterized as a matter of deriving hypotheses concerning that utterance from the general theory, which in turn is modified in the light of the success of that hypothesis. Unlike Quine, he distinguishes between theory construction in the natural and the psychological sciences, since the latter inevitably relies on canons of rationality, notably the principle of charity. Nevertheless, the requirement of rationality is superimposed by the interpreter on an array of brute

data. The evidence of understanding, both domestic and anthropological, is 'non-linguistic goings on' like the movement of the lips and larynx.¹⁹ All we really perceive are sound patterns and bodily movements.²⁰ Like Quine, Davidson extends the empiricist myth of the given from perception to speech and action. Linguistic understanding is a case of theory construction on the basis of observing conditions of utterance. This theorizing need not conform to the requirements of Quine's behaviourism. The stimulus conditions may be described in terms of macroscopic objects and events rather than by reference to neural stimulations. But they must not be described in semantic or intensional terms like meaning, beliefs, desires, intentions. A 'specifically semantical' theory employing such concepts is to emerge only as the result of theorizing on the basis of 'non-semantical evidence'.²¹

Moreover, Davidson joins hands with Quine in denying that language should be described in terms of linguistic rules, conventions or language-games.²² Even in our own language, they claim, what we encounter are not utterances which can be described as correct or incorrect, meaningful or nonsensical by reference to rules accepted by a linguistic community. Rather, we are given an array of sounds and movements non-normatively, and we confront the task of extrapolating their 'meanings' through explanatory hypotheses informed by, and in turn informing, a truth-conditional theory of meaning. A Davidsonian interpreter theorizes under the guidance of principles of rationality, but it remains a process of empiricist theory construction.

This contrasts sharply with Wittgenstein's anti-reductionist and normative approach. Wittgenstein views language as an activity which is structured by rules, standards for the correct use of words which are evident in our explanations and corrections. Moreover, Wittgenstein insisted that we should not try to reduce concepts like rule following to anything more basic, since they are 'FUNDAMENTAL' to our linguistic practices (*RFM* 330). To naturalists, Davidson's approach may appear to have an advantage over Wittgenstein's, even if they reject Quine's reductionism. Whereas Wittgenstein seems to take 'higher phenomena' like the normative nature of language for granted, Davidson holds out the promise of a naturalist transcendental argument: he does away with the idea of linguistic rules, and derives normative standards of rationality as preconditions of interpretative theory construction.

Against this I should like to argue that it is neither possible nor

necessary to replace the normativist picture of language by that of interpretative theory construction. Both behaviourists like Quine and mentalists like Chomsky have characterized language acquisition as theory construction, respectively maintaining or denying that it can be done on an austere empiricist basis. Davidson seems committed to a similar picture. The 'prior theories' which, according to him, we adopt in everyday communication and adapt according to the principle of charity must presumably have been the result of theorizing during language acquisition. This underlying assumption, however, is absurd. The ability to engage in scientific theory construction clearly presupposes the ability to speak a language, and a very complex one at that.²³ Some of Chomsky's followers have been alive to this point and have been driven to the conclusion that in order to learn a language the child must already possess a 'language of thought'. But that idea suffers from the same defect as Plato's explanation of knowledge by reference to anamnesis: it simply pushes one step further back the problem of how we came to acquire any language.²⁴

Even if we are entitled to presume language possession on the part of the hearer, Davidson's picture is awry. For one thing, like Quine he insists that the only empirical evidence available to either enterprise concerns what people assent to under what circumstances.²⁵ In Davidson's case, this assumption seems mainly motivated by his desire to apply to radical translation a Tarskian theory of truth. But, as we have seen, the assumption is unwarranted. An anthropologist will often rely on identifying questions and explanations. And there are situations in which she would most conveniently start out from orders, exclamations and requests.

Moreover, understanding is not a matter of inferring the meaning of utterances or the mental states of speakers from a description of mere sounds and bodily movements. While we find it easy to describe human actions and utterances in the 'rich' semantic and intentional terms Davidson precludes, we are ignorant of the austere physical descriptions he condones. As Wittgenstein noted, we can describe a person's features as 'sad', 'radiant' or 'bored', but do not know how to describe a person's face in physical terms (*Z* §225). And as someone who has taken a course in phonetics I vouch for the claim that even a complex philosophical lecture is easier to understand than to describe in terms of its physical or phonetic features. In other words, we are able to state the conclusions of Davidsonian theorizing without necessarily being able even to

understand the data from which they are allegedly derived. This suggests that the idea of theoretical inferences is misplaced here.

One might reply that the inference is subconscious. However, while human speech involves complex causal processes of which we are unaware, the physical and neurophysiological causes of our linguistic behaviour are not pieces of evidence from which we derive the meaning of what has been said. Davidson himself would not deny this. Instead, he might opt for a different line of defence.²⁶ The non-semantic evidence which underlies the theory construction is not a phonetic description of the speaker's utterance, but simply a *reproduction* of the utterance which the hearer *is* able to provide. In the light of her prior theory, she will then derive a T-sentence like 'A's utterance of "Snow is white" is true iff snow is white.' In response I should like to ask what it is that the hearer has to be able to reproduce. Either it is the precise acoustic phenomenon—but that is even more difficult than giving a phonetic description, and certainly not required for understanding; or it is a token of the type-sentence like 'Snow is white.' But in that case the evidence is *not* pre-semantic, since to characterize something as a token of an English type-sentence is to characterize it as belonging to a particular linguistic system.

These considerations leave intact the austere version of Davidson's project. That version is committed only to the view that the meaning of sentences and the significance of intentional actions *could* be derived from evidence which concerns only what people assent to under what circumstances. We can provide neutral phonetic descriptions of human language, and we could develop equipment to provide similarly neutral descriptions of facial expressions. However, this does not suffice to secure the evidence that Davidson requires. For, as argued above, identifying assent and dissent presupposes that anthropologist and native engage in a certain type of communication, and hence a certain kind of semantic knowledge.

Even if one grants the Davidsonian interpreter that evidence, there are reasons to suppose that his task is no less hopeless than that of the Quinean. For we lack the inferential procedures which would allow us to infer from such descriptions the meaning of utterances and actions. Davidson himself does *not* specify such procedures. This point is obscured by the fact that in his concrete examples he describes the macroscopic objects and events in the interpretees' surroundings not in completely neutral—if macroscopic—terms, but in the kind of terms which occur in the

native observation sentences themselves, for example as a ship passing by, or a tin of paint, or someone uttering ‘Snow is white.’ These terms, however, are not purely geometrical or physical. They are everyday terms which incorporate the (epistemic and conative) significance of those objects and events for creatures like us. And it is only because they do that we can apply rationality principles like the principle of charity to the observation sentences which contain them.

In my view Davidson’s failure to specify inferential procedures is no coincidence. The attempt to extrapolate the meaning of utterances from a physical description of sounds and movements is as absurd as trying to solve the problem ‘A ship is 20 feet long and 6 feet wide: so how old is its captain?’ (see BT 494). This is the point at which the Quinean discussion of radical translation converges with the Wittgensteinian discussion of rule following. Both show, in different ways, that such pre-semantic evidence leaves the meaning of our words and the sense of our utterances necessarily *under-determined*. Any finite sequence of numbers is compatible with indefinitely many functions. By the same token, any finite array of behaviour is compatible with ‘any number of rules’, if it is described in presemantic terms (BB 13). This means that any *extrapolation* of rules from behaviour neutrally described is, in principle, underdetermined. It does not mean, as rule-scepticism suggests, that the *rule* leaves its *application* underdetermined. Whereas the relation between phenomena described in neutral (behaviourist, physicalist or naturalistic) terms is *external*, the relation between a rule and its application is, as Wittgenstein shows, *internal* (WWK 152–7): it is logically impossible that they should not stand in this relation, since the relation is constitutive of the relata. That a given behaviour is conducted according to such and such rules may indeed be an explanatory hypothesis or conjecture of an uninitiated observer. But that does not mean that those rules do not determine what counts as their correct application.

Such internal relations are *de dicto*, i.e. they depend on how we describe things (this is something Davidson accepts in his celebrated attack on the distinction between reasons and causes). The internal relation between a rule and its application is lost if the relata are described along the lines of Quine and Davidson, namely in *presemantic*, *non-normative* terms. If the rule formulation ‘Add 2’ and the utterance ‘1000, 1002, 1004’ are

described phonetically, it is impossible to tell whether the latter is a correct application of the former. However, this is possible if both are described in terms of our normative practice in which the rule functions as a standard of correctness. In fact '1000, 1002, 1004' is the correct continuation, since this is what we *call* 'adding 2' or 'the series of even integers'. To insist on internal relations does not introduce any mysterious, supernatural phenomena. Internal relations are neither abstract nor mental. They are effected by our *normative practice*—the fact that we introduce, teach and explain standards of correctness, and criticize or justify performances by reference to them (see *PI* §201, *LFM* 83). But such relations emerge only if we describe human activities at the normative level at which the *participants themselves* do.

Both Quine and Davidson refuse to do this. At best they acknowledge assent/dissent under certain conditions. Normativity, by contrast, implies a distinction between two kinds of dissent: (a) rejecting an utterance as false, i.e. unfair to the facts; (b) rejecting it as incorrect, meaningless or nonsensical by reference to standards of correctness. Quine and Davidson repudiate this dichotomy. But it can be argued that without it linguistic meaning, the starting point of radical interpretation, vanishes. If an utterance like 'The number 1 has an Italian hairdresser' had the same logical status as an utterance like 'Hanjo Glock has an Italian hairdresser', namely that of being perfectly intelligible but false to the facts, the use of number-terms would have become completely arbitrary, and hence these terms would have lost all meaning. A practice without this distinction between the false and the senseless would at best be a communal phonetic babbling. In such a practice I could treat your utterance 'I just met the number 1 with its new hair-cut' as unusual, out of the statistical norm. But I could not reject it as unintelligible or demand an explanation. In such a Quinean scenario utterances and situations might still be linked by regularities. As a result hearers might still predict the behaviour of speakers on the basis of their utterances, and speakers might use words with the intention of causing a certain behaviour in hearers. But linguistic utterances would merely be *empirical indicators* of other phenomena, just as clouds indicate rain. They would have some indicative value (natural significance), but they could not be understood as having linguistic meaning. But without linguistic meaning there is no such thing as true or false statements, and hence no such thing as the assent or dissent which Quine and Davidson are preoccupied with.²⁷

**WITTGENSTEIN: 'THE COMMON
BEHAVIOUR OF MANKIND'**

I have argued that neither domestic understanding nor radical translation is, or could be, a matter of constructing explanatory theories on the basis of pre-semantic evidence. The Quinean and Davidsonian methods of translation do not just differ from what we actually do in communication or radical translation; they are not up to the job. What makes *ordinary* understanding and interpretation possible is not evidence beyond human behaviour, as the mentalist opponents of Quine and Davidson have urged. Rather, it is the fact that for the participants such behaviour is *ab initio* infused with meaning and intentions. What we encounter are not mere sound patterns and bodily movements, but rule-guided behaviour.

Unfortunately, even if correct, these considerations do not solve the problem of how radical translation is possible. All they show is what it amounts to—not theory construction, but being introduced into a normative practice. We learn that certain utterances in certain situations *count* as saying such-and-such, that words can be combined in specific ways but not others, that it is a mistake to refer to certain objects by certain words, etc. We acquire a technique, and this will usually be a communicative and interactive process: we receive explanations and instructions, practise certain constructions, and are corrected or encouraged.

The problem is that in radical interpretation we *ex hypothesi* are not at first in a position to describe the native utterances and activities in the normative terms available to the participants. Here we *are* constructing what Quine calls 'analytical hypotheses'. But what is their basis, given that it is a matter neither of straightforward application of familiar rules, nor of empiricist theory construction? It is clear that we must enter a hermeneutical circle here, and correct a provisional understanding of parts of the native language by reference to our understanding of the whole. The discredited demand for presuppositionless translation notwithstanding, the actual history of radical translation shows that this circle is not vicious, and does not lead to any indeterminacy. Definite mistakes have been made, and have definitely been rectified (as we have seen). But this leaves open the question of how precisely the circle operates in the communicative process of radical translation. How do we recognize, for example, that the native is explaining something to us, or correcting our first efforts? And how do we

make sense of his explanations and corrections? Wittgenstein intimates an answer to these urgent questions:

The common behaviour of mankind is the system of reference by means of which we interpret an unknown language.

(*PI* §206)

We can solve the problem of radical translation, because we share with the natives certain basic forms of human behaviour.²⁸ This idea is linked to the claim that ‘the speaking of language is part of a form of life’, i.e. of a communal practice in which our language-games are *embedded* (*PI* §23; *RFM* 335).

Some commentators have claimed that for Wittgenstein there is only *one* form of life for humans, and that different forms of life, notably those of non-human animals, are simply *unintelligible* to us.²⁹ This would mean that what allows us to translate an alien language is the fact that we share with its speakers a common form of life, namely the human form of life. Wittgenstein often speaks of forms of life in the plural (e.g. *PI* II 226; *RPPI* §630; CE 404). But what he has in mind here are specific facts about human behaviour—he also calls them ‘facts of life’—which together characterize *a* form of life, a totality of communal activities.

Nevertheless, there are other reasons against ascribing to Wittgenstein the idea that there is a unique human form of life. One is his insistence that alternatives to our own conceptual schemes (what he calls ‘grammars’ or ‘forms of representation’) become intelligible if we assume that their protagonists lead a different kind of *life*, i.e. engage in communal practices which are based on different types of training and serve different purposes (*PI* II230; *Z* §§352, 387–8; *RFM* 38, 91; *LFM* 83, 201–2). Thus he imagines communities in which people measure with elastic rulers, or even sell piles of wood according to the area they cover, irrespective of their height. Another reason is that what Wittgenstein calls ‘the natural history of human beings’ (*PI* §415) includes not just basic activities which are shared by all human beings because of their inflexible biological make-up, but *cultural* activities which vary according to different times and places, such as measuring or doing mathematics and logic (*RFM* 352–3, 356, 399; *RPPI* §1109). In view of these facts it is reasonable to assume that ‘form of life’ does not refer to our common biological nature, but to a culture or social formation which is not shared by all human beings.

At the same time, like Quine and Davidson, Wittgenstein insists

that there are minimum requirements which a form of linguistic behaviour must meet in order to be intelligible to us. Our form of life need not be identical with that of the natives; after all, even if we leave aside Wittgenstein's fictional cases, we have managed to translate very remote languages such as Linear B, and to interpret very alien cultures, like that of the New Guinea head-hunters. But we could never start the hermeneutical process unless we shared with the interpretees certain *forms or facts* of life (*RFM* 414, 421).

This idea lies behind Wittgenstein's puzzling remark 'If a lion could talk, we could not understand him' (*PI* II 223). On one reading this means that we could not understand a lion who utters *English* sentences like 'I'm not interested in you: I just had an antelope', which is obviously false (although one might, following Austin, question whether such a talkative creature could count as a lion). On a charitable reading, it means that if lions had a *feline* language of complex growls, roars, etc., we could never come to *learn* it. Why? Because their form of life, and their behavioural repertoire, are so alien to us. We could not make head or tail of their facial expressions, gestures and demeanour. Moreover, our ability to interact even with a tame lion is strictly limited. For related reasons we 'could not find our feet' with human beings who give no expression of feeling of any kind, and would be completely at a loss with spherical Martians (*RPPII* §568; *Z* §390; *LC* 2–3).

At this point it is imperative to be clear about what kind of things we need to share with the natives. What precisely does Wittgenstein's 'common behaviour of mankind' include? What should it include? And how do his preconditions of radical translation differ from those of Quine and Davidson? One clear example is the kind of interaction tacitly presupposed by Quine. Unless the natives shared our desire to communicate with foreigners, as well as language-games of querying and correction, the mutual instruction between explorers and natives would not take place. This kind of interaction characterizes actual anthropological field-work. But if the above fiction of the invisible interpreter is coherent, it is not conceptually essential to radical translation. However, other features mentioned by Wittgenstein arguably are.

One such feature is behavioural universals. Thus he writes that the justification for translating words of an alien language as expressions of doubt or certainty 'lies mainly, if not exclusively, in gestures, the facial expressions of the speakers, and their tone of

voice' (*EPB* 149; my translation). Unfortunately, Wittgenstein did not always stick to this insight, because he is sometimes too impressed by the cultural diversity of gestures. He suggests not only that we 'wouldn't know what genuine joy looks like with the Chinese' (*LWPP* II 89; my translation), but even that 'we understand Chinese gestures as little as Chinese sentences' (*Z* §219). In the same vein, Quine mentions the idea that radical translation might be based on characteristic forms of behaviour such as gestures, only to object that gestures 'are not to be taken at face value; the Turks' are nearly the reverse of our own' (*WO* 29).

This dismissal is precipitate. For example, although the Turkish gesture of dissent involves a vertical movement of the head, it is not nodding and can be recognized as a gesture of rejection since it also involves a sound which is clearly dismissive. Equally, Wittgenstein's first claim is plausible, because the distinction between genuine expressions and pretence often relies not on straightforward criteria, but on very 'fine shades of behaviour', which are accessible only to observers familiar with the culture and personal character of the subject (see, for example *LWPP* II 61–8). But this does not license the implausible claim that we are ignorant of the gestures and facial expressions of the Chinese as we are of their language. Without knowledge of Chinese culture we may have difficulties in distinguishing a genuine from an insincere smile, or an embarrassed smile from a relaxed smile, but we can distinguish either from scowling, for example. Moreover, even the distinction between genuine and insincere poses problems only in those cases in which the emotional import of the situation is unclear or ambivalent. Similarly, it is for the most part straightforward to distinguish threatening and submissive gestures, since these are tied up with characteristic forms of human action, and the gesture of pointing is shared by all known cultures.

As a matter of empirical fact some features of human behaviour—concerning gestures, facial expressions, demeanour and intonation—have transcultural significance.³⁰ In another passage Wittgenstein himself suggests that one can recognize the behaviour characteristic of correcting the violation of a rule even in an unknown language (*PI* §54). If he is right, even an invisible radical translator could establish whether the native behaviour is indeed rule-guided, and profit from the natives' specific corrections. Yet by itself, this point of contact is insufficient, however important it may be. For he could never make any reasonable guesses as to the

impetus of a correction unless he shared other features with the natives. Some of these shared features are part of our animal nature, such as our needs for drink, food and shelter, our sexual drives and our reactions to physical danger. Others are the preserve of cultural and historical beings—such as our curiosity about what is alien, or our fascination with death. These shared features are not exclusively, or even primarily, cognitive in nature, but comprise conative and affective aspects of our lives. Thus we could not identify assent and dissent unless the natives shared certain fundamental preferences with us, such as the acceptance of food or drink, or the refusal of unpleasant things. This insight is prominent in Wittgenstein's insistence that radical translation requires a substantial overlap in forms of life. It is absent from Quine's version of the principle of charity, but present in Davidson's, since the latter insists that it must be possible to treat both the beliefs and the desires of the aliens as largely rational.

At the same time Quine's and Davidson's principle of charity expresses important insights about the *cognitive* preconditions of radical translation. For one thing, unless we can treat the natives' behaviour as abiding by certain fundamental laws of rationality, we cannot translate it. As Davidson has indicated in his celebrated attack on the idea of alternative conceptual schemes, we cannot even have any grounds for describing it as reasoning, and may even withhold the term 'language' from it.³¹ This is in line with Wittgenstein's idea that a practice which does not conform to the so-called 'laws of logic' simply does not qualify as what *we call* 'inferring', 'reasoning' or 'speaking a language' (*RFM* 80, 89–95, 336; *LFM* 201–2, 214). There is another side to the principle of charity which has no echo in Wittgenstein's discussion of radical translation, although it is in line with other observations of his. We cannot even start to translate the natives' utterances unless we can take for granted that they share with us basic *perceptual capacities*. We take for granted that they can survey the scene around them and are aware of what goes on within their perceptual range. And this is a precondition for ascribing to them shared needs and desires. We cannot recognize them, for example, as refusing unpleasant things unless we can assume that they know that they are confronted with a knife rather than a piece of fruit.

However, Quine and Davidson distort these insights by approaching translation exclusively from the principle of charity. Unlike Quine, who in this respect is closer to Wittgenstein,

Davidson applies the principle not just to necessary truths or self-evident empirical truths, but ‘across the board’,³² i.e. indiscriminately to all types of beliefs. This suggests that a precondition of translating the natives is that we can count them right not just on fundamental issues, where disagreement would be unintelligible, but on most matters. Understanding would depend on maximizing agreement in quantitative terms. Contrast Wittgenstein’s remark:

If language is to be a means of communication there must be agreement not only in definitions but also...in judgements. (*PI*§242)

Davidson rightly stresses the second point, but in the process mistakenly discards the first. By insisting that we need to maximize agreement in order to understand other people, he puts the cart (truth) before the horse (meaning). For, by and large, we must understand what people say in order to judge whether they are speaking the truth. Sharing a language is ‘not agreement in opinions but in form of life’ (*PI*§241; see also *RFM* 353). By the same token, understanding an alien language presupposes convergence not of *beliefs*, but of *patterns of behaviour*, which in turn presupposes a framework of shared cognitive capacities, needs, emotions and attitudes.

On that basis, however, there is room for genuine disagreement, for example about beliefs concerning the causes of physical phenomena, or about the acceptability (moral or aesthetic) of certain desires. Such disagreement will often include those beliefs that play a fundamental role in the respective ‘world-pictures’, and which Wittgenstein discussed in *On Certainty*, notably propositions concerning fundamental scientific questions. Finally, once we exclude the need to maximize agreement, there are no *prima facie* reasons in favour of Davidson’s claim that there could not be genuinely different conceptual schemes of the kind envisaged by Wittgenstein. But that complex issue must be left for another occasion.³³

My conclusion is that Wittgenstein presents a more accurate picture of radical translation, and thereby of human understanding, than either Quine or Davidson. On the other hand, it is only before the background of their elaborate and forceful discussion that we can appreciate the relevance and value of his cursory remarks. The most important thing, however, is to confront their contributions with each other. For, as all three have shown, the safari of radical translation may yield important insights not just for philosophical

anthropology or philosophy of language, but also for epistemology, notably the problem of relativism.³⁴

NOTES

- 1 A terminological point: in the literature 'radical translation' and 'radical interpretation' are sometimes used to denote respectively the Quinean and Davidsonian methods of translation. I do not follow this usage, but rather employ 'radical translation' to refer to translation or interpretation from scratch, in order to bring out the different approaches to this task adopted by our three protagonists.
- 2 'The Indispensability of Translation in Quine and Davidson', *Philosophical Quarterly*, 43 (1993); see also M.Alvarez, 'Radical Interpretation and Semantic Nihilism: Reply to Glock', *Philosophical Quarterly*, 44 (1994) and my 'A Radical Interpretation of Davidson: Reply to Alvarez', *Philosophical Quarterly*, 45 (1995).
- 3 CV 37; 'Some Developments in Wittgenstein's View of Ethics', *Philosophical Review*, 74 (1965), 25.
- 4 J.Katz, 'The Refutation of Indeterminacy', in R.Barrett and R.Gibson (eds), *Perspectives on Quine* (Blackwell, Oxford, 1990), pp. 182–3.
- 5 Dummett, *Frege: Philosophy of Language* (Duckworth, London, 1981), pp. 374ff.; Evans, *Collected Papers* (Oxford University Press, Oxford, 1985), ch. 2.
- 6 It is not clear whom he has in mind. Of course, Searle ('Indeterminacy, Empiricism and the First Person', *Journal of Philosophy*, 84 (1987)) has claimed that Quine's rejection of first-person authority concerning meaning is an absurd consequence of his behaviourism, but this attack would leave intact his approach to understanding the words of *others*, including radical translation.
- 7 In the same vein, Blackburn (*Spreading the Word* (Oxford University Press, Oxford, 1984), ch. 8) holds that the task of a 'bleak' Quinean interpreter is hopeless, but without showing why Quine cannot reach the little he claims or regarding this as a *reductio*.
- 8 See, for example, C.Hookway, *Quine* (Polity Press, Cambridge, 1988), pp. 172–3.
- 9 This scenario is suggested by Chomskian accounts, e.g. R.Bartsch and T. Vennemann, *Semantic Structures* (Athenäum Verlag, Frankfurt, 1972), p. 3.
- 10 Hilary Putnam, *Philosophical Papers*, vol. II (Cambridge University Press, Cambridge, 1975), pp. 257–8.
- 11 Paul Wirz, *Die Marind-anim von Hollandisch Neu-Guinea*, vol. I (L. Fehlgruber & Co., Hamburg, 1922), pp. 31–6.
- 12 See A.H.Wood, *History and Geography of Tonga* (Wilson & Horton, Auckland, 1938), p. 24. Quine himself (RR 44) mentions a mistranslation based not on a misunderstanding by the native, but by the radical translator.
- 13 According to Wittgenstein, this is a mistake which often underlies philosophical problems. See my *Philosophical Investigations* §128:

- Theses in Philosophy and Undogmatic Procedure', in *Wittgenstein's 'Philosophical Investigations': Text and Context*, ed. R.L.Arrington and H.Glock (Routledge, London, 1991).
- 14 See Donald Davidson, *Inquiries into Truth and Interpretation* (Oxford University Press, Oxford, 1984), chs 9–10, 16, 18 (subsequently abbreviated as ITI); Hookway, op. cit., pp. 167ff.; Evinne, *Donald Davidson* (Polity Press, Cambridge, 1991) ch. 6.2.
 - 15 See my 'A Radical Interpretation of Davidson', op. cit., p. 211.
 - 16 Donald Davidson, 'A Coherence Theory of Truth and Knowledge', in *Truth and Interpretation: Perspectives on the Philosophy of Donald Davidson*, ed. E.LePore (Blackwell, Oxford, 1986), p. 313.
 - 17 Donald Davidson, *Essays on Actions and Events* (Oxford University Press, Oxford, 1982), pp. 272–3 (subsequently abbreviated as EAE).
 - 18 'Reply to Essays', in *Essays on Davidson: Actions and Events*, ed. B. Vermazen and M.Hintikka (Oxford University Press, Oxford, 1985), p. 245; cf. D.Lewis, *Philosophical Papers* (Oxford University Press, Oxford, 1983), vol. I, p. 112.
 - 19 ITI 126.
 - 20 Ibid., 161.
 - 21 Ibid., 142–3.
 - 22 See respectively *WPEb* 104–28; *RTC* 93–5, 138, 207–8 and ITI 171, 280; 'A Nice Derangement of Epitaphs', in *Truth and Interpretation: Perspectives on the Philosophy of Donald Davidson*, ed. E.LePore (Blackwell, Oxford, 1986), pp. 433–46.
 - 23 See G.P.Baker and P.M.S.Hacker, *Language, Sense and Nonsense* (Blackwell, Oxford, 1984), p. 292.
 - 24 J.A.Fodor, *The Language of Thought* (Crowell, New York, 1975). P.M.S.Hacker presents a powerful critique of this idea in *Meaning and Mind* (Blackwell, Oxford, 1990), 'Thinking: The Soul of Language'.
 - 25 ITI 230.
 - 26 EAE 50–2.
 - 27 I develop this argument against the Quinean assimilation of nonsense and falsehood at greater length in my 'Wittgenstein vs. Quine on Logical Necessity', in S.Teghrarian (ed.), *Wittgenstein and Contemporary Philosophy* (Thoemmes Press, Bristol, 1994), pp. 216–20.
 - 28 Von Savigny, 'Common Behaviour of Many a Kind', in Arrington and Glock, op. cit., argues that this passage makes understanding dependent not on something we share with the interpretees, but only on *their* behaviour sharing certain regularities. Wittgenstein indeed insisted that such a consensus is a framework condition of rule following, and hence of speaking a language. But, as we shall see, he also insisted that we can learn an alien language only if we share a certain framework with its speakers; and the quoted passage is most naturally interpreted as expressing that thought.
 - 29 For example N.Garver, 'Naturalism and Transcendentality: The Case of Form of Life', in Teghrarian (ed.), *Wittgenstein and Contemporary Philosophy*, op. cit.; A.Kenny, 'Wittgenstein's Meaning of Life', *Times Higher Education Supplement*, 19 May 1989.

- 30 See, for example, C.E.Izard, *The Face of Emotion* (Appleton-Century-Crofts, New York, 1969); R.van Beldoyen, *Characteristics and Recognizability of Vocal Expressions of Emotions* (Foris, Dordrecht 1984).
- 31 *ITI*, ch.13.
- 32 *Ibid.*, xvii.
- 33 See my 'Radical Translation and Conceptual Relativism', *The European Legacy I* (1996).
- 34 Thanks are due to Bob Arrington, Peter Hacker, John Hyman, James Young and to audiences at Graz, Oxford and Reading for comments and suggestions.

EXISTENCE AND THEORY

Quine's conception of reality

Ilham Dilman

PREVIEW

Quine's two main philosophical concerns seem to be (1) to develop a 'theory or organized conception of reality', a 'system of the world', and (2) to give an account of how 'the meagre evidence' we have for what we know leads to our 'knowledge of reality', which, for Quine, is identical with scientific knowledge.

Quine insists that both of these are *scientific* concerns. The first is continuous with theory construction in physics and the second with scientific psychology. *Ontology* falls in the domain of the first concern, and the second constitutes *epistemology*, though 'naturalized'.

These concerns, Quine argues, are at least in part the very ones that moved many of the great philosophers of the past: Plato, Aristotle, Descartes, Leibnitz, Locke, Berkeley, Hume, Kant. He admits that 'their search...goes beyond the special sciences as we now define them: there were also broader and more basic concepts to clarify' (*TT* 191). The search is thus philosophy, though scientific in character and continuous with science: scientific philosophy. Quine's two enterprises are furthermore interwoven. 'Naturalized epistemology' is an armchair causal inquiry; its considerations are 'causal speculations' (*RR* 138). 'Epistemology, for me, or what comes nearest to it, is the study of how we animals can have contrived that very science, given just that sketchy neural input' (*TT* 21). What Quine calls 'working up our science from infancy onward' (*RR* 138) is our learning to speak and acquiring knowledge. Quine sees this as a *causal* process. Moreover, he sees himself, in his attempts to develop a 'theory of reality', as furthering the same process: a person's learning of the referential apparatus of the language he

comes to speak and his deliberate ‘ontologizing’, if he is a Quinean philosopher, are continuous.

Taken in one way this seems sensible. We acquire our conception of reality as we learn to speak. Indeed, we acquire a world, which amongst other things contains various objects with which we reckon in different ways, as we learn to speak, to identify and name things. The scientist lives in the same world and makes the aims and purposes which belong to it his own, and for certain purposes he extends the language he speaks in certain directions, thus developing it in particular ways. He thus enriches and sometimes modifies that conception of reality in certain respects.

If, however, the learning, to the subject matter of which such contributions are made, is regarded as a purely causal process, studied by naturalized epistemology, how is one to think of the reflections which provide these contributions? Are they themselves the workings of natural, causal, processes? Is Quine to think of his own ‘ontologizings’ as the result of such processes in his body?

QUINE ON ONTOLOGY

In various of his writings Quine explains that ‘bodies’ are fundamental to our everyday thinking. They are the primitive objects of reference; they are ‘our paradigmatic objects, clearer and more perspicuous than others’ (FM 159). Nevertheless, they are ‘theoretical entities’: ‘I see all objects as theoretical.’ ‘Even our primordial objects, bodies, are already theoretical. Whether we encounter the same apple the next time around, or only another one like it, is settled if at all by inference from a network of hypotheses’ (*TT* 20). Grammatical analogies lead us to treat other terms in our language, e.g., general terms, ‘*as if* [they] designated a single object’ (FM 159; my italic). In this way our ontology grows: ‘we come to posit a realm for the general terms to designate.... What with the nominalizing also of verbs and causes, a vaguely varied and very untidy ontology grows up. The common man’s ontology is vague and untidy’ (ibid.). I have italicized the ‘as if, as it suggests, even if it does not imply, that an illusion is involved, because general terms do not *really* designate single objects. Quine, we shall see, denies such a suggestion, and I shall return to it, but, legitimately in his own terms, he finds fault with ‘the common man’s ontology’, without, however, advising that it should be given up (FM 168). Its fault is that ‘it is vague and untidy’; it is not clear what this ontology encompasses.

This indeterminacy characterizes the ontology itself. There is no question of clarifying, making explicit what 'the common man' assumes to exist: 'bodies are assumed, yes; they are the things, first and foremost. Beyond them there is a succession of dwindling analogies.... But there is no purpose in trying to mark an ontological limit to the dwindling parallelism' (ibid., 159). The 'somewhat regimented and sophisticated language of science', on the other hand, does not share this defect: 'its referential apparatus...is explicit; there is no question of a dwindling parallelism' (ibid.). What objects the scientist assumes, in contrast with what objects other than bodies 'the common man' assumes, 'becomes a significant question, and it can be variously answered in various scientific systems of the world' (ibid.).

What Quine means is that the ontological commitments of 'a regimented language' (he explains clearly in a few paragraphs what this means in FM 160–1) are clear and not indeterminate. Therefore it is a great advantage for scientists to use such a language. But what 'objects' they 'choose' to assume is a matter of the theory they develop in that language. Are they going to 'assume' heat to be itself a substance ('caloric') or to be motion—the motion of the molecules of a gas, liquid or solid? This is a scientific, theoretical question, one which Lord Rumford answered one way: heat is motion. Einstein and Infeld, in their book *The Evolution of Physics*, describe beautifully the background against which this question arose for him at all and how he reached his answer.¹

Quine, as a logician, shows us how language is to be regimented: he constructs a language for science. But he goes *further* than this and sets out to construct an 'ontology' for the whole of science which stands in glorious detachment from our everyday life and which Quine takes to reflect unfavourably on 'the ordinary man's ontology': to put forward 'a theory of reality', no less. There is certainly an important sense in which great scientists *construct* new 'theories' and *form* new concepts designed to systematize and organize what is already known at the time. With a good new system they may reveal a new aspect to things already known which leads to new experiments and new findings. The kind of reflection from which such constructions issue can be characterized as *a priori*, and it belongs to the development of the sciences.

Perhaps there is an element of this in Quine's ontological reflections, given his interest in and his knowledge of physics. It is possible that scientists may find what he puts forward in the name

of ontology useful. But only *they* can tell this. In any case he is doing *more* than this in so far as he puts forward a ‘theory of reality’. In their book *The Evolution of Physics*, Einstein and Infeld speak of the physicist’s aim to unify theories in different fields of physics. Such a unified theory may be described as a ‘theory of the physical world’, meaning the world of physics—the science. It is certainly not a theory of the physical world in any other sense. Even less is it meant to be ‘a theory of reality’. For, as I shall argue, there can be no theory of reality; that is a metaphysical dream born out of confusion. Secondly, if that implies that ‘all reality is physical’, a reductive view which Quine disowns, or that ‘physical reality is basic’, Quine’s physicalism, that is no part of a scientist’s brief, even if it is a ‘metaphysical faith’ to which some scientists subscribe privately. No, physicists investigate different kinds of physical phenomena, construct theories which advance their understanding of them, and try to pool their resources to obtain a unified view of *these* phenomena. That is all.

Of course, it is true that what Quine calls ‘bodies’, including the human body and our physical environment, are important in what I should like to call ‘the human world’—for what makes sense there. But that is not identical with the world of physics, that is, the world of the physicist *as* physicist. Indeed, as Rush Rhees once put it in a seminar, science takes its start from the use of ordinary language and the reality of certain questions asked in it. And, I may add, its language is ‘a suburb of language’ (*PI* §18). Quine speaks of the ‘primacy of bodies’ and of the way the development of physics is continuous with the development of ‘the common man’s ontology’, and this may look close to what I have just said. But he wants to make physics the main street of language. True, he says: ‘I do not advise giving up ordinary language’ (FM 168). All the same, in the ‘theory of reality’ which he advances he wants the tail of physics to wag the dog of everyday language. He wants to subordinate the understanding of the world in which we live, made possible by the language we speak, to scientific understanding.

So Quine goes on to *construct* an ontology, as part of his ‘theory of reality’, a reality which becomes progressively a more ‘barren landscape’. At first he admits classes alongside physical objects, and then his classes, in the form of numbers (for along with Russell he thinks of numbers as a species of classes), swallow up physical objects. He explains in his paper ‘Facts of the Matter’ that he upholds the physicalist thesis that ‘there is no difference in the world without

a physical difference' and that he is concerned with an account of what a physical difference amounts to, indeed with 'fixing the notion of a physical difference'. Given an atomic theory of matter, he explains, a physical difference would be a difference in the numbers, arrangement and trajectories of the atoms—*physical objects*—of the things that are said to differ physically. Given, however, that latter-day physicists have found it difficult to sustain the notion of subatomic particles, owing to problems of their identification and individuation, 'the utility of the particle model, the extrapolation of the primordial body into the very small, is now marginal at best' (FM 164). So Quine proposes to adopt a 'field theory', one which ascribes physical states to regions of space-time in terms of numbers on a coordinate system.

What then is the brave new ontology? There are real numbers, needed to measure the intensity of the various states, and there are space-time regions to which the states are ascribed. By identifying each space-time point with a quadruple of real or complex numbers according to an arbitrary system of coordinates, we can explain the space-time regions as sets of quadruples of numbers.... The brave new ontology is, in short, the purely abstract ontology of pure set theory, pure mathematics. At first we tolerated these abstract objects as convenient adjuncts to our central corporeal ontology because of the power and simplification that they contributed. In the end, like the camel who got his nose under the tent, they have taken over.

(*ibid.*)

Quine's ontology has thus undergone a radical transformation since the days when he first asked 'what there is', but *not* his conception of the question he was then asking. He now goes further and says that one lesson to be learnt is that 'ontology is not what mainly matters':

When bodies first came into my story I warned that they, even then, were theoretical. All theoretical entities are here strictly on sufferance, and all entities are theoretical. What were observational were not terms but observation sentences. Sentences, in their truth or falsity, are what run deep; ontology is by the way.

(*ibid.*, 165)

When Quine says that 'sentences are what run deep', he has in

mind the sort of sentences we learn when we first learn to speak, such as 'It is windy', 'It is cold.' We learn them first; names and their references come after.

In the short passage I just quoted Quine says that 'All theoretical entities are...strictly on sufferance' and 'ontology is by the way'. This is connected with the 'unresolved tension', I noted in my book on Quine, before his 'naturalization' of epistemology: a tension between Quine's absolutism in speaking about what is 'raw' and his relativism as far as what is 'posited' goes.² It is this tension which finally gives when ontology, constituted by what is posited, becomes by the way. I earlier quoted Quine's words: 'Grammatical analogy between general terms and singular terms encourages us to treat a general term *as if it* designated a single object' (FM 159). I asked: why 'as if? Does not Quine say that this is equally true of the apple I fetch from the shelf? The truth, I hazard, is that while Quine regards all reality as theoretical, he also regards everything theoretical as unreal:

Our talk of external things, our very notion of things, is *just* a conceptual apparatus that helps us to foresee and control the triggering of our sensory receptors in the light of previous triggering of our sensory receptors. The triggering, first and last, is all we have to go on.

(TT 1; my italic)

The 'raw' 'flux of experience' has given way to the 'triggerings of our sensory receptors', but the conception of what is *given*, the basic material which is to be organized into objects of knowledge, remains unchanged. Only this is real; all else is 'posited', it does the organizing, it belongs to our conceptual apparatus. He still asserts that 'there is nothing we can be more confident of than external things' (ibid., 2) and confesses his 'unswerving belief in external things' (ibid., 21). But this 'robust realism' cannot be reconciled with 'the barren landscape' he has constructed—not while he gives primacy to the theoretical over the practical. Before discussing this question, however, I want to consider Quine's notion of existence.

QUESTIONS ABOUT EXISTENCE

There is a *variety* of questions we ask about the existence of things, and many of them have little to do with philosophy and ontology: 'Is there a Father Christmas?', as asked by a child. 'Do unicorns exist?' 'Does Excalibur exist?' 'Does Mr Pickwick exist—is he a real

man?' 'Does the average man exist? I have never met him: have you? Every man is different.' Podkolyosin is not merely a fictitious character out of Gogol's imagination. He exists. I have met him.³

Then there are those interrogative words which may or may not put a philosophical question: 'Does God exist?' This may be asked by a believer who is losing his faith: 'Can I continue to believe in God?' It would be a different question in the mouth of someone who has half-recognized that God is not an object but still thinks that for anything to exist it must be an object. Thus a philosopher may ask explicitly: 'Does God exist as an object—for all believers? Is God's existence the existence of an object? Must it be so? Is that the only way in which we can conceive of God's reality?' Someone may even say: 'I personally cannot see any religious sense in that way of conceiving of God's reality.'

'Do atoms and/or electrons exist, or are they mere scientific posits?' Here two different questions run into each other: scientific and philosophical. Thus the nineteenth-century chemist August Kekulé:

The question whether atoms exist or not has but little significance from a chemical point of view; its discussion belongs rather to metaphysics. In chemistry we have only to decide whether the assumption of atoms is an hypothesis adapted to the explanation of chemical phenomena.

So far, so good; this is fairly near to Quine. But Kekulé goes on:

From a philosophical point of view, I do not believe in the actual existence of atoms, taking the word in its literal significance of indivisible particles of matter—I rather expect that we shall some day find for what we now call atoms a mathematico-mechanical explanation, which will render an account of atomic weight, of atomicity and of numerous other properties of the so-called atoms. As a chemist, however, I regard the assumption of atoms, not only as advisable, but as absolutely necessary in chemistry. I will even go further and declare my belief that chemical atoms exist.⁴

I think that there is a good deal of philosophical sense in what Kekulé says. But the philosophical problem he tries to sweep into metaphysics will not lie down. For he is still inclined to think of the molecules, H₂O, that make up the water in lakes and rivers as doing so in the way a swarm of locusts make up the cloud of locusts moving towards a field of crops.

He says that he believes that chemical atoms exist—the atoms of physics and chemistry. But what other atoms are there? The discussion of whether atoms exist or not belongs to physics. What belongs to philosophy is the discussion of what kind of existence they have. Do they exist in the way that tiny microscopic organisms do? Kekulé says, No. Good. So what does their existence amount to? Kekulé gives us a hint which others since have developed. Good. But unless one thinks that they should exist as tiny particles of matter like viruses or particles of dust, why should one say, ‘I do not believe in the actual existence of atoms, taking the word in its literal significance?’ The words ‘actual’ and ‘literal’ here are symptomatic of a cramped notion of existence: as if there were only *one* way in which something could exist or have reality.

But philosophy is full of existential questions, denials and assertions that come from such a cramped notion, for instance, ‘Is there a causal nexus?’ and ‘Are there causal connections?’ If one thinks that any connection must be like a material connection, or that any necessary connection must be like a logical connection, then one will deny that there are causal connections. Thus Hume: ‘All events seem entirely loose and separate. One event follows another, but we never can observe any tie between them. They seem *conjoined*, but never *connected*.’⁵ One then ends up by rejecting the baby with the bath water.

So when philosophers deny the existence of something that has significance for us in our lives and culture, something that is marked in our language by various expressions, what they are rejecting is a *philosophical idea*: a way of coming to think about what these expressions refer to.

When we are puzzled about the existence of mind or matter, of time or space, of causal connections or logical necessity, such philosophical ideas need to be brought into daylight so they can be examined critically. Otherwise we shall be unable to disentangle what we are trying to be clear about from a way of thinking about it which leaves us uneasy. We shall then run the risk of throwing away what we need to keep or find that we can only keep it in an attenuated form. Thus when in the *Tractatus* Wittgenstein said that ‘belief in the causal nexus is superstition’ (5.1361), he was not just rejecting the entailment view of causation. Together with Hume he was also rejecting the idea of causal necessitation. Later, in his notes on ‘Cause and Effect’, he criticized Hume and showed (1) how we can see a causal connection *in* a material connection, and (2) how,

though a causal connection is not a logical connection, there is nevertheless such a thing as 'causal necessitation'.

'Does love exist?' 'Does honesty exist?' 'Does goodness exist?' These questions may be expressions of disillusionment—the loss of an illusion. Or they may be the mournful expression of one's perception of the passing away of something which one still cherishes. As such these are not philosophical responses, though they may raise philosophical questions. However, as one thinks about what love or goodness is, the very idea may come to seem to hide a contradiction—as the idea of matter came to do for Berkeley. One may then say, 'There is no such thing as love', or 'Goodness is impossible'. Here one is into philosophy. Perhaps one has an idealized conception of love or goodness in which genuine features of these things have been taken to an extreme in which they exclude each other, an idealization suggested by those features themselves. The paradox here says something illuminating, and it is important not to be tempted to escape its sting at the price of giving a reductionist account of these things.

'Do values exist?' In his 'Lecture on Ethics' Wittgenstein wanted to combat an 'objectivist' conception of moral value. One may put this by saying that 'though values exist independently of any individual, and are part of the culture of the community to which he belongs, they have no reality for him until he makes them his own and thus finds them in his own personal life'. More briefly, 'in their objective existence absolute moral values are unreal, they have their reality in the personal dimension' (see LE).

Someone who cannot dissociate the notion of 'being real' from 'objectivity', however, may think that this amounts to denying the existence of moral values: 'If their reality is such that each person can find it only in his own life, that must mean that they can have only subjective reality—and that is no reality at all.' This is, of course, a misunderstanding and calls for philosophical discussion.

'Does the self exist?' Again it was Hume who asked this question. He looked for it in himself and could not find it; he said he stumbled upon particular perceptions or impressions, but never came across the self. This is not surprising since 'the self', as philosophers speak of it, is a fiction, a product of philosophical thinking. It is an idea philosophers come up with to solve the problem of personal identity—as is the case with the soul as many philosophers speak of it. These terms are not, of course, meaningless. But what they mean is to be found in the work they do in the language in which

they are used, not in the contrived use which philosophers invent for them to solve their problems. Here the living language in which they have sense is not the language of the market place, but the language in which, on special occasions, people engage in some serious soul-searching: 'Who am I? What has my life come to?' The self is what such a person finds or comes to, if he can work through his despair without self-deception. The real self then is not the one Hume failed to come across in his 'introspections' but the one which Ibsen represented Peer Gynt as having lost in the life he led.

I have given examples of existential questions, some of them philosophical and some not, to bring out, by contrast, the philosophically contrived character of Quine's interpretation of what it means to ask an existential question. Indeed, I am arguing that it is not for a philosopher to settle what exists, and even less to fix it, as Quine claims to do. The *ontological* question is not 'What exists?', but 'What kind of existence does this or that kind of thing have?' What does the existence of the soul amount to? What kind of reality do other people have? What do we mean when we say of someone that after long years in the wilderness he has at last found himself? One may talk of stories in the Bible where God is treated as a living being as *myths* without in any sense intending to downgrade them or to deny the reality of the God they speak about. Plato ended many of his argumentative dialogues with such stories or myths and said that he recounted them as the truth. He meant, I think, that he was willing to live by them, to measure his life in them.

One may talk of the theoretical entities of physics and chemistry as *posits*, in the way Quine does. But they are not hypotheses or assumptions. As Professor John Wisdom puts it, the chemist tells us a story of molecules and atoms hurrying, clinging and separating, and he does so with the air of an engineer who tells us what happens inside a machine. 'But really the chemist is quite different from the engineer. He has never seen anything different from the sort of incident we now observe with him. It's only that he has seen more of them.'⁶ Both Wisdom and the Austrian philosopher-scientist Ernst Mach point out that 'physics lives and grows by comparison'. The system of resemblances which a fruitful comparison reveals changes the physiognomy of the phenomena compared. It may transform them into 'an old acquaintance', reveal in them an aspect familiar but not recognized until then—in the way Dostoyevsky tells us Gogol did with his fictitious character Podkolyosin. 'Besides', Mach says,

it is in the power of the idea [which suggests a comparison] to offer us more than we actually see in the new fact, at the first moment; it can extend the fact, and enrich it with features we are first induced to *seek* from such suggestions, and which are often actually found.⁷

I agree with Quine that 'science is a conceptual bridge of our making', but *not* one 'linking sensory stimulation to sensory stimulation'. Let me quote two more sentences from Wisdom:

With the word 'gravity', or the word 'attraction', used in a modified way, Newton connected apples in an orchard with stars in heaven, a mammoth in a pitfall with waves high on the beach. Till he spoke we had no word connecting every incident in nature by thin lines of likeness, thin as the lines of force but stronger than steel.⁸

What are thus connected by the comparisons suggested by means of the theoretical terms of the scientist are such *incidents in nature* as the falling of apples in an orchard and the rising of the sea in the tide on the shore, and *not* sensory stimulations. The incidents in question are what we speak of in our everyday language and encounter in our everyday life, and there is nothing theoretical about these.

So I agree that such theoretical entities as atoms and electrons are 'positis': they help us to make connections which make a momentous difference to what we apprehend. Does that mean that atoms and electrons do not exist? Of course not. The words 'atom' and 'electron' refer to atoms and electrons, and they do so by virtue of what they mean. Their meaning is the work they do for the scientist in his language in those contexts where he uses it. To characterize them as 'positis', provided this can be made clear, is not to deny their existence, but to say what kind of existence they have.

CONCEPTION OF REALITY: FOUNDED ON THE PRACTICAL, NOT THEORETICAL

Certainly our physical environment, with its objects, their properties and behaviour, living things and particularly people, constitutes the most important aspect of the reality which affects our life. It is in our interaction with it that our life takes shape. Furthermore, this

physical reality and the reality of people are intertwined. Reference to physical things is certainly a central part of our language; it is difficult to imagine what our language would be like without it.

We come in contact with this reality first in our reactions to it, which involves touching, handling, holding, pulling, pushing, sucking, etc.... As Wittgenstein puts it, our language is an extension of action. He quotes a line from Goethe: ‘... in the beginning was the deed’ (*OC* §402). The deed, not the word; practice, not theory; doing, not thinking. Of course, we have senses (‘sensory receptors’, as Quine calls them), and the physical world impinges on us through them. Without them we would not react: we would have nothing to which to react. But equally it is in the process of our interactions with the physical world that we learn to see and hear things, that we come to have things to see and hear. The new-born infant’s eyes may let in the light and function physiologically, as we see from his pupillary reactions. But that is not to say that he yet sees anything. The pupillary reactions are not *his* reaction, but those of his pupils, and it is only to a creature who responds to his environment in ways similar to the way sighted creatures do that we attribute sight.

The infant first comes to see things as he comes to have things to see, and he comes to have things to see as he learns to reach for them, to touch them, to take an interest in them. Learning to identify things is to learn to respond to them. What happens in the infant physiologically is no doubt necessary to this process of growth and learning—causally necessary. But it is not the most important part of the story. Much more to the point is his learning to co-ordinate his movements, to take an interest in and reach for things, to look for them when they disappear from his field of vision, to recognize them when they reappear, to respond to his mother’s smile, to find her breast.

The reality of his immediate physical environment as well as that of his mother and of other figures that appear in it takes shape for him in these interactions. The story of their evolution undoubtedly has a causal, physiological background. But it is not itself a causal story. It is the story of the learning and development of a child from infancy onwards in which he *himself* takes part. In this process he comes to enter the world of the adult, of other human beings, so that he comes to have a world. At the same time he comes to have a self, i.e. becomes an individual. If I may put it tersely: the world first is neither in our sensory stimulations nor in our theories; it is in our fingertips. What reality things have for us shows in what we do

to them or with them, in how we respond to them. If we reach and touch things, it means that there is something for us to reach and touch.

This limited world of the infant is immeasurably widened and acquires a multiplicity of dimensions as he learns to speak and forms new relationships. The world he comes to have belongs to the life of this language, a life which human beings live with language. Theorizing is *one* aspect of the life of this language. Learning to identify things is *not* coming to have theories.

It is true that as a child learns to identify things, to recognize figures which become familiar, fragmentary appearances become unified into objects and human figures. What this involves, on the part of the growing infant, is learning to reach for things which in his field of vision attract his attention and interest. It involves coming to respond to what appears, disappears and reappears in his field of vision, and coming to form constant expectations with regard to them. It is not *because* he comes to realize that what appears fragmentary is one and the same thing that he responds in the way he comes to do. Rather the responses he develops take what at first appeared fragmentary as appearances of the same thing. In his experience of them fragmentary appearances come together as he forms interests, develops emotions and affections, comes to have desires which are at first in his responses and undetachable from them. The responses are not mediated by any prior apprehension or theory. Rather any apprehension we can attribute to the infant is in his responses. The idea that as the child learns to identify and name things he is applying a theory, however primordial, is one which puts the cart before the horse.

Quine might agree: after all, is he not putting forward a purely causal account of learning and development which is behaviouristic? No doubt, the infant's physiological development, the changes in his body as he grows, which *permit* new responses to emerge, may be explained in causal terms. But that is not to say that the responses themselves are so explained. They are part of the phenomena of the normal growth of a human being, which may be arrested at various stages. When that happens we may look for causes in the hope of finding a remedy. But the phenomena of normal growth cannot be causally explained. For the growth of a human being in which he comes to have a world is a form of interaction with his environment in which he participates as a person—and that is radically different from causal interaction. All we can ask about the

various steps by which it takes place is: how did he come to do or think such and such? What made it possible? What did he have to have already come to in order to be able to achieve that? These are not causal questions; they are conceptual questions.

I am arguing that the young child's concepts are his abilities and that they find expression in his actions and responses. The responses are neither mediated by theories nor causally explicable. Not all objects that make up our world are theoretical entities. The categories of thought and language which the child acquires as he learns to speak and which remain with us as adults are not theoretical concepts. They are grammatical categories. It is these that have concerned the great philosophers throughout centuries, these to which their *ontological* questions have been directed. It is *within* a grammar that we name and identify things and that the scientist, equally, theorizes and posits theoretical entities. The grammatical categories cannot, therefore, themselves be posits.

As for the triggerings of our nerve endings, the sensory stimulations, these are *physiological* goings on in our bodies. They are not in any sense inputs: to have a triggering *or* pattern of triggerings of the optic nerve is not yet to see anything. Triggerings are *not* what we have to go on at all. Quine is at pains to avoid any form of reductionism, but to claim that 'triggering, first and last, is all we have to go on' is to embrace a form of reductionism. In it we have the reappearance of the idea of 'the given': the clay which is shaped into the familiar objects and figures of the world in which we live.

Wittgenstein approached the question of how we come to have a world in a very different way and rejected this conception: 'the given, so one could say, are forms of life' (*PI* II 226). It is certain basic features of the life we share with others, gratuitous features, not founded on anything more basic, that shape our conceptions of reality. This is Wittgenstein's discussion of the question whether grammar is itself responsible to reality. His answer to it is a qualified Yes: 'but has nature nothing to say here? Indeed she has—but she makes herself audible in another way' (*Z* §364).

QUINE'S NOTION OF HUMAN BEINGS

Quine, I said, is at pains to avoid reductionism, and so he says that he is not a materialist. He calls himself a physicalist and as such he allows the use of 'mentalist language' (*FM* 168).

The physicalist does not insist on an exclusively corporeal ontology. He is content to declare bodies to be fundamental to nature in somewhat this sense: there is no difference *in the world* without a difference in the positions or states of bodies.

(*ibid.*, 162)

This is what at first constitutes a physical difference for Quine. As he refines or rarefies his ontology he redefines 'a physical difference'. But his physicalism is the view that there is no difference *in the world* without a physical difference—however the latter is to be defined.

He is willing to talk of 'mental differences', and he does not reduce them to physical differences. But he makes them *dependent* on physical differences. He says that what he is proposing is not 'a Utopian dream of our being able to specify all mental events in physiological or microbiological terms'. He does not even claim that 'such correlations...exist, in general to be discovered; the groupings of events in mentalistic terms need not stand in any systematic relation to biological groupings'. All he insists on, he says, is that 'there is no mental difference without a physical difference'. This, he says, 'is a way of saying that the fundamental objects are the physical objects. It accords physics its rightful place as the basic natural science without venturing any dubious hopes of reductionism of other disciplines' (*ibid.*, 163). Nevertheless, he says, 'mental states and events...are explained by neurology, when explained' (*ibid.*, 167). He is not a behaviourist either: 'mental states and events do not reduce to behaviour—but their behavioural adjuncts serve to specify them objectively'. They are 'subject to behavioural criteria' (*ibid.*).

What he says he is rejecting is the idea of minds as entities: 'if there is no mental difference without a physical difference, then there is pointless ontological extravagance in admitting minds as entities over and above bodies' (*ibid.*, 163). The rationale for Quine is to avoid ontological extravagance, not to reject what makes no sense. He goes on: 'we lose nothing by applying mentalistic predicates directly to persons as bodies, much in the manner of everyday usage. We still have two species of predicates, mental and physical, but both sorts apply to bodies' (*ibid.*).

This seems eminently sensible and 'in the manner of everyday usage' until we hear more from Quine. 'Persons as bodies' may mean 'persons as flesh and blood beings', but in Quine it means 'physiological organisms'. From 'persons as bodies' he slips easily to 'bodies': mental predicates 'apply to bodies'. In *The Roots of Reference*

he speaks of 'Mama', 'Fido' and 'Jumbo' as proper names for *bodies* (52). But how can a body be in pain or tell jokes? If a body could, so could a gorse bush or a computer, given the appropriate structure for the relevant causal processes to take place. For Quine this would be sufficient. He finds no problem with the intelligibility of such a 'hypothesis'. As for the 'manner of everyday usage', Quine needs to be reminded that it is not my body which feels pain (even when we say 'my body is aching all over')—it is I who feel it in parts of my body (see *PI* §286). This, however, does not mean, as Descartes thought, that 'I am lodged in my body as a captain is in his ship.'

There are not two things, me and my body. As Sartre puts it: *I am my body*—but not *a* body which, as a matter of fact, is mine. I *live* my body; my body is not for me one object among others. Indeed, it is not an object for me at all, the way it is for the physiologist who studies the effects of certain chemicals on the liver. Nor is someone else's body an object for me—unless I am a pervert of a certain kind. Normally when we meet someone we do not see a body: we see a live person. As Wittgenstein puts it: 'the human body is the best picture of the human soul' (*PII* 178). We see the soul in the flesh and blood being, in the movements and expression of this physical being. I put it as 'flesh and blood being', for it is not a body that we see. It is in the life of this living being that his soul finds expression; and when I say 'life', I do not mean 'physiological ticking over'.

Again, as Wittgenstein puts it, 'my attitude towards him is an attitude towards a soul' (*ibid.*), that is, towards a human being—not a physiological organism or a computerized robot. Wittgenstein contrasts 'attitude', as he uses the term, with 'belief. What I believe I believe of what I take such an attitude towards—for instance that he is in pain or distress. I could not intelligibly have such a belief unless the object of my belief were the object of such an attitude. The attitude comprises affective reactions that are pre-logical: they are not the result of thought or reasoning, but underlie the possibility of a certain form of thought and reasoning. They are concept-forming. Thus a human being is what I take such an attitude towards. I do not take such an attitude *because*, by independent criteria, he is a human being.

The baby smiles at Mama. This is not only a smile of recognition; it is an instance of the kind of attitude Wittgenstein has in mind to which the baby comes naturally. In that smile Mama is a person—at least, she is beginning to become one for the baby. The baby is certainly not smiling at a body with certain magical powers. This

affective response is concept-forming, but the concept does not belong to a theory about bodies. It is part of a particular grammar; one that is internal to the attitude. It is in the *life* of what that attitude is a part that Mama exists for the baby as a person—no doubt as a very special person. The baby *lives* Mama's reality as such a person; she does not come to be constructed in the baby's apprehension by the cementing together of different appearances of her. It is to such a being that 'mental language' applies. In using such language we are not applying one of two species of predicates to bodies. We are not speaking of *bodies* at all, and we are not applying *predicates* to them either. We are responding to a person in words, words that would not make sense in connection with inanimate things or machines. Only in certain cases do we speak of 'applying predicates'—for example 'He is courageous and also prudent.'

When Quine says that 'mental states are explained by neurology' he is thinking of the kind of depression, for instance, that may be alleviated by taking certain drugs. But that is a special case, and normally we do not think of human emotions in this way. We do not think of someone who is pleased to see us, for instance, as pleased because of the secretion of certain hormones by glands in his body—no doubt triggered by impulses of the optic nerve. For in that case they could have been triggered by an injection of the hormone through a hypodermic needle. We would then at best be the cause of the feeling *in* him and not the object of his pleasure. What he feels would not be directed at us and there would be no contact between us, only the mutual stimulation of sensations. We would each remain shut in our 'inner worlds'—hardly what one would call a 'world' at all.

Bodies cannot be in 'mental states', but for the most part people are not either. To have an intention, for instance, or to know something, is not to be in a particular mental state. True, the mind is not an object, but neither is it replaceable by 'mental states' which we attribute to living things. If we want to be clear about what it means to speak of the mind of a living thing, we need to turn our attention to those aspects of our life in which the reality of others for us finds expression, a life in which necessarily we ourselves are persons. The requirements of an abstract ontology are just what turn Quine away from all this. But if he is not interested in what we normally mean when we speak of the mind, what is there left in which to be interested as far as the reality of human existence is concerned? It is to this question I now turn: what *we* call 'real', what

in the grammar of the language *we* speak constitutes reality, in different domains of existence. I say ‘we’, for who else is there?

REALITY AND THE HUMAN WORLD

Quine’s conception of reality, that is, the one he develops in his philosophy, is a *legislative* one, that is, one which he legislates. He never asks what we actually mean by reality, and his conception is a purely metaphysical one. He rejects the metaphysics of what he calls a ‘first philosophy’, in other words ‘foundationalism’, only to accept the metaphysics of what he calls a ‘scientific philosophy’. His view is that there is *one* reality and that it is the one which the science of physics *constructs*. Scientific philosophy clarifies, purifies and develops this construction. As he puts it in *The Roots of Reference*: ‘Putting our house in ontological order is not a matter of making an already implicit ontology explicit by sorting and dusting up ordinary language. It is a matter of devising and imposing’ (88).

The child’s acquisition of the apparatus of reference stopped short of any deliberate *ontologizing* on his part. But the boundary is not sharp. The learner progresses by analogy and even by crude simplicity considerations, largely unawares. The scientist or philosopher who in a scientific spirit undertakes to clarify, organize, or simplify his ontology is doing more of the same, but doing it better and in full awareness.

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But what physics does is to develop, expand or extend our ordinary conception of physical reality. It does not turn away from, leave behind or detach itself from that conception with which Quine speaks with a touch of contempt. It remains rooted in that conception which belongs to the life which the scientist shares. If scientific language is a ‘suburb’ of language, it still draws its life from the life of the city. Quine regards physical reality as *basic*. Thus ‘mental language’, for instance, makes sense, but not independent sense: what we speak of in that language is grounded in neurology. But this is to misconstrue the importance which physical reality indisputably has in our lives and for our language. For Quine this reality swallows up all other realities and *dehumanizes*—I use the word advisedly—the world in which we live:

The terms that play a leading role in a good conceptual

apparatus are terms that promise to play a leading role in causal explanation; and causal explanation is polarized. Causal explanations of psychology are to be sought in physiology, of physiology in biology, of biology in chemistry, and of chemistry in physics—in the elementary physical states.

(FM 168–9)

But causal language is not the only language we use, and causal explanations are not the only kind of explanation we seek in our attempts to understand what is important to us. In any case there is no single conception of cause, and what Hume tried to give an account of was only one of our concepts of cause. It is not only physical reality that counts for us. There is, for instance, spiritual reality—and let me reassure Quine immediately that I am not speaking of the bogus reality with which mediums in spiritual seances pretend to establish contact. I mean the kind of reality in the light of which, for instance, a person who has failed in his relationships or who has hurt those he loves examines his life, or one which someone whose faith is tottering searches—as depicted, for instance, by Tolstoy in his story ‘Father Sergius’.

When I speak of reality here I mean the sense in which we distinguish between what is real and what is illusory, bogus or a false imitation. These distinctions do not come to the same thing in different areas of discourse: what we mean by *reality* depends on the grammar within which the question whether something is real or not arises. Plato, for instance, was interested in what this distinction comes to in the domain of spiritual values. In the *Republic* he depicted human beings as passing their lives in a cave and taking the shadows on its walls as reality, that is, as the real thing—as spiritual values and genuine virtues, when they were in fact fancies of ‘the great beast’, his name for ‘society’. The image of the cave is a literary device he used for reflecting on a reality which, in different ways, eludes most of us, while we live with false imitations of it. But how is what is real and what is illusory and, therefore, deceptive distinguished here? We have and use such a language, and to it belongs a dimension of reality to which our lives bear some relation, even if only that of estrangement.

Let me return to the question of what exists. If we ask, ‘Do unicorns, dinosaurs, or even Father Christmas exist?’, we are concerned with whether something that would have a *physical reality*, if it existed, exists—exists in the fields of this planet, the earth, or comes down

the chimneys of houses in its cities. The question takes the conception of physical reality for granted. That is not something which we question or can legislate about. It is independent of any one of us; it belongs to the language that has developed in human societies and which we are using when we ask whether this or that exists. Similarly, if we question whether there is any goodness in someone, or among human beings, we take the *reality of absolute value* for granted. That reality likewise is independent of us and belongs to a language that is as old as humanity.

Existential questions, therefore, such as 'Does Father Christmas exist?', and their reflective varieties, such as 'Is there goodness in any of us?', do not belong to philosophy, and the reality to which they are responsible can neither be questioned nor constructed or imposed. If philosophers have questioned it, the question is an expression of conflict, one seen as at the very heart of the concept of reality questioned. Thus Berkeley: the idea of matter involves a contradiction. It calls for a clarification of the concept and not for an affirmation, denial or revision of the reality questioned. If 'ontology' is the name of a branch of philosophical inquiry, therefore, what it should properly ask is not 'What exists?', but 'What kind of reality belongs to what we claim or deny to exist in situations that arise in the course of our lives?' Ontology is, therefore, the clarification of the *grammar* of 'existence' and 'reality'. But that does not make it a trifling pursuit, for such clarifications can make a genuine contribution to our understanding of substantive matters of interest to us as human beings.

CONCLUSION

I have been critical of Quine: I have asked critical questions about what he says from *outside* his philosophical conception and not from *inside* it. I have questioned its presuppositions. If my criticisms are justified, then someone who shares Quine's conception of philosophy and reality needs to try and answer them.

Professor Strawson, whose criticism of Russell's theory of descriptions was, in my estimate, both trenchant and illuminating, is extraordinarily generous towards Quine.⁹ He is, properly, appreciative of Quine's logical acumen and philosophical seriousness, but he accepts Quine's philosophical enterprise as legitimate in its own terms too easily. He sees Quine, I think, in a quasi-Kantian light, as trying to pinpoint concepts radically crucial to at least a possible conception

of reality. But, he says, he would like to defend a different conception of reality, equally possible: one in which properties are accorded an important place alongside physical objects. 'There are (he says) gains and losses on either side.' The gain on Quine's side is scientific precision, elegance and economy, and on Strawson's side it is fidelity to the structure of our common thinking (*POQ* 313). What each is doing, Strawson says, 'has its own validity on its own terms.... [T]he choice between them is ultimately, perhaps, a matter of individual temperament.' He writes:

It has been said that the best conceptual scheme...is the one that gets us around best. The question is: in what milieu? For one content to lead his life—at least his intellectual life—in the rarefied atmosphere of science, the choice, on this test, will go one way. For one content to lead *his* intellectual life in the muddier atmosphere of the more mundane...it will go the other way.

(*POQ* 318)

'In what milieu?' is indeed a key question, and the qualification 'at least his intellectual life' is to the point. For the use of linguistic expressions cannot be separated from the surroundings in which they are used. It is in those surroundings that they have their particular grammar. Thus, to use an analogy, a saw is a saw in carpentry and, as Wittgenstein puts it, 'a smiling mouth *smiles* only in a human face' (*PI* §583). But the contexts or milieux themselves belong to a form of life: they are contexts of human life. They cannot, therefore, be isolated from each other, and none could be given ascendancy over others. Even our intellectual life draws its sense and nourishment from the rest of our life.

Strawson is right: 'the best conceptual scheme...is *the* one that gets us around best', and so one that helps the physicist to get around best in physics is the best one for *him*. I agree. But Strawson is being kind to Quine in ignoring Quine's claim that reality is fundamentally physical. To say the least, that is to suggest that the conceptual scheme that suits best the physicist's purposes is also the best one for other branches of knowledge—for psychology, for instance. In fact Quine does say, for instance, that 'causal explanations in psychology are to be sought in physiology', that 'mental states and events...are explained by neurology, when they are explained'. But this is to impose a direction on psychological research.

As a philosopher Quine has every right to criticize psychology, i.e. lines taken in psychological research and inquiry. But *not* as a ‘scientific philosopher’, *not* in the name of science, the science of physics. For, let us be clear, Quine does *more* than simply provide physics with what he thinks it needs. He also attempts to shape psychological thinking. At least he approves certain of the directions along which psychological thinking is in fact developing. But these directions can be criticized, and to defend them on the basis of physicalism is to beg the question: what is psychology supposed to study, the behaviour of rats or that of human beings? Quine may see little difference, but the question of the kind of reality which the subject matter of psychology has is not a matter of indifference. Hence the ‘loss’ which Strawson tolerantly refers to on the side of Quine’s philosophy cannot be tolerated, and the ‘validity’ of his conception needs to be questioned. As I said, Quine ‘dehumanizes’ the human world, and his ‘barren landscape’ cannot support even intellectual life.

In any case, Strawson minimizes the difference between what he is engaged in and Quine’s enterprise, expressing the difference in terms acceptable to Quine. But Strawson is engaged in *clarifying* the structures of our thinking and language, in exhibiting the logic of concepts that occupy a strategic place in those structures, and he suggests distinctions that are helpful to others engaged in the same enterprise, whereas Quine is engaged in *building* abstract logical structures in the name of science—a task in the service of a dubious metaphysics. He thinks that reality is endlessly manipulable by logic in the name of physics.

Certainly our conception of reality is shaped by our language and, indeed, could be said to be internal to it. But our language, in turn, is rooted in our life, and that itself has a form which is partly determined by some very general features of the physical environment in which we live. It is also limited by certain fortuitous features of our make-up, including certain natural ways we have of reacting to features of our environment, physical and human. Wittgenstein has discussed all this in detail. Our language, to which our conceptions of reality are internal, is accessible to change. Individual thinkers can even make a limited contribution to such changes, when social and cultural conditions are propitious to them. They are at once revolutionary thinkers within their discipline and also vehicles through which social change, with its own complex momentum, takes place.

Obviously language is not and can never be putty in any individual's hands. He may, to change the analogy, be able to change one plank on the deck of Neurath's ship, but that is not to say that he can rebuild the ship at sea. Indeed, language is no ship, and it can be built neither at sea nor on dry dock. It is we who are its product.

In short, one cannot anchor reality in the triggering of our sensory nerves, but neither can one play God with it.

NOTES

- 1 (Cambridge University Press, Cambridge, 1947), pp. 43–7.
- 2 See Ilham Dilman, *Quine on Ontology, Necessity and Experience* (Macmillan, London, 1984), pp. 10–12.
- 3 See Fyodor Dostoyevsky, *The Idiot*, tr. David Magarshack (Penguin, London, 1956), p. 499.
- 4 Quoted by Stephen Toulmin and June Goodfield, *The Architecture of Matter* (Hutchinson, London, 1962), p. 264.
- 5 *An Enquiry Concerning Human Understanding* (The Liberal Arts Press, 1957), p. 85.
- 6 *Philosophy and Psycho-Analysis* (Blackwell, Oxford, 1953), p. 186.
- 7 'On the Principle of Comparison in Physics', in *Popular Scientific Lectures*, tr. Thomas J. McCormack (Open Court, La Salle, 1898), p. 241.
- 8 Wisdom, *op. cit.*, p. 253.
- 9 See P.F. Strawson, 'On Referring', *Mind*, 59 (1950), 320–44, and 'Two Conceptions of Philosophy', in *POQ*.

ONTOLOGICAL COMMITMENT

Robert L. Arrington

Quine talks about conceptual schemes; Wittgenstein refers to language-games. For Quine, a conceptual scheme includes an ontology: 'One's ontology is basic to the conceptual scheme by which he interprets all experiences' (OWTIa 10). Moreover, different conceptual systems invoke different ontologies: 'disagreement in ontology involves basic disagreement in conceptual schemes' (ibid., 16). For Wittgenstein, different language-games involve different grammatical rules, and, accordingly, different essences, since essence is expressed by grammar (*PI*§371). For two or more people to disagree over the essence of something is for them to operate with different grammatical rules. For both Quine and Wittgenstein, meaning is not to be equated with naming: a word doesn't have to be a name in order to be meaningful. In the minds of both, the confusion of meaning and naming is responsible for numerous confused ontological or metaphysical claims.

For Quine, one cannot prove that one's own conceptual scheme is correct and that other schemes are false. The only ontological question that transcends linguistic convention is the pragmatic one: 'how economical an ontology *can* we achieve and still have a language adequate to all purposes of science?' (*WPEa* 68). Another way in which Quine expresses this question is to ask what the simplest conceptual scheme is into which we can fit and arrange the discordant fragments of raw experience (OWTIa 16). Wittgenstein denies that grammatical rules are accountable to reality or experience, and he cautions that we can neither justify as true nor invalidate as false any one or any set of these rules by comparing them with reality. Grammar and language, he insists, are autonomous. To many readers, he also appears to think that pragmatic questions can be raised about language. For example, is

a certain language-game workable, given the general facts of nature? Can we offer reasons for a particular rule by reference to its utility relative to our needs?

How similar are the above views of Quine and Wittgenstein? Do we have interesting and important convergence of opinion here, or do we have misleading appearances of agreement that mask profound disagreements? I shall argue that the latter is the case.

The basic difference is this: Quine is an ontologist; Wittgenstein is a critic of the ontological enterprise. Quine struggles throughout his writing to identify what there is and to clarify the way in which we should go about finding out what there is. Wittgenstein maintains throughout his writings that we transcend the bounds of sense when we try to answer ontological questions—at least when we interpret and try to answer them ‘ontologically’. The ontological claims that Quine sanctions, claims such as ‘Universals exist’ or ‘Only particulars exist’ or ‘Physical objects do (or do not) exist’, are seen by Wittgenstein as highly misleading. For him, the only meaning they can have is either as grammatical statements about the meanings of words (posing confusedly as existential claims) or as confused ways of making non-ontological, low-level or trivial empirical statements. There are no ontological commitments embedded in Wittgenstein’s language-games. The only things presupposed by a language-game are grammatical rules. These govern the way we talk since they express the ways in which we define our concepts; they tell us nothing about the nature of reality.

I shall begin to flesh out and defend these claims by looking first at Quine’s notion of ontological commitment as presented in his famous essay ‘On What There Is’. He has several purposes in this essay. In the first place, he wants to show that some famous arguments designed to prove that we must make certain ontological admissions do not work. For example, we do not have to admit ‘unrealized possibles’ into our universe as a consequence of the fact that we can speak meaningfully of people and things that do not exist. Many philosophers have argued that in order for us to speak intelligibly of, say, the mythological horse Pegasus, we have to grant the reality of this non-existent horse; otherwise, they maintain, there would be nothing for the name ‘Pegasus’ to refer to and our claims about Pegasus, even our claim that he does not exist, would be meaningless. Not so, argues Quine. He invokes Russell’s theory of definite descriptions, which shows that sentences with terms such as ‘Pegasus’ can be analysed in such a fashion that

these terms do not function as names and thus do not require the reality of a referent in order to be meaningful. 'Pegasus', he claims, is not really a name. It is a disguised description, and when we realize this we can see how 'Pegasus does not exist' can be true without requiring the postulation of the reality of an unrealized possible, the mythological horse Pegasus.

Quine goes on to show that other arguments designed to force us into accepting an ontology of a certain type likewise do not work. Use of a word like 'red' in 'This is a red house', 'This is a red car' and 'This is a red tie' does not force us to admit that there is a universal, redness, which is common to the house, the car and the tie. A different interpretation of this word and these sentences is possible, one which avoids this ontological commitment. To conclude that the universal redness exists because there is a red house, a red car and a red tie is to be guilty of hasty ontologizing.

Do any of our uses of words or sentences force us to accept a certain ontology? Only one, according to Quine. If we speak in such a way that our bound variables (what in ordinary speech would be our pronouns) must refer to certain entities in order for our statements using these variables to be true, then we must admit entities of this sort into our universe and thus into our ontology. Quantification forces an ontology on us. Quine's second purpose in 'On What There Is', then, is to define a criterion of ontological commitment, a test for determining what ontology a person is committed to. 'To be is to be the value of a bound variable' is this criterion.

Quine argues that some people—realists—operate with a conceptual system that involves quantification over variables designating universals; others—nominalists—restrict the values of their bound variables to particulars or individuals. He also considers a phenomenalist language whose bound variables designate sense experiences, and he contrasts it to a physicalist language in which only physical objects are assumed. Adherents of these various conceptual schemes would say, respectively: there are universals (universals exist), there are only particulars (only particulars exist), there are only sense experiences (only sense experiences exist), and there are physical objects (physical objects exist). For purposes of future discussion, let us call statements of this sort *ontological statements*.

Quine's third goal in 'On What There Is' is to argue that we are not *required* to use our bound variables in any one or another of the above conflicting ways. We are not required to use a physicalist language involving reference to physical objects; nor are we

required to use a phenomenalist language incorporating reference only to events or items of subjective experience. We can, presumably, choose what our bound variables will designate, i.e. their values, and thus we can choose our ontology. But we need not do so arbitrarily. Choosing the physicalist ontology allows us to interpret sets of our experiences as being the experiences of one, enduring object. There are definite advantages of economy in doing so. But the phenomenalist language also has its virtues. For one thing, it grounds our talk in what is most epistemically certain. So our decision to opt for the one conceptual system instead of the other can be made in the light of which advantage plays the more important role in our effort to deal with the data of raw experience. Thus our ontology can receive a pragmatic validation.

One thing that is disturbing about Quine's reflections on ontological commitment is that although he gives us a criterion for it, he does not give us a clear picture of what an ontological statement is. What, for him, makes a statement an *ontological* one?²¹ What is the subject matter of such a statement? We can say with some confidence that for Quine an ontological statement is broadly empirical and hence, if not a part of science, at least continuous with it. Moreover, it appears to be a statement that describes or asserts the existence of abstract kinds. 'Red exists' is not a low-level empirical judgment such as 'this rose is red', although it may be the result of an inference from such low-level empirical statements (an inference, we might remember, that Quine thinks is hasty). In the end, however, Quine is unclear about what the precise character of ontological statements is.

But let us put this question aside. All Quine's remarks suggest that whether or not we agree with an ontological statement, or whether such a statement is hasty or not, a statement like 'There are universals' is a *meaningful* existential claim. Ontological statements, whatever their other problems, are quite sensible. Accordingly, they can be debated and criticized. For Quine, the limits of sense fall on the far side of ontology.

I do not believe that this is so for Wittgenstein. Just as, in the *Tractatus*, his 'formal concepts' cannot be meaningfully employed in describing the world, so too, throughout his later philosophy, ontological categories cannot be used to make informative, non-trivial statements about reality. To my knowledge there is no one place in the later philosophy where he deals directly and at length with this issue. So it will be necessary for us to construct a

Wittgensteinian position on ontology from a variety of sources in the later writings.

In *Zettel* §69 (as well as *Philosophical Grammar* 137) we find Wittgenstein discussing the same problem that concerned Quine, the problem of speaking about something that does not exist:

Socrates to Theaetetus: 'If you have an idea, must it not be an idea of something?'—Theaetetus: 'Necessarily.'—Socrates: 'And if you have an idea of something mustn't it be of something real?'—Theaetetus: 'It seems so.'

If we put the word 'kill', say, in place of 'have an idea of in this argument, then there is a rule for the use of this word: it makes no sense to say 'I am killing something that does not exist.' I can imagine a stag that is not there, in this meadow, but not kill one that is not there. And 'to imagine a stag in this meadow' means to imagine *that*... But if someone says 'In order for me to be able to imagine a stag it must after all exist in some sense'—the answer is: no, it does not have to exist in any sense. And if it should be replied: 'But the colour brown at any rate must exist, for me to be able to have an idea of it'—then we can say: 'The colour brown exists' means nothing at all; except that it exists here or there as the colouring of an object, and that is not necessary in order for me to be able to imagine a brown stag.

This passage is rich with a number of familiar Wittgensteinian themes. It suggests that the argument used by Socrates and many others to prove that something must *be* (in some sense) in order for one to think about it is based upon a false equation of the grammar of verbs like 'to kill' and 'to have an idea of'. This assimilation is the result of misleading surface grammar. Beneath the surface, the grammatical rules for the use of these verbs are very different. There is a grammatical rule that disallows saying that something is killed that does not exist, but there is no such rule for 'to have an idea of'. On the contrary: the rule governing the latter notion licenses the inference from having an idea of a stag in the meadow to having an idea *that* the stag is in the meadow, and it may simply be false that the stag is in the meadow. A similar rule does not govern 'to kill': 'he killed the stag' does not entail 'he killed that the stag', because the latter expression makes no sense. The grammar of 'to have an idea of', like that of 'to imagine', equates having an idea of Pegasus with having an idea

that Pegasus...which may be false and hence not require the existence of Pegasus.

So far, then, Quine and Wittgenstein seem to agree, albeit for different reasons, that ordinary speech does not force an ontology of unreal objects on us. Quine appeals to the possibility of paraphrase into language with a different logical structure; Wittgenstein appeals to the grammatical differences in our everyday language itself between verbs like 'kill' and those like 'mean', 'imagine', 'think', etc. And Wittgenstein explains the error of the Socratic argument in terms of misleading analogies of surface grammar, while Quine seems to blame it on hasty ontologizing.

For our purposes, the most important passage in the above quotation from *Zettel* is the last sentence, particularly the claim "The colour brown exists" means nothing at all; except that it exists here or there as the colouring of an object.' Wittgenstein makes a similar point, with an important variation, in *PI* §58. To the interlocutor in *PI* §58 who claims that one cannot say 'Red exists' because 'if there were no red it could not be spoken of at all', Wittgenstein responds:

- Better: If 'X exists' is meant simply to say 'X has a meaning,
- then it is not a proposition which treats of X, but a proposition about our use of language, that is, about the use of the word 'X'.

He goes on to suggest that 'Red exists' can be taken to say that the word 'red' has a meaning and that 'Red does not exist' can be taken to say that this word has no meaning. The proposition 'Red exists', although it 'looks as if it were about the colour', is in fact about the use of a word. He ends the passage by making the same kind of statement we found in *Zettel* §69: 'We quite readily say that a particular colour exists; and that is as much as to say that something exists that has that colour.' 'Red exists' is a way (not inaccurate, according to Wittgenstein) of saying that some objects exist that are red.

How are we to understand these somewhat cryptic remarks? The overall message seems to be this: if we mean anything at all in saying 'the colour brown exists' (and we may very well fail to mean anything), then we are using this sentence either to say that certain particular objects are coloured brown or to say that the word 'brown' has a meaning. *Prima facie*, the consequent of this claim, especially its second disjunct, sounds implausible: 'The colour brown exists'

doesn't seem to be *synonymous* either with the claim that certain objects are coloured brown or with the claim that the word 'brown' has a meaning. The negation of the claim, i.e. 'brown does not exist', certainly does not appear (*face* Wittgenstein) to mean that the word 'brown' has no meaning. What is Wittgenstein up to here?

Instead of taking him to make a claim about the synonymy of certain sentences, let us take him, with respect to the first possibility ('The colour brown exists' means 'Some objects are brown'), to be making a point about the criterion for the existence of a colour. The criterion for the existence of a colour, he may be saying, is the existence of an object or thing that has that colour. What if your interior designer asked you: is there any brown in your sitting room? You might answer: 'Yes, the sofa is brown, and so is the coffee table.' To be sure, the designer may not be interested in *what* is brown but only in the present colour scheme in the room—we can take an interest in colour in addition to, and even in opposition to, an interest in coloured things. Nevertheless, the existence of colour *is* the existence of coloured things; the existence of a particular colour *is* the existence of something having that colour. The designer might change the colour scheme in the room, but could do so only by changing the things or the colour of the things in it.

So, Wittgenstein may be taken to say that a claim about the existence of a colour either is, or is necessarily connected to, a claim about the existence of coloured things. But the latter are empirical assertions, *not* ontological ones. The designer's question, 'Is there any brown in your sitting room?', can only be answered by looking to see if there are any brown objects in the room. On this reading, 'The colour brown exists' reduces to the unproblematic statement that some objects (somewhere) are brown. This is empirically indisputable, but trivial and wholly uninteresting.

Alternatively, Wittgenstein tells us that 'The colour brown exists' might be interpreted to say that the word 'brown' has a meaning (and 'The colour brown does not exist' to say that the word 'brown' has no meaning). These claims are also difficult to understand. But, once again, let us avoid the literal reading, which suggests that in each case the two statements are synonymous. Consider the following scenario: a psychology student studying the psychology of colour perception might ask, 'Is there any such thing as mauve?' Or, more 'ontologically', 'Does mauve exist?' The instructor might answer: 'Yes, the word "mauve" refers to *this* colour' (pointing to a colour on the colour wheel or chart). Or she might just say 'Yes, this

is mauve' (again pointing). (She is most unlikely to say 'Yes, mauve exists.') The instructor's response to the student amounts to giving him an (ostensive) *definition*. The student doesn't know what the word 'mauve' *means*, for if he did, he would have seen the sample of the colour mauve on the chart. If the student had asked instead, 'Is there a colour anise?' the instructor could equally have responded 'No, there is no colour called "anise"' or 'No, "anise" is not a colour word.' Seen in this fashion, the student's questions about the existence or non-existence of a colour become linguistic ones about the meanings of certain words. No ontological issues need to be decided in order to answer the student's questions. Definitions are enough (or the lack thereof).

To sum up this discussion of what Wittgenstein says in Z §69 and *PI* §58, we see him arguing that statements having the look of ontology on them reduce in fact either to low-level or trivial empirical statements or to linguistic ones. 'The colour red exists' tells us nothing that we, as moderately experienced and literate observers and speakers, do not already know. *What* we know, however, are truisms about red objects or the meaning of the word 'red'.

It should be noted in passing that Wittgenstein's diagnosis of 'The colour red exists' blunts the argument that the Platonic Socrates gives for accepting the reality of transcendent Forms. After noting that various men and societies are just, Socrates pushes his interlocutors to grant that all these entities are just by virtue of possessing *one and the same thing*, justice. It is but a short distance to the claim that this thing, justice, exists or subsists in a transcendent realm. Wittgenstein in effect takes the claim that 'Justice exists' and reconverts it into unproblematic, and non-ontological, claims like 'Athens is a just state', 'Hippias is a just man', and so on. In this way, ascent to the Forms never gets started.

It might be thought that Wittgenstein's argument goes too far. Surely it makes sense to say things like 'Bengal tigers still exist in India' or even 'Quarks exist.' Aren't these counterexamples to what Wittgenstein has to say? The answer is No. In the *Blue Book*, Wittgenstein makes an interesting distinction between empirical kinds and grammatical kinds (*BB* 19)—what he also calls grammatical categories and logical forms. This distinction blunts the above criticism, for Bengal tigers and quarks are empirical kinds. The distinction also, I believe, casts additional light on claims like 'The colour brown exists.' Empirical kinds—for example kinds of apples—are defined by sets of properties. A Red Delicious apple has a certain

colour, sweetness, hardness, etc.; a MacIntosh apple has an overlapping, but also slightly different, set of characteristics. What kinds of apples exist is an empirical matter, and so is the question of whether we have identified all of the kinds of apples: here, Wittgenstein tells us, nature provides the standard of completeness. Presumably he would allow the meaningfulness of 'There are MacIntosh apples' because it amounts to the empirical claim that apples with certain properties have been found in nature. In contrast, grammatical kinds are not defined in terms of properties; whether or not they 'exist' is not an empirical matter, and whether or not we have identified all of them is not something that nature decides.

Unfortunately, Wittgenstein doesn't tell us anything else in this passage about grammatical kinds—he doesn't give us any indication of their positive features. But what he says in a negative vein allows us to deduce from another passage that *colours* are grammatical, not empirical kinds. In *Remarks on Colour* he writes: "The colours" are not things that have definite properties, so that one could straight off look for or imagine colours that we don't yet know, *or* imagine someone who knows different ones than we do' (33). If colours do not have definite properties, and empirical kinds do, then colours are not empirical kinds. No examination of nature, then, will reveal whether the colour brown exists; no examination of nature will reveal whether or not we have identified all of the kinds of colour; and no such examination will show whether we have got the distinctions correct ('There are no subtle distinctions between logical forms as there are between the tastes of different kinds of apples' (BB 19)). Questions, then, about the existence and nature of colours do not make sense—unless they are disguised questions about the existence and nature of coloured things, or about the meanings of words.

The claim that colours don't have definite properties may strike us as a strange one. It appears to suggest that we have no way to distinguish them, which seems absurd. Wittgenstein acknowledges this, but counters:

When asked 'what is the distinction between blue and red?' we feel like answering: one is blue and the other red. But of course that means nothing and in reality what we're thinking of is the distinction between the surfaces or places that have these colours. For otherwise the question makes no sense at all.

(PG 208)

We can't distinguish blue from red by pointing out that it is blue.

‘Blue is blue’ is an empty tautology which ‘means nothing’. Blueness is not a property of blue, one that distinguishes it from red. To think meaningfully of the difference between blue and red is to think of the things (surfaces, places) that are blue as distinct from those that are red. So, once again, any comments about the grammatical kinds *blue* and *red* are, if meaningful, empirical comments about blue and red things. ‘So what I am saying means: red can’t be described’ (PG 209).

This claim may appear counter-intuitive. Don’t we say, for instance, ‘Red is a warm colour’ and ‘The red of the cushion clashes with the violet sofa’? The first of these statements, however, might plausibly be taken as a grammatical statement expressing a rule governing the way we talk about ‘red’. The second seems more like a statement about the red thing, or about the colour of a particular thing, than a statement about red itself.² ‘Red can’t be described’ comes across as a rhetorical reminder that what we *call* descriptions of red are often definitional in nature or are descriptions of the specific colours of individual objects. There are no contingent statements that we would call descriptions of red itself or descriptions of its essence.

It might be asked what relevance this discussion of colour has to Quine’s views on ontological commitment. Quine’s argument in ‘On What There Is’ operates at a much higher level of generality than is occupied by the putatively ontological claim ‘The colour red exists.’ He is concerned with statements like ‘Universals exist.’ What can we get from Wittgenstein that will help us see whether this latter kind of statement is meaningful? Red, of course, is said by all the realists I know to be a universal, and hence we might generalize Wittgenstein’s response to the claim that ‘The colour red exists.’ But Wittgenstein also has some interesting things to say about more abstract issues—for instance about the abstract notion of *colour*. His remarks on this topic will help us get a better handle on ‘Universals exist.’

Surely if *the colours*—kinds of colour—are grammatical and not empirical kinds, *colour* is likewise. It shares this status with concepts like *noise*, *shape* and *number* and many others. None of these are distinguished from one another by sets of properties, and none of them must meet a standard set by nature. It follows that there can be no questions about the existence or non-existence of these abstract kinds.

These are large claims. Let us see what can be said in defence of

them. Can we distinguish colours from, say, noises ('Can anyone believe it makes sense to say "That's not a noise, it's a colour"' (*PR* 55))? Might we not say: 'That's a colour—it has a hue, and noises don't have hues'? Is hue a property of colour, a property that noise does not have and hence a property that distinguishes colours from noises? First of all, note that 'Noises don't have hues' is a meaningless statement (unless it is a grammatical one about ways in which we are *not* to talk about noises). We can't conceive of noises not having hues unless it *makes sense* to think of them as *having* hues; our denial is just the denial of the statement that they have hues. But what could 'Noises have hues' possibly mean? It is not, to be sure, a contradiction in terms: the term 'noise' does not mean 'something that doesn't have a hue'. Nevertheless, it lacks any sensible content. But if this is so, 'Noises don't have hues' is equally meaningless, and thus the contrast we have drawn between noises and colours is itself meaningless.

Is hue a property of colour? Not according to Wittgenstein. All descriptions of the properties of things must be, in his view, external descriptions (*PG* 207). Any description of the properties of things must be capable of falsehood, and 'Colours have hue' is not capable of this. Having a hue is constitutive of colour, which means that to speak at all of a colour is to speak of something that can be said to have a hue. This is a grammatical proposition about the way the term 'colour' is used. And similar things might be said about other alleged properties of colour, for example intensity. There are no *properties* of colour.

Couldn't we distinguish colours from noises by saying that colours are seen, noises heard? Aren't *being seen* and *being heard* external to colour and noise, and hence properties capable of distinguishing them? Once again, however, it appears not. 'Noises are heard, not seen', taken as a description of fact, implies that it is intelligible, just factually false, to think of noises being seen. This, however, is not the case: what would it be like to see a noise? There is no application that can be projected for this notion.

Wittgenstein even suggests that we do not put the colours together—put them into a single class and contrast them with the class of shapes or notes (or noises)—because there is a similarity among them, namely the property or properties of *colour*. And this leads him to raise the provocative question 'Then might one also take red, green, and circular together?' (*Z* §31), to which he gives the only consistent, if astonishing, answer 'Why not?!' (*ibid.*) The

conflicting properties of colours and shapes do not prevent such a conjunction, for there are no such properties. We don't conjoin red, green and circular—but we might (if we spoke a different language). We don't conjoin colours and noises—but we might (if we operated with a different grammar). Wittgenstein entertains the possibility of some people having a coloured-shape language instead of one that distinguishes colours and shapes. Nature—reality, if you please—does not dictate what grammatical categories exist. Therefore there is no meaningful question of their existence.

If it makes no sense to speak of the existence of the colour red or indeed of colour (in a way other than indirectly speaking of coloured things or the meanings of words) and if similar claims can be made about the other grammatical kinds or categories we find in our language, then what sense can be made of the claim that universals exist? All the possible candidates have been removed from the scene. The mode of speech required to talk about a universal has crossed the bounds of sense.

But the class of universals is only one of the ontological kinds that Quine thinks can be assumed by a language. He maintains that a physicalist language brings with it the assumption that there are physical objects. What would Wittgenstein have to say on this count?

His message is much the same as it was regarding 'Red exists' and 'There are colours':

'A is a physical object' is a piece of instruction which we give only to someone who doesn't yet understand either what 'A' means, or what 'physical object' means. Thus it is instruction about the use of words, and 'physical object' is a logical concept. (Like colour, quantity,...) And that is why no such proposition as: 'There are physical objects' can be formulated.

(OC §36)

Wittgenstein recognizes that this is a conclusion many will hesitate to draw. Surely one might conjecture that there are no physical objects (the Cartesian sceptic certainly appears to do so):

But can't it be imagined that there should be no physical objects? I don't know. And yet 'There are physical objects' is nonsense. Is it supposed to be an empirical proposition?

(OC §35)

If 'There are physical objects' were an empirical proposition, there would be empirically observable properties by means of which we

recognized the existence of physical objects, properties the observed absence of which would indicate the non-existence of physical objects. We could, in this case, be said to *know* that something is a physical object or that physical objects exist. With regard to the question of the meaningfulness of talk about physical objects existing, Wittgenstein focuses, not on the question of whether physical objects have properties by virtue of which we recognize them as such, but on the question of whether it makes sense to talk of our *knowing* of their existence.

Later in *On Certainty* he raises the strange question, ‘Are we to say that the knowledge that there are physical objects comes very early or very late?’ (*OC* §479). I take it that by this question he wants to highlight the oddity of talking about ‘knowing of the existence of physical objects’. If we did know such a thing, we should be able to ascertain when we came to know it or learnt about it. But it makes no sense to talk of such a time. Furthermore, to utilize some of the other things he has to say in *On Certainty* about knowledge, if we claim to know that there are physical objects, their existence must be something about which doubt is, or was, possible (*OC* §121). Knowing involves the possibility of doubt that is overcome by evidence. Can we doubt the existence of physical objects? Clearly we can doubt the existence of particular ones, but can we doubt that there are any at all? Isn’t the latter doubt ‘hollow’ (*OC* §312)? What ‘specific grounds’ could we have for doubting the reality of physical objects in general (*OC* §458)? But if we cannot conceive of doubting the existence of all physical objects, neither can we speak of over-coming such doubt and thereby achieving knowledge that physical objects exist.

Wittgenstein is careful to note, however, that in instances in which it makes no sense to talk about doubting and knowing, the proper inference is not that we *don’t* know these things and, at best, only surmise or assume them. In such cases, the very question of epistemic status—knowledge, ignorance, surmise, assumption—is wrong-headed. We can’t say, then, that we *assume* there are physical objects. ‘Physical objects exist’ is not the unproven assumption behind our talk about individual physical objects, an assumption which we must accept if our more specific statements are to turn out to be true. Nor is it one that can receive any sort of validation, pragmatic or otherwise. Claims about which it makes no sense to speak of knowing can’t be surmised assumed, or validated either, for these are just different moves in the language-game of knowing.

As Wittgenstein observes, 'It is as if "I know" did not tolerate a metaphysical emphasis' (*OC* §482). The epistemic language-game does not encompass metaphysics.

Wittgenstein is always insistent that, in order to understand a word or sentence, we must identify its use in a language-game. One of the tasks involved in doing so is to ascertain the purpose or point of its utterance. Claims about the existence or non-existence of certain things usually have as their point the goal of providing information to other people, which presupposes that these people are initially ignorant of the matter at hand and that the speaker communicates the information to them in order to overcome their ignorance. Lacking such a context, the act of making an assertion intended to be informative makes little if any sense. In *Remarks on Colours* we find Wittgenstein elaborating on such points. Consider:

168. Psychology describes the phenomena of seeing. For whom does it describe them? What ignorance can this description eliminate?

(*ROC* 40)

328. Could a 'Psychology' contain the sentence: 'There are human beings who see'? Well, would that be false?—But to whom would this communicate anything?

(*ROC* 61)

These remarks raise some interesting, sceptical questions about the discipline which we call 'psychology', but pursuing these questions is not our task at the moment—except for the purpose of explicating the notion of someone's making a cognitive claim. In effect, §168 asks: who needs to be informed about the phenomenon of seeing? Who is ignorant of it? Certainly not you and I, to whom the description of seeing is presumably addressed. We aren't ignorant of what it is to see—after all, we see the words on the page of the psychologist's treatise on seeing. In what sense, then, is this psychologist communicating anything to us? In what sense is he saying anything at all? Unless the term 'seeing' has been given a technical sense, and hence doesn't mean what we ordinarily mean by it, the context for a communicative utterance has been removed. Likewise, if the psychologist makes the claim 'There are human beings who see', the fact that *prima facie* it is impossible to identify anyone ignorant of this and hence in a position to have it communicated to him calls into question the

meaningfulness of the utterance. ‘The meaning of the sentence “there are humans who see”, i.e. its possible use at any rate, is not immediately clear’ (*ROC* 61).

What about those who are blind from birth? Can’t we tell them that there are human beings who see? Wittgenstein gives us the proper response to this question when he follows up *ROC* III, §328 with the following passage: ‘If we say “There are human beings who see” the question follows “And what *is* seeing?” And how should we answer it? By teaching the use of the word “see”?’ (*ROC* 61). The answer to the last question seems to be ‘Yes’, since in *ROC* III, §337 Wittgenstein writes ‘It is not the psychologist who teaches me the use of the word “seeing”’ (*ROC* 62). I already know what seeing is, prior to being informed by the psychologist’s ‘description’, because I already know how to use the word ‘seeing’. My ‘knowledge’ in this case, however, is not a matter of having information, but of having mastery of the use of a word, mastery of a concept. Those who are blind from birth need to learn the concept of seeing. If, in teaching them this concept, we say ‘There are human beings who see’, this statement becomes a grammatical remark, part of the elucidation of a concept.

Let us try to apply these comments to the issue of the intelligibility of ontological statements like ‘There are physical objects.’ To make such a statement presupposes, Wittgenstein’s comments suggest, that there is someone who is ignorant of the matter and to whom one wishes to communicate this information. Who could it be? Not the phenomenalist philosopher. For a number of reasons, he *denies* that there are physical objects—so it would be disingenuous to attribute *ignorance* to him. And knowing his position, we could hardly be said to wish to communicate the matter to him. Who else might be in a position to receive this information? Young children? Well, it was never communicated to *us* when we were children, and we don’t, as a result, seem to suffer from some continuing ignorance about the matter. There is no audience for ‘There are physical objects.’ Therefore it is not a meaningful claim.

Of course, we do not come into this world understanding the notion of a physical object. We have to be taught the use of the term ‘physical object’. But it is not our local ontologist (of a physicalist bent) who teaches us the use of this term. Although it is a fairly uncommon term, it is not totally without a use. But its use primarily seems to be a contrastive one in the context of defining a term that doesn’t refer to a physical object. We might say to a child: ‘an *idea*

is not a physical object; a *hammer* is a physical object'. In this instance we are defining or elucidating the meaning of 'idea' and, perhaps, that of 'physical object' as well. Once we learn the use of the term, we hardly need to be informed that there are physical objects.

It very much appears to be the case, then, that ontological statements like 'There are physical objects' lack the kind of context which could provide them with a meaningful, informative use. Is there any other use for them? What could it be? Possibly to teach a person that terms like 'physical object' have a meaning. But this is a task for a kindergarten or primary school teacher, not a professor of ontology.

The other two examples of ontological statements given by Quine, 'Only particulars exist' and 'Only sense experiences exist', can be handled without much ado simply by noting that to establish them one must demonstrate the falsity of 'Universals exist' and 'Physical object exist.' Inasmuch as we have found these latter utterances to be devoid of meaning, it follows that their denials are equally senseless.

In the above and still other ways, Wittgenstein calls into question the meaningfulness of ontological statements. What Quine assumes is the proper subject of debate—the matter of what there is (ontologically)—is for Wittgenstein a set of utterances incapable of being debated. Ontologizing is not a sometimes hasty enterprise; it is once and for all an idle one.³

NOTES

- 1 Remarks by John Canfield led me to raise this question.
- 2 I am grateful to P.M.S.Hacker for suggestions along this line.
- 3 I wish to thank Hans-Johann Glock, P.M.S.Hacker and John Canfield for their helpful comments on earlier versions of this chapter.

THE CONFLICT
 BETWEEN
 WITTGENSTEIN AND
 QUINE ON THE
 NATURE OF LANGUAGE
 AND COGNITION AND
 ITS IMPLICATIONS FOR
 CONSTRAINT THEORY

*Stuart Shanker**

QUINE'S COGNITIVIST LEGACY

In the last few years a new theory citing Quine's indeterminacy of translation argument as its catalyst has arisen in the most unlikely of places. An emerging branch of cognitive psychology, dubbed 'constraint theory', has explicitly declared its debt to Quine.¹ Constraint theory, as it occurs in categorization research, must be sharply distinguished from the sorts of constraints on radical translation that Quine has discussed (for example the principle of charity). Far from bypassing 'meanings' and 'concepts', constraint theory is all about how the developing child acquires and organizes these 'mental constructs'.

Constraint theory addresses the basic question of how a child is able to acquire language from a limited set of linguistic inputs. The theory claims that

at least to some extent children acquire categories in ways that circumvent the need for sophisticated hypothesis testing. The most powerful alternative is that young children may come to the task equipped with some assumptions about the nature

of categories and about the nature of category terms. These assumptions limit the kinds of hypotheses children consider. In other words, children do not always need to reject hypotheses on the basis of negative evidence. They can implicitly reject them by being biased against them.²

That is, there must be innate information-processing structures that constrain the number of hypotheses that a child can draw about the possible extension of a term. (For example, a child might be biased to interpret each new word it hears as having an extension that is mutually exclusive with that of other words: the so-called mutual exclusivity assumption.) Constraint theory is thus sister to the study of cognitive heuristics in the psychology of reasoning. For example, there is a close parallel between the class-inclusion experiments performed on young children and the Wason selection tasks. In both cases cognitivists are looking for consistent types of error: the starting-point is the hypothesis that these reflect biases which manifest hidden cognitive processes. Both constraint theory and the study of cognitive heuristics are concerned, therefore, with explaining the nature of thought qua partially pre-conscious process; language acquisition, concept organization, problem solving, and reasoning are seen as interconnected sub-domains in this broad topic.

There is something rather intriguing about the idea of treating the pre-linguistic child as the radical translator in Quine's indeterminacy argument. Quine himself toyed with the idea in his account of language learning in *Word and Object*; and in a sense, this is also close to the point that Wittgenstein intends in the quotation from Augustine's *Confessions* with which he begins the *Investigations*. Philosophers have expended considerable effort trying to come up with a concrete example of radical translation: a case where there is no background information to aid the process of translation, and the focus is as exclusively as possible on the relation between verbal behaviour and action. Perhaps the perfect example of just this situation was right under our nose all the time? Of course, the child isn't translating anything (for example constructing a translation manual for the language of thought and a natural language). But then, the disparity may not be quite as great as it seems at first: especially if it should turn out that the indeterminacy of translation argument isn't really about translation (see the next section of the chapter).

Still, this leaves us with a curious problem. Constraint theory's picture of concept acquisition and category organization runs

counter to everything that Quine has ever said about psychological explanation. How could there be any common ground between Quine, who is so resolutely committed to behaviourism and physicalism, and this most cognitivist of theories? Moreover, here is a theory which seeks to implement Chomsky's fundamental premiss that there must be some mental property that enables a subject to acquire language under uniform conditions. But wasn't it Chomsky who charged Quine with promulgating 'mere dogmatism [and] *a priorism*', and who concluded that, 'insofar as empiricist doctrine has clear psychological content, it is in conflict with the not inconsiderable information that is now available'?³ The Quine-Chomsky debate in the early 1970s served to polarize attitudes towards cognitivism. Are we now to conclude that this great clash was no more substantial than the heated exchanges that take place during a parliamentary debate? Or is constraint theory proof of the revisionary nature of the history of ideas?

In his attack on Quine, Chomsky went on to raise a further issue which is central to this chapter. Wittgenstein's remarks on language learning, he charged, also 'fall within the framework of a narrow and dogmatic empiricism'. To be sure, he conceded that there are 'very significant differences between Quine and Wittgenstein in their approach to language, mind and behavior'. Yet he insisted that 'In both cases, we find a restriction of attention to behavior, a studied refusal to examine and elaborate the mental structures that underlie observed performance'.⁴ Is Chomsky right in seeing a connection between Wittgenstein and Quine on the question of the nature of language and cognition? Are they both promoting a thesis that is grounded in a behaviourist theory of language learning? Or is it wrong to treat Wittgenstein's remarks on language and cognition in the same spirit as Quine's? Indeed, perhaps reading Wittgenstein can shed some light on this curious twist in the evolution of cognitive science, which finds the indeterminacy of translation argument inspiring a theory of cognition that represents the very antithesis of Quine's intentions in the philosophy of psychology.

THE 'CHARM' OF THE INDETERMINACY OF TRANSLATION ARGUMENT

Ptolemy II brought together seventy-two Jewish scholars, and reportedly asked each of them individually to translate the whole Hebrew Bible into Greek. The astonishing result,

according to Jewish legend, was that the seventy-two versions were identical.

(Daniel Boorstin, *The Creators*)

Philosophy's continuing fascination with Quine's indeterminacy of translation argument is itself quite fascinating. With so many different sceptical problems to choose from, why should philosophers be so obsessed with translating 'gavagai'? It's not as if anyone feels a pressing need to defend linguistics or cultural anthropology from Quine's attack. So where does the 'charm' of this modern classic of epistemological scepticism lie? Why is there such a widespread concern to refute an argument which, on the face of it, is actually rather bizarre?

Quine's picture of the field linguist trying to figure out what the natives mean by 'gavagai' is reminiscent of those early films of Jane Goodall hiding in the bushes and observing the chimpanzees from a distance. Perhaps, under these conditions, it might be difficult to know what the speakers mean by 'gavagai'. But this is not at all Quine's intention; he wants his field linguist out there in the open, interacting freely with the natives. He can ask them anything he wants; go on gavagai hunts with them; learn how to identify gavagai tracks; spot gavagai warrens; prepare gavagai stew; bargain for gavagai pelts; raise gavagai pets; watch funny cartoons about talking gavagai. And all this while never quite being sure whether 'gavagai' means 'rabbit' or 'rabbit stage' or 'There it goes.'

Part of the appeal of the argument is that it is so counter-intuitive. Surely, one wants to say, there are certain universals in the way different cultures think and speak; or at least, how different cultures think will be transparent in the way they speak. Surely astute questioning will establish whether someone is referring to a rabbit or to one of its parts. But Quine's strategy lies precisely in the fact that this is one's automatic response. In effect, Quine baits the trap with 'gavagai', and then springs it shut with the follow-up point that whatever questions we ask to determine the reference of 'gavagai' will depend upon a prior translation of our 'individuation apparatus' (for example indefinite and definite articles, plural endings, pronouns, identity operators, copulas). We thus find ourselves confronted with a regress; for the same sceptical problem will arise with regard to this individuation apparatus as with 'gavagai' (see *ORE* 33).

The next step in the argument is to generalize the problem so as to apply it to count-nouns that can be used both as concrete general terms and as abstract singular terms (for example 'green'). The use

of a colour-word prepares us for the ensuing step, which is to convince us that this sceptical problem applies just as forcefully to cases of ordinary as to cases of radical translation; and then the final step, that the argument applies just as much to speaking our own language as to cases of translation. That is, it is just as possible, Quine insists, to map systematic ambiguity onto each other's uses of count-nouns as onto a foreign culture's. The upshot of the indeterminacy argument, therefore, is that 'referential inscrutability' is inherent to language use: so much so that this third-person sceptical problem can even be extended to first-person uses.⁵

This leads Quine to formulate his so-called relativity thesis: i.e. 'absolute questions about reference', whether with regard to a foreign or to one's own language, are 'nonsense'. Questions about reference only make sense relative to the background language in which they are asked. Any theory can only be interpreted relative to a background theory; ontology 'can be multiply relative, multiply meaningless apart from a background theory' (*ORE* 67). When read in conjunction with the indeterminacy argument, it is clear that this relativity thesis is just another way of formulating the attack on meaning and/or reference realism. But Quine's aim is not to induce us to accept an anti-realist account of meaning or reference. Nor is he suggesting that the meaning or reference of a sentence or word is relative to the context in which it occurs. He is only saying that the scope of questions about meaning or reference are fixed by the language in which they are expressed.

As Kirk points out, Quine is not so much a relativist as he is 'a semantic nihilist'. Indeed, Quine exemplifies Taylor's depiction of the 'strong sceptic' in the study of human communication.⁶ Thus, Quine's intentions are radically different from Kripke's in *Wittgenstein on Rules and Private Language*. He does not present us with a sceptical dilemma in order to persuade us to abandon truth-conditional semantics and to accept in its place a definition of 'meaning' or 'reference' in terms, for example, of assertability conditions. Rather, he seeks to persuade us to abandon *meaning* and *reference* altogether in the study of human communication. But what does he propose to take their place? Or to put this another way, to what purpose does Quine intend to put his radical scepticism?

Plainly, this isn't just a problem about translation.⁷ In fact, indeterminacy of translation is an instantiation of a much larger issue, and much of the argument's effectiveness stems from the epistemological framework which frustrates our every attempt to escape the quandary in which Quine lands us. In *The Roots of Reference* Quine

chastises the retrograde philosopher who, while 'chary of talking of ideas and propositions is apt still to talk as blithely as a layman on the subject of translation' (*RR* 36). This benighted individual believes that 'it makes sense to ask, of just about any sentence in any language, for an English translation'. The cause of his confusion is that he is in the grip of 'an unconscious old-fashioned acceptance of the idea idea: one sentence is a translation of another if it expresses the same idea, the same thought, the same meaning, the same proposition' (*RR* 37). That is not to say that Quine disputes this account of *what* 'correct translation' consists in; where he disagrees with the traditional epistemologist is over the question of *whether* this can ever occur.

Disregarding for the moment the question of whether our faith in the possibility of correct translation really does have anything to do with 'an unconscious old-fashioned acceptance of the idea idea', what is actually wrong with the above definition of 'correct translation'? Far from appearing misguided, it looks to be not only true, but necessarily true. That is, it looks like the *grammatical proposition*: 'If "p" is a translation of "f", then "p" and "f" express the same idea (the same thought, meaning, proposition).' But then, Quine does not recognize the existence of grammatical propositions in the sense intended by Wittgenstein; for he denies that there is any special category of sentences which are constitutive of meaning (see *RR* 80). Thus, what Wittgenstein refers to as a 'grammatical proposition' Quine will see as a community-wide uniformity in the learning of certain sentences (for example 'There is an extremely high probability that language-speakers will respond in the same way to "S is a bachelor" as to "S is an unmarried male"'). Hence Quine will see the above statement as an empirical generalization which completely overlooks the myriad philosophical problems besetting ideas, and the need to conduct psychology on a different (i.e. a non-mentalist) footing.

It turns out, therefore, that radical translation is merely the hook into a much deeper epistemological problem. As Quine presents it, the basic difference between the two cultures is in how they 'slice' the world. The linguist can only infer from the natives' behaviour what 'p' refers to; for he 'has no access to native meanings apart from what he can glean from the observed circumstances of utterances' (*MRCLT* 14). Moreover,

We can systematically reconstrue our neighbor's apparent references to rabbits as really references to rabbit stages....
We can reconcile all this with our neighbor's verbal behavior

by cunningly readjusting our translations of his various connecting predicates so as to compensate for the switch of ontology.

(ORE 47)

In other words, *reference* is a *mental phenomenon* which as such is *epistemically private*. The reason why reference is inscrutable is precisely because everything mental is inscrutable. The indeterminacy of translation is part of the larger problem of the indeterminacy of the mental.⁸

In *Ontological Relativity* Quine argues that ‘how to slice [the world] is what ostension or simple conditioning, however persistently repeated, cannot teach’ (ORE 32). That is, we can teach a subject how to use ‘p’ correctly, but we cannot determine how S mentally represents the extension of ‘p’. But the whole thrust of the argument—its apparently inexorable descent into the relativity thesis—turns on the assumption that referential inscrutability poses no barrier to successful communication. Even though the linguist can never be certain that he knows what the natives are thinking when they talk about ‘gavagai’—even though I can never be certain that I know what my neighbour is thinking when he says ‘That ? is red’, and perhaps, what I myself am thinking when I call something red—we can still successfully interact with one another verbally. Just as the linguist can map different referents onto ‘gavagai’ with no discernible anomalies in the natives’ behaviour, so too we can learn how to use ‘red’ correctly, even though each of us may experience a different sensation when we look at red things. Thus, as far as linguistic intercourse is concerned, *reference* is an ‘idly turning wheel’.

Quine tells us that he wants to explain ‘how we acquire science’: how an individual gets from a null (or close to a null⁹) cognitive state to his grasp of scientific knowledge. Here we get our first intimation of how this argument will strike the cognitivist as leading in his direction; for Quine’s epistemological goal is similar to that which Piaget assigned to genetic epistemology. Yet, unlike Piaget, Quine insists that to explain this transition we must eschew talking about concepts or ideas and talk solely about language. This isn’t just the first of Quine’s ‘five milestones’ in the history of empiricism: it is ‘a revolution, a Copernican flip’ (PPLT 4).

It is certainly a bold shift: we explain cognition, according to Quine, by ignoring it. This is because ideas—if in fact they exist!—are both

private and subjective, whereas language is a concrete phenomenon: 'words are out where we can see and hear them', unlike ideas, which are hidden from observation and perhaps from introspection. This view of the epistemic privacy of ideas is something that Quine, qua orthodox empiricist, simply takes for granted. At any rate, he never presents a sustained defence of this picture of the mental. Nor does he recognize its significance for his attitudes towards language. Quine's whole strategy is that ideas simply do not engage the mechanism of language learning and knowledge acquisition. What he fails to acknowledge, however, is just how much this conception of language draws from his conception of the mental.

The 'nominalist strategy' that Quine counsels is one of 'turning away from the ideas and looking to the words':

Language, we are told, serves to convey ideas. When we learn language we learn to associate its words with the same ideas with which other speakers associate them. Now how do we know that these ideas are the same? And, so far as communication is concerned, who cares? We have all learned to apply the word 'red' to blood, tomatoes, ripe apples, and boiled lobsters. The associated idea, the associated sensation, is as may be. Language bypasses the idea and homes on the object. Than the idea there is little less useful to the study of language.

(ORE 35)

What Quine glosses over here is how much his conception of the mental shapes his view of the nature of language and how it is acquired.

There is something ironic in this charge, since it is the one reading that Quine most wanted to avoid. The early Quine would have countered that his argument is based on eliminative materialism: i.e. that mentalist terms may serve a heuristic purpose, but that they will submit 'someday to a full physical explanation in turn' (RR 34). Thus, he would have questioned how his conception of the mental could have shaped his view of language when he was on record as stating that

If we are limning the true and ultimate structure of reality, the canonical scheme for us is the austere scheme that knows no quotation but direct quotation and no prepositional attitudes but only the physical constitutions and the behavior of organisms.

(WO 221)

It is not quite so clear what Quine would now answer; for in *Pursuit of Truth* he counsels us to read Davidson and Dennett in order to appreciate how mental predicates are ‘indispensable both to the social sciences and to our everyday dealings’ (*PTb* 73). Without question he will insist that this concession does not mark a relapse into mentalism; for the contingencies that shape a child’s use of ‘intend’ and ‘believe’ are no different in kind from those that condition his use of ‘red’ and ‘rabbit’. In any event, Quine will still refuse to see how his conception of mental phenomena could have any bearing on his grudging acceptance that mental terms may play an essential role in explaining and predicting behaviour.

The answer to this question is that it is his picture of the epistemic privacy of ideas and concepts that shapes Quine’s view of the nature of language and language learning. For it is his desire to ‘bypass the idea and home on the object’ which underpins his view of language as ‘the complex of present dispositions to verbal behavior, in which speakers of the same language have perforce come to resemble one another’ (*WO* 27). That is, given that language demands some form of regularity, and given that—as Wittgenstein established with the subjective language argument¹⁰—this regularity cannot be based on private impressions, it follows, according to Quine, that ‘The uniformity that unites us in communication and belief is a uniformity of resultant patterns overlying a chaotic subjective diversity of connections between words and experience’ (*WO* 8). In other words, the regularity that characterizes verbal behaviour should be seen in terms of operant conditioning.¹¹ On this view, we are trained to use sentences in response to certain stimuli: ‘words mean only as their use in sentences is conditioned to sensory stimuli, verbal and otherwise’, and in turn, we use language in the expectation that it will cause other agents to ? (language is ‘a social art’, words are ‘social tools’ (*WO* 17, ix, 8)).

This argument is grounded in Skinner’s theory of language learning.¹² In *The Roots of Reference* Quine confidently reports that ‘Infant learning is a bright domain, and there behavioristic psychology blooms. The beginnings of language are learned ostensibly. The needed stimuli are right out there in front, and mystery is at a minimum’ (*RR* 35). It may seem surprising that, as late as 1973, Quine could so blithely assume that the child ‘is being trained by successive reinforcements and extinctions to say “red” on the right occasions and those only’ (*RR* 42). This flies in the face of Chomsky’s supposedly devastating objection, in his review of *Verbal Behaviour*, that Skinner had completely overlooked the

contribution which the individual makes to language learning.¹³ Quine responds to this criticism by dwelling on the role that observation and imitation—as seen from the behaviourist perspective—play in language learning (for example, the child observes the situations in which the same sounds are used, or the effects which certain sounds have on behaviour (see *RR* 38f.)). And there is nothing in *Pursuit of Truth* to suggest that the vast amount of work in developmental interactionism over the past two decades has led Quine to alter his views on language learning in any substantial way (see *PTb* 5ff.).

Quine is thus mounting a deliberate challenge to the prevailing view that Chomsky's review of *Verbal Behaviour* dealt a fatal blow to behaviourism. And herein lies the key to Quine's intent in the indeterminacy argument. Quine isn't interested in radical scepticism for its own sake. His goal is to shift our attitudes towards the nature of language and cognition. He regards cognitivism as the metaphysical consequence of treating language as an abstract system for communicating thoughts. Such a misconception is the consequence of mentalism. Viewed scientifically, language and cognition must be seen on a par with any other natural phenomena (see *ORE* 26). Thus Quine, following Skinner, denies that there is any categorial distinction between language, qua verbal behaviour, and behaviour *simpliciter*. The contingencies that cause a rat to depress a lever are no different from those that cause a child to utter 'p'.¹⁴

Mentalism, according to Quine, distorts this fact by treating language as a vehicle for the transmission of thoughts from the mind of a speaker to the mind of a listener (as in Saussure's famous speech-circuit diagram). This leads cognitive psychologists to ask how children acquire concepts and how they map these onto language. It leads psycholinguists to ask how children acquire syntax and create or recognize novel grammatical forms. It leads cognitivists to postulate an intermediary type of 'tacit' or 'embodied' rule which not only fits but actually guides behaviour entirely on a pre-conscious level. And it leads philosophers to investigate the relation between thought and language.

Quine's response to this 'mentalist picture' is a reductionist account of what we mean by 'language'. That is, his goal isn't to convince us that we don't ever communicate with one another. It is to show us that we must formulate a completely different account of the nature of *verbal communication*: one that makes no appeal to any of the 'old notions of meaning, idea, proposition' that land

us in such sceptical dilemmas as that highlighted by the indeterminacy of translation argument (*ORE* 304).

Quine intends his radical scepticism to persuade us to accept that, for scientific purposes, our most fundamental concepts for talking about language—for example *meaning*, *explanation* and *understanding*—are all grounded in mentalism, and should accordingly be abandoned. The scientific explanation of verbal behaviour should be conducted entirely in terms of behavioural contingencies. Thus, Quine seeks to inculcate the attitude that to be a good scientist of human communication or cognition, one has to adopt a sceptical attitude towards such ‘mentalist platitudes’ as that we usually know what someone is referring to.

Quine’s basic thesis is that language use is bound up with behavioural regularities (and no doubt with neural regularities, if only these could be discerned). We are conditioned, for example, to say ‘red’ in the presence of red stimuli: “Red”...is a happy case where a nearly uniform stimulatory condition is shared by simultaneous observers. All the assembled retinas are irradiated by substantially the same red light’ (*WO* 7). If we didn’t experience the same response to this uniform stimulatory condition, ‘red’ would in all likelihood prove to be useless. But not necessarily; for it is always possible that we could still be conditioned to use ‘red’ in the same way. Even if I can’t *see* any difference between red and green tomatoes, or between boiled and live lobsters, that doesn’t mean that I can’t be conditioned in the presence of red and green stimuli to use ‘red’ and ‘green’ in the same way as everyone else. For *seeing* (like understanding or referring) is a private mental phenomenon, as opposed to verbal behaviour, which is out there for everyone to observe. Thus, it is ‘No matter that sensations are private, and no matter that men may take radically different views of the environing situation; the observation *sentence* serves nicely to pick out what witnesses can agree on’ (*RR* 39).

Quine’s claim that we can bypass ideas and home in on verbal behaviour turns, therefore, on the assumption that thought and language are *externally* related. It is one thing to say that S’s use of ‘p’ conforms to the ‘norm’, but quite another to know how S mentally represents *p*. The former judgements *may* be criterial (more of this below), but the latter are strictly evidential, and of course, underdetermined.¹⁵ It is as conceivable that two subjects can master the rules for the use of ‘p’ while inwardly forming very different impressions of *p* as that two subjects can agree on all the criteria

that make for a good prime minister while forming a very different opinion as to who best fits the bill.

To see what Quine has in mind here, we might consider an example from primatology. A chimpanzee can be trained to use a symbol to request orange juice, or to comply with requests for orange juice, or to pour a glass of orange juice when asked to do so and put it on the table. But we can never be certain, according to primatology's sceptical canons, what he understands by 'orange juice'. What if he should fetch orange but not apple juice when asked to get some juice? What if he should bring an orange object when asked for orange juice? What if he should point to a melon and ask for 'orange juice'? What will he do if we should ask him to juice an orange? What if one day we should find him pouring orange juice on a plant, or covering the walls with orange juice, or washing his hands in orange juice? This is a matter that can never be fully resolved by testing, for there will always be an element of uncertainty as to how he will behave in the future, which is construed as signifying an element of uncertainty in how he represents the extension of 'orange juice'.¹⁶ Hence when explaining or predicting his use or his response to uses of 'orange juice', we should not resort to those old mentalistic bogeys of 'meaning, idea, or proposition'. The hard-nosed scientist will talk instead of, for example, chimpanzees 'demonstrating only a reliable (80 percent) rate of responding to classes of equivalent stimuli with rotely paired associates'.¹⁷

In the case of primatology, such scepticism is underscored by the common refrain that we can never know for certain how non-human primates see the world. And now Quine's point is that we can never be certain how human primates see the world either. Of course, we might be convinced that we know what someone thinks or believes, just as we might feel exactly the same way towards Kanzi, and this obviously plays a vital role in how we manage our day-to-day relations and interactions. But the occasional bite on the hand from a chimpanzee for what, to us, seems to be no apparent reason is no different from what strikes us as a totally unmotivated snub from our neighbour: both are reminders that we can never truly get inside another agent's mind. Hence, the scientific explanation of verbal behaviour must, like the explanation of all behaviour, leave no epistemological hostages to fortune: it must settle on a grammar which excludes the very possibility of entertaining sceptical doubts.

Reductionism, however, never comes without a heavy price. The first thing to note is how, on Quine's conception of the external relation

between thought and language, it *makes no sense* to speak of associating the ‘right’ or ‘wrong’ idea with a count-noun. That is, the concept of *correct usage* only applies (if at all) to linguistic conventions: to the fact that we have all learnt (been trained) to apply the word ‘red’ to blood, tomatoes, ripe apples and boiled lobsters. Since, on the cognitive level, each of us may represent the same concept somewhat differently—for example, may see as red certain shades which another agent sees as green—it makes no sense to say that a subject can be ‘right’ or ‘wrong’ in the manner in which she represents *red*.

This argument has troubling consequences. Could someone fail to see both red and green as colours? Could someone see both red and C⁺ as colours? (Is this in fact precisely what happens to those experiencing synaesthesia?) Could someone see red as lighter than green? Could someone see an object that was red and green all over?¹⁸ Moreover, if thought and language are externally related, then this means that someone could use ‘red’ correctly—for example, could bring red objects when asked to do so—and yet not possess the idea of red: for example, could correctly call something red while actually seeing it as green. But if that were the case, then how on earth could she ever have been conditioned to respond appropriately to red stimuli? Conversely, someone could possess the idea of red yet be incapable of being trained to use ‘red’ appropriately.

This use of ‘appropriate’ is profoundly suspect. On Quine’s account, the concept of *rule-governed practice* is supposed to reduce to *conditioned response*; hence the concept of *correctness* is supposed to reduce to *uniformity*. But then, how are we to reconcile this reductionist backdrop with Quine’s fundamental premiss that a child ‘is being trained by successive reinforcements and extinctions to say “red” on the right occasions and those only’ (RR 42)? Which are the *right* occasions? What is the source of Quine’s fundamental presupposition that ‘The child and the parent must both see red when the child learns “red”’ (RR 37)? What is the source of his presupposition that ‘All the assembled retinas are irradiated by substantially the *same red light*’ (my italics)?

Quine’s answer lies in his account of *perceptual similarity*. Stimulatory conditions are said to be ‘perceptually similar’ to the extent that they elicit similar behaviour from a subject (RR 16ff.). Thus Quine tells us that

One of the child’s rewarding episodes may be supposed to have included a conspicuous show of red together with the

sound 'red' from his own mouth, followed by the sound 'yes' from the parent. In a later episode there is again the color and again the sound 'red'. Such is the partial similarity of the later episode to the earlier.

(RR 47)

But this presupposes the very point it was supposed to explain. For it is the child's behaviour which constitutes what we shall call 'the same stimulatory condition'. If we ignore the question of why we should even be confined to colours, our problem here is that we lack an *independent criterion of identity* for speaking of *the same colour occurring in a later episode*. On Quine's argument, anything that caused an S to ? would constitute 'the same stimulus condition'. Suppose a trumpet blast had the same effect on a child as a 'red stimulatory condition' (whatever that is): then, by definition, these are 'perceptually similar' stimuli for the child. Or suppose the child simply did not respond in the same manner to what we would call 'the same stimuli', or responded in the same manner to what we would call 'different stimuli', or responded in a haphazard fashion to the same stimulus events? But then, how would we know that his response was 'haphazard'?

Quine proposed an extraordinary solution to these problems: 'If the child is to be amenable to [verbal] training...what he must have is a prior tendency to weight qualitative differences unequally. He must, so to speak, sense more resemblance between some stimulations than between others' (WO 83). That is, the child must be predisposed to respond in a similar manner to categorially similar stimulatory conditions, and as Quine concedes, 'We shall need a separate quality space for each of the senses. Worse, subsidiary spaces may have to be distinguished within a single sense' (WO 84). It would seem, then, that not only has Quine adopted a realist account of categories, but on top of this, he has consigned the problem of concept formation and categorization to the black box of innate dispositions. To make matters worse, he goes on to explain that 'In effect therefore we must credit the child with a sort of prelinguistic quality space' (WO 83). One can certainly sympathize with Chomsky's frustration with this argument.¹⁹ Not only does this appeal to 'innate quality spaces' represent the benefit of theft over honest toil, but in fact, it is difficult to see how this argument differs from cognitivism. Indeed, Quine goes on to insist that 'Supplementary clues to spacing are available in the child's

hesitation, or reaction time' (WO 83). Therein, as we shall see in the final section, speaks the voice of constraint theory.

One of the most conspicuous features of philosophical scientism is that, when an argument rests as squarely as does Quine's on a particular theory, its own fortunes must rise or fall along with that of the theory in question. From the perspective of current language-learning theory, what is most striking about Quine's picture of verbal training is how much goes missing. For example, one of the most conspicuous features in debates over whether apes can learn how to speak is whether they can use words and signs spontaneously. Nowhere does Quine account for the fact that, without any training, a child can suddenly begin to use a word correctly. And from a cognitivist perspective, this is just a fraction of what is missing.

For all the emphasis that he places on verbal conditioning, Quine never explains what makes these signals *verbal*. Moreover, he says nothing about how infants are able to segment speech into lexemes and morphemes. How they master the internal structure of words and acquire the ability to use words grammatically. Why this phenomenon occurs in humans but not other primates. Why children find some words easier to acquire than others. Why it is that, virtually from birth, infants are habituated to familiar objects. Why it is that a child spontaneously demonstrates sorting behaviour at 18 months. Why this occurs at the same time as the onset of the 'word explosion'. Why there is a word explosion. Whether conceptual primitives (such as *object*, *object permanence*, *self* and *causality*) lay the cognitive foundation for language acquisition. And in general, whether cognitive development is, at least to some extent, an autogenetic mental process.

In the end, then, we are left with a sceptical argument whose overriding motivation is to push us into accepting a reductionist analysis of *language* which is not only self-defeating, but totally out of step with recent developments in the study of language development. This brings us back to our original question in this section: with such manifest, indeed, overwhelming problems, wherein does the 'charm' of the indeterminacy of translation argument lie? Perhaps the answer to this question is ultimately that, as Hookway puts it, 'We naturally feel that these arguments constitute a *reductio ad absurdum* of something, although it is hard to see quite what'.²⁰ Perhaps Wittgenstein can help us with this problem. Or make it worse.

**A BEHAVIOURIST (MIS-)READING OF THE
*INVESTIGATIONS***

I conceive of understanding, in a sense, behaviouristically....
What is behaviourist in my conception consists only in that I do not distinguish between 'outer' and 'inner'. Because psychology does not concern me.

(EBT 310)

The title of this chapter assumes a fundamental clash between Wittgenstein and Quine in their views on the nature of language and cognition. But for cognitivists²¹ a more fitting title would have been: 'Wittgenstein and Quine: Behaviourist Birds of the Same Feather'. The idea that Wittgenstein was, if not a closet behaviourist, at least strongly influenced by behaviourism, has dogged Wittgenstein studies from the start. Indeed, as the above epigraph makes clear, it is a charge that Wittgenstein himself took seriously. This alone constitutes sufficient grounds to consider the relationship in which Wittgenstein's thought on language and cognition stands to Quine's. But given the consensus amongst cognitivists that Wittgenstein shared the behaviourists' antipathy to all things mental, it becomes imperative for our understanding of the *Investigations* that we consider whether Wittgenstein shared the same outlook as Quine on the phenomenon of 'breaking into language'.

To do this we must first consider how a behaviourist reading of the *Investigations* might proceed. And we don't have far to go; for the truth is that the cognitivist will have considerable trouble getting past the first dozen sections. It is certain that he will find serious problems in these opening passages: problems which a philosopher trained during the 'linguistic turn' might easily overlook, but which will be all too evident to someone whose thinking has been shaped by the 'cognitive turn'. To begin with, it will strike the cognitivist that Wittgenstein misconstrues the very quotation with which he starts the book. Where Augustine deals with the problem of language acquisition, Wittgenstein talks about 'Augustine's picture of the essence of human language'. In fact, this involves a deliberate shift on Wittgenstein's part: one that forms the starting point for the remainder of the book, whose task it will be to establish and implement the logical resolution of the epistemological problems that are merely hinted at in this opening section. But this is a difficult point: certainly not something that can be treated as self-evident.²² Then, at the close of the first section,

Wittgenstein seems to dismiss the very problem which most concerns the cognitivist (namely 'how does he know where and how he is to look up the word "red" and what he is to do with the word "five"?'). And he does so on the basis of what, to a cognitivist, will appear to be a total disregard for the cognitive dimensions of the problem at hand. For Wittgenstein concludes: 'Well, I assume that he *acts* as I have described. Explanations come to an end somewhere.' The problem, from a cognitivist point of view, is *where* Wittgenstein locates this 'somewhere'.

It may seem that §2 raises a new problem. It is all too easy to overlook the presuppositions involved in seeing the situation that Wittgenstein describes as a primitive language-game: namely that the two builders are engaged in a purposive activity, that the one is *leader* and the other assistant, that A gives instructions or communicates his desires and intentions to B, who in turn learns how to comply with A's requests. But why should we not say instead that A and B are simply two automata responding to stimuli? Suppose we were observing two ants constructing a nest and we could identify four distinctive movements or sounds which always seemed to elicit the same reaction from the other: would we call this a 'primitive language-game'? Suppose this is precisely the question that Wittgenstein wants us to ask, and that the answer he intends is affirmative? The problem is that this is exactly what Quine would have us say. Here is a case where, according to the behaviourist, it makes perfect sense to speak of purposive behaviour in mechanical terms: a situation where the two organisms are conditioned or innately disposed to engage in a goal-directed activity and to respond to various signals. Thus, the cognitivist will wonder whether, by presenting this as a 'primitive system of communication'—which is the step that he takes in §3—Wittgenstein is preparing us for a behaviourist theory of verbal conditioning, with language speaking proper supposedly emerging as merely a more complex system of such stimulus-response 'connections'.

As far as our hypothetical cognitivist reader is concerned, Wittgenstein presents us in the first sentence of the second paragraph of §5 with what, despite all his later protestations about eschewing philosophical theorizing, certainly looks like a genetic thesis. ('A child uses such primitive forms of language when it learns to talk.') Whether Wittgenstein is right or wrong is beside the point; all that matters is that it is observation that will determine whether a child's first utterances are structurally similar to the functional paradigm

outlined in §2. The danger here is that, even if it is not explicitly genetic, Wittgenstein's argument presupposes a (behaviourist) developmental theory. And this suspicion might seem to be confirmed by the second sentence of §6 ('The children are brought up to perform *these* actions, to use *these* words as they do so, and to react in *this* way to the words of others').

It is hardly surprising that Wittgenstein should have been preoccupied with behaviourism when he first began to think about the philosophy of psychology in the 1930s. We must, of course, be careful that we do not misconstrue what were intended to be read as criticisms as in fact endorsing a behaviourist theory of verbal conditioning. But perhaps there is an element of both in Wittgenstein's writings at the time, which was carried over into the *Investigations*? This is the impression that one gets from reading Wittgenstein's most influential commentator of this period, Friedrich Waismann. In chapter 6 of *Principles of Linguistic Philosophy (PLP)*, Waismann sets out to explain Wittgenstein's views on the nature of language and language learning. He begins with what is either an allusion to recent work in ethology, or the behaviourist analysis of *purposive behaviour*:

A hen clucks in order to gather her chickens together, a marmot whistles in order to warn his companions. We can say that the purpose of the hen's clucking is to make the chickens come to her; the way we recognize that this is the purpose is by observing the results of the clucking. If chickens never ran to clucking hens, we should not say that the purpose of clucking is to collect chickens.

(PLP 111)

But would we say that the purpose of the magnet is to make the iron filings come to it? And is it really so straightforward to say that a marmot whistles in order to warn his companions? Does a marmot ever deliberate about whether to sound the warning or jump up and down if his companions ignore him? Does he ever try to trick them? What about the experiments by ethologists that have shown how, for example, a turkey hen will attack her chicks if the sounds of a predator come from the nest, or will nurse a predator if the sounds of a chick are played back? At the very least, there is a disturbingly rapid shift from 'We can say that the purpose of the hen's clucking is to make the chickens come to her' to 'A hen clucks in order to gather her chickens together.'

Waismann goes on to apply this example to

many of the processes which take place in the learning of language. If we teach a child to turn his head when we say 'Look!', we establish a connection between the word and a movement. We also say that a child 'understands' a command when he carries it out, and from this it is easy to pass to the view that the meaning of a command lies in its effect. We should be disinclined to say that we 'explain' the meaning of the command to a child; what we do is rather to bring the child, by various means, to do what we want him to do—for example, we turn his head in the demanded direction, or we show him how to move, etc.; in short we accustom him to a reaction in a way not very different from that in which we train a dog to come to us when we whistle to him. In such a case we may speak not of *explanation*, but of *training*. It cannot be disputed that the first stages in teaching a child to speak consists [*sic*] of this sort of training, of establishing a causal nexus between words and actions, movements, etc. Later, at a higher stage, this process merges quite gradually into what we call 'explanation'.

(*PLP* 111–12)

This is as clear a statement as one could get of Quine's picture of the reinforcement of verbal behaviour. The origins of speech (and note how Waismann equates this with 'the learning of language') are based on the paradigm of classical conditioning. 'Meanings' only enter the picture, if they enter at all, at a much later stage of cognitive development.

Waismann appears to be arguing in the above passage that an individual undergoes a developmental process: a transition from conditioned to normative behaviour. It looks as if he is saying that, while the ability to speak a language is the result of training, the meaning of a word does not consist in its effect, but rather in that which is given by an explanation of the rules for its use. In other words, Waismann seems to be implying that behaviourism was only partially right: but at least it was partially right. The mistake it made was in trying to extend a theory that only applies to the origins of speech to language use proper.

What are we to say of the picture of *training* operating here? Isn't this exactly what Quine is saying when he argues that a child 'is being trained by successive reinforcements and extinctions to say "red" on the right occasions and those only' (*RR* 42)? And what

are we to make of the claim that ‘we establish a connection between the word and a movement’? What *kind* of connection? Is it neural? Behavioural? To fall back here on the claim that philosophy is purely descriptive is to invite the cognitivist response: you ignore the very explanatory problem which your argument raises. Moreover, it certainly can be disputed that the first stages in learning how to speak consist in this sort of training. And if that is the case, then what becomes of the claim to be eschewing genetic theorizing?

One can, of course, always fall back on the defence that what Waismann says should not be attributed to Wittgenstein. The trouble is, similar remarks can be found in Wittgenstein’s writings from this period. Indeed, they can be discerned in §6 of the *Investigations*. Here Wittgenstein seems to accept a behaviourist analysis of verbal training. That is, the origins of language are said to lie in the association between word and thing formed in ‘ostensive teaching’. The sound of the word causes the child to think of the object. Wittgenstein is clearly uninterested in pursuing the ‘nature of the connection forged during training’ any further. (Cf. his remark in *Philosophical Grammar* that ‘The psychological effectiveness of a sign does not concern us. I wouldn’t even scruple to invent that kind of mechanism’ (PG 71).) But then, the picture we are left with is that which is presented at the start of the *Brown Book*:

The child learns this language from the grown-ups by being trained to its use. I am using the word ‘trained’ in a way strictly analogous to that in which we talk of an animal being trained to do certain things.

(BB 77)

Isn’t this dangerous ground? Apart from the fact that Wittgenstein presumes that the concept of training is perspicuous, and that the nature of the connection between words and things needs no elaboration, the psychological theory on which the argument would appear to rest is now hopelessly outdated.

This brings us to §§7 and 9. It will be hard for the cognitivist to avoid the conclusion that Wittgenstein is advancing a behaviourist theory here: especially when these passages are read in conjunction with his remark at the start of the *Brown Book* that it is possible to describe a primitive language-game for which ‘we can say that Augustine’s description of learning the language was correct’ (BB 77). The account of training and drill presented in §7, which returns us to the language-game of §2, would appear to have been intended

to represent just such a primitive language-game. This impression is reinforced by the remark in the second paragraph that 'We can also think of the whole process of using words in (2) as one of those games by means of which children learn their native language.'

Does this amount to an endorsement of a behaviourist theory of language learning? A remark in the *Brown Book* might seem to confirm this:

The child learns this language from the grown-ups by being trained to its use. I am using the word 'trained' in a way strictly analogous to that in which we talk of an animal being trained to do certain things. It is done by means of example, reward, punishment, and suchlike.

(BB 77)

Moreover, the suggestion at §7 of the *Investigations* that 'language-games' can be seen as either an exegetical device or as the actual games 'by which children learn their native language' is an uncomfortable reminder of the ambivalence in the *Blue Book* where Wittgenstein first explains that 'When we look at such simple forms of language the mental mist which seems to enshroud our ordinary use of language disappears' and then argues that 'Language games are the forms of language with which a child begins to make use of words. The study of language games is the study of primitive forms of language or primitive languages' (BB 17).

Perhaps, the cognitivist will concede, 'endorsement' is too strong a term; but he will see nothing here to suggest a repudiation of behaviourism. Thus, as far as the cognitivist is concerned, the opening sections of the *Investigations* are grounded in a behaviourist theory of verbal conditioning, where the same 'ostensive teaching' in different contexts elicits different thought-processes. This, the cognitivist will assume, is what Wittgenstein intends when he states: 'With different training the same ostensive teaching of these words would have effected a quite different understanding' (PI §6). The cognitivist's main concern will be that, whatever his ulterior philosophical motives, Wittgenstein builds his argument on a picture of the child as a passive participant in the language-learning process: i.e. he presents the child's linguistic behaviour as proceeding out of conditioned responses. Nor is this just a problem for Wittgenstein's philosophy of psychology; for the obvious question which this in turn raises is: how different a conclusion *vis-à-vis* the nature of language, or cognition, or indeed philosophy, might Wittgenstein

have reached had he proceeded from a dynamic starting point: one which treats the child as actively seeking to make sense of its environment?

This epistemological starting point is, in fact, one of Wittgenstein's primary targets throughout his later writings, and as such, demands careful scrutiny.²³ But to respond to this behaviourist reading of the *Investigations*, what we really need to look at is the transition which Wittgenstein intends us to make in the opening sections of the book. It is not from *reflexes* to *intentions*. Rather, it is from describing behaviour in causal terms to describing it in intentional or normative terms. That is, the transition that concerns Wittgenstein is not developmental: it is *grammatical*.

Wittgenstein clarifies what is involved in this grammatical transition with a subtle demonstration of the limitations of what he calls 'Augustine's conception of *language*': even for the primitive language-game which seems to instantiate it. The language-game of §2 reduces word use to a single dimension: in effect, the same as applies to animal training. In this case it virtually makes no sense to speak of '*word* use'; only of conditioned responses to verbal signals. But as soon as some communicational complexity is introduced into the picture, the agents' behaviour begins to demand—and to warrant—the introduction of intentional or normative concepts for its correct description and explanation.

Wittgenstein is making the point that the more this kind of behavioural complexity is introduced into a language-game, the more inaccurate it becomes to describe the agents' actions in purely causal terms. It is made clear in §§10–17 that the kind of complexity being introduced relates to the different kinds of uses which the words in a language-game have. The 'Augustinian' picture (the referential theory of meaning) presupposes that all words 'signify' in the same way (for example like the label on a bottle), and hence, that all word use can be described in the same way (for example in S-R terms). But the different kinds of uses which words have demand different kinds of description of their use (§10) and ever more complex accounts of an agent's actions.

Whereas in the initial case outlined in §2 there is nothing in the behaviour of A and B to warrant anything other than a causal description, as we start to add to the complexity of their verbal interactions, the corresponding complexity of their behaviour warrants describing the situation in increasingly intentional or normative terms. I say 'increasingly' because of the manner in which Wittgenstein

develops this theme in the *Blue and Brown Books*. Wittgenstein presents a succession of language-games here, each slightly more involved than the one before (as marked, for example, by the introduction of counting, deictic gestures, commands, questions and answers, explanations and descriptions). The whole point of the first part of the *Brown Book* is to show, through a series of ever more complicated language-games, the different kinds of uses which words have and to clarify how this affects the description of an agent's behaviour.

What these graduated language-games bring us to see is that there are *grammatical continua* which are counterpoised against behaviour, and demand ever more complex actions to license the attribution of ever more complex cognitive skills and abilities. These grammatical continua—which range from primitive to rarefied uses of psychological concept-words—frame any psychological investigation into the possible existence of a phylogenetic and/or an ontogenetic continuum. The child (or rather, the child's mind) does not build up 'psychological concepts' from atomic (cognitive or non-cognitive) units; rather, adult human beings serve as the paradigm subjects for the psychological concepts that are used to speak of a child's developing behaviour. That is, any question about the psychological capacities of animals or infants demands that we compare their behaviour with the relevant adult human actions which underpin our use of the concept in question.

To speak of *grammatical continua* is to draw attention to the normative practices in which our uses of psychological concepts are embedded. In countless cases the rules governing the use of these concept-words allow us to apply a concept to primitive instances: for example to cases where the subject is not able to explain her use of a symbol, or where a subject cannot herself use symbols but can respond appropriately to their use by others, or to cases of 'protolinguistic' communication (such as have been documented by primatologists), and even cases of behavioural prototypes (as in Wittgenstein's example of how a cat stalking a bird constitutes 'a natural expression of intention' (*PI* §647)). This does not, however, mean that these rules can be stretched to the point that any form of causal regularity (for example a tropism, or a thermostat) can be regarded as displaying evidence for the possession of some rudimentary concept. Similarly, the reason why salivating at the sound of a bell does not constitute a criterion for describing a dog as possessing a primitive concept of *mealtime* is grammatical, not epistemological. The point is not that we lack *sufficient evidence* to

know what a dog is or is not thinking; it is that the language-game played with 'time' demands far greater behavioural complexity than has been displayed by the dog in order to describe it as possessing even a primitive version of the concept (see *PI* §650).

It is precisely because there are no grounds for speaking of a dog that salivates at the sound of a bell as intentionally signalling his desire for his dinner, or as 'correctly' or 'incorrectly' anticipating the arrival of his dinner, that it makes no sense to try to reduce *language use* to the same terms. A dog which, bell or no bell, incessantly salivates has no more made a *mistake* than has a photo-electric door that randomly opens and closes. Typically, it is a subject's ability to respond appropriately to the use of 'p' and to use 'p' for suitable purposes in appropriate contexts that licenses our describing him as 'comprehending the meaning of "p"'. If a subject's actions satisfy the criteria involved, then the psychologist can legitimately—where this use of 'can' is grammatical—make the transition from describing his behaviour in causal terms to describing it in intentional or normative terms. Conversely, a psychologist is not being 'conservative' if she denies that a dog that automatically sits on the command 'Sit!' understands the meaning of the command; for this just is what is called a 'conditioned response'. Nor are we a priori ruling out the possibility that dogs, like apes, can be taught concepts hitherto thought to be beyond their grasp.²⁴ But the comparative psychologist needs a clear idea of just how complex a dog's behaviour must become to warrant describing him as possessing the concept? before she can set about trying to inculcate the skills necessary for the possession of that concept.²⁵

What makes this issue so complex is the fact that causal descriptions of behaviour (of automatic or conditioned responses, associations, drill, repeating or memorizing sounds) merge into intentional or normative descriptions of behaviour (of teaching, explaining, following, appealing to the rules for the use of words). But despite the graduated nature of applying normative concepts in primitive contexts, the transition from paradigmatic uses of *reacting* to paradigmatic uses of *understanding* involves a fundamental categorial shift: the terms that apply to conditioned responses do not carry over into the description of comprehension and production skills, even though it may at times be difficult to distinguish between where 'reacting' ends and 'understanding' begins.

If we look at a child's acquisition of a word like 'circle' in isolation from the function which the word plays in specific routines, we

seem to be confronted with the dilemma (which Wittgenstein raises at *PI* §§29ff.) that it is unclear how the child knows whether the word refers to an object's shape and not to its colour, texture, size, etc. (And why to the object?) But suppose the function of 'circle' is to initiate a routine in which a child and its caretaker draw similar shapes with crayons, or find objects which are the same shape as the picture on a flash card. The child starts to use 'circle' to initiate this routine (for example saying 'circle' while drawing one). Of course, at this point the child may think that 'circle' is only used for drawing; requests to a group of young children to 'form a circle' are met with a blank stare. But the very question, 'At what point does the child's behaviour become sufficiently complex to satisfy the criteria for what we would call "possessing a primitive concept of *circle*"?' attests to the grammatical continuum that characterizes our descriptions of a child's developing mathematical abilities.

As far as the early stages of language learning are concerned, Wittgenstein's point is that psychologists resist describing a child first learning how to speak as 'understanding the meaning of the words he is uttering or repeating' for the criterial reasons outlined above. This is an essential aspect of the normative practices involved in describing language use. Another crucial aspect of these normative practices is that there is no hard and fast line between describing a child's behaviour in causal terms and describing it in normative terms; for 'I might also say of a little child "he can use the word: he knows how it is applied". But I only see what that means if I ask "what is the criterion for this knowledge?" In this case it isn't the ability to state rules' (*PG* 62). Children are often able to play games without being able to cite the rules. A child can be trained to shout 'circle' when the appropriate flash card is raised long before he begins to pick out other circles; and he may point to circles long before he can define 'circle'. A pupil can often recite the definition of 'circle' before he understands it (before he can explain the terms used in the definition, respond to further questions, relate the definition to other geometrical constructions). Hence, behaviour that is described in causal terms shades into behaviour that is described in normative terms. But these are grammatical, not developmental observations about the differences one must register when describing a child as responding to a signal or as following and mastering the rules for the use of a word.

How does this argument bear on the schematic remarks on training in the opening sections of the *Investigations*? A brief

discussion in *Principles of Linguistic Philosophy* of the categorial distinction between the concepts of *training* and *explaining* can help us to answer this question. Waismann remarks: 'We also say that a child "understands" a command when he carries it out, and from this it is easy to pass to the view that the meaning of a command lies in its effect.' But, he continues,

We should be disinclined to say that we 'explain' the meaning of the command to a child; what we do is rather to bring the child, by various means, to do what we want him to do.... In such a case we may speak not of *explanation*, but of *training*.

That is, to speak of *explanation* presupposes that we possess sufficient grounds to speak of *teaching* the child the meaning of 'p'—teaching the child the rules for the use of 'p'—as opposed to simply bringing him to react to the sound of 'p'.

This returns us to the question of what sort of 'connection' Wittgenstein has in mind when he remarks that, in teaching a child how to use 'p', 'we establish a connection between the word and a movement.' The connection he is interested in is neither neural nor behavioural: it is grammatical.

Of course an ostensive definition of a word sets up a connection between a word and 'a thing'...but the connection doesn't consist in the hearing of the words now having *this* effect, since the effect may actually be caused by the making of the convention. And it is the connection and not the effect which determines the meaning.

(PG 190)

That is, the meaning of an expression is not to be confused with or 'reduced to' or 'eliminated by' its effect: it is what is given by an *explanation* of its meaning (PG 59; see also PI §560). 'And an explanation of meaning is not an empirical proposition and not a causal explanation, but a rule, a convention' (PG 68). Thus, a grammar is not some sort of theory; it 'consists of conventions. An example of such conventions [would] be one saying "the word 'red' means this colour"' (PG 190). This last proposition does not *describe* the connection between 'red' and a sample of red: it *stipulates* a convention for how 'red' is to be used.

We can begin to appreciate the significance of Wittgenstein's insistence that he is not engaged in genetic speculation. 'Am I doing child psychology?', he asks. The answer is emphatically *No*: not because

he is 'shutting his eyes to the limitations of the genetic thesis he has embraced [*sic*]', but because he is 'making a connexion between the concept of teaching and the concept of meaning' (Z §412). We look at the origins of language use because of the light which this sheds on the nature of language: on the skills which are involved in learning how to speak and understanding what others are saying, on the different kinds of uses which words have, the different types of rules and practices that we learn, the freedom that we enjoy to modify existing language-games or to introduce new ones.²⁶

Far from endorsing a behaviourist theory of verbal conditioning, Wittgenstein presents us with an approach to language learning that is highly sympathetic to developmental interactionism. The crux of his view of language is that learning how to speak is learning how to act in certain ways. The ability to speak a language emerges from such primal activities as sharing, requesting and playing. These dyadic interactions are initially governed by the use of sounds and gaze to establish or maintain joint attention. They are soon supplemented by natural gestures whose communicative significance can only be assessed within the context of the routines in which they occur. (For example, a certain gesture might signify: 'I want to be tickled'.) Words are then introduced to supplant these natural gestures (for example Tickle!). The actions which constitute speech are thus continuous with the child's primitive expressive behaviour. The word 'primitive', Wittgenstein explains, is meant to say here that 'the mode of behaviour is *pre-linguistic*: that a language-game is based *on it*: that it is the prototype of a mode of thought and not the result of thought' (RPPI §916). In its broadest terms, the point is that what a child is learning when learning how to speak is the techniques required to engage in certain practices. When Wittgenstein describes the advent of 'language [a]s an extension of the more primitive behaviour' (RPPI §151), what he means is that in learning how to do things with words, and how to respond to what other people do with words, a child in the initial stages of language learning is being taught to use words to augment behavioural signals, and then to co-ordinate increasingly complex social interactions.

It is precisely because he immerses himself in the business of doing child psychology that Quine's argument confronts us with the equally unpalatable alternatives of radical scepticism or radical reductionism. The result of his ignoring the categorial distinction between *training* and *explaining* is that he is led to treat the connection formed in ostensive teaching between word and 'thing' in terms of 'now a

stimulus, now a reaction' (*PLP* 114). Thus, the analysis of *language* that Quine advocates is one which hopes 'to replace the "meaning of a sign"—which is felt to be too nebulous—by a chain of clear-cut physical processes' (*PLP* 115). But while training can bring about understanding, *explanation* cannot be reduced to *training* (logical 'cannot'). 'Suppose', Waismann remarks, 'it were possible to find a drug which would make people perform certain actions at a certain gesture; then we should not call the drug the explanation for the gesture. *Explanation explains only within language*' (*PLP* 126). That is, a causal account of the factors that bring about a child's ability to follow the rules for the use of a word (in terms, for example, of shared line of regard or modulations in the parent's tone of voice which serve to shift the child's attention onto objects and from which the ability to use words to refer to objects naturally evolves) neither constitutes an analysis of the meaning of the expression which the child is thereby brought to use nor eliminates both the need and the possibility of explaining the meaning of that expression.

It may well be that

I can establish by experience that a human being (or animal) reacts to one sign as I want him to, and to another not. That e.g. a human being goes to the right at the sign '→' and goes to the left at the sign '←'; but that he does not react to the sign '◊—|' as to '←'.

(*PG* 187)

That is, it is perfectly conceivable that we can condition a subject to respond in such-and-such a way to certain words. But, be that as it may, 'An explanation of the operation of language as a psycho-physical mechanism is of no interest to us' in so far as explaining the nature of language is concerned (*PG* 70). This is because 'Such an explanation itself uses language to describe phenomena (association, memory etc); it is itself a linguistic act and stands outside the calculus; but we need an explanation which is *part of the calculus*' (*ibid.*). This takes us back to the problem raised at the end of the preceding section, where we noted that Quine is unable to account for his fundamental presupposition that a child 'is being trained by successive reinforcements and extinctions to say "red" on the *right* occasions and those only' (my italics). Quine is trying to use a psychological theory which relies on language in order to explain the nature of language, and then adopting a reductionist analysis of *language* to overcome the internal strains that this creates. The price that he pays

for this manoeuvre is, as we saw in the second section of the chapter, that he simply has no basis on which to describe 'all the assembled retinas' as being 'irradiated by substantially the same red light'.

According to classical empiricism, a sound is associated with a particular mental image or sensation. But how can I be sure that I am associating 'red' with the same mental image or sensation on each occasion? How can I be sure that I am associating 'red' with the *correct* mental image or sensation? These were questions for which empiricism had no answer. Quine's proposed way out of this sceptical dilemma is to dispense with ideation altogether. On his approach, it makes no sense to speak of associating red with the 'right' or 'wrong' mental image. Where Wittgenstein is indeed in full agreement with Quine is on the point that, in order to speak of associating 'red' with the right mental image, I must already know what 'red' means: i.e. I must already have mastered the rules for the use of 'red'. And private mental images and sensations can provide no such independent criterion of identity (which, of course, is the point of the private language argument). But far from seeing this as a basis for the type of drastic reductionist programme which Quine advocates, Wittgenstein concludes that it only makes sense to speak of *recognizing* that this is red (that it only makes sense to say 'The child and the parent must both see red when the child learns "red"' (RR 37)) when we have independent and public criteria for describing something as red.²⁷

None of this is designed to undermine the developmental question, 'How does a child acquire the ability to understand "red"?' (where, as far as Wittgenstein is concerned, the answer could be in terms of his training, or his formula, or his DNA). But Quine is looking for something entirely different; the issue that concerns him is the epistemological problem: 'How can a child ever acquire the ability to understand "red" when he can never be sure that he knows what "red" means or to what it refers?' Since, according to Quine, this sceptical problem cannot be refuted, the scientific explanation of verbal behaviour has no choice but to avoid it. But it is just this epistemological problem that Wittgenstein's argument subverts. For the certainty which we are dealing with here—the certainty that 'The word "red" means this ↗ colour'—is not inductive, but normative: i.e. the certainty which characterizes rules of grammar. Likewise, the certainty that a child knows the meaning of 'red' if he can use 'red' correctly and explain the meaning of 'red' ostensively is grounded in the rule of grammar: 'To say "The child understands the meaning of 'red"' is

to say “The child responds appropriately to the use of ‘red’, can use ‘red’ in the same way as his community, can explain ‘red’ ostensively, etc.” (as opposed to ‘*x, y, z* caused the child to react in the same way as everyone else to “red””).

Quine’s starting point is that, since meaning is a mental process, which as such must be referentially inscrutable, it follows that a child ‘breaking into language’ (like the field linguist) can never be sure what the adults around him are referring to when they use certain sounds to govern their interactions. Hence language use could never get started if it were grounded in mental induction. And Wittgenstein concurs with this criticism, given that he too wants to argue that ‘Language did not emerge from some kind of ratiocination’ (*OC* §475). But far from seeing this as the basis for excluding *meaning* and *reference* from the analysis of *language* (or excluding *intention* and *belief* from the scientific study of behaviour), Wittgenstein sees this as evidence that behaviourism succumbs to the same epistemological confusion as inspires cognitivism.

Wittgenstein brings this out into the open at §307 of the *Investigations*. The interlocutor asks: ‘Are you not really a behaviourist in disguise? Aren’t you at bottom really saying that everything except human behaviour is a fiction?’ Wittgenstein responds: ‘If I do speak of a fiction, then it is of a *grammatical* fiction.’ It is a grammatical fiction about the nature of mental processes: the ‘black box’ which behaviourism sought to bypass and cognitivism seeks to break open. Wittgenstein goes on to ask:

How does the philosophical problem about mental processes and states and about behaviourism arise?—The first step is the one that altogether escapes notice. We talk of processes and states and leave their nature undecided. Sometimes perhaps we shall know more about them—we think. But that is just what commits us to a particular way of looking at the matter. For we have a definite concept of what it means to learn to know a process better. (The decisive movement in the conjuring trick has been made, and it was the very one that we thought quite innocent.)—And now the analogy which was to make us understand our thoughts falls to pieces. So we have to deny the yet uncomprehended process in the yet unexplored medium. And now it looks as if we had denied mental processes. And naturally we don’t want to deny them.

(*PI* §308)

Nowhere is the significance of this theme for Quine's indeterminacy of translation argument more forcefully illustrated than in the very sections in the *Investigations* which are often cited as a precursor of Quine's indeterminacy argument. Wittgenstein presents us with the example of an explorer who comes into a foreign country with a language quite strange to him. He asks us to imagine that

the people in that country carried on the usual human activities; and in the course of them employed, apparently, an articulate language. If we watch their behaviour we find it intelligible, it seems 'logical'. But when we try to learn their language we find it impossible to do so. For there is no regular connexion between what they say, the sounds they make, and their actions; but still these sounds are not superfluous, for if we gag one of the people, it has the same consequences as with us; without the sounds their actions fall into confusion—as I feel like putting it.

Are we to say that these people have a language: orders, reports, and the rest?

There is not enough regularity for us to call it 'language'.

(PI §§206–7)

As Wittgenstein makes clear in numerous other places,²⁸ the point of this example is to *dissolve* the very sceptical problem on which Quine seeks to erect his reductionist programme. The question here is not, 'How could I ever be sure whether they are speaking a language (giving orders, that "p" means p, etc.) or merely producing sounds?' It is rather whether their behaviour satisfies the criteria for saying 'They are speaking a language (giving orders, that "p" means p, etc)'. That is, the question forces us to clarify the criteria that govern the application of 'speaking a language', 'giving orders', etc., and then to establish whether the behaviour of the subjects in question satisfies these criteria.

It is worth recalling here what Wittgenstein says to Waismann and Schlick in the famous 'red room' argument (see Shanker 1986). We must be careful, Wittgenstein warns, to distinguish between the psychological question of whether a man locked up all his life in a completely red room could acquire the concept of *red*, and the philosophical question of what his concept of *red* would be like. Wittgenstein explains:

Here there are two possibilities: a) Either his syntax is the same as ours: red, redder, bright red, yellowish red, etc. In this case he has our complete system of colours, b) Or his syntax is not the same. In that case he does not know a colour in our sense at all. For if a sign has the same meaning, it must also have the same syntax.

(WWK 65–6)

That is, as Wittgenstein would later phrase this: if he uses 'red' in the same way that we do (if he uses 'gavagai' in the same way that we use 'rabbit'), then the meaning of his sign must—grammatical 'must'—be the same as ours. How he may have acquired the concept of red is of no philosophical concern; but to say that he possesses the concept ? is to say that he uses '?' in the same way as we do, where this is a grammatical, not an empirical proposition.

Criterial judgements are, of course, defeasible, as the thought experiments dreamt up by philosophers to substantiate Quine's argument so amply demonstrate. But it is no less certain that the natives mean rabbit if they use 'gavagai' in the same way as we use 'rabbit' as that $2+2=4$. Should an anomaly in their behaviour arise at some future point, we would have to assess whether the natives did not in fact mean rabbit when they uttered 'gavagai', or whether they had started to use 'gavagai' in a different manner from before, or whether their concept of *rabbit* only partially overlapped with ours (for example, suppose that they treat rabbits and hares as different species, or that they have no words to distinguish between rabbits, hares and groundhogs: all are simply 'gavagai'). The important point in all this is simply that the statement "Gavagai" means "rabbit" is neither a hypothesis nor an inference about mental events. It is itself a rule of grammar which the field linguist cites to explain the meaning of 'gavagai'. In effect, the field linguist justifies this rule on the grounds that the natives' use of 'gavagai' satisfies our criteria for 'rabbit'. Hence, Quine was quite right to extend the case of radical translation to ordinary ostensive explanations: not because both are descriptions of a referentially inscrutable realm, but because 'an explanation of meaning is not an empirical proposition and not a causal explanation, but a rule, a convention' (PG 68).

If we return now to Hookway's point (see p. 226 above) we can see that, although it was never intended as such, the indeterminacy argument is indeed a *reductio*, where the premisses to be rejected are Quine's Cartesian conception of the epistemic privacy of

concepts and ideas, and the Cartesian 'telementational' conception of language. We have already seen in the second section of the chapter how it is his desire to 'bypass the idea and home on the object' which underpins Quine's view of language as 'the complex of present dispositions to verbal behavior, in which speakers of the same language have perforce come to resemble one another'. But behaviour (verbal and otherwise) is a *criterion for*, not *evidence of*, what a subject is thinking, feeling, intending, etc. What this means, as far as 'referential inscrutability' is concerned, is that the judgement that a subject understands, or means, or is referring to such-and-such, is criterial, not inductive. It is in order to wean us from the epistemological picture underlying the indeterminacy argument that Wittgenstein lays so much stress on the theme that the relation between thought and language is *internal*, not *external*. Picking out red things or explaining the meaning of 'red' by pointing to a red sample is a *criterion* for saying that a child understands the meaning of 'red', not evidence of what is going on in the child's mind when he utters 'red'.

Whatever the behaviourist overtones of Wittgenstein's remarks on *training* in the *Blue and Brown Books*, and perhaps in the early sections of the *Investigations*, his point is that we do indeed *teach* a child important aspects of a language. The child is neither a passive organism which we condition to react in such-and-such a way to various stimuli nor some sort of proto-scientist observing the events going on around him and performing experiments on his environment and then recording the results. We teach a child how to use words (how words *ought* to be used), and we teach a child how to speak about language (for example how to explain what words mean or to what they refer). By no means is this meant to exclude the importance of observation and imitation from the explanation of language learning; it is rather meant to highlight the fact that linguistic behaviour is *essentially normative and essentially reflexive*. To become a competent member of a linguistic community a child must not only learn how to use words correctly, but must also learn how to speak about language use.²⁹ But then, what of Chomsky's objection that the basic problem with Wittgenstein's argument, no less than with Quine's, is that 'In both cases, we find a restriction of attention to behavior, a studied refusal to examine and elaborate the mental structures that underlie observed performance'³⁰? We shall only have truly laid the behaviourist misreading of the *Investigations* to rest when we have dealt with this charge.

CONSTRAINT THEORY

Any behaviorist account of the learning process is openly and emphatically committed to innate beginnings. The behaviorist recognizes the indispensability, for any kind of learning, of prior biases and affinities.

(PPLT)

Despite his unwavering faith in a behaviourist account of language learning, Quine presents a picture of thought that has a great deal in common with cognitivism. Or at least, so constraint theorists have assumed. And not, as we saw at the end of the second section of the chapter, without some reason. After all, it was Quine who insisted, in 'Philosophical Progress in Language Theory', that 'Our mental life settles into an inferential status' (PPLT 4). And in his 'Reply to Chomsky', Quine added 'an explicit word of welcome toward any innate mechanisms of language aptitude, however elaborate, that Chomsky can make intelligible and plausible'. For 'There could be no induction, no habit formation, no conditioning, without prior dispositions on the subject's part to treat one stimulation as more nearly similar to a second than to a third' (DH 306).

All constraint theory proposes to do is investigate the 'prior biases and affinities' mentioned in the above epigraph. The very fact that constraint theory should cite the indeterminacy argument as one of its key sources of inspiration is thus doubly enlightening: it sheds light on the picture of the mental which underpins Quine's sceptical argument and shapes his consequent analysis of language and language learning; and it highlights the continuity between pre- and post-computational mechanism (between behaviourism and AI). In *The Roots of Reference*, Quine describes how the epistemological framework that underpins his account of verbal behaviour is that which gave rise to experimental psychology. But AI, thanks to Turing, is also a product of that framework.³¹ Thus, if nothing else, constraint theory has forced us to reassess our attitudes towards the great Quine-Chomsky debate of the early 1970s.

To be sure, it puts a very different slant on the indeterminacy argument when the radical translator is viewed as a pre-linguistic child who, instead of merely responding, is trying to *make sense* out of the events going on around him. Thus, constraint theory is formulated entirely in the mentalist vocabulary which Quine forswears. But it is essential that we keep in mind the mechanist gloss which cognitivism seeks to impose on these mentalist terms.³²

In his 'Reply to Chomsky', Quine stressed that 'Innate mechanism, after all, is the heart and sinew of behavior' (DH 307). In essence, constraint theory represents the attempt to disclose the 'innate mechanisms' which shape a child's 'quality spaces' using the very methods that Quine spelt out in *Word and Object*.

Constraint theory sets out to establish how a child maps words onto the concepts he has formed. But, the constraint theorist insists, we can never be certain what the concept is onto which the child has mapped a word, or what the common features are which he has abstracted from a group of exemplars, or how a child has organized his concepts. For example, a child who has pointed to oaks, pines and maples as examples of 'trees' one day calls a telephone pole a 'tree'. Do we conclude that he has suddenly made a mistake, or that his concept was not what we inferred? Indeed, are our own concepts any less a mystery than those formed by children? Doesn't Quine's radical translation argument apply just as forcefully to ourselves as to other agents? For we certainly don't have privileged access to our brain's operations. Do we infer from our own behaviour and the kind of judgements that we make what concepts our brain has formed?

Constraint theory thus lands us with the same sorts of sceptical problems as Quine's account of *language* and *cognition*: for a very good reason. Neither constraint theorists nor Quine see these questions as *reductios*, forcing us to reconsider the picture of thought and its relation to language whence they flow. Rather, they see them as proof of the complexity of the problems with which they are grappling. The main theme in Quine's picture of thought is that, because ideas are intangible products of the human mind, they cannot be measured or observed directly. So too, cognitivism is based on the premiss that 'Concepts are fundamentally private, cognitive phenomena.' Yet 'they of course can be and are externalized as social objects, and agreement can often be reached as to what their exact, "correct" meaning should be'. But 'Knowing that a given concept, as a public entity, has certain attributes does not tell me what it means to you, how you represent it to yourself, how and under what conditions you can access and utilize it.' Hence 'Just as concepts differ among themselves, so also do individuals differ in the way they apprehend, use, and otherwise "relate to" any given concept.' 'The concept has one more or less definite meaning and individuals have various different approximations of that meaning.'³³ For example, their category may be narrower or broader

than the standard interpretation; or it may differ for individuals according to contexts.

According to cognitivism, communication is by no means an exact phenomenon, but we more or less succeed in knowing what each other is thinking: at least to the point that linguistic interaction is possible. And as scientists, we can only infer the idea which an agent has, or the concept which she possesses, from the behaviour which she manifests. 'To elicit these overt behaviors, we introduce our subjects to events or problems of one kind or another' and then base our hypotheses on such things as 'reaction times, object labelling, classification, or typicality judgments'.³⁴ But these hypotheses can *always* be overturned. Thus, no matter how stringent our tests, we can 'never be certain whether and how the effects we obtain and the behaviors we observe are related to the ever-intangible underlying cognitive processes and mental representations'.³⁵ So speaks the voice of the radical translator.

Little wonder that, with the kind of problems which this theory poses for the psychologist, and the kind of tasks which it assigns to the pre-conscious mind, Quine should have chosen to remain faithful to his behaviourist approach. But what if we should respond to this picture in the same way as to that which guided Quine: i.e. if we should neither seek to overcome the scepticism on which these theories are built nor try to bypass it but instead, treat the relation between thought and language as *internal*, not *external*. That is, if we should see language as used to *express*, not to encode and decode thoughts, and see the child learning how to speak as learning how to participate in language-games, and thereby acquiring concepts. Concepts, we might say, are neither private nor public phenomena. Rather, we use 'concept' to attribute certain abilities to an agent, and not as a referring term: i.e. as the name neither of a mental representation nor of the rules encoded in social practices. What we see in the world are tables and lamps and chairs, and human beings acting in ways which we take to satisfy the criteria for describing their behaviour in psychological terms: not objects or events which we infer are members of classes whose criterial attributes we have previously abstracted and recorded.

The crux of Wittgenstein's argument presented in the preceding section is that the manner in which S uses ' ϕ ' and responds to our uses of ' ϕ ' satisfies the criteria for saying 'S possesses the concept ϕ ', and also the criterion for how we describe what S understands by ' ϕ '. The major question which Quine's indeterminacy thesis and constraint

theory both raise is whether we infer the nature of the concept which a child possesses from the behaviour which he manifests, or whether the child's behaviour furnishes us with the criteria that justify us in saying that or what the child understands. That is, instead of treating the statement 'S possesses the concept ϕ ' as a hypothesis that a representation has formed in S's mind (as a result of an abstraction and generalization process), we might see it as grounded in the rules governing the application of ' ϕ '. For we should not misconstrue the *justificational criteria* for describing S as possessing the concept ϕ as *inductive evidence* for the concept he (his mind) has acquired. The use of 'S possesses the concept ϕ ' in both primitive contexts and in the increasingly more advanced contexts involved in language use is determined—grammatically determined—by these criteria. They are the background—the 'form of representation'—against which any conjectures about a child's or an animal's ability to acquire and apply certain concepts can be formulated.

The 'charm' of the indeterminacy argument—whether in Quine's hands, or in those of the constraint theorist—would thus appear to be that of any *reductio* whose major premiss we simply take for granted. But what is perhaps most intriguing about the indeterminacy argument is simply its resilience. As Taylor shows us in *Mutual Misunderstanding*, different versions of the argument keep cropping up, generation after generation, in the most disparate of fields. Anthropology, sociology, linguistics, literary theory, philosophy: each has been drawn into finding a way out of the dilemma in which the indeterminacy argument seems to land us. Cognitivism is merely the latest science to fall victim to this 'charm': for reasons which lie at the very heart of Quine's epistemological framework. But perhaps that is where the real importance of Quine's writings on radical translation lie: not in the sceptical problems that they confront us with, but in forcing us to locate the source of these sceptical problems. Here one is reminded of what Wittgenstein once said of Gödel: perhaps Quine's greatest service to the philosophy of psychology has been to highlight the pressing need to extirpate Cartesianism in all its many guises from the foundations of psychology.

NOTES

* I am deeply indebted to Talbot J. Taylor in this chapter, in more ways than I can begin to recount. In fact, I see this chapter as an exercise in the type of investigation which Taylor portrays in *Mutual*

Misunderstanding (Routledge, London, 1992). As such, it is my hope that this chapter might serve as a useful prolegomenon to Taylor's book.

- 1 See Ellen Markman, *Categorization and Naming in Children* (MIT Press, Cambridge, Mass., 1989).
- 2 *Ibid.*, p. 7.
- 3 'Some Empirical Assumptions in Modern Philosophy of Language', in *Philosophy, Science, and Method: Essays in Honour of Ernest Nagel*, ed. Sydney Margenbaum, P. Suppes and M. White (St Martin's Press, London, 1969), p. 274.
- 4 *Ibid.*, p. 281.
- 5 'If there really is no fact of the matter [determining what a speaker is referring to], then the inscrutability of reference can be brought even closer to home than the neighbor's case; we can apply it to ourselves' (*ibid.*, p. 47).
- 6 See R. Kirk, *Translation Determined* (Clarendon Press, Oxford, 1986), pp. 9–10, 75; T. Taylor, 'The Anthropomorphic and the Sceptical', *Language and Communication*, 14 (1994).
- 7 An important point to bear in mind is that Russell had defined the meaning of a sentence as the proposition which is common to two sentences that are translations of each other.
- 8 Attempts to come up with 'alleged instances' of radical translation misrepresent this point. Quine is confronting us with a philosophical, not an empirical, problem about the nature of *language*. In 'Philosophical Progress in Language Theory' he refers to 'the *Gedankenexperiment* of radical translation' (PPLT 8). His argument is supposed to apply just as forcefully to our own language as to Cretan or Japanese. Thus he tells us in *The Roots of Reference*:

I spoke of translation from the foreigner's language just in order to make one point clear: to show that reference involves more than the simple ability to acknowledge a presence. I showed this by pointing out that a word adequate to acknowledging red episodes could be drawn from any of various referential roles; and I needed the foreign setting so as to keep the question of reference open. Now that this point is made, I can forget about foreign languages and translation.

(83)

- 9 As he made clear in his reply to Chomsky, Quine has no problem with the notion of innate ideas, provided this is interpreted in terms of innate dispositions to overt behaviour (see DH and the epigraph to on p. 245). For to say that a subject is innately disposed to respond, for example, to colours is not to say that she has an innate knowledge of colours.
- 10 An argument which Quine attributes to Dewey (see *ORE* 47; PPLT 5).
- 11 Quine's argument exemplifies Taylor's point about how an anti-realist notion of communicational success automatically raises what Taylor calls the 'How problem of social order': i.e. 'if shared ideas are not the source of linguistic regularity, then How does successful verbal

- interaction occur?' The answer *must* be that we are physically caused to conform (see Taylor, *Mutual Misunderstanding*, op. cit., pp. 186–7).
- 12 In *The Time of My Life* Quine reports that 'It has been wrongly assumed that I imbibed my behaviorism from Fred; I lately learned from his autobiography that in fact my exposure to John B. Watson slightly antedated his. It was particularly in language theory, rather, that Fred opened doors for me' (110). In fact, Quine's debt to *Verbal Behavior* is explicitly recorded in *Word and Object* (82). For one of his strongest statements on the subject, see PPLT.
 - 13 See N.Chomsky, 'Review of *Verbal Behavior*', *Language*, 35 (1959), 29f.
 - 14 See B.F.Skinner, *Verbal Behavior* (Appleton-Century-Crofts, New York, 1957).
 - 15 There is an interesting debate over whether the indeterminacy thesis is epistemological or ontological: whether Quine is arguing that translation is under-determined by the evidence, or whether he is saying that translation is not determined by facts about stimulus meaning; cf. Kirk, op. cit., and C.Hookway, *Quine* (Stanford University Press, Stanford, 1988). On the present reading he is saying both, which entails a reformulation of what we understand by *correct translation*.
 - 16 Cf. what Quine says about indeterminacy of translation in 'Philosophical Progress in Language Theory': 'What I am calling indeterminacy of translation... is indeterminacy in principle and in the face of all possible data; indeterminacy relative to the totality of behavioral dispositions'
 - 17 J.Wallman, *Aping Language* (Cambridge University Press, Cambridge, 1992)
 - 18 In so far as he will regard this as an 'experiential issue', Quine will see this as perfectly conceivable. Indeed, Quine often resorts, when trying to illustrate the indeterminacy of translation argument, to the example of 'a prelogical culture, where self-contradictions are knowingly accepted as true' (PPLT 15). Here, one should like to say, we have a 'hitherto unknown kind of insanity', but Quine has never said what this 'insanity' would really be like (see S.Shanker, 'Descartes' Legacy: The Mechanist/Vitalist Debates', in *The Philosophy of Science, Logic and Mathematics in the 20th Century*, Vol. IX of *The Routledge History of Philosophy*, ed. G.H.R. Parkinson and S.G.Shanker (Routledge, London, forthcoming).
 - 19 Chomsky, 'Empirical Assumptions', op. cit.
 - 20 Hookway, op. cit., p. 144.
 - 21 And for those philosophers who share Kripke's view that there is a fundamental sceptical affinity between Wittgenstein's remarks on rule following and the indeterminacy of translation argument (see S.Kripke, *Wittgenstein on Rules and Private Languages* (Blackwell, Oxford), pp. 55f.). Quine himself would belong to this group. Certainly, at the time he wrote *Word and Object*, he doesn't appear to have thought that there was any conflict between his own and Wittgenstein's views on *meaning* (WO 76–7, 77, n. 2; see PPLT 6).
 - 22 It is worth noting that earlier drafts of the *Investigations* began with a discussion of the nature of understanding before 'Augustine's

- conception of language' was introduced. Beginning the book in this fashion, with the quotation from Augustine's *Confessions*, makes Wittgenstein's intentions exceedingly obscure.
- 23 See Shanker, 'In Search of Bruner', 'Locating Bruner' and 'Ape Language in a New Light', all in *Language and Communication*, 12–14 (1992–94).
 - 24 See R.Gregory, 'In Defence of Artificial Intelligence—A Reply to John Searle', in C.Blakemore and S.Greenfield (eds), *Mindwaves* (Blackwell, Oxford, 1987) and S.Savage-Rumbaugh, *Ape Language* (Columbia University Press, New York, 1986) and S.Savage-Rumbaugh *et al.*, 'Language Comprehension in Ape and Child', monograph of the Society for Research in Child Development, 58 (1993).
 - 25 See Shanker, 'Ape Language in a New Light', *op. cit.*; cf. Thomas, *Hidden Life of Dogs* (Houghton Mifflin Co., Boston, 1993).
 - 26 Hence, as far as the problem of 'linguistic creativity' is concerned, looking at language learning helps us to clarify that it is an essential feature of the concept of *language* that 'I'm now able to construct a new language, for instance to invent words.—So this construction too belongs to the concept of language.... That's also what I meant when I said "there are surprises in reality but not in grammar".' The creation of a new language-game does not "broaden" (alter) the concept of language' (PG 115).
 - 27 See Shanker, 'Ape Language in a New Light', *op. cit.*
 - 28 G.P.Baker and P.M.S.Hacker, *Wittgenstein: Rules, Grammar and Necessity, Volume 2 of an Analytical Commentary on the Philosophical Investigations* (Blackwell, Oxford, 1985), pp. 188ff.
 - 29 Taylor, *Mutual Misunderstanding*, *op. cit.*, 'The Anthropomorphic and the Sceptical', *op. cit.*
 - 30 Chomsky, 'Some Empirical Assumptions in Modern Philosophy of Language', p. 281.
 - 31 See Shanker, 'Descartes' Legacy', *op. cit.*
 - 32 *Ibid.*
 - 33 J.Flavell, 'Concept Development', in *Carmichael's Manual of Child Development*, Vol. 1 (Wiley, New York, 1970). pp. 986–7.
 - 34 S.R.Waxman, 'Contemporary Approaches to Concept Development', *Cognitive Development*, 6 (1990). p. 109.
 - 35 *Ibid.*

POST-QUINEAN PHILOSOPHICAL INVESTIGATIONS

John F. Post

INTRODUCTION

Science is the great shibboleth, some think, as perhaps when Quine's empiricism yields no first philosophy higher than science, indeed none other than science about science. Others think that science is the great Satan, many of them under the influence of Wittgenstein's repeatedly distancing philosophy from science, putting philosophy first, on the ground that it checks the tools which science merely uses. 'Philosophy first' trumps 'No first philosophy'.

Of course, the two extremes are simplistic, whether or not Quine and Wittgenstein hold them, prompting still other philosophers to develop more judicious accounts of the troubled relations between science and philosophy. But whatever your account, the contrast between Quine and Wittgenstein on the role of science in philosophy remains highly instructive, as we shall see, especially with regard to their views on language, meaning and the relations between language and the world.

Highly instructive and deeply ironic. Quine regards all philosophy as subject to contradiction by science, a fate he is fond of attributing to views alien to his own. Yet an updated science, or at least an updated understanding of science—biological science in particular—conflicts with Quine's own ideas about language, rendering them obsolescent at best. Philosophical investigations after Quine need also to be investigations in the light of science after Quine, and the results can be startling. They undermine the account of meaning and reference that he derives from earlier science, or at least from an earlier understanding of science. And they undercut Wittgenstein's contrary belief that philosophy—especially philosophy of language—

has nothing fundamental to learn from the kinds of generalization, explanation and theory which science seeks. Wittgenstein believes that philosophers need but describe how our linguistic devices actually work in our lives; describe the familiar in the right way, ‘arranging what we’ve always known’, and we shall understand our language. Yet this Wittgensteinian armchair linguistic phenomenology—this ‘steadfast laymanship’, in Quine’s phrase (*WO* 261)—proves misleading. When we examine language in the light of an updated understanding of a supple biology, a number of questions that Wittgenstein thought we should not ask prove not only intelligible but answerable. Possibly Wittgenstein is right that ‘Darwin’s theory has no more to do with philosophy than any other hypothesis in natural science’ (*TLP* 4.1122), but only if we add, ‘And *no less*’.

The lessons to be derived from an updated understanding of biological science are not all negative. A positive account of the relations between language and the world will emerge by the end of the chapter. The account is largely Millikan’s,¹ recast so as to bear more specifically on Quine and Wittgenstein and to meet objections which they or their epigones might raise. Though indebted to biological science, the account is far from scientific. Among other things it is not eliminativist, reductivist, individualist, essentialist, or totalizing or monopolistic; nor is it foundationalist, Platonic, or committed either to a ‘metaphysics of presence’ or to the mentalism which Quine and Wittgenstein both abjure.² And so far from disparaging normativity—including the normativity involved in rule following, meaning and more—it accords normativity a vital objective role in the world as well as in us and our language. There may be no first philosophy higher than science, but it does not follow that a naturalized philosophy of language must either eliminate normativity or subjectivize it.

Some philosophers cherish stereotypes of science so misleading that much of what I’ve been saying will strike them as preposterous. Even Quine indulges a stereotype, viewing all science through lenses that filter out much of biology—not molecular biology or any other possibly reductive subdiscipline, but the biology of historically evolved living organisms in relation to their normal environments and to each other. The key concept for such biology is ‘teleofunction’—what an organ, device or behaviour is *supposed* to do, its proper function, purpose, *telos* or ‘final cause’. *Final Cause?* Quine himself deems talk of final cause respectable, Darwin having ‘reduc[ed] final cause in biology to efficient cause through his theory

of natural selection' (*PTb* 75). True, 'reduction' may be too strong a word for the relation between a teleofunction and the efficient causes in virtue of which an item has it.³ But what counts is the legitimacy, even by Quine's lights, of the notion of the teleofunction of an organ, device or behaviour. Let us pursue this thread, first in relation to Quine (second and third sections), pausing to address various objections (fourth and fifth sections), then in relation to Wittgenstein (fifth and sixth sections). The result is a realist account of the relations between language and the world which accommodates what remains of value in Quine and Wittgenstein while avoiding the rest.

QUINE AND TELEOFUNCTION

Quine does not say how Darwin 'reduced' final cause or teleofunction to efficient cause by natural-selective means. Presumably the idea is something like this: assume that the teleofunction of the heart is to pump blood (which does not exclude its having other functions as well, just not as 'central'); to be a heart is to be supposed to pump blood. What determines that this is the function of the heart? According to a leading theory of the matter, the function is to pump blood because it was by pumping blood that past hearts (or enough of them) enabled containing organisms to survive and reproduce at rates higher than those without them, this prior successful performance thereby enabling the production of today's hearts. The trait selected for was one responsible for a mechanism or muscle that pumps, and your heart has the teleofunction in particular of being supposed to pump blood in virtue of being a descendant in a 'reproductively established family' of items in which a critical proportion of ancestors performed that function, your heart having been produced in significant part because often enough they did. The proportion of ancestor devices that performed successfully can sometimes be tiny; in this sense the devices can be quite unreliable yet contribute just enough to enable survival and reproduction. Hardly any of the seeds of the wild fig in its jungle habitat manage to start new trees; the seeds are nearly all consumed by animals or insects or meet with some other mishap. None the less, they have the function of starting new trees.⁴

Note that this account of teleofunction is not an *analysis* of a term, which Quine would reject in so far as it involves a synonymy claim (*WO* 258–9).⁵ It is a biological *theory*, a theory of what teleofunction is. The account is natural-selective, places

teleofunction firmly in the causal order, and enables biologists to use the notion in their work, as they have all along, but with a clear conscience. Thus it should be congenial to Quine, as indeed his remark about Darwin's natural-selective 'reduction' of final cause suggests. In any event, it is congenial to his empiricism, there being sufficient 'intersubjective checkpoints', as he puts it, for hypotheses about what traits are selected for and which of their effects represent teleofunctions of an organ, device or behaviour (though of course there will be, as in all science, some 'empirical slack', as he says, between evidence and hypothesis). And it is congenial to his physicalism, since the matter of what traits are selected for, and which of their effects represent teleofunctions, is determined ultimately by affairs at the level of physics.⁶

Unfortunately, Quine also espouses a principle that conflicts with this natural-selective theory of teleofunction. The principle is, 'Nothing happens in the world...without some redistribution of microphysical states', or in slogan form, 'No difference without a microphysical difference' (*GW* 25).⁷ What he means by this no-difference principle is that there can be no difference between two objects that is not traceable to some difference, however undetectable, in the physical states of *those self-same objects*. That is, a thing's traits all supervene on *its own* physical traits. For example, 'one's understanding of language, one's dispositions to respond, indeed one's very thoughts, cannot differ from one moment to another without some difference, however undetectable, in the states of one's physical organism' (*RTC* 75). This is a fundamental reason why, in translation, 'all the objective data [the field linguist] has to go on are the forces that he sees impinging on the native's surfaces and the observable behavior, vocal and otherwise, of the native' (*WO* 28).

The trouble is this. Suppose that by some cosmic accident a collection of molecules hitherto in random motion were to coalesce to form an exact physical duplicate of your heart, the same down to the last microparticle. Or imagine the duplicate achieved by some prodigious feat of technology (beam me up my heart-copy, Scotty). Because the history of the duplicate is wrong—it is not a descendant, not in the family—it would not *be* a heart (it would not be a member of the biological kind 'heart'), even though it would of course have the same physical states, powers and dispositions as your heart. What determines whether an object is a member of the biological kind 'heart' is the natural-selective historical matter of whether the

object is a descendant in a reproductively established family of objects in which a critical proportion of ancestors pumped blood. It is not determined by the microphysical states of the object alone, or by the physical structure or dispositions of the particles that compose the object, but only by these together with the relevant natural-selective history.⁸ It follows not only that there can be a difference between two objects that is not traceable to some difference in the physical states of those self-same objects. It follows also that if your physicalism entails the contrary, as does Quine's no-difference principle, it entails further that there are no hearts, since to be a heart is to have the teleofunction of pumping blood, which is determined not by morphology or a mechanism but by physical affairs in a natural-selective history.

The problem is fundamental, recurring all the way down to the molecular level. Certain sequences of amino-acid molecules, called signal sequences, have the function of acting as precursors to certain proteins and mediating where they go when fully synthesized—some to the mitochondria, some to the plasma membrane, some to the chloroplasts, and so on.⁹ The trait of being a signal sequence is a teleofunction trait, a matter of what the sequences of amino-acid molecules are *supposed* to do but may fail to do, depending in part on what is happening elsewhere in the cell. Whether a sequence of molecules is a signal sequence is not determined by the physical structure or dispositions of the particles that compose the sequence, but only by these together with the relevant natural-selective history.

Quine's no-difference principle therefore entails not only that there are no hearts, but that there are no signal sequences, indeed no other such sub-cellular affairs, and ultimately no cells. This reduces the principle to absurdity, one would think, and so too for any argument that depends on it, including his argument that there is no fact of the matter as regards reference, meaning and translation.

No-difference physicalists have potential replies to all this, of course, Quine included. The most obvious reply, short of biting the bullet and eliminating teleofunctions, is to go relational: what determines a thing's non-physical traits is its own physical traits *and relations*.¹⁰ What makes something a heart, what makes something a signal sequence, is not its intrinsic traits alone, but these together with its physical relations, including the temporal relations involved in being a descendant in a reproductively established family. No problem. Further, if your physicalism is reductive, you need require only that a thing's non-physical traits

be equivalent to some compound of its physical traits and relations (provided that the compound in turn is a genuine trait). And if your physicalism is eliminative, you too can be more tolerant: amputate only what cannot be reduced to a thing's physical traits and relations, which allows you to include the historical, the holistic and the ecological. True, these physicalisms remain *individualist*—not, of course, in the sense that a thing's non-physical traits are determined by its own intrinsic or non-relational physical traits (call this 'non-relational individualism'), but in the sense that they are determined by its own physical traits and relations (call this '*relational individualism*'). Still, this relational individualism seems harmless, allowing as it does for the historical and the holistic.¹¹

Or so I too once thought. Alas, the empirical evidence might not cooperate. There might be naturally occurring phenomena in which a non-physical trait of an item *x* is determined not by *x*'s own physical traits and relations, but only by these together with the physical traits of some *y* that bears no physical relation to *x* that does any work in determining *x*'s non-physical traits. Are there such cases?

Among the teleofunctions a device or behaviour may have is that of being supposed to map onto some affair in the world. A certain honey-bee dance, for example, may be supposed to map onto nectar that lies in a specific direction-and-distance, and the bits of nectar and pollen that adhere to the dancing forager bees have as one of their functions to tell other bees about the kind of nectar—say peach-blossom.¹² Thus an aspect of the dance complex—the complex consisting of the dance plus adhering substances—is supposed to map onto the affair of the nectar's being peach-blossom. It does so map if and only if the nectar is peach-blossom.

Now assume that one of the bees is ill with pesticide poisoning. As a result she visits peach blossoms west of the hive, returns with peach-blossom nectar adhering, but tokens a dance for a location to the east. Assume further that peach-blossom nectar happens to exist at this location to the east, so that the dance complex does map onto this nectar's being peach-blossom;¹³ but the location to the east is a mile down wind on the far side of a high hill where no bee from this hive has actually been, and indeed not only is there no physical relation between nectar and hive that relevantly affects the bees, but there is none that does any work in determining that the complex maps onto this nectar's being peach-blossom.¹⁴

In this kind of case, the dance complex's non-physical trait of actually mapping onto the nectar's being peach-blossom is determined not by

the complex's own physical traits and relations (its temporal relations to ancestor complexes included), but only by these together with the nectar's being peach-blossom (or together with the physical traits of the nectar that make it peach-blossom). Two complexes can be the same as regards their physical traits and relations, yet not the same as regards all their non-physical traits. Supervenience even in this relational individualist sense therefore fails, and with it even the more tolerant versions of reductivism and eliminativism. Causal-role functionalist accounts are likewise in deep trouble. For according to them, the non-physical trait of mapping onto the nectar's being peach-blossom would have to be a matter solely of the complex's bearing appropriate causal relations to input, output and internal states of the bee.

It looks as though Quine's physicalism, and many others, will require revision if they are to avoid individualist presuppositions contradicted by natural phenomena in which a non-physical trait N of an individual x is determined not by x 's own physical traits and relations, but only by these together with the physical traits of some y that bears no physical relation to x that does any work in determining whether x has N . The simplest revision is to replace principles like Quine's no-difference principle with a physical determination principle to the effect that x 's traits are determined by physical conditions, just not always physical conditions that amount to physical traits or relations only of x .¹⁵

INDETERMINACY AND TELEOFUNCTION

Quine might concede the need for some such non-individualist notion of physical determination, yet object to how it was used above. It was used to assert that the bee-dance complex's mapping onto nectar is determined ultimately by physical affairs—by a natural-selective history combined with the physical traits of the nectar that make it peach-blossom. But what, if anything, warrants assuming that the complex maps onto *nectar*, rather than an undetached nectar part, a nectar stage, or part of the nectar fusion? Isn't this to assume the very determinacy Quine rejects?

No. Quine's argument for indeterminacy of reference (or inscrutability, as he calls it) is above all an argument to the effect that reference is not determined by affairs for which there are sufficient empirical checkpoints, and in particular not by affairs at the level of natural science; so too for translation and meaning. Hold all the natural-scientific truths constant, he says; even all this

truth will not fix reference. It follows that Quine cannot object to our provisionally holding the natural science constant, in the sense among others of provisionally supposing that its terms refer determinately to their manifest subject matter—the term ‘molecule’, say, to the molecule, not an undetached molecule part, and ‘nectar’ to nectar, not a part of the nectar fusion. The natural science may be taken provisionally at face value.

Or turn the matter this way. When Quine says that there is no first philosophy, what he means, among other things, is that we must take physics and the other natural sciences at face value, not imposing on them any foundationalist or other armchair philosophical scruple. If our current best natural-scientific theories offer explanations in terms of X’s, then X’s there are, so far as we can tell, and it is by reference to X’s that the target phenomena are to be explained (subject to revision, of course, in the light of further experience). In this spirit Quine’s argument for indeterminacy of reference accords the natural sciences a privilege not granted to semantics and intentional psychology. The truths, explanations and vocabularies-cum-interpretation of natural science are taken provisionally at face value; not so those of intentional psychology. The question of whether there is a fact of the matter about reference is expressly the question of whether the alleged reference is determined by the natural-scientific truths so taken. Quine then argues, via the gavatani and other scenarios, that the reference is not thus determined.

Of course, once the indeterminacy is established, according to Quine, we see that the terms even of natural science are implicated; they too suffer indeterminate reference. But his argument for the indeterminacy gets off the ground only by according natural-scientific explanations the sort of privilege sketched above. His argument is always only that relative to natural science taken at face value, reference is not determinate—not fixed by the truths of natural science. Further, the natural-scientific truths and explanations expressly retain this privilege, in practice, even when Quine is driven to conclude that their own terms are subject to the indeterminacy. That is, we are to continue to use our current best natural-scientific explanations and their terms as though they do refer determinately to their face-value referents, knowing all the while that strictly they do not. All I am adding is that this includes the terms of biological natural science, such as ‘nectar’ and ‘teleofunction’.

Clearly, Quine’s challenge to defenders of determinacy has always been to explain how, given our best natural-scientific

descriptions taken at face value, reference could be fixed by the phenomena they describe. Suppose we take up the challenge, then meet it, following Millikan, first by showing that Quine has overlooked a fundamental way in which such phenomena can determine reference, then by explaining how they not only can but do. Quine would be cheating if he replied by shifting his ground, saying that we are not to take the natural-scientific terms at face value after all, not even provisionally, so that 'nectar' need not refer to nectar. To shift ground this way would beg the question of whether reference is determinate, in so far as the shift would assume, prior to successful defence of his argument for indeterminacy, that the reference of terms like 'nectar' is indeterminate as between nectar, part of the nectar fusion, and so on.

Still, one wonders what so graces the biologist's use of the terms 'nectar' and 'teleofunction' that they escape Quinean and other scepticism about the semanticist's use of 'refers', especially when the biologist talks of the bee-dance complex's function of *mapping* onto nectar. The answer lies in how biologists go about explaining the behaviours of historically evolved living organisms in relation to their normal environments and each other. The explanations are in terms of actual causal processes and the causal significance of various factors in those processes, all subject to intersubjective checkpoints. Thus suppose we want to understand the causal role of bee dances in the life of the hive, which role, biologists conjecture, contributed to the evolutionary success of the bees. Careful observation and experiment reveal that dance-complex variations map onto specific combinations of direction, distance, kind and quantity of nectar, the mapping being a necessary causal factor in the waiting bees' being both stimulated to seek and enabled to find the nectar (or to seek and find this nectar rather than some lower in quality or quantity). This in turn provides significant support for the hypothesis that past dance complexes which did map were selected for (or rather that the mechanisms which produced them in appropriate conditions, often enough, were selected for, or at least the genotypes responsible for those mechanisms). Granted the hypothesis, and given the natural-selective theory of teleofunction, one of the teleofunctions of the complexes is to map onto direction, distance, kind and quantity of nectar.

Of course, someone could conceivably recast this whole natural-selective causal story in terms, say, of parts of the nectar fusion, or whatever. But there is no a priori guarantee that this could be done

so as to produce an empirically equivalent account, contrary to Quine and conventional wisdom, and substantial reason to think that it could not. Even if it could, it would not follow that the empirically equivalent theories are under-determined by the evidence. Instead, ‘one of a number of empirically equivalent theories may be uniquely preferable on evidentially probative grounds’.¹⁶ The conventional view to the contrary is based on a dubious way of construing theories, via formal semantics, rather than on the actual epistemic and methodological situation in science. Once again Quine’s view seems driven by an outdated understanding of science. Biologists would condemn any revision of their story in terms of parts of the nectar fusion, on the ground that the revision would introduce gratuitous complexity that does no work in explaining the causal role of the bee-dance complexes in the life of the hive, or in the survival and proliferation of *Apis mellifera*.

OBJECTIONS TO TELEOFUNCTION

Quine may be forced to bite the bullet and deny that a feature of the bee-dance complex maps determinately onto nectar. The mapping, after all, together with the feature’s being supposed to map, would be a naturally occurring phenomenon that looks a lot like reference. It would involve not only a mapping from a bit of signing behaviour to an affair in the world, but a kind of aboutness or intentionality. For traditionally, the intentional is what is *supposed* to stand in relation to something else—to that which it *intends* or *means* or is *about* or is *meant* to do—even if that something else does not exist or never happens. Thus ‘in the broadest possible sense of “intentionality”, any device with a [teleofunction] might be said to display “intentionality”’.¹⁷ The bee-dance complex displays intentionality in a narrower sense, its intentionality being a species of the broader variety. An aspect of the dance, in virtue of a natural-selective history, has the teleofunction of being supposed to stand in relation to something else—say to peach-blossom nectar at a certain location—even if somehow the nectar happens not to be peach-blossom or to exist there. The same can be said of indefinitely many other signing behaviours—say the call which vervet monkeys use for eagles, their call for cobras, and so on.

True, these signing behaviours, systematic and articulate though some may be, are a long way from language. But it is hardly a new thought that human abilities all have ample anticipations in the pre-

human. Why not language, and in particular how aspects of it seem to be determinately about or map onto affairs in the world? Quine must stop this entering wedge from biology if he is to preserve his characteristic ideas about language—not at all easy to do for someone who accords the natural sciences, biology included, a privilege not granted to semantics and intentional psychology, and who insists that

knowledge, mind, and meaning are part of the same world that they have to do with, and that they are to be studied in the same empirical spirit that animates natural science. There is no place for a prior philosophy.

(ORE 26)

Quinean objections

One way to stop the entering wedge, or try, we've already met. This is to insist, in line with the no-difference principle, that the teleofunction of an item x —say x 's being supposed to map onto nectar—must, like all genuine traits, be determined by x 's own physical states and dispositions. But we saw how the individualism that this involves would cripple the Darwinian natural-selective account of final cause or teleofunction that Quine himself approves; there would be no hearts, no signal sequences of molecules, nothing that is defined by its teleofunctions. Broadening the individualism, so as to allow x 's relational physical traits to be among those that do the determining, likewise runs up against naturally occurring phenomena to the contrary.¹⁸ Much the same goes for any behaviourist tendencies which Quine might elevate into an objection, according to which there can be no difference in x 's traits, teleofunctions included, without some difference in the behaviour, or dispositions to behave, of the particles that compose x .

Nor can he argue thus: the only evidence that speakers have to go on in acquiring a language is observation of the linguistic behaviour of those who already speak it; therefore, meaning is a matter only of behaviour or of dispositions to behave. The argument is a non sequitur. The meaning of a language device might be a matter of its teleofunction, as will become clear, and hence not a matter alone of users' dispositions to produce it. This enables us to see that the argument would be like arguing thus: the only evidence

that young vervet monkeys have to go on in learning the vervet calls is observation of the call behaviour of adult vervets; therefore such meaning as the calls have is a matter only of behaviour, not a teleofunctional matter of being supposed to map onto predators or food. The non sequitur is obvious.

Many have long interpreted Quine's indeterminacy argument as being driven by behaviourist, individualist and ahistorical tendencies. What is new is to see how these tendencies conflict both with his own endorsement of Darwinian accounts of final cause and with an updated understanding of biological natural science. Seen this way, Quine's tendencies to the behavioural, the individualist and the ahistorical, ironically, reflect a philosophy prior to science, or more precisely a philosophy based perhaps on earlier science but held prior to later science.

Prediction and explanation

Someone might object that a thing's having a certain function yields no prediction of its behaviour. After all, that the heart's function is to pump blood does not by itself imply that a given token heart will pump blood; the token may be so deformed, diseased or damaged as to be totally incapable of doing so. Nor does a thing x 's having a certain function F imply even that there is a substantial probability that x will perform F ; remember all those fig seeds. But, the objection continues, empirical science must yield testable predictions; since attributing teleofunction does not, talk of teleofunction is insufficiently empirical.

Quine would have nothing to do with this, nor should we; the intersubjective checkpoints which science requires need not be traceable in this way to individual attributions or statements. Furthermore, biologists are typically interested in how a thing *would* behave *if* it were functioning normally and in conditions for which it was designed (where both the notion of normality and that of design are given the natural-selective account sketched above). To attribute to the heart the function of pumping blood, then, is among other things to predict how it would behave if it were behaving normally and under design conditions.

A related objection is that attributing teleofunction does no explanatory work. After all, saying that x is supposed to F explains neither x 's actual behaviour (since, as seen, nothing follows about x 's actual behaviour from x 's being supposed to F) nor the behaviour of

other things causally affected by x (for the same reason). Again Quine would have nothing to do with this, nor should we; the explanatory work required of a theory need not be traceable in this way to each of its individual statements. In addition, we might well wonder why so draconian a principle should be adopted—the principle that a trait is admissible only for what it explains—rather than the principle that a trait is admissible *either* for what it explains *or* for what explains it. Then x 's having a specific teleofunction F is admissible, since what explains it is a solid natural-selective causal history. In any case, attributing F does do explanatory work, as follows. Biologists are typically interested in what causal effects x would have if x were functioning normally and under design conditions. To attribute to the heart the teleofunction of pumping blood, then, is to give a causal explanation of the behaviour of those things affected by the heart, assuming that it is functioning normally and under design conditions.

Normativity

Physicalists are by no means alone in distrusting any normativity that allegedly obtains or not, independently not only of our evidence but of our schemes for classifying and valuing. The distrust is deeply entrenched, going back to the seventeenth-century project of ridding science of Aristotelian and related notions of final cause, purpose, teleofunction. What really or primarily exist, on this view, are the kinds of things physics talks about: mass, force, impact or other direct action of one thing on another. All else has derivative or secondary existence at best, ideological and other normativity emphatically included. The only way to render them respectable (though still secondary) would be either to derive them from or to reduce them to the primary affairs. But Hume showed that no ought can be derived from any is, and G.E. Moore showed that it cannot be reduced either, thanks to the open-question argument. What we call objective normativity is but our subjective valuation schemes causally stimulated by and then projected back onto the value-neutral real world.

But no one seems to have noticed that this entrenched line of thought implies not only that there can be no objective normativity but that there can be no hearts.¹⁹ For consider: hearts are defined by the teleofunction of pumping blood, and the teleofunction of a device x is not derivable from, reducible to, or even supervenient on x 's own physical or other descriptive traits, and in some cases, as lately seen, not even on x 's own physical traits and relations.

Furthermore, there is reason to believe that the normativity of a trait N of x , even if not derivable from or reducible to non-normative traits of x , is non-reductively determined by non-normative affairs. To begin with, many will grant that (1) the empirical evidence is now overwhelmingly in favour of the prevailing theory of the role of bee-dance complexes in the life of the hive, including the details of how a specific aspect of the complex has among its functions that of mapping onto nectar of a certain kind; and (2) its having this function is determined by a natural-selective history. On the other hand, it is not obvious that this evidence is evidence also for the non-reductive determination of a *normative* trait. The trait of having the function of mapping onto the nectar's being peach-blossom, so far as the prevailing theory and evidence for it are concerned, might strike some as not at all a normative trait. What tells us, if anything, that the teleofunction of mapping, in addition to being non-reductively determined by non-normative affairs (indeed, physical affairs), is a matter not only of these non-normative affairs, but also of the mapping's being something the dance is *supposed* to do, one of its biological *shoulds* or *oughts*?

What tells us this is a general theory of what teleofunctional *normativity* is. The theory is essentially a Darwinian natural-selective account, which should be congenial to Quine even in the present context of a discussion of objective normativity. According to the theory, the most basic kind of teleofunctional trait, and hence the most basic kind of normativity, is a trait N that x has when x is a member of a reproductively established family, which family survived, proliferated and enabled the production of x because a critical proportion of x 's ancestors performed N . Thus x has N in virtue of a natural-selective history of ancestors and environments in which x is a subsequent arrival—though the history can be short indeed; x can have a teleofunctional N even if x is only the second member in the line of descent.²⁰ That x is *supposed* to perform N —that x *should* or *ought to* do so—is a matter just of its occurring in this sort of natural-selective reproductive history and being produced because of it.

Note that what the theory presents is *not* an *analysis* of normativity in general or of the normative trait N in particular. Given theoretical normative terms like 'teleofunction' and 'supposed to pump blood', the relation between the term and its explicans is not synonymy, and not conceptually necessary equivalence, not even broadly logical or metaphysical equivalence. The claim is only that

the equivalence holds in physically possible worlds (ppws), or rather in a subset of the ppws; what happens in the rest is left open.²¹ So far as the empirical evidence for the theory allows us to say, the equivalence of 'is supposed to pump blood' and 'occurs in a natural-selective reproductive history having such-and-such physical characteristics' is true in the subset of ppws in which conditions obtain that are necessary for there to be natural-selective reproductive histories (or more narrowly, for certain kinds of them; such conditions include sufficient stability in the reproductive 'stuff for replication, sufficient stability in the environment for favourable adaptation to get a grip, and so on; all bets are off in ppws that are too chaotic, too hot, or whatever).

This claim only of equivalence in subsets of ppws disarms open-question arguments against the equivalence of a normative trait *N* with some descriptive or physical affair *P*. According to the open-question argument against utilitarianism, we can easily imagine ourselves both recognizing that some act or policy *x* conduces to the greatest happiness of the greatest number, and yet also wondering whether *x* is morally good; therefore, the two traits cannot be equivalent after all. The trouble with applying this argument in the present context is that from the mere imaginability of a situation, nothing follows about its *physical* possibility. Philosophers' armchair intuitions are notoriously poor indicators of physical possibility (that is, of what the laws of physics actually allow). Hence the mere imaginability of a situation, or the intuitions that drive it, cannot be used to counter-example an equivalence meant to hold only in a subset of the ppws.

Another hackneyed objection to any equivalence of normativity with some descriptive affair is that no ought can be derived from any is. This too is not even to the point, which is not that a basic normative teleofunctional trait can be derived from the descriptive matter of occurring in a natural-selective reproductive history having such-and-such physical characteristics. The point is that by assuming the equivalence of the two in a subset of the ppws, we are enabled to construct an empirically adequate theory of teleofunctional normativity and of much else.

Still another objection has to do with identity. If $N=P$, the objection goes, then necessarily, $N=P$; $N=P$ in every logically possible world. So if for some *x* we can imagine that Px but not Nx , then $N\neq P$ after all. The trouble is, the theory of normative teleofunctional traits does not claim anything so strong as type identity. All it claims is

equivalence of N and P in a subset of the ppws, which hardly guarantees type identity. Further, even if type identity were claimed, it could be contingent identity; that $N=P$ would not entail that $N=P$ in every logically possible world, or even in every ppw. Finally, it's not at all clear that the present P —the descriptive matter of occurring in a natural-selective reproductive history having such-and-such physical characteristics—is a *genuine trait (or property)* of x in the first place.²²

RULES AND TELEOFUNCTIONS NEW UNDER THE SUN

We are still a long way from language. How do we get there? Only ultimately by means of a comprehensive, detailed theory, say Millikan's. What follows is the merest sketch. Start by thinking about rules, and about behaviour that is supposed to conform to a rule. One of the functions of a forager bee's dance is to map onto nectar at a certain distance-and-direction V ; given V , the bee's dance-producing mechanisms are supposed to produce a certain dance, say Opus II, no. 4. That is, the mechanisms are supposed to perform in conformity to the rule, 'When there is nectar at V , dance Opus II, no. 4.' In the waiting bees, the dance-interpreting mechanisms are supposed to perform in conformity to the rule, 'When they dance Opus II, no. 4, fly V .' The genotype responsible for the mechanisms was selected for because they produce and interpret dances, often enough, in conformity to such rules. In this sense the bees come wired by evolution to be predisposed to behave (often enough) in conformity to the rules. Clearly, the bees have a competence to conform to these rules.

Now imagine that the bees could ask Kripke's question: 'whether my actual dispositions are right or not, is there anything that mandates what they *ought* to be?'²³ The question figures in his rejection of dispositional accounts of meaning and rule following; no ought can be derived from any disposition. Nor, we may add in the spirit of both Quine and Wittgenstein, can any mentalism account for the ought, since meaning and correct rule following are not determined by what lies before consciousness. There is no self-interpreting interpretation, no instant mental talisman.²⁴

Yet Kripke's question, applied to the bee, has a straight answer. What mandates—that is, what determines—what the bee's dispositions ought to be is the natural-selective history that determines the teleofunctions of the bee's dance-producing and

interpreting mechanisms, what they are *supposed* to do. Whether the bee's actual dispositions are right or not—whether under the influence, say, of pesticide they lead her to interpret a dance for nectar in the west as one for nectar in the east—what they ought to be is not determined by the dispositions, and not by any (other) individualist or ahistorical affairs. Hence it is also not determined by conditions *internal* to the interpreter bee—internal in the epistemic sense of being present to the bee's consciousness were there any. Contrary to Wittgenstein, there is indeed an *external* vantage point from which to answer 'what counts as following a rule'. True, what explains the stability of the bees' practice is not Platonic universals; Wittgenstein is surely right about this. Yet there are external standards, in nature, that both explain the stability and determine not only why there are *these* rules rather than some others, but why under the circumstances they are better than those others. Note also that the normativity involved is a species of the teleofunctional normativity discussed in the third subsection of the above, and that it is likewise immune to standard objections to any such objective normativity.

Bees have their limits, and not only as a philosopher's example. Fortunately, many organisms are designed to be highly plastic in their behaviours and in their learning—more so, anyway, than the bees. Instead of coming wired by evolution to be predisposed to behave (often enough) in conformity to certain rules, they may *learn* so to behave (or to be so disposed) and to pass on what they learn to their offspring.²⁵ As Millikan remarks, 'What an organism does in accordance with evolutionary design can be very novel and surprising, for the more complex of nature's creatures can learn.' They can acquire biological purposes—things which they are supposed to do—'that are peculiar to them as individuals, tailored to their own peculiar circumstances and histories'.²⁶ In this kind of case, what they are supposed to do may be non-reductively determined not by a natural-selective reproductive history having such-and-such physical characteristics, but only by such a history together with the relevant novel features to which the rule is to apply.

For example, upon becoming ill within a few hours of eating a specific substance, rats will thereafter shun anything that tastes the same. In doing so they conform to 'the proximal rat rule': don't eat what tastes like the stuff you had when you got sick. Conforming to this rule is a means to conforming to a more distal rule, perhaps

'Don't eat poisonous substances.' Now suppose the rat becomes ill after eating the children's silly putty, a substance rats have encountered nowhere in their evolutionary history. In order to conform to the proximal rat rule, the rat must now conform to a further proximal rule, 'Don't eat what tastes like silly putty.' This is a *derived* rule, and the rat learns a new competence to follow it. The rule is derived in the sense that it follows logically from the conjunction of the rule 'Don't eat what tastes like the stuff you had when you got sick' and 'The stuff you had when you got sick tastes like silly putty.'²⁷ To take another example, a chimpanzee who learns to sign, as a number now have, learns to produce a certain sequence of signs to get a certain food, another sequence in the presence of a certain state of affairs, and so on. The chimpanzee acquires a competence and a purpose to conform to a number of derived rules, rules that involve correlations or mappings between certain sequences of signs and certain states of affairs.

The normativity of a derived rule, clearly, is a species of the normativity of the rule from which it is derived. Note also that in these cases as in many others, 'to fulfill a biological purpose is not always to take a step toward flourishing or propagating': if the rat gets sick after eating the only available food (but not because of it) and thereafter shuns it, it will starve.²⁸

Now suppose that sentences, like bee dances, have among their functions certain biological functions or purposes. The sentences produced, say, by a late-Pleistocene hunter-gatherer scout on returning to the band have the purpose or function of 'adapting' the listeners to certain world affairs or conditions, such as food or shelter over the horizon. This enables the listeners to pursue their purposes in line with just those conditions, thus enhancing their chances of success. The sentences perform this function by virtue of mapping onto certain affairs in conformity to certain mapping rules. The mapping rules, not unlike those for bee dances, are rules in conformity to which 'a critical mass of sentences have mapped onto affairs in the world in the past, thus producing correlation patterns between certain kinds of configurations of sentence elements and certain kinds of configurations in the world'.²⁹ The correlation patterns enable the listeners to adapt their activity to the configuration or world affair thus mapped, and thereby to improve their chances of success. An adequate explanation of their success would have to make reference to these mappings, much as an explanation of the bees' success in finding nectar refers to the

mapping between dance and nectar. We might well demand of Wittgenstein (as does Pears, though in order eventually to exonerate him), ‘if language has grown out of a pre-linguistic pattern of discriminations which is locked into our environment in complex ways, how can the philosophical study of language avoid including this part of natural history?’³⁰

We can tell what the mapping rules are, and which sentences are supposed to map onto which affairs, by looking back in time to discover which rules and mappings explain what the hunter-gatherers are doing. So too do we look at a history to find the rules, proximal and distal, that explain what the bee, the rat and the chimpanzee are doing. We are likely to find that a certain aspect of the bee-dance complex maps onto a direction to nectar, not an undetached nectar part, and that a certain sentence maps onto a rabbit, not a rabbit stage, whereas another sentence maps onto the stage, not the rabbit. The speaker need have no descriptions in mind, and no conscious intentions or other mental states, with which the key terms in the sentence are associated, no instant mental talisman. The speaker needs this no more than the bee does when an aspect of the dance maps onto nectar rather than an undetached nectar part.

What determines what a given sentence is about, then, and the reference of the terms in it, are physical affairs in a history in which certain sentences in the past, and derivatively their terms, have come to have a certain purpose or function, as has the bee dance. This purpose or function is a matter of these past sentences’ mapping onto certain affairs, and of their terms’ correlating with aspects of those affairs. What the mapping rule is, for a given sentence today which also contains these terms, is determined by these correlations between its terms and the aspects, in conjunction with semantic rules that project, from the terms and the structure of the sentence, the conditions under which it would be true. In this way, novel sentences—sentences never produced before—can map onto affairs in the world, including affairs never encountered before.

The theory also makes provision for novel terms. One way is this. Among our language devices are conventional introducing-devices such as ‘I christen thee—’, ‘Let us call such-and-such—’, ‘Let the rule be *pawn can take en passant*’, and so on. Humans are able not only to conform to rules—quite primitive creatures do that—but to express the rules and make up new ones. Conventional introducing-devices have a relational stabilizing teleofunction such that, given for its adaptor something to fill the blank, and given the appropriate

context, they acquire an adapted function to cause what fills the blank to perform a certain function (of being the name of the christened infant, of being a rule for the pawn, etc.). Performance of this latter function is then a derived teleofunction of the words in the blank—derived from the function of the introducing device. And the words so introduced acquire this derived teleofunction instantaneously. (Often it will not long remain a *derived* teleofunction. As soon as the words are used and continue to be used in part because using them in this way works for partner hearers and speakers—a kind of (natural) selection—the words become members of a reproductively established family and thereby have a *direct* teleofunction. So too for the newly coined rules that they may express.³¹)

In the first instance, therefore, whole sentences are what map onto or correspond to a condition in the world. ‘A less direct, more mediated, kind of correspondence is the correspondence between a referential term *in the context of a true sentence* and its referent.’³² The relation between a lone term or a term in a false sentence and its referent is even more derivative. It is the relation not of actually corresponding with something, but of there being something to which it is *supposed* to correspond. Yet doubly derivative though this relation is, there is a fact of the matter as to what a given referential term refers to, via the determinacy of the mapping rules for the true sentences in which the term occurs.

What makes a given sentence true is that there is something in the world—a condition, a configuration, a world affair—onto which it maps in accordance with a certain mapping rule. The situation is very like the one in which what makes a given aspect of a bee-dance complex actually map is that there is something in the world—say the nectar’s being peach-blossom—onto which it maps in accordance with a certain mapping rule. Further, there need be no one kind of condition onto which sentences always map—no one way the world is, no absolute version.³³ Nor need the rule be present to consciousness or in the speaker’s head, any more than the bee-dance rules and mappings are in the bees’ heads. Moreover, the mapping rule governs the manner in which sentences are supposed to correspond to conditions that very often are well beyond the mind or the interface between mind or body and world. Indeed, the affairs mapped may be so distant that no causal chain connects them to the speaker.³⁴

It follows that the mapping rule is not a proximal rule but distal. So too for truth-rules, therefore, which are those ‘that project, from the parts and structures of sentences of the language, the conditions

under which these sentences would be true'.³⁵ When sincere speakers make assertions, their (conscious) intent is to make true assertions, which can be done only if their sentences conform to these truth-rules. The rules need not be expressed or expressible by or known to the speaker, no more than the bee's rules need be expressible by or known to the bee. It follows further that truth-rules are realist or correspondence rules, not rules about what goes on (or ought to go on) in the mind or the body or at their surface. Nor are they rules about assertability conditions. As with the bee-dance rules, they govern the way in which sign tokens are to correspond to conditions that obtain in the world beyond. Not only can we be mistaken about whether the conditions obtain, but we can be mistaken about what the truth-conditions of a given sentence are. In this sense we can be mistaken about what we mean, since the rules that govern what a sentence means are not known a priori. Note also that the kinds of normativity involved in all these matters are species of the basic normativity discussed above, and that they are likewise immune to the usual objections to objective normativity.

BEYOND THE VEIL OF LANGUAGE-GAMES

Wittgenstein rightly condemns 'the contemptuous attitude towards the particular case' on the part of certain philosophers obsessed with science (*BB* 18). Let us not fall victim to the opposite extreme of contempt for what a non-reductive, non-scientistic use of a supple biological science might tell us about language and ourselves. There is a sense in which Wittgenstein's approach to language is emphatically internalist. His method is a linguistic phenomenology, in which philosophers are to investigate *what it makes sense to say*; phenomenology is grammar.³⁶ What it makes sense to say is a matter of what we would say in the light of our intuitions as competent speakers. According to Wittgenstein, among the things we would say is, 'There is no such thing as reddish green.' This sentence expresses a norm or standard, a rule of grammar, not a true or false description; 'reddish-green' is a senseless term. If we want to get clear about what can sensibly be said, and why, we should investigate our linguistic practice, not the phenomena external to it. 'Grammar is not indebted to reality. Grammatical rules first determine meaning (constitute it) and are therefore not responsible to any meaning and are to that extent arbitrary' (*PG* 184).

There is great risk in thus concentrating on how things seem to us, from inside language, as regards what it makes sense to say. Suppose

that according to the rules of language as seen from within, it makes no sense to say that something is (or is not) reddish-green—that it does or does not have a colour which stands to red and green as purple stands to red and blue. The trouble is that in a striking experiment, subjects do see reddish-green.³⁷ By concentrating on the phenomenology of how things must be according to the grammar of our language, we can get things quite wrong. Kant too got things quite wrong about the geometry of our world by concentrating on how things must appear according to the forms of intuition. Of course Wittgenstein rejects talk of Kantian and other things-in-themselves, restricting investigation to the phenomena. Even so, he can be read as replacing Kant's forms of intuition with the contingent yet prior grammatical rules of our one language. 'We have only one language, and that is our everyday language.... [O]ur everyday language already is *the* language, provided we rid it of the obscurities that lie hidden in it.... Our language is complete' (*WWK* 46), and its grammar, like a Kantian category, is not 'indebted to reality' (in the relevant sense).

The possibility of getting things quite wrong is not itself so bad. All inquiry takes that risk, and anyway Kant and Wittgenstein might have proved to be right. But consider those who objected to Einstein that it makes no sense to say that mass is not conserved in all interactions, or that there can be time travel (the Twin Paradox), as did many at the time, including a powerful senior academician, a professor of physics, who stormed out of one of Einstein's lectures muttering 'Das ist absolut Blödsinn!' Not only did such objectors get things quite wrong—they might after all have proved to be right—but their adherence to the grammar of the language discouraged entertaining *any* revisionary account of mass, time and space. So too is there a deeply conservative bias in Wittgenstein's linguistic phenomenology, as in other phenomenology, by way of a bias in favour of the descriptive at the expense of the revisionary.

This includes revisionary accounts of language. Among the things we may get quite wrong by going internalist, descriptive and phenomenological in our approach to language is language itself, including its relations to the world. Imagine a Wittgenstein of the bees, discussing what it makes sense to dance. Internalist and descriptive, as befits the bee-dance phenomenologist, Wittgenstein-of-the-bees concludes that what it makes sense to dance is a matter of what competent bees would dance in conformity to the rules of bee-dance grammar. The grammar is not imposed on us bees by reality or by any superior necessity, but by our practices. Nor can

we bee-dance describe a pre-existing situation and show that it forces us to adopt a particular rule, since to do so would require us to use bee dances to get outside bee dances. There is no such external viewpoint ('There is no outside; outside you cannot breathe') (PI §103)

Wittgenstein-of-the-bees not only gets it wrong. Given his internalist stance, he is bound to. We humans know that the bee-dance grammar is indebted to reality, even imposed by reality, in the sense that the rules, including the mapping rules, are (1) determined by external conditions in a history, and (2) in such a way that the received mappings of aspects of the bee-dance complex onto certain affairs are what enabled the bees to adapt their activities to conditions in the world beyond the veil of bee dances. The grammatical rules are not arbitrary but designed for a world that has certain fundamental pre-existing features.

Ah, but—you will say—how do *we humans* get outside *our* sign system? However it may go with the bees, for us and our language there is *no outside, no higher viewpoint*. In order to apply to ourselves the moral of the bee-dance case, we would have to use language to describe the so-called pre-existing situation to which our language allegedly evolved to adapt us. Yet we cannot possibly justify our descriptive or factual language by appealing to facts which can only be stated in it. It makes no sense to say that our concepts answer to a ready-made world. Concepts are rules for introducing sameness and difference into a world that would not otherwise have them.

Notice how this Wittgensteinian response, like most of Western philosophy, privileges human being over the rest of nature; there is *no higher viewpoint*. Other animals' sign systems conform to rules imposed by natural-selective pressures to adapt to a pre-existing reality, a ready-made world. Ours does not. Other animals' concepts track samenesses that exist independently of their sign systems.³⁸ Ours do not. For it is only relative to language that it makes sense to say that these very samenesses are there for the animals' concepts to track. Indeed, it is only relative to language that it makes sense to say that there are the samenesses we call the animals. If there is no ready-made world, there can be no ready-made spotted owls. The spotted owl—individual or species—cannot sensibly be said to exist independently of the sign system that is language. Quine's indeterminacy theses imply much the same, as do related theses in Goodman, Putnam, Davidson and Rorty.

This way of privileging human being, with all that it implies ethically and environmentally, should make us suspicious. It means an internalist account for us, externalist for all other creatures; a free play of sameness-creating concepts for us, sameness-imposed concepts for them; conceptual relativism for us, realism for them; world-making for us, a ready-made world for them, indeed for them a world made by us. If we are part of nature, as Darwin tells us, still nature's writ does not extend to language, and hence not to us in so far as language is what defines us. 'Darwin's theory has no more to do with philosophy than any other hypothesis in natural science' (*TLP* 4.1122).

The privileging of human being is something Wittgenstein shares, if unwittingly, with Descartes (and Kant). But they share more. Recall the Wittgensteinian assumption on which the privileging rests: we cannot possibly justify our factual language by appealing to facts which can only be stated in it. This has the form of the Cartesian assumption that we cannot justify our factual belief in an external world by appealing to facts which can only be objects of such external-world belief. According to Wittgenstein, however unwittingly, our factual language bears the mark that all things bear at the foundations, of there being no possible further argument about them which is not circular or question-begging, on pain of vicious regress.³⁹ One may be forgiven the urge to relish the irony: foundationalism lurks behind Wittgenstein's linguistic philosophy. So too for Rorty's, who under the influence of Wittgenstein defines a 'final vocabulary' as one beyond which there is 'no noncircular argumentative recourse...but only helpless passivity or a resort to force', on pain of vicious regress.⁴⁰

There is worse to come than irony. It is now well understood, or should be, that the regress argument for there being no non-circular inferential justification of certain basic matters assumes that the only admissible forms of inferential justification are transitive (i.e. if x justifies y and y justifies z , then x justifies z).⁴¹ In particular, the reason why there can supposedly be no non-circular inferential justification of our factual language is that the very use of factual language is presupposed by, and hence part of, what justifies our most basic factual beliefs; they in turn justify more complex factual beliefs (including biological externalist accounts of the relations between sign systems and the world); whence it follows, by transitivity, that if the more complex factual beliefs justified the very use of factual language, then that very use would justify itself—a

tight little closed circle. Therefore, there can be no non-circular inferential justification of factual language. The trouble with this hoary argument-form is that there exist important kinds of inferential justification that are not transitive—probabilifying inference and varieties of inference to best explanation, plus inferences from reflective equilibrium, or from the track records of competing paradigms, or from (other) balance-of-evidence considerations.⁴² Some such non-transitive variety of inferential justification could well yield non-question-begging rational justification, provisional and fallible, for the factual language. A good place to look is the balance of evidence in favour of the externalist, non-privileging, non-scientistic teleofunctional account sketched here, according to which the best explanation of our linguistic practices is one in which, thanks to a natural-selective history, factual language, often enough, tracks pre-existing conditions and samenesses in the world.

Wittgenstein rejected a paradigm or picture that captivated us—roughly, Platonic correspondence—and replaced it with his own even more seductive picture, a linguistic variation on themes descended from Descartes and Kant. So too, in his way, did Quine. It's time for another picture altogether.

NOTES

- 1 R.G.Millikan, *Language, Thought and Other Biological Categories* (MIT Press, Cambridge, Mass., 1984)—hereafter *LTBC*—and 'Explanation in Biopsychology', in *Mental Causation*, ed. John Heil and Alfred Mele (Oxford University Press, Oxford, 1993)—hereafter *EIB*. The fourth and fifth sections below consider objections to her account of teleofunction.
- 2 John F.Post, *The Faces of Existence: An Essay in Nonreductive Metaphysics* (Cornell University Press, Ithaca, 1987) and *Metaphysics: A Contemporary Introduction* (Paragon House, New York, 1991).
- 3 I refer to reduction of a property to a property (or a trait to a trait). See Post, *The Faces of Existence*, pp. 122, 170, 178; Post, *Metaphysics*, pp. 103–19, 124–9; Post, "Global" Supervenient Determination: Too Permissive?, in *Essays on Supervenience*, ed. A.Savellos and U.Yalçin (Cambridge University Press, Cambridge, 1994), §3.
- 4 The detailed theory of proper function behind this sketch, as well as the definition of 'reproductively established family', occurs in Millikan, *LTBC*, chs 1–2, and *EIB*, *passim*. It resembles but improves on the account in Larry Wright, *Teleological Explanations* (University of California Press, Berkeley, 1976), endorsed by Wesley C.Salmon, *Four Decades of Scientific Explanation* (University of Minnesota Press, Minneapolis, 1990), pp. 32, 111–15. Millikan's account, like Wright's, differs significantly from the 'propensity theory' of J.Bigelow and R.

- Pargetter, 'Functions', *The Journal of Philosophy*, 84, (1987), and hence escapes its difficulties; cf. EIB 39.
- 5 A.Plantinga, *Warrant and Proper Function* (Oxford University Press, Oxford, 1993), pp. 201–4, badly misconstrues Millikan's *LTBC* as an attempt at an *analysis* (and confuses proper function with *direct* proper functions, which are the topic of her ch. 1; he seems scarcely to have read ch. 2, about *adapted* and *derived* functions).
 - 6 As argued in Post, *Metaphysics*, pp. 128–9. See also E.Sober, *The Nature of Selection: Evolutionary Theory in Philosophical Focus* (MIT Press, Cambridge, Mass., 1984), pp. 48ff.
 - 7 See Post, *The Faces of Existence*, §4.2.
 - 8 *LTBC* 93 presses this point against Quine.
 - 9 The example is from H.Kincaid, 'Molecular Biology and the Unity of Science', *Philosophy of Science*, 57 (1990), pp. 578–83, who develops it in greater detail (though to a different end).
 - 10 For example J.Kim, "'Strong" and "Global" Supervenience Revisited', *Philosophy and Phenomenological Research*, 48 (1987), pp. 323–4.
 - 11 What L.R.Baker, *Saving Belief: A Critique of Physicalism* (Princeton University Press, Princeton, 1987) and many others call individualism amounts to what I am calling non-relational individualism; what she calls physicalist non-individualism amounts to (a kind of) relational individualism.
 - 12 W.H.Kirchner and W.F.Towne, 'The Sensory Basis of the Honeybee's Dance Language', *Scientific American*, 270 (1994), provide an accessible introduction with references. None of this is to suggest that the bee dances form a *language*. Cf. *LTBC*, 40ff, 96–7; A.Wenner, *Anatomy of a Controversy: The Question of Language Among the Bees* (Columbia University Press, New York, 1990). I am indebted to Richard Burian and Karen Neander for calling attention to problems with an earlier version of this example.
 - 13 As it is one of its functions so to map, having, qua displaying correct B-mese 'syntax', the direct teleofunction of mapping onto this nectar's being peach-blossom. *LTBC* 43.
 - 14 The objection that there *must* be a physical relation between the complex and something else—say the distant nectar—which does work in determining the matter is met in Post, "'Global" Supervenient Determination', §3, by showing how the plausible candidate relations all fail to do so. For a parallel case that involves sentences or beliefs, see Post, *Metaphysics*, pp. 114–17, 124–8.
 - 15 Post, "'Global" Supervenient Determination', contains an updated explication and defence of the needed relation of non-reductive determination—sometimes called (pejoratively) 'global' supervenience—together with further references.
 - 16 L.Laudan and J.Lepplin, 'Empirical Equivalence and Underdetermination', *The Journal of Philosophy*, 88 (1991), 450.
 - 17 *LTBC* 95.
 - 18 In addition to those in biology and social science, there may be some in physics itself. Recent work in the philosophy of quantum physics suggests that some of what might be called the 'higher-level' quantal

- properties of particles—certain of their entangled-statistical relations—are not determined by or supervenient on the particles' own 'lower-level' state-function properties, whether intrinsic or extrinsic (and in that sense relational). See S.French, 'Individuality, Supervenience and Bell's Theorem', *Philosophical Studies*, 55 (1989), 16.
- 19 Post, *Metaphysics*, pp. 145–8.
 - 20 *LTBC* 81.
 - 21 Ppws are worlds in which the objects obey the laws of physics. On construing possible worlds as entities safely within Quine's ontology, see Post, *The Faces of Existence*, §§4.1–4.3.
 - 22 On what count as physical traits and relations, see *ibid.*, pp. 122, 170, 178; Post, "Global" Supervenient Determination', §3. Objections by Putnam and Fodor to natural-selective accounts of teleofunction, on the ground that they presuppose problematic intensionalities, are considered in Post, 'Teleofunction, Natural Selection and Intensionality' (forthcoming).
 - 23 S.A.Kripke, *Wittgenstein on Rules and Private Language* (Harvard University Press, Cambridge, Mass., 1982), p. 57.
 - 24 As D.Pears, *The False Prison: A Study of the Development of Wittgenstein's Philosophy* (Clarendon Press, Oxford, 1988), p. 210, puts it on behalf of Wittgenstein. Even so, Kripke seems to hanker for some such mentalism, as EIB 215, n. 4, argues.
 - 25 We may add that some of them may learn what Dennett calls a Good Trick—a behavioural talent that enhances their chances dramatically—which when combined with the Baldwin Effect can reflect back on and accelerate the process of genetic evolution. See D.C.Dennett, *Consciousness Explained* (Little, Brown, Boston, Mass., 1991), pp. 184ff.
 - 26 EIB 94, 226.
 - 27 The example is from EIB 224–8; I've added the silly putty.
 - 28 EIB 227.
 - 29 *LTBC* 99.
 - 30 Pears, *op. cit.*, p. 451.
 - 31 *LTBC* 81–2.
 - 32 *Ibid.*, 104.
 - 33 *LTBC*, 109; Post, *Metaphysics*, pp. 30–59.
 - 34 Post, *Metaphysics*, pp. 114–18, 128; Post, "Global" Supervenient Determination', §§2–3.
 - 35 EIB 231.
 - 36 Cf. R.A.Noë, 'Wittgenstein, Phenomenology and What it Makes Sense to Say', *Philosophy and Phenomenological Research*, 54 (1994), 20; Pears, *op. cit.*, p. 455.
 - 37 H.Crane and T.P.Piantanida, 'On Seeing Reddish Green and Yellowish Blue', *Science*, 221 (1983), discussed by C.L.Hardin, *Color for Philosophers: Unweaving the Rainbow* (Hackett, Indianapolis, 1988), pp. 121–7. Nothing I say here conflicts with Noë, *op. cit.*, p. 3, n. 9.
 - 38 For the needed full account of concepts, see *LTBC* and EIB.
 - 39 On this relation between Wittgenstein and Descartes, see Post, 'Descartes's Epistemology', in *Descartes, His Texts, Legacy and Prospects*, ed. David Weissman (Yale University Press, New Haven, 1995), §§2, 4, 6–7.

- 40 R.Rorty, *Contingency, Irony, and Solidarity* (Cambridge University Press, Cambridge, 1989), pp. 73ff., 80. Cf. Post, 'The Foundationalism in Irrealism, and the Immorality', *Journal for Philosophical Research*, 21 (1996), pp. 3–4.
- 41 Post, 'Infinite Regresses of Justification and of Explanation', *Philosophical Studies*, 38 (1980), pp. 38–40; Post, 'The Infinite Regress Argument', in *A Companion to Epistemology*, ed. Jonathan Dancy and Ernest Sosa (Blackwell, Oxford, 1992), pp. 209–12; Post, 'The Foundationalism in Irrealism, and the Immorality', pp. 2–10.
- 42 Post, 'The Infinite Regress Argument', pp. 211–12; Post, 'Descartes's Epistemology', §5; Post, 'Versus Asymmetric Supervenient Determination' (forthcoming), §3.

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