

**B A C O N ;**  
**H I S W R I T I N G S ,**  
**A N D**  
**H I S P H I L O S O P H Y .**

**BY GEO. L. CRAIK, M.A.**

**IN THREE VOLUMES.**

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# BACON;

## HIS WRITINGS, AND HIS PHILOSOPHY.

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### INTRODUCTION.

BACON has himself said, that, although some books may be read by deputy, and extracts made of them by others, that should be only in the less important arguments and the meaner sort of books; "else," he adds, "distilled books are like common distilled waters, flashy things." This is in his essay entitled 'Of Studies;' and undoubtedly the works of a great writer can only be properly studied in their original form.

But abridgements, compendiums, analyses, even of the works of the greatest writers, may still serve important purposes. If properly executed, even the student of the original works may find them of use both as guides and as remembrancers. A good compendium should be at least the best index and synopsis. The more extensive the original book, or books, the more is such a compendious analysis wanted, not to supersede or be a substitute for the original, but to accompany it as an introduction and instrument of ready reference. It is like a map of a country through which one has travelled, or is about to travel; or rather it is like what is called the key-map prefixed to a voluminous atlas, by which all the other maps are brought together into one view, and their consultation facilitated.

To the generality of readers, again, a comprehensive survey in small compass of an extensive and various mass of writings is calculated to be more than such a mere convenient table of contents or ground-plan. In the same Essay Bacon has said, "Some books are to be tasted,

others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention." This must be understood, from the title and whole strain of the essay, to be addressed to students—to the comparatively few a large portion of whose time is occupied with books. If the illustrious author had been treating of the subject of reading in general, with the "great faculty," as he has himself called it, which he possessed in so eminent a degree, of contracting his view as well as of dilating and dispersing it, of making his mental eye a microscope to discern the parts of whatever he investigated as well as a telescope to take in the whole, he would not have omitted to remark also, that the same book is often to be read in one way by one man and in another way by another. We cannot have a better example than his own writings. In their entire form they fill many volumes; they have been collected in three or four large folios, in five quartos, in a dozen or more octavos. Let the student of literature or philosophy, we say again, by all means read and inwardly digest every page of them; but it would be the height of pedantry to recommend that anything like that should be done by all readers. Even if the entire body of Bacon's works could be produced at so small a cost as to be within the reach of all readers, the time to peruse them would be wanting. Nor, even if such of them as are not in English were to be all translated (which they have not yet been), would they be found to be all, or nearly all, of universal interest. Another remark that Bacon himself would not have failed to make if he had been examining the question of reading books in its whole extent, and on all sides, is, that, with few exceptions, all books lose something of their first importance, at least for the world at large, with the lapse of time. Works of science, or positive knowledge, especially, are always to some extent superseded, at least for their main or primary purpose, by the growth or extension of that very branch of knowledge

which they may have been the first to set before the eyes of men, as the torch may be dimmed and made useless by the greater light it has itself served to kindle. Much of what Bacon has left us is interesting now only as having either been or seemed to be of importance at the time when it was first published; that is to say, only as an evidence of the state of knowledge in those days. Much is the same thing that we have elsewhere in another form, or is the rudimentary conception of what is more fully brought out elsewhere. To the student of the history of science, or of the progress of thought and discovery in the mind of Bacon, all these indications are curious and precious; he will scrutinize them all anxiously, and will even wish that they were more numerous. But it is the results of such scrutiny principally that the ordinary reader wants; at most a few specimens of the repetitions and variations and exploded errors will be enough for him. Is nobody to be thought entitled to know anything about Bacon and his philosophy—about which everybody has heard so much—who cannot or will not make himself master of every line that Bacon has written? Here, as in all other cases, there is one kind of knowledge which the professed student of the particular subject in question requires, and quite another kind which suffices for the general reader—who may be considered as a mere looker on at the operation which the other is carrying on. It is right that such an observer should have understanding enough of the matter to comprehend what he sees done; it is not at all necessary that he should be able to do it. Even if the highest education were to be universally diffused, still some must have their attention more especially directed to one department of knowledge, some to another; and therefore in every department there must still be the few thoroughly instructed, and the many to whom the subject is known only in its outlines and general principles.

Such a knowledge of what is called the Baconian philosophy we hope to present our readers with the materials for acquiring in these volumes. Our plan, of producing for the most part Bacon's own words, will have at

least the advantage of trustworthiness and safety. Our duty will be to confine ourselves principally to exposition, and to deal but little either in controversy or in criticism. The only respect, therefore, in which we shall have to draw upon the confidence of the reader will be that we exhibit all the evidence which is material upon any disputed point.

But what is understood by the Baconian philosophy is only one of the things to which the extant writings of Bacon relate. About half of the entire body of them, even if we exclude his Letters, has nothing to do with his system or method of philosophy. If we confine ourselves to his English writings, the portion of them that relates to his method of philosophy will be found to be less than a third of the whole. The other two-thirds are occupied with matters Moral, Theological, Historical, Political, and Legal.

Bacon is a great name both in the history of philosophy and in our English literature. At the same time, with the exception of his Essays, what he has written is very little known to the general reader. He stands, therefore, exactly in the position which seems to make it expedient that an account of his works should be given, and so much of them as can be made generally interesting produced for popular perusal, in such a form as the present. It is the object of the series of analytical accounts of great writers, to which the present volumes belong, to introduce the most numerous class of readers to an actual acquaintance with those chief works, in our own literature and in that of other countries, with the names at least of the authors of which everybody is familiar. And this we believe to be likely to prove by far the most effectual way of promoting the more general study of the works in their original and complete form.

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## PART I.

BACON'S MORAL, THEOLOGICAL, AND  
HISTORICAL WORKS.

## SECTION I.—THE ESSAYS.

THE father of Francis Bacon was Sir Nicholas Bacon, Keeper of the Great Seal from the accession of Queen Elizabeth in 1558 till his death in 1579 ; his mother was Anne, the second of the four learned daughters of Sir Anthony Cooke, of whom the eldest married Lord Burleigh, and the third Lord Russell, son of the second Earl of Bedford. She was the second wife of Sir Nicholas, who had had by a former wife three sons and three daughters. Francis was the younger of two sons by the second marriage, the other being named Anthony.

He was born in London, at his father's residence, called York House,\* from having been properly the town mansion of the Archbishops of York. Mr. Montagu says that it is the same house which is now numbered 31, Strand, being the corner house on the west side of Villiers Street ; but Villiers Street is only one of several streets that were built upon the grounds of York House, after the site was disposed of by the second Villiers Duke of Buckingham some years subsequent to the Restora-

\* This house was rented from the Archbishop of York not only by Sir Nicholas Bacon, when Lord Keeper of the Great Seal, but by his successors in the same office, or in that of Lord Chancellor, Sir John Puckering, Lord Ellesmere, and finally his illustrious son. It was afterwards acquired from Archbishop Mathew by the crown, and bestowed by James I. upon Villiers Duke of Buckingham.

tion. The common account of this York House,—which must not be confounded with the earlier York House, or York Place, so called from having been the archiepiscopal residence till it was purchased by Henry VIII. from Cardinal Wolsey in 1530, which stood on the site of Whitehall, and of which a portion still remains in the official residence of the Comptroller of the Exchequer,—is, that it stood a little to the west of Inigo Jones's handsome erection still called the York Stairs Watergate, in the midst of a garden skirted by the river. We doubt if any part of it extended to the street. The expression of Bacon's first biographer, Dr. Rawley, in his account as translated by himself into Latin, which is in several minute particulars more precise and accurate than the original English, is, that he was born in York Palace, "infra plateam dictam le Strand," which would seem to mean, not in the Strand, but below or back from it.

His birth took place, according to Rawley, on the 22nd of January, 1560. But, as we are afterwards told that at his death, in April, 1626, he was only in his sixty-sixth year, by January, 1560, must be meant, as was then the usual mode of computation, what we should now call January, 1561.\*

He was sent to Trinity College, Cambridge, when he was only in his thirteenth year, along with his brother Anthony, who was his senior by two or three years. They were both matriculated as members of the university on the 10th of June, 1573. It is not very clear how long he remained at Cambridge. Mr. Montagu makes him to have left after a residence of only two years;† but Rawley, in his English 'Life,' says,

\* Dugdale, however, in his 'Baronage,' vol. ii., pp. 437-439, as the account is reprinted by Archbishop Tenison in the 'Baconiana,' p. 246, makes him to have been born in the 2nd of Elizabeth, which would be in January, 1560. But he afterwards contradicts himself by stating (p. 257) that, at his death in April, 1626, he was in the sixty-sixth year of his age.

† Life, p. x. Six pages after, indeed, he says that he was sent to France "after three years' residence in the University."

“ Whilst he was commorant in the university, about sixteen years of age (as his Lordship hath been pleased to impart unto myself), he first fell into the dislike of the philosophy of Aristotle; not for the worthlessness of the author, to whom he would ever ascribe all high attributes, but for the unfruitfulness of the way; being a philosophy, as his Lordship used to say, only strong for disputations and contentions, but barren of the production of works for the benefit of the life of man. In which mind he continued to his dying day.” In the subsequent Latin translation the expression he uses is slightly different, and somewhat more precise:—“ tantum non sexdecim annos setatis nato,” when he had all but completed his sixteenth year. The time referred to, then, may be taken to have been towards the close of the year 1576. This computation agrees very well with what follows in Rawley’s account:—“ After he had passed the circle of the liberal arts, his father thought fit to frame and mould him for the arts of state; and, for that end, sent him over into France with Sir Amyas Paulet, then employed ambassador heger into France.” According to Mr. Montagu (*Life*, Note O), Sir Amyas Paulet was sent as ambassador to France in September, 1576; although he immediately subjoins an extract of a letter from Sir Amyas, dated 22nd June, 1577, in which, writing to a friend in England, he says, “ One year is already spent since my departure from you.” In his *Sylva Sylvarum* (Experiment 997) Bacon himself speaks of having been at Paris when he was “ about sixteen years old.”

With the exception of a short visit to England with dispatches from the ambassador to the queen, which must have been made before December, 1578, when Sir Amyas was recalled, Bacon remained in France till after the death of his father, which took place in February, 1579. In his *Sylva* (Experiment 986) he mentions having been in Paris when he received the news. His later biographers make him to have spent some time after the recal of Sir Amyas Paulet in visiting the provincial parts of France; and there are some traces in his writings of his having at least once made an excursion to the



south-west. In his *Sylva* (Experiment 365) he makes mention of a mode of thickening milk practised in a village near Blois, in such a manner as if he had seen it; and in another work of his latter years, his *Historia Vitæ et Mortis*, he records a conversation he had had with a person whom he met when he was a young man at Poitiers. In the Sixth Book of the *De Augmentis Scientiarum*, he gives an account of a method of cyphers which he says he invented when he was a young man at Paris. It was in that capital, no doubt, that he spent by far the greater part, if not the whole, of the two years and a half, or thereby, that he seems to have remained abroad. Mr. Montagu mentions, as a fact illustrative of the impression he had already begun to make, "that an eminent artist, to whom, when in Paris, he sat for his portrait, was so conscious of his inability to do justice to his extraordinary intellectual endowments, that he has written on the side of his picture, *Si tabula daretur digna, animum mallet*" (If the canvas were worthy of it, I should prefer a picture of his mind). This is the portrait of which Mr. Montagu has given an engraving in the first volume of his edition of the works of Bacon, where it is described as a miniature by Hillyard.

It appears that Bacon was entered a student of Gray's Inn on the 21st of November, 1576; his four brothers, Nicholas, Nathaniel, Edward, and Anthony, being also all entered on the same day.\* He was made a Bencher of his inn in 1586; and in 1588 he was elected Lent Reader. In Gray's Inn he erected, Rawley, writing

\* The true date of Bacon's admission as a student of Gray's Inn was, we believe, stated for the first time in an article in the 'London Review,' No. IV. (for October, 1835), p. 523, *note*. It had been assumed by Mr. Montagu, that he did not commence the study of the law till 1580. The authority referred to by the London Reviewer, is the Harleian MS., 1812, which is described as "a large volume of copies of the records of Gray's Inn." The original admission-book for this date is lost.

in 1657, tells us, "that elegant pile or structure commonly known by the name of the Lord Bacon's Lodgings; which he inhabited by turns the most part of his life (some few years only excepted) unto his dying day." "The apartments in which Lord Bacon resided," says Mr. Montagu, "are said to be at No. 1, Gray's Inn Square, on the north side, one pair of stairs; I visited them in June, 1832. They are said to be, and they appear to be, in the same state in which they must have been for the last two centuries; handsome oak wainscot, and a beautiful ornament over the chimney-piece." "In the garden," Mr. Montagu adds, "there was, till within the last three or four years, a small elevation surrounded by trees, called Lord Bacon's Mount, and there was a legend that the trees were planted by him; they were removed to raise the new building now on the west side of the garden, and they stood about three-fourths from the south end." The elms in the walks were also planted by Bacon, when he was Double Reader, in the year 1600.

Mr. Montagu gives from the original preserved among the Lansdowne MSS. a letter of Bacon's to Lord Burghley, dated 6th May, 1586, from which, he says, it appears that Bacon had some time before applied to the Lord Treasurer to be called within the bar, or to be made what was then called an inner barrister. But this was no doubt merely his application to be made a bencher, his promotion to which rank Mr. Montagu has previously noticed. The inner barristers of that day were the benchers and readers, the term having reference to the bar, not of the court, but of the hall of the inn, and the place occupied by them at the readings and exercises of the house. The letter, however, is interesting for what Bacon says of his own disposition and habits at this date. "I find also," he writes, "that such persons as are of nature bashful (as myself is), whereby they want that plausible familiarity which others have, are often mistaken for proud. But once I know well, and I most humbly beseech your Lordship to believe, that arrogance and over-weening is so far from my nature, as, if I think

well of myself in anything, it is in this, that I am free from that vice." In his thirtieth year, according to Mr. Montagu (meaning apparently the year 1589), Bacon was appointed Queen's Counsel learned extraordinary, "an honour," it is added, "which until that time had never been conferred upon any member of the profession." Rawley calls it "a grace (if I err not) scarce known before."\*

It appears to have been from about this date that Bacon began to attach himself to the prevalent royal favourite, the Earl of Essex. Nevertheless, it was about this very time† that his relations the Cecils, hostile as they were to Essex and his faction, procured for him the reversion of the valuable place of Register of the Star Chamber. It was worth about 1600*l.* per annum; "for

\* Mr. Jardine, in 'Criminal Trials' ('Library of Entertaining Knowledge'), 1832, vol. i. p. 385, *note*, observes that "it does not distinctly appear at what time Bacon received his nomination as Queen's Counsel." Mr. Jardine adds, "He is said to have been the first King's Counsel under the degree of Sergeant."

† We do not find that Mr. Montagu anywhere assigns a precise date to this appointment, although he notices it under the year 1591 ('Life,' p. xxvi.). But Dugdale (in 'Baconiana,' p. 247) states that Bacon was made one of the Clerks of the Council in 32 Eliz., quoting as his authority the Patent Rolls of that year, p. 11. The 32 Eliz. extended from Nov. 1589 to Nov. 1590. This, we suppose, is the same appointment which Rawley designates as that of Register of the Star Chamber; the Judges of the Court of Star Chamber having been the Lords of the Council, or chief ministers of the crown. Indeed it is clear, from a comparison of various passages in the *Egerton Papers* (edited by Mr. Collier for the Camden Society, 4to. London, 1840), that the office of which Bacon held the reversion, was called indifferently the Clerkship of the Council, or the Clerkship of the Star Chamber (*Confer* pp. 272 and 429). Mr. Collier, however, would appear to be mistaken in his assertion, at p. 266, that Bacon did not obtain the reversion of the Clerkship of the Star Chamber till some time after his disappointment in regard to the office of Solicitor-General.

which," says Rawley, "he waited in expectation either fully or near twenty years; of which his lordship would say, in Queen Elizabeth's time, that it was like another man's ground butting [abutting] upon his house, which might mend his prospect, but it did not fill his barn. Nevertheless, in the time of King James it fell unto him." But it can scarcely be made matter of charge against Elizabeth or her ministers, as the worthy chaplain in his zeal would almost make it, that the office did not become vacant sooner. Bacon's failure in obtaining any present provision, he goes on, "might be imputed, not so much to her Majesty's averseness or disaffection towards him, as to the arts and policy of a great statesman then [he means Burghley], who laboured by all industrious and secret means to suppress and keep him down; lest, if he had risen, he might have obscured his glory." According to Mr. Collier (*Egerton Papers*, p. 269), "there is some reason to think that Bacon at one time acted as private secretary to Sir Robert Cecil." But this was perhaps at a date considerably later; for the letter which gives occasion to the remark, and which is stated to be addressed in the hand-writing of Bacon, is dated the 25th of December, 1597.

Long ere now, however, Bacon had commenced his career as a politician. Instead of having, as is commonly stated, first entered parliament in 1592, it appears from Browne Willis's *Notitia Parliamentaria* and D'Ewes's *Journals* that he had sat in every House of Commons from the fifth parliament of Elizabeth, which met in 1585. He was returned to that parliament for Melcombe Regis; to Elizabeth's sixth parliament, which met in 1586, for Taunton; to her seventh, which met in 1588, for Liverpool; to her eighth, which met in 1592, for Middlesex; to her ninth, which met in 1597, for Ipswich; to her tenth, which met in 1601, for both Ipswich and St. Alban's, when he elected to serve for the former place; to James's first parliament, which met in 1603, again for the same two places, when he elected, as before, to serve for Ipswich; and to James's second parliament, which

met in 1614, for St. Alban's, for Ipswich, and for the University of Cambridge, when he elected to serve for the last. It seems to have been in the more spacious arena of the House of Commons that Bacon's eloquence first broke forth so as to attract observation. One account, indeed, is, that it was not till 1594 that he made his first pleading at the bar, his previous professional practice having been confined to his chambers, or at the most to the inferior courts.\* The description that has been given of his oratory by Ben Jonson would seem to have a special reference to his speaking in Parliament:—"There happened in my time one noble speaker, who was full of gravity in his speaking. His language, where he could spare or pass by a jest, was nobly censorious [censor-like]. No man ever spake more neatly, more pressly, more weightily, or suffered less emptiness, less idleness, in what he uttered. No member of his speech but consisted of his own graces. His hearers could not cough, or look aside from him, without loss. He commanded where he spoke, and had his judges angry and pleased at his devotion. No man had their affections more in his power. The fear of every man that heard him was lest he should make an end."†

In 1592, also, appeared Bacon's first publication, as far as is known: 'Certain Observations upon a Libel published this present year, 1592, entituled A Declaration of the True Causes of the Great Troubles presupposed to be intended against the Realm of England.' It will fall to be noticed when we come to give an account of his political writings.

On the promotion of Sir Edward Coke to be Attorney-

\* B. Brit. 2nd edit., vol. i. p. 494.

† 'Discoveries;' Works, by Gifford, ix. 184. To Jonson we are also indebted for the knowledge of a peculiarity in his manner of speaking:—"My Lord Chancellor of England wringeth his speeches from the strings of his band, and other counsellors from the picking of their teeth."—*Conversations with Drummond*, edited by Mr. D. Laing for Shakespeare Society, 8vo. Lond., 1842, p. 25.

General, in April, 1594, Bacon became a candidate for the vacant office of Solicitor-General; but another person was eventually appointed. Upon this the Earl of Essex, who had exerted himself in his friend's behalf with extraordinary zeal, and took his failure much to heart, munificently presented him with an estate near Twickenham, which he afterwards sold for 1800*l.* The fact has been circumstantially related by Bacon himself.

In 1596 he completed and dedicated to the Queen 'A Collection of some of the Principal Rules and Maxims of the Common Law, with their Latitude and Extent;' but this work was not published till 1630, some years after the author's death, when it was printed along with another tract subsequently written, 'The Use of the Law, for Preservation of our persons, goods, and good names, according to the practice of the laws and customs of this land;' both being included under the title of 'The Elements of the Common Law of England.\*'

And now we come to the publication of the first edition of the *ESSAYS*, which appeared in a small 8vo. volume, with the following title:—'Essayes. Religious Meditations. Places of Perswasion and Disswasion. Seene and allowed. At London. Printed for Humfrey Hooper, and are to be sold at the blacke Beare in Chauncery Lane. 1597.' Only the leaves are numbered, and there are 45 of them in all, in two series; of which the first, extending to 13 leaves, is occupied with the *Essays*. The 14th leaf presents the following new title:—'Meditationes Sacrae. Londini. Excudebat Johannes Windet. 1597.' Then follow, on 14 more leaves, the *Meditationes Sacrae*, in Latin, being the same that are called the *Religious Meditations* on the first or general title-page. The leaf numbered 16 of this second series presents a third title:—'Of the Coulers of good and evill, a fragment. 1597;' and it is followed by 16 leaves con-

\* Mr. Montagu, however ('Life,' p. xxxv.) appears to consider the 'Maxims' and the 'Use' as having originally formed one work. The Dedication to Elizabeth, and the Preface, clearly apply only to the 'Maxims.'

taining the tract so called, being the same that is called *Places of Perswasion and Disswasion* in the general title. The *Meditationes Sacrae* are printed in the Italic letter; the *Essays* and *Colours* in the Roman. On the back of the last leaf are the words—"Printed at London by John Windet for Humfrey Hooper. 1597."\*

We may observe, that, notwithstanding the date 1597, it is most probable that the volume really appeared in the early part of what we should now call the year 1598. The *Essays* are inscribed by the author "To M. Anthony Bacon, his deare Brother;" the Dedication being dated "From my chamber at Graies Inne this 30 of Januarie. 1597." This would mean January, 1598, according to the then usual mode of computation.

There is another edition of the same collection with exactly the same title-page, except only that the date is 1598. It may have appeared, therefore, either in the same year with the former or in the beginning of the year 1599. It is in 12mo., and the page is of a smaller size than in the former. Only the leaves, of which there are 50, are numbered. It is not so neatly printed as the edition marked 1597; but the chief difference is, that the *Religious Meditations* are now in English. They in particular are full of the grossest misprints—all of which have been carefully preserved in Mr. Montagu's edition.

The only other known impression of the same collection (having also the *Meditations* in English) is a small 8vo., "printed at London for John Jaggard, dwelling in Fleete Streete, at the hande and Starre, near Temple Barre. 1606." The date of the Dedication is also altered

\* Mr. Montagu says that the 'Religious Meditations' are not printed, as the 'Essays' are, for Hooper. But in the next sentence but one he says, "Although the name of Hooper does not appear in the title prefixed to the 'Meditationes Sacrae,' it is evident that Windet was the printer for Hooper." The first or general title-page shows clearly enough that the entire volume was printed for Hooper. Mr. Montagu also expresses himself as if the 'Places of Perswasion and Disswasion' were a second title of the 'Religious Meditations.'

to 1606; and Mr. Montagu considers this to be a pirated edition.

The *Essays*, as they stand in these three first editions, are only ten in number; but several of the twelve *Meditations* are the rudimentary forms of compositions afterwards inserted among the *Essays*.

The next edition that has been discovered is dated 1612, and contains 38 Essays; namely, nine of those formerly published (the 8th, entitled 'Of Honour and Reputation,' being omitted), and 29 new ones. Of the nine that are reprinted, also, several are considerably enlarged. The Table of Contents enumerates 40 Essays; but the two last, entitled 'Of the Public,' and 'Of War and Peace,' are not given.

The Fifth edition, also dated 1612, appears to be another piracy of Jaggard's. It contains 39 Essays; namely, the 10 formerly printed (but without the enlargements), and the 29 new ones. It has likewise the *Religious Meditations*, and the *Places of Persuasion and Dissuasion*.

The Sixth edition is also by Jaggard, and is dated 1613. It is a transcript of the Fourth edition, with the addition of the Essay 'Of Honour and Reputation,' there omitted. It contains, therefore, the same 39 Essays as the Fifth edition, but differently arranged, and with several of them extended and altered.

The Seventh is an Edinburgh edition, printed for Andro Hart, and dated 1614. It is a copy of the last mentioned.

The Eighth edition, dated 1624, is printed for Elizabeth Jaggard (probably Jaggard's widow), and is also copied from the edition of 1613. These three last-mentioned editions all contain the *Meditations* and the *Places of Persuasion and Dissuasion*, as well as the *Essays*.

The Ninth edition, the last published in Bacon's lifetime, is a small quarto of 340 pages, entitled 'The *Essayes or Counsels, Civell and Morall, of Francis Lo. Verulam, Viscount St. Alban.* Newly enlarged. London, Printed by John Haviland for Hanna Barret and Richard Whitaker, and are to be sold at the signe of the King's



head in Paul's Churchyard. 1625.' It contains 58 Essays; namely, the 38 published in the Fourth edition; and 20 additional ones. Several of those formerly published have also new titles, and are otherwise altered.\*

In the original Dedication of the Essays to "Mr. Anthony Bacon, his dear Brother," Bacon says, "Loving and Beloved Brother, I do now like some that have an orchard ill neighboured; that gather their fruit before it is ripe, to prevent stealing. These fragments of my conceits were going to print; to labour the stay of them had been troublesome, and subject to interpretation; † to let them pass had been to adventure ‡ the wrong they might receive by untrue copies, or by some garnishment which it might please any that should set them forth to bestow upon them." From this it may be inferred that, as was then common, they had already been for some time circulating in manuscript. He goes on to speak of them as having passed long ago from his pen, and intimates that they are now published as they were originally written. And in this statement, it should be observed, he seems to refer to all the contents of the little volume—to the *Meditations* and the *Colours of Good and Evil*, as well as to the *Essays*.

The short address concludes with an expression of strong affection, which is further interesting for a disclosure, at this early date, of what appears to have been Bacon's conviction in regard to his own true sphere at the close as well as at the outset of his public life. In the depth of their reciprocal love, he says to his brother,

\* We have abstracted the notices of the last six of these editions, as well as we could, from Mr. Montagu's detailed account, 'Life,' note 3 I. But in his tabular comparison of the edition of 1625 with the regular edition of 1612, he makes the 1st Essay of the former to be the same with the 1st of the latter, whereas it is quite different and new; the 3rd of the former to be new, whereas it corresponds in great part to the 1st of the latter; and the 29th of the former to be new, whereas it is an extension of the 38th of the latter.

† That is, as we should now say, to misconstruction.

‡ To risk.

“ I assure you, I sometimes wish your infirmities translated upon myself, that her Majesty might have the service of so active and able a mind ; and I might be, with excuse, confined to these contemplations and studies, for which I am the fittest.” Mr. Anthony Bacon, who was a person of great ability and accomplishment, was most of his life so afflicted with gout as to incapacitate him for walking, and died in 1601 or 1602. When the *Essays* were republished in 1612, increased to four times their original number and extent, but without the *Meditations* and the *Colours of Good and Evil*, the former of which had been now mostly turned into *Essays*, while the latter tract was reserved to be incorporated in the *De Augmentis Scientiarum*, Bacon dedicated them to Sir John Constable, who was married to a sister of Lady Bacon's. He says, “ My last *Essays* I dedicated to my dear brother, Mr. Anthony Bacon, who is with God. Looking amongst my papers this vacation, I found others of the same nature ; which if I myself shall not suffer to be lost, it seemeth the world will not, by the often printing of the former.” These last words may lead us to suspect that Jaggard's edition of 1606 (supposed to be pirated) had not been the only re-impression of the former *Essays* after their first appearance in 1597 or 1598, although no other intermediate edition is now known.

It appears from a letter first published in Stephens's Second Collection (‘*Letters and Remains*,’ 4to., Lond. 1734), that Bacon had originally designed to dedicate this 1612 edition to Henry Prince of Wales, who died on the 6th of November in that year. The book, therefore, we may infer did not come out till towards the end of the year, or perhaps not till after the beginning of 1613. The letter is in fact the intended Dedication to the Prince. “ Having,” Bacon begins, “ divided my life into the contemplative and active part, I am desirous to give his Majesty and your Highness of the fruits of both, simple though they be.” The *Essays* he goes on to describe as only “ brief notes, set down rather significantly than anxiously.” “ The word,” he continues,

“ is late, but the thing is ancient ; for Seneca's Epistles to Lucilius, if you mark them well, are but Essays, that is, dispersed meditations, though conveyed in the form of Epistles.” As for the present compositions, he adds, he has “ endeavoured to make them not vulgar, but of a nature whereof a man shall find much in experience and little in books ; so as they are neither repetitions nor fancies.”

It was Bacon's practice to improve and make additions to the Essays throughout his life. In the letter to Bishop Andrews prefixed to his tract entitled ‘ An Advertisement touching an Holy War,’ which was written in 1622, he says, after speaking of his other writings :— “ As for my Essays, and some other particulars of that nature, I count them but as the recreations of my other studies, and in that sort purpose to continue them ; though I am not ignorant that those kind of writings would, with less pains and embracement, perhaps, yield more lustre and reputation to my name than those other which I have in hand.” From what has been stated it will be seen that the successive forms which the work assumed as published by the author are to be found in the three editions of 1597 (or 1598), of 1612 (the regular edition of that date), and of 1625. The last-mentioned edition is dedicated to the potent royal favourite, Villiers Duke of Buckingham, between whom and Bacon the most intimate alliance had subsisted from the first appearance of the former at court. Having dedicated his *Instauration to the King*, and his *History of Henry the Seventh*, as also his portions of *Natural History* (meaning certain tracts in what is called the *Third Part of the Instauration Magna*) to the Prince (that is Prince Charles, afterwards Charles I.), Bacon informs his grace that he now dedicates the *Essays* to him ; “ being,” he says, “ of the best fruits that, by the good increase which God gives to my pen and labours, I could yield.” Of all his other works, he observes, they have been the most current ; “ for that, as it seems, they come home to men's business and bosoms.” And he has enlarged them, he states, “ both in number and weight ; so that they are indeed a new work.” “ I thought it there-

fare," he adds, "agreeable to my affection and obligation to your Grace to prefix your name before them both in English and in Latin; for I do conceive that the Latin volume of them, being in the universal language, may last as long as books last." He takes care to intimate that he has now also translated his 'Henry the Seventh' into Latin: \* the *Instauration and the Natural History* were originally published and written in that language. But the Latin version of the *Essays*, of which he here speaks, was not printed till some years after his death; it and the translation of the *History of Henry the Seventh*, along with other pieces, were first published by Dr. Rawley, in a folio volume, at London, in 1638. The Latin title, which was given to the *Essays* by Bacon himself, is 'Sermones Fideles, sive Interiora Rerum.' † Mr. Montagu seems to consider the translation as being Bacon's own throughout—quoting, oddly enough, as the description of them given by Rawley, 'Sermones Fideles, ab ipso Honoratissimo Auctore, præterquam in paucis, Latinitate donatus.' We need not say that the learned chaplain was incapable of writing anything like this. What his title-page (for it is from that that the words are extracted) describes as for the most part turned into Latin by Bacon himself is not the *Sermones*, but the entire volume, the general title of which is 'Moralium et Civilium Tomus.' As it contains the voluminous *De Augmentis Scientiarum*, and other long treatises, and the *Sermones* form a very small part of it, they may be among the few things of which the author himself was not the translator. In his *Life of Bacon*, it is true, both in the English and in the Latin, Rawley seems to enumerate the Latin translation of the *Essays* among Bacon's own performances. But, on the other hand, we find Bacon himself, in a letter to his friend Mr. Toby Matthew, without date, but apparently written in 1622

\* The expression in the Latin is quite explicit:—"Quam etiam in Latinum verti."

† This Bacon states in his Latin Letter to Father Falgentio, written probably in 1624.

or 1623,\* expressing himself in a way which implies at least that he did not then intend to be his own translator. "It is true," he says, "my labours are now most set to have those works which I had formerly published, as that of *Advancement of Learning*, that of *Henry Seventh*, that of the *Essays*, being retractate and made more perfect, well translated into Latin by the help of some good pens, which forsake me not; for these modern languages will at one time or other play the bankrupts with books, and, since I have lost much time with this age, I would be glad, as God shall give me leave, to recover it with posterity." And Archbishop Tenison says expressly, speaking of the *Essays*, "The Latin translation of them was a work performed by divers hands; by those of Dr. Hacket (late Bishop of Lichfield), Mr. Benjamin Johnson (the learned and judicious poet), and some others, whose names I once heard from Dr. Rawley; but I cannot now recall them. To this Latin edition he gave the name of *Sermones Fideles*, after the manner of the Jews, who called the words, adagies, or observations of the wise, *Faithful Sayings*; that is, credible propositions, worthy of firm assent and ready acceptance. And, as I think, he alluded more particularly in this title to a passage in Ecclesiastes (xii. 10, 11), where the preacher saith that he sought to find out *Verba Delectabilia* (as Tremellius rendereth the Hebrew), *pleasant words* (that is, perhaps, his Book of Canticles), and *Verba Fidelia* (as the same Tremellius), *faithful sayings* (meaning, it may be, his collection of Proverbs). In the next verse he calls them *Words of the Wise*, and so many goads and nails given *ab eodem pastore*, from the same shepherd (of the flock of Israel)."† Bacon himself, in his letter to Father Fulgentio, intimates that he preferred the title *Sermones*

\* The letter is placed by Birch, in whose collection it was first published, under the year 1623; but, as it seems to speak of the Latin translation of the 'Advancement of Learning,' which was published in that year, as only in progress, perhaps it may have been written in 1622.

† Introduction to 'Baconiana,' 1679, p. 61.

*Fideles*, as weightier than that of *Saggi Morali* which had been given to the Essays in the Italian translations;\* —“ Verum illi libro nomen gravius impono.”

It is a curious fact that at one time Bacon's Essays appear to have been generally known and read only in an English translation from the Latin. Thus, the writer of the Life of Bacon in the first edition of the *Biographia Britannica*, published about the middle of the last century, tells us that it is from the Latin translation we have the Essays in Bacon's Works, referring to what is called Mallet's edition, which appeared in 1753. Hume, it may be remarked, has described Bacon's prose as barbarous. And, what is still more surprising, Dugald Stewart, in his Preliminary Dissertation to the *Encyclopædia Britannica*, written and published within the last thirty years, expresses his astonishment that Bacon's English style should have been preferred by Bishop Burnet to that of Sprat! If, indeed, his wonder had been that so just a judgment should have proceeded from Burnet, it would be more intelligible; but, on the contrary, Burnet is strangely enough brought forward as “no contemptible judge of style;” and it is declared to be difficult to conceive on what grounds he proceeded “in hazarding so extraordinary an opinion.” The passage occurs in a note at p. 40 (last edition); and is followed up by an exclamation about the inferiority, “in all the higher qualities and graces of style,” of the prose compositions of Swift to those of Pope and Addison. We need not say that an editor of Bacon's Essays would now be thought out of his senses who should give them in any other English than Bacon's own.

As the Essays stand in Bacon's last and most com-

\* Two Italian translations bearing this title had already appeared, one in 1618 (by Mr. Toby Matthew), the other in 1621. A French translation had also been published at London in 1619, under the title of ‘*Essays Moraux*.’ This was the work of Sir Arthur Gorges, the common friend of Bacon and Spenser, and also the English translator of Bacon's treatise ‘*De Sapientia Veterum*.’ Mr. Montagu everywhere gives the name *Georges*, we do not know upon what authority.

plete edition, the first is entitled 'Of Truth,' and is as follows:—

'What is Truth?' said jesting Pilate, and would not stay for an answer. Certainly there be that delight in giddiness, and count it a bondage to fix a belief; affecting free-will in thinking, as well as in acting. And though the sects of philosophers of that kind be gone, yet there remain certain discouraging wits, which are of the same veins, though there be not so much blood in them as was in those of the ancients. But it is not only the difficulty and labour which men take in finding out of Truth; nor again, that when it is found, it imposeth upon men's thoughts, that doth bring lies in favour; but a natural, though corrupt, love of the lie itself. One of the later school of the Grecians examineth the matter, and is at a stand to think what should be in it that men should love lies; where neither they make for pleasure, as with poets, nor for advantage, as with the merchant, but for the lie's sake. But I cannot tell: this same Truth is a naked and open daylight, that doth not show the masques, and mummeries, and triumphs of the world, half so stately and daintily as candle-lights. Truth may perhaps come to the price of a pearl, that showeth best by day; but it will not rise to the price of a diamond or carbuncle, that showeth best in varied lights. A mixture of a lie doth ever add pleasure. Doth any man doubt, that if there were taken out of men's minds vain opinions, flattering hopes, false valuations, imaginations as one would, and the like; but it would leave the minds of a number of men, poor shrunken things, full of melancholy and indisposition, and unpleasing to themselves. One of the Fathers, in great severity, called poesy 'Vinum Dæmonum,'\* because it filleth the imagination, and yet it is but with the shadow of a lie. But it is not the lie that passeth through the mind, but the lie that sinketh in and setteth in it, that doth the hurt, such as we spake of before. But howsoever these things are thus in men's depraved judgments and affections, yet truth, which only doth judge itself, teacheth that the inquiry of truth, which is the love-making or wooing of it; the knowledge of truth, which is the presence of it; and the belief of truth, which is the enjoying of it, is the sovereign

\* The wine of devils. (The translations throughout our extracts from the *Essays* are the same as in the edition, with notes, by Dr. W. C. Taylor, 8vo., Lond. 1840.)

good of human nature. The first creature of God in the works of the days was the light of the sense; the last was the light of reason; and his sabbath-work ever since is the illumination of his spirit. First he breathed light upon the face of the matter or chaos, then he breathed light into the face of man, and still he breatheth and inspireth light into the face of his chosen. The poet that beautified the sect that was otherwise inferior to the rest, saith yet excellently well: 'It is a pleasure to stand upon the shore, and to see ships tossed upon the sea; a pleasure to stand in the window of a castle and to see a battle, and the adventures thereof below; but no pleasure is comparable to the standing upon the vantage-ground of truth—(a hill not to be commanded, and where the air is always clear and serene)—and to see the errors, and wanderings, and mists, and tempests in the vale below:' so always that this prospect be with pity, and not with swelling or pride. Certainly it is heaven upon earth to have a man's mind move in charity, rest in providence, and turn upon the poles of truth.

To pass from theological and philosophical truth to the truth of civil business, it will be acknowledged, even by those that practise it not, that clear and round dealing is the honour of man's nature, and that mixture of falsehood is like alloy in coin of gold and silver, which may make the metal work the better, but it embaseth it. For these winding and crooked courses are the goings of the serpent, which goeth basely upon the belly, and not upon the feet. There is no vice that doth so cover a man with shame as to be found false and perfidious. And therefore Mountaigny saith prettily, when he inquired the reason, Why the word of the lie should be such a disgrace, and such an odious charge? Saith he, 'If it be well weighed, To say that a man lieth, is as much as to say that he is brave towards God, and a coward towards men.' For a lie faces God, and shrinks from man. Surely the wickedness of falsehood, and breach of faith, cannot possibly be so highly expressed, as in that it shall be the last peal, to call the judgments of God upon the generations of men; it being foretold, that when Christ cometh, 'He shall not find faith upon the earth.'

As this is our first specimen, we may stop for a moment to notice the characteristics of Bacon's manner of thinking and writing by which it is marked.

The first thing that will strike every reader is its fulness of matter. Jonson, as we have seen, has said of Bacon's speaking, that his hearers could not cough or



look aside from him without loss; neither can his readers remit their attention for a sentence, or for a clause of a sentence, without missing a portion of the thought. We do not speak merely of the vividness and pregnancy of the expression; that is another thing. What we mean is, that the flow of the reasoning or reflection never pauses, never diminishes. True or false, one new thought, one new view succeeds another as fast as it is possible to exhibit them. Nor is this true only of the Essays, where the style is more formally aphoristic and economical. His other writings are less pointed and epigrammatic; but the packing of the thoughts is nearly as close everywhere. Every word indicates a working, teeming mind. Much of what is said, indeed, may be merely ingenious; some portion of the abundance may be even incumbering, and would, we may think, be better away; but there, at any rate, it is, never-failing and seemingly inexhaustible, at the least the richest intermixture of wisdom, fancy, and ingenuity in succession, often a combination and interfusion of all the three.

Then there is the uncommonness and characteristic air of nearly all the thoughts. It might be supposed that after any true thing has once been said, and generally felt and accepted, it would pass into common property, and cease to be recognisable as the thought of an individual. But it does not so happen. An original thought never loses its stamp of originality. If it has been struck out in an illiterate and unrecording age, it spreads indeed everywhere among the people, but it retains its distinctive shape of a peculiar utterance, a proverb, and, after having been repeated for a thousand years, it shows like a flash of fire among other words every time it is used. It is the same with an original thought in a book. It always remains new, fresh, and striking. A mere scientific truth may become a commonplace; it is something entirely separate from the mind of the discoverer; but a happily expressed thought is a fragment of the mind which first gave it such expression, and will always continue to be something unlike what any other mind would have produced. Take any

discovery in astronomy : we could not say from anything that is known of the minds of Copernicus, or Galileo, or Tycho Brahe, or Kepler, from which of them it proceeded, nor does the mention of it in ordinary circumstances recal its author ; no part of its importance, no part of its beauty or its life lies in its connection with him : it has no flavour or character of any kind which it has taken from him, or which makes any likeness between him and it. He has thrown it forth as the tissue is thrown forth by the loom ; a moral saying is more like the grape, that is ever racy of the soil where it grew. Thus, a characteristic thought of Bacon's cannot be taken possession of by any one else and made his own ; in the change of the Baconian form or expression, the thought itself would be changed ; it must therefore always retain that peculiarity of aspect which marks it as his, and which will keep it for ever as distinguishable and as striking as it was at first. A discovery made by Kepler might easily, if we were to judge only by the intellectual characters of the two, be attributed to Copernicus ; but a verse of Homer's or a sentence of Bacon's will usually, like a picture by Raphael, attest their own paternity.

Bacon's manner of writing has been described by his chaplain and first biographer in the following terms :—  
 “ In the composing of his books, he did rather drive at a masculine and clear expression than at any fineness or affectation of phrases, and would often ask if the meaning were expressed plainly enough ; as being one that accounted words to be but subservient or ministerial to matter and not the principal. And, if his style were polite, it was because he could do no otherwise. Neither was he given to any light conceits, or descanting upon words, but did ever purposely and industriously avoid them ; for he held such things to be but digressions or diversions from the scope intended, and to derogate from the weight and dignity of the style.” What is here said of his avoidance of all mere verbal conceits is true, and the fact merits especial attention as notably discriminating the wit of Bacon from that of every other English writer eminent for that quality in his age. Pro-

bably nothing resembling a pun, or any quibble of that class, is to be found in all that he has written. Nor does he torture thoughts more than words; having once given the thought full and fitting expression, he lets it alone, and passes on to the next. Yet the characteristic of his writing is pre-eminently wit, understood in the largest and highest sense, as the perception and exhibition of things in their less obvious relations. Upon no topic is he ever trite, or a repeater of what has been said by others; he cannot quote a verse of Scripture without giving it an interpretation of his own. And yet the peculiar view that he takes of everything never, or very rarely, appears forced or unnatural; if it be the last that would occur to an ordinary thinker, it looks as if it were the first that had occurred to him.

Much of this comes of the real originality of Bacon's manner of thinking; but the effect is also in part owing to his great oratorical skill or art of expression. The manner of his writing is as striking and uncommon as the matter. Or rather, we should say, the arraying and apparelling of his thoughts is as brilliant as the thoughts themselves. He has no passion; but no man had ever more of the mere ingenuity and fancy that belong to eloquence. His style is all over colour and imagery; so much so, indeed, that this sort of enrichment may be said frequently to enter into its substance, and to constitute his thoughts rather than to clothe and decorate them. Metaphors, similitudes, and analogies make up a great part of his reasoning,—are constantly brought in for proof and argument as well as for illustration. Not that this forms any objection to the force or soundness of the reasoning. In moral exposition, which is totally different in its nature from mathematical demonstration—as different as a piece of music is from the multiplication table—what is at all times principally wanted, almost the one thing needful, is the spirit and pulse of life; if that be present in sufficient strength, the manner in which it shows itself, or the source whence it is obtained, is of little consequence. Consider what all such exposition is. It rarely or never takes the form of pure syllogism

or absolutely necessary deduction; its nature does not admit of its doing so; it never can, except perhaps for a step or two now and then by a process of forcing or torture, be reduced to that form. What is called moral reasoning consists, in addition to the historical statement of the necessary facts, mainly of such excitement addressed to the reader or hearer as enables and impels him to supply every thing else for himself—to see the subject in the same light in which the writer or speaker sees it, and to come to the same conclusions. There are various ways, we repeat, of producing this effect, according to the circumstances of the case. Almost the only position that can be universally affirmed is, that the thing cannot be done in the manner of a mathematical demonstration; in moral questions that mode of reasoning is at once powerless and, for any continued effort, impossible. It may be accomplished by mere artifice of narration; by the clear exhibition of the subject in the proper points of view; by passionate declamation; by invective; by ridicule; by epigrams and witticisms; and often, as effectually as in any other way, or more so than in any other, by ingenious analogies and similitudes and other fanciful illustrations. None of these modes of exposition, it is true, are in a strict sense logically conclusive; but any one is nearly as much so as any other; and at any rate no methods more purely logical are possible. An extended concatenation of perfect syllogisms upon any moral subject would be a mere string of truisms and inanities.

We do not admit, therefore, that there is any thing false or hollow in Bacon's manner of reasoning, because he deals largely in figurative illustrations. When in the above essay he represents truth as a kind of daylight, and falsehood or fiction as a candlelight, we contend that he expounds an idea and impresses a conviction as distinctly and completely as could have been done by the soberest and most colourless statement. Nay, much more distinctly and effectually; for there is a life and power in the figure that the plain statement would not have had, awakening a corresponding life and power of

conception in the mind of the reader. Nor is an imaginative manner of thinking, or a figurative style, inconsistent with soundness of judgment or correctness of exposition. The highest of all truths have been expounded poetically. Many of the highest truths cannot be conceived at all except imaginatively. A mind of imaginative capacity is in the region of thought and reasoning to a mind without imagination what in the world of sense the man who sees is to him who is blind. The latter may have a tolerably correct notion of any thing he can touch and handle; but the former alone can embrace the grand panorama of nature.

¶ The question, however, still remains in how far Bacon is a philosopher or sage, as well as an orator—what is the real amount and character of the truth and wisdom contained in his writings. To what extent are his views subtle and profound? to what extent only specious? Ingenuity, fancy, eloquence, fertility of invention, a never-failing flow of thought of one kind or another, even singular sagacity and insight within a certain range, will be denied him by none; but with all this the deepest penetration and widest compass of vision may still be wanting. Whether or no such be the case, the actual examination of his works must decide.

The Second Essay, entitled 'Of Death,' had appeared in the edition of 1612. We will give the greater part of it:—

Men fear death as children fear to go in the dark; and as that natural fear in children is increased with tales, so is the other. Certainly, the contemplation of death as the wages of sin and passage to another world, is holy and religious; but the fear of it as a tribute due unto nature is weak. Yet in religious meditations there is sometimes mixture of vanity and of superstition. You shall read in some of the friars' books of Mortification, that a man should think with himself what the pain is, if he have but his fingers' end pressed or tortured, and thereby imagine what the pains of death are when the whole body is corrupted and dissolved; when many times death passeth with less pain than the torture of a limb: for the most vital parts are not the quickest of sense. And by him that

spake only as a philosopher and natural man, it was well said, 'pompa mortis magis terret, quam mors ipsa;'<sup>\*</sup> groans and convulsions, and a discoloured face, and friends weeping, and blacks, and obsequies, and the like, show death terrible. It is worthy the observing, that there is no passion in the mind of man so weak but it mates and masters the fear of death: and therefore death is no such terrible enemy, when a man hath so many attendants about him that can win the combat of him. Revenge triumphs over death; love slights it; honour aspireth to it; grief fieth to it; fear pre-occupateth it; Nay we read, after Otho the Emperor had slain himself, pity (which is the tenderest of affections) provoked many to die, out of mere compassion to their sovereign, and as the truest sort of followers. Nay, Seneca adds, niceness and satiety; 'cogita quâmdiu eadem feceris; mori velle, non tantum fortis, aut miser, sed etiam fastidiosus potest.'<sup>†</sup> A man would die, though he were neither valiant nor miserable, only upon a weariness to do the same thing so oft over and over. It is no less worthy to observe how little alteration in good spirits the approaches of death make. For they appear to be the same men till the last instant.

Then follow some instances of the composure with which strong or well-balanced minds have welcomed death; among others, that of the Emperor Galba, who is said to have exclaimed, holding out his neck to his assassin, *Feri, si ex re sit populi Romani* (Strike, if it be for the good of the Roman people); and that of Septimius Severus, whose last words to those about him were, *Adeste, si quid mihi restat agendum* (Be quick, if anything remains for me to do). The essay concludes thus: —

It is as natural to die as to be born, and to a little infant perhaps the one is as painful as the other. He that dies in an earnest pursuit is like one that is wounded in hot blood, who, for the time, scarce feels the hurt; and therefore a mind that is fixed, and bent upon somewhat that is good, doth avert the

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\* The parade of death is more terrific than death itself.

† Consider how often you repeat the same things; the desire of death may arise not only from fortitude, or misery, but from satiety.

dolours of death.' But above all, believe it, the sweetest canticle is '*Nunc dimittis*'\*—when a man hath obtained worthy ends and expectations. Death hath this also—that it openeth the gate to good fame, and extinguisheth envy. '*Extinctus amabitur idem.*' † :

The Third Essay, 'Of Unity in Religion,' is an enlargement of one which had appeared in the edition of 1612. It is longer than usual; but, one or two short passages will suffice as samples of the manner in which the subject is treated. Having remarked that "the fruits of unity, next unto the well-pleasing of God, which is all in all, are two; the one towards those that are without the church, the other towards those that are within;" the author proceeds:—

For the former:—It is certain that heresies and schisms are of all others the greatest scandals, yea, more than corruption of manners. For as in the natural body a wound or solution of continuity is worse than a corrupt humour, so in the spiritual. So that nothing doth so much keep men out of the church, and drive men out of the church, as breach of unity; and therefore whensoever it cometh to that pass that one saith '*Ecce in deserto,*' † another saith '*Ecce in penetralibus;*' ‡ that is, when some men seek Christ in the conventicles of heretics, and others in an outward face of a church, that voice had need continually to sound in men's ears, '*Nolite exire,*' Go not out. The doctor of the Gentiles (the propriety of whose vocation drew him to have a special care of those without) saith, '*If an heathen come in and hear you speak with several tongues, will he not say that you are mad?*' And certainly it is little better when atheists and profane persons do hear of so many discordant and contrary opinions in religion; it doth avert them from the church, and maketh them to sit down in the chair of the scorers.

He afterwards gives the following advice in regard to the true rule or principle of unity:—

Men ought to take heed of rending God's church by two

\* Lord, now lettest thou thy servant depart in peace.

† The same person shall be beloved after death.

‡ Behold, he is in the desert.

§ Behold, he is in the secret chamber of the house.

kinds of controversies : the one is when the matter of the point controverted is too small and light, not worth the heat and strife about it, kindled only by contradiction. For, as it is noted by one of the fathers, 'Christ's coat indeed had no seam, but the church's vesture was of divers colours;' whereupon he saith, 'In veste varietas sit, scissura non sit,'\* They be two things—unity and uniformity. The other is when the matter of the point controverted is great, but it is driven to an over-great subtilty and obscurity, so that it becometh a thing rather ingenious than substantial. A man that is of judgment and understanding shall sometimes hear ignorant men differ, and know well within himself that those which so differ mean one thing, and yet they themselves would never agree. And if it come so to pass, in that distance of judgment which is between man and man, shall we not think that God above, that knows the heart, doth not discern that frail men, in some of their contradictions, intend the same thing, and accepteth of both.

Of the Fourth Essay, 'Of Revenge,' first printed in the edition of 1625, the following is the commencement :—

Revenge is a kind of wild justice, which the more man's nature runs to, the more ought law to weed it out. For as for the first wrong, it doth but offend the law; but the revenge of that wrong putteth the law out of office. Certainly, in taking revenge, a man is but even with his enemy; but in passing it over, he is superior—for it is a prince's part to pardon. And Solomon, I am sure, saith, 'It is the glory of a man to pass by an offence.' That which is past is gone, and irrecoverable; and wise men have enough to do with things present and to come; therefore they do but trifle with themselves that labour in past matters. There is no man doth a wrong for the wrong's sake, but thereby to purchase himself profit, or pleasure, or honour, or the like. Therefore why should I be angry with a man for loving himself better than me? And if any man should do wrong merely out of ill nature, why, yet it is but like the thorn or briar, which prick and scratch because they can do no other.

And here are the commencement and conclusion of

\* There may be variety in the vesture, but let there be no division.



the Fifth, entitled 'Of Adversity,' which was also one of those added in the edition of 1625 :—

It was a high speech of Seneca (after the manner of the Stoics), That the good things which belong to prosperity are to be wished, but the good things that belong to adversity are to be admired—'Bona rerum secundarum optabilia, adversarum mirabilia.' Certainly if miracles be the command over nature, they appear most in adversity. It is yet a higher speech of his than the other (much too high for a heathen), It is true greatness to have in one the frailty of a man and the security of a god—'Vere magnum habere fragilitatem hominis, securitatem Dei.' This would have done better in poesy, where transcendencies are more allowed. And the poets indeed have been busy with it; for it is in effect the thing which is figured in that strange fiction of the ancient poets, which seemeth not to be without mystery, nay, and to have some approach to the state of a Christian: That Hercules, when he went to unbind Prometheus (by whom human nature is represented), sailed the length of the great ocean in an earthen pot or pitcher; livelily describing Christian resolution that saileth in the frail bark of the flesh through the waves of the world. . . . . We see in needle-works and embroideries it is more pleasing to have a lively work upon a sad and solemm ground, than to have a dark and melancholy work upon a lightsome ground. Judge therefore of the pleasure of the heart by the pleasure of the eye. Certainly virtue is like precious odours, most fragrant when they are incensed or crushed; for prosperity doth best discover vice, but adversity doth best discover virtue.

The Sixth Essay, 'Of Simulation and Dissimulation,' was likewise new in 1625. The following are its most material or striking passages :—

Dissimulation is but a faint kind of policy or wisdom; for it asketh a strong wit and a strong heart to know when to tell truth, and to do it. Therefore it is the weaker sort of politics that are the great dissemblers.

Tacitus saith, 'Livia sorted well with the arts of her husband and dissimulation of her son, attributing arts or policy to Augustus and dissimulation to Tiberius. And again, when Mucianus encourageth Vespasian to take arms against Vitellius he saith, 'We rise not against the piercing judgment of Augustus, nor the extreme caution or closeness of Tiberius.'

These properties of arts, or policy and dissimulation, or closeness, are indeed habits and faculties, several, and to be distinguished. For if a man have that penetration of judgment as he can discern what things are to be laid open, and what to be secreted, and what to be showed at half lights, and to whom, and when (which indeed are arts of state and arts of life, as Tacitus well calleth them), to him, a habit of dissimulation is a hindrance and a poorness: but if a man cannot attain to that judgment, then it is left to him generally to be close and a dissembler. For where a man cannot choose or vary in particulars, there it is good to take the safest and wariest way in general, like the going softly by one that cannot well see. Certainly the ablest men that ever were have had all an openness and frankness of dealing, and a name of certainty and veracity; but then they were like horses well managed, for they could tell passing well when to stop or turn: and at such times, when they thought the case indeed required dissimulation, if then they used it, it came to pass that the former opinion spread abroad of their good faith, and clearness of dealing, made them almost invisible. . . . . In few words, mysteries are due to secrecy. Besides, to say truth, nakedness is uncomely as well in mind as body; and it addeth no small reverence to men's manners and actions if they be not altogether open. As for talkers and futile persons, they are commonly vain and credulous withal; for he that talketh what he knoweth will also talk what he knoweth not. Therefore set it down, that a habit of secrecy is both politic and moral. And in this part it is good, that a man's face give his tongue leave to speak; for the discovery of a man's self, by the tracks of his countenance is a great weakness and betraying, by how much it is many times more marked and believed than a man's words.

In conclusion; those advantages which are considered to belong to the practice of Simulation and Dissimulation having been enumerated, it is added:—

There be also three disadvantages to set it even. The first, that simulation and dissimulation commonly carry with them a show of fearfulness, which, in any business, doth spoil the feathers of round flying up to the mark. The second, that it puzzleth and perplexeth the conceits of many, that perhaps would otherwise co-operate with him, and makes a man w<sup>r</sup> almost alone to his own ends. The third and greatest is, th

depriveth a man of one of the most principal instruments for action, which is trust and belief. The best composition and temperature is to have openness in fame and opinion, secrecy in habit, dissimulation in seasonable use, and a power to feign if there be no remedy.

Of the Seventh Essay, entitled 'Of Parents and Children,' which is one of those first printed in 1612, it will be enough to give a few sentences at the beginning:—

The joys of parents are secret, and so are their griefs and fears; they cannot utter the one, nor they will not utter the other. Children sweeten labours, but they make misfortunes more bitter: they increase the cares of life, but they mitigate the remembrance of death. The perpetuity by generation is common to beasts; but memory, merit, and noble works are proper to men: and surely a man shall see the noblest works and foundations have proceeded from childless men, which have sought to express the images of their minds where those of their bodies have failed. So the care of posterity is most in them that have no posterity.

We will transcribe the whole of the Eighth, entitled 'Of Marriage and Single Life,' also one of those first given in the collection of 1612:—

He that hath wife and children hath given hostages to fortune, for they are impediments to great enterprises, either of virtue or mischief. Certainly the best works, and of greatest merit for the public, have proceeded from the unmarried or childless men, which both in affection and means have married and endowed the public. Yet it were great reason that those that have children should have greatest care of future times, unto which they know they must transmit their dearest pledges. Some there are, who, though they lead a single life, yet their thoughts do end with themselves, and account future times impertinencies. Nay, there are some others that account wife and children but as bills of charges. Nay more, there are some foolish, rich, covetous men, that take a pride in having no children, because they may be thought so much the richer. For perhaps they have heard some talk, 'Such an one is a great rich man;' and another except to it, 'Yea, but he hath a great charge of children,' as if it were an abatement to his riches. But the most ordinary cause of a single life is liberty, especi-

ally in certain self-pleasing and humorous minds, which are so sensible of every restraint, as they will go near to think their girdles and garters to be bonds and shackles. Unmarried men are best friends, best masters, best servants, but not always best subjects; for they are light to run away, and almost all fugitives are of that condition. A single life doth well with churchmen, for charity will hardly water the ground where it must first fill a pool. It is indifferent for judges and magistrates; for if they be facile and corrupt, you shall have a servant five times worse than a wife. For soldiers, I find the generals commonly in their hortatives put men in mind of their wives and children. And I think the despising of marriage among the Turks maketh the vulgar soldier more base. Certainly wife and children are a kind of discipline of humanity; and single men, though they may be many times more charitable, because their means are less exhaust, yet on the other side they are more cruel and hard hearted (good to make severe inquisitors), because their tenderness is not so often called upon. Grave natures, led by custom, and therefore constant, are commonly loving husbands; as was said of Ulysses, 'Vetulam suam prætulit immortalitati.'\* Chaste women are often proud and froward, as presuming upon the merit of their chastity. It is one of the best bonds both of chastity and obedience in the wife if she think her husband wise, which she will never do if she find him jealous. Wives are young men's mistresses, companions for middle age, and old men's nurses; so as a man may have a quarrel to marry when he will. But yet he was reputed one of the wise men that made answer to the question, 'When a man should marry?'—'A young man not yet, an elder man not at all.' It is often seen that bad husbands have very good wives, whether it be that it raiseth the price of their husband's kindness when it comes, or that the wives take a pride in their patience. But this never fails if the bad husbands were of their own choosing, against their friends' consent. for then they will be sure to make good their own folly.

The Ninth Essay is entitled 'Of Envy,' (the word being here used in its modern sense, and not in that sometimes borne by the Latin *invidia*, hatred generally, or hatred arising merely from a wish to displace, in which it often occurs in other parts of Bacon's writings). It was first published in 1625. It commences thus:—

\* He preferred his old woman to immortality.

There be none of the affections which have been noted to fascinate or bewitch but love and envy. They both have vehement wishes; they frame themselves readily into imaginations and suggestions; and they come easily into the eye, especially upon the presence of the objects which are the points that conduce to fascination, if any such thing there be. We see, likewise, the Scripture calleth envy an evil eye; and the astrologers call the evil influences of the stars, evil aspects; so that still there seemeth to be acknowledged in the act of envy an ejaculation or irradiation of the eye. Nay, some have been so curious as to note, that the times when the stroke or percussion of an envious eye doth most hurt, are, when the party envied is beheld in glory or triumph, for that sets an edge upon envy; and besides at such times the spirits of the person envied do come forth most into the outward parts, and so meet the blow.

And the following is the concluding paragraph:—

We will add this in general, touching the affection of envy, that, of all other affections, it is the most importune and continual; for of other affections there is occasion given but now and then. And therefore it was well said, 'Invidia festos non agit;\*' for it is ever working upon some or other. And it is also noted, that love and envy do make a man pine, which other affections do not, because they are not so continual. It is also the vilest affection, and the most depraved; for which cause it is the proper attribute of the devil, who is called the envious man, that soweth tares amongst the wheat by night: as it always cometh to pass that envy worketh subtilly and in the dark, and to the prejudice of good things, such as is the wheat.

The Tenth Essay, 'Of Love,' is in the collection of 1612. It is not very long, but a few sentences will convey the substance of the whole:—

The stage is more beholden to love than the life of man: for as to the stage, love is even matter of comedies and now and then of tragedies; but in life it doth much mischief, sometimes like a syren, sometimes like a fury. You may observe that amongst all the great and worthy persons (whereof the memory remaineth, either ancient or recent) there is not one

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\* Envy keeps no holidays. Digitized by Google

that hath been transported to the mad degree of love; which shows that great spirits and great business do keep out this weak passion. . . . . It is a strange thing to note the excess of this passion, and how it braves the nature and value of things by this, that the speaking in a perpetual hyperbole is comely in nothing but in love. Neither is it merely in the phrase; for, whereas it hath been well said that the arch-flatterer, with whom all the petty flatterers have intelligence, is a man's self, certainly the lover is more. For there was never proud man thought so absurdly well of himself as the lover doth of the person loved; and therefore it was well said, that it is impossible to love and to be wise. Neither doth this weakness appear to others only and not to the party loved, but to the loved most of all, except the love be reciproque; for it is a true rule, that love is ever rewarded, either with the reciproque or with an inward and secret contempt. By how much the more men ought to beware of this passion, which leaeth not only other things, but itself. As for the other losses, the poet's relation doth well figure them; that he that preferred Helena quitted the gifts of Juno and Pallas. For whosoever esteemeth too much of amorous affection quitteth both riches and wisdom. This passion hath his floods in the very times of weakness, which are great prosperity and great adversity, though this latter hath been less observed: both which times kindle love and make it more frequent, and therefore show it to be the child of folly.

The subject of the Eleventh, which is entitled, 'Of Great Place,' and which was also first published in the edition of 1612, is more in Bacon's line; and of this Essay, though it is of some length, we will subjoin the greater part:—

Men in great places are thrice servants—servants of the sovereign or state, servants of fame, and servants of business; so as they have no freedom, neither in their persons, nor in their actions, nor in their times. It is a strange desire, to seek power and to lose liberty, or to seek power over others and to lose power over a man's self. The rising unto place is laborious, and by pains men come to greater pains, and it is sometimes base; and by indignities men come to dignities. The standing is slippery, and the regress is either a downfall, or at least an eclipse, which is a melancholy thing. . . . . In the discharge of thy place set before thee the best examples; for imita-

tion is a globe of precepts; and after a time set before thee thine own example, and examine thyself strictly whether thou didst not best at first. Neglect not also the examples of those that have carried themselves ill in the same place, not to set off thyself by taxing their memory, but to direct thyself what to avoid. Reform, therefore, without bravery or scandal of former times and persons, but yet set it down to thyself as well to create good precedents as to follow them. Reduce things to the first institution, and observe wherein and how they have degenerated; but yet ask counsel of both times—of the ancient time, what is best, and of the latter time, what it fittest. Seek to make thy course regular, that men may know beforehand what they may expect; but be not too positive and peremptory, and express thyself well when thou digressest from thy rule. Preserve the right of thy place, but stir not questions of jurisdiction; and rather assume thy right in silence and *de facto*, than voice it with claims and challenges. Preserve likewise the rights of inferior places, and think it more honour to direct in chief than to be busy in all. Embrace and invite helps and advices touching the execution of thy place; and do not drive away such as bring thee information, as meddlers, but accept of them in good part. The vices of authority are chiefly four; delays, corruption, roughness, and facility. For delays, give easy access, keep times appointed, go through with that which is in hand, and interlace not business but of necessity. For corruptions do not only bind thine own hands, or thy servant's hands, from taking, but bind the hands of suitors also from offering; for integrity, used, doth the one; but integrity professed, and with a manifest detestation of bribery, doth the other: and avoid not only the fault but the suspicion. Whosoever is found variable, and changeth manifestly without manifest cause, giveth suspicion of corruption. Therefore always, when thou changest thine opinion or course, profess it plainly and declare it, together with the reasons that move thee to change, and do not think to steal it. A servant or a favourite, if he be inward and no other apparent cause of esteem, is commonly thought but a by-way to close corruption. For roughness, it is a needless cause of discontent; severity breedeth fear, but roughness breedeth hate. Even reproofs from authority ought to be grave and not taunting. As for facility, it is worse than bribery; for bribes come but now and then, but if impotunity or idle respects lead a man, he shall never be without: as Solomon saith, 'To respect persons is not good, for such a man will transgress for a piece of bread.' It is most true that

was anciently spoken—‘A place showeth the man;’ and it showeth some to the better and some to the worse: ‘*Omnium consensu, capax imperii, nisi imperasset,*’\* saith Tacitus of Galba; but of Vespasian he saith, ‘*Solus imperantium Vespasianus mutatus in melius:*’† though the one was meant of sufficiency, the other of manners and affection. It is an assured sign of a worthy and generous spirit whom honour amends, for honour is or should be the place of virtue; and as in nature things move violently to their place, and calmly in their place, so virtue in ambition is violent, in authority settled and calm. All rising to great place is by a winding stair; and if there be factions, it is good to side a man’s self whilst he is in the rising, and to balance himself when he is placed. Use the memory of thy predecessor fairly and tenderly; for if thou dost not, it is a debt will sure be paid when thou art gone. If thou have colleagues, respect them, and rather call them when they look not for it, than exclude them when they have reason to look to be called. Be not too sensible, or too remembering of thy place in conversation and private answers to suitors; but let it rather be said, ‘When he sits in place he is another man.’

We will give also the whole of the Twelfth, entitled ‘Of Boldness,’ first published in 1625.—

‘It is a trivial grammar-school text, but yet worthy a wise man’s consideration. Question was asked of Demosthenes, ‘What was the chief part of an orator?’ He answered, ‘Action.’ ‘What next?’ ‘Action.’ ‘What next again?’ ‘Action.’ He said it that knew it best, and had by nature himself no advantage in that he commended. A strange thing, that that part of an orator which is but superficial, and rather the virtue of a player, should be placed so high above those other noble parts of invention, elocution, and the rest; nay, almost alone, as if it were all in all. But the reason is plain. There is in human nature generally more of the fool than of the wise, and therefore those faculties by which the foolish part of men’s minds is taken are most potent. Wonderful like is the case of boldness in civil business. What first? Boldness.

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\* He would have been universally deemed fit for empire, if he had never reigned.

† Vespasian was the only emperor who was changed for the better by his accession.



What second and third? Boldness. And yet boldness is a child of ignorance and baseness, far inferior to other parts. But nevertheless it doth fascinate and bind hand and foot those that are either shallow in judgment or weak in courage; which are the greatest part, yea, and prevail with wise men at weak times. Therefore we see it hath done wonders in popular states, but with senates and princes less; and more ever upon the first entrance of bold persons into action than soon after, for boldness is an ill keeper of promise. Surely as there are mountebanks for the natural body, so are there mountebanks for the politic body: men that undertake great cures, and perhaps have been lucky in two or three experiments, but want the grounds of science, and therefore cannot hold out. Nay, you shall see a bold fellow many times do Mahomet's miracle. Mahomet made the people believe that he would call an hill to him, and from the top of it offer up his prayers for the observers of his law. The people assembled. Mahomet called the hill to come to him again and again; and when the hill stood still he was never a whit abashed, but said, 'If the hill will not come to Mahomet, Mahomet will go to the hill.' So these men, when they have promised great matters and failed most shamefully, yet (if they have the perfection of boldness) they will but slight it over, and make a turn, and no more ado. Certainly, to men of great judgment, bold persons are a sport to behold; nay, and to the vulgar also, boldness hath somewhat of the ridiculous. For if absurdity be the subject of laughter, doubt you not but great boldness is seldom without some absurdity. Especially it is a sport to see when a bold fellow is out of countenance, for that puts his face into a most shrunken and wooden posture, as needs it must: for in bashfulness the spirits do a little go and come, but with bold men, upon like occasion, they stand at a stay, like a stale at chess, where it is no mate, but yet the game cannot stir. But this last were fitter for a satire than for a serious observation. This is well to be weighed—that boldness is ever blind, for it seeth not dangers and inconveniencies; therefore it is ill in counsel, good in execution: so that the right use of bold persons is, that they never command in chief, but be seconds, and under the direction of others. For in counsel it is good to see dangers, and in execution not to see them, except they be very great.

The following are the most notable passages of the Thirteenth, first published in 1612, and entitled, 'Of Goodness, and Goodness of Nature:—

Goodness I call the habit, and goodness of nature the inclination. This of all virtues and dignities of the mind is the greatest, being the character of the Deity; and without it man is a busy, mischievous, wretched thing, no better than a kind of vermin. Goodness answers to the theological virtue, charity, and admits no excess, but error. The desire of power in excess caused the angels to fall, the desire of knowledge in excess caused man to fall; but in charity there is no excess, neither can angel or man come in danger by it. . . . Errors, indeed, in this virtue of goodness or charity, may be committed. The Italians have an ungracious proverb, 'Tanto buon che val niente'—So good that he is good for nothing. And one of the doctors of Italy, Nicholas Macchiavel, had the confidence to put in writing, almost in plain terms, 'That the Christian faith had given up good men in prey to those that are tyrannical and unjust;' which he spake because indeed there was never law, or sect, or opinion, did so much magnify goodness as the Christian religion doth; therefore to avoid the scandal and the danger both, it is good to take knowledge of the errors of a habit so excellent. Seek the good of other men, but be not in bondage to their faces or fancies, for that is but facility or softness which taketh an honest mind prisoner. Neither give thou *Æsop's* cock a gem, who would be better pleased and happier if he had a barley-corn. The example of God teacheth the lesson truly: 'He sendeth his rain, and maketh his sun to shine upon the just and the unjust;' but he doth not rain wealth nor shine honour and virtues upon men equally. Common benefits are to be communicated with all, but peculiar benefits with choice. And beware how, in making the portraiture, thou breakest the pattern; for Divinity maketh the love of ourselves the pattern—the love of our neighbours but the portraiture. 'Sell all thou hast and give it to the poor, and follow me.' But sell not all thou hast, except thou come and follow me; that is, except thou hast a vocation, wherein thou mayest do as much good with little means as with great; for otherwise, in feeding the streams thou driest the fountain.

The Fourteenth, also contained in the edition of 1612, is entitled 'Of Nobility,' and is very short. We subjoin a few sentences of it:—

A monarchy, where there is no nobility at all, is ever a pure and absolute tyranny, as that of the Turks; for nobility attempts sovereignty and draws the eyes of the people some-

what aside from the line royal. . . . . A great and potent nobility addeth majesty to a monarch, but diminisheth power, and putteth life and spirit into the people, but presseth their fortune. . . . .

As for nobility in particular persons, it is a reverend thing to see an ancient castle or building not in decay, or to see a fair timber tree sound and perfect; how much more to behold an ancient noble family, which hath stood against the waves and weathers of time! For new nobility is but the act of power, but ancient nobility is the act of time. Those that are first raised to nobility are commonly more virtuous but less innocent than their descendants, for there is rarely any rising but by a commixture of good and evil arts. But it is reason the memory of their virtues remain to their posterity, and their faults die with themselves.

The Fifteenth Essay, 'Of Seditions and Troubles,' was first published in 1625, and is of considerable length; but the following are perhaps the portions of it most worthy of note:—

Concerning the materials of seditions, it is a thing well to be considered; for the surest way to prevent seditions (if the times do bear it) is to take away the matter of them: for if there be fuel prepared, it is hard to tell whence the spark shall come that shall set it on fire. The matter of seditions is of two kinds—much poverty and much discontentment. It is certain, so many overthrown estates, so many votes for troubles. Lucan noteth well the state of Rome before the civil war—

*'Hinc usura vorax, rapidumque in tempore fœnus,  
Hinc concussa fides, et multis utile bellum.'*\*

This same 'multis utile bellum' † is an assured and infallible sign of a state disposed to seditions and troubles. And if this poverty and broken estate, in the better sort, be joined with a want and necessity in the mean people, the danger is imminent and great, for the rebellions of the belly are the worst. As for discontentments, they are in the politic body like to humours in the natural, which are apt to gather a preternatural heat,

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\* Hence griping avarice, extortion, fraud,  
Unblushing perjury had spread abroad,  
Crushing the wretched people in their course,  
And leaving civil war their last resource.

† War useful to the many.

and to inflame. And let no prince measure the danger of them by this, whether they be just or unjust; for that were to imagine people to be too reasonable, who do often spurn at their own good; nor yet by this, whether the griefs whereupon they rise be in fact great or small, for they are the most dangerous discontentments where the fear is greater than the feeling. 'Dolendi modus, timendi non item.\*' Besides, in great oppressions the same things that provoke the patience do withal mate the courage, but in fears it is not so. Neither let any prince or state be secure concerning discontentments because they have been often or have been long, and yet no peril hath ensued; for as it is true that every vapour or fume doth not turn into a storm, so it is nevertheless true, that storms, though they blow over divers times, yet may fall at last; and as the Spanish proverb noteth well, 'The cord breaketh at the last by the weakest pull.' . . . . .

The part of Epimetheus might well become Prometheus in the case of discontentments, for there is not a better provision against them. Epimetheus, when griefs and evils flew abroad, at last shut the lid and kept Hope in the bottom of the vessel. Certainly the politic and artificial nourishing and entertaining of hopes, and carrying men from hopes to hopes, is one of the best antidotes against the poison of discontentments. And it is a certain sign of a wise government and proceeding when it can hold men's hearts by hopes, when it cannot by satisfaction; and when it can handle things in such manner as no evil shall appear so peremptory, but that it hath some outlet of hope; which is the less hard to do, because both particular persons and factions are apt enough to flatter themselves, or at least to brave that they believe not.

Also the foresight and prevention, that there be no likely or fit head whereunto discontented persons may resort, and under whom they may join, is a known but an excellent point of caution. I understand a fit head to be one that hath greatness and reputation, that hath confidence with the discontented party, and upon whom they turn their eyes, and that is thought discontented in his own particular; which kind of persons are either to be won and reconciled to the state, and that in a fast and true manner, or to be fronted with some other of the same party that may oppose them, and so divide the reputation. Generally the dividing and breaking of all factions and combinations that are adverse to the state, and setting them at dis-

\* There are wounds to grief, but not to fear.

tance, or at least distrust among themselves, is not one of the worst remedies. For it is a desperate case, if those that hold with the proceeding of the state be full of discord and faction, and those that are against it be entire and united.

We will give nearly the whole of the Sixteenth Essay, entitled 'Of Atheism,' which is in the collection of 1612.

I had rather believe all the fables in the Legend, and the Talmud, and the Alcoran, than that this universal frame is without a mind. And therefore God never wrought miracle to convince atheism, because his ordinary works convince it. It is true that a little philosophy inclineth man's mind to atheism, but depth in philosophy bringeth men's minds about to religion. For while the mind of man looketh upon second causes scattered, it may sometimes rest in them and go no further; but when it beholdeth the chain of them confederate and linked together, it must needs fly to Providence and Deity. Nay, even that school which is most accused of atheism, doth most demonstrate religion—that is the school of Leucippus, and Democritus, and Epicurus. For it is a thousand times more credible that four mutable elements and one immutable fifth essence, duly and eternally placed, need no God, than that an army of infinite small portions or seeds, unplaced, should have produced this order and beauty without a Divine Marshal. The Scripture saith, 'The fool hath said in his heart, There is no God.' It is not said, 'The fool hath thought in his heart;' so as he rather saith it by rote to himself, as that he would have, than that he can thoroughly believe it, or be persuaded of it; for none deny there is a God but those for whom it maketh that there were no God. It appeareth in nothing more that atheism is rather in the lip than in the heart of man than by this, that atheists will ever be talking of that their opinion, as if they fainted in it within themselves, and would be glad to be strengthened by the consent of others; nay more, you shall have atheists strive to get disciples, as it fareth with other sects; and, which is most of all, you shall have of them that will suffer for atheism, and not recant: whereas if they did truly think that there were no such thing as God, why should they trouble themselves? Epicurus is charged that he did but dissemble for his credit's sake, when he affirmed there were blessed natures, but such as enjoyed themselves without having respect to the government of the world, wherein, they

my, he did temporize, though in secret he thought there was no God. -But certainly he is traduced, for his words are noble and divine—'Non Deos vulgi negare profanum, sed vulgi opiniones Diis applicare profanum.'\* Plato could have said no more. . . . . They that deny a God destroy man's nobility; for certainly man is of kin to the beasts by his body; and if he be not of kin to God by his spirit, he is a base and ignoble creature. It destroys likewise magnanimity and the raising of human nature. For take an example of a dog, and mark what a generosity and courage he will put on when he finds himself maintained by a man who, to him, is instead of a God, or *melior natura*; which courage is manifestly such as that creature, without that confidence of a better nature than his own, could never attain. So man, when he resteth and assureth himself upon Divine protection and favour, gathereth a force and faith which human nature in itself could not obtain. Therefore as atheism is in all respects hateful, so in this, that it depriveth human nature of the means to exalt itself above human frailty.

The Seventeenth Essay, also in the collection of 1612, is entitled 'Of Superstition.' Its leading idea is stated in the commencement:—

It were better to have no opinion of God at all, than such an opinion as is unworthy of him; for the one is unbelief, the other is contumely; and certainly superstition is the reproach of the Deity. Plutarch saith well to that purpose: 'Surely,' saith he, 'I had rather a great deal men should say there was no such man at all as Plutarch, than that they should say that there was one Plutarch that would eat his children as soon as they were born;' as the poets speak of Saturn. And as the contumely is greater towards God, so the danger is greater towards men. Atheism leaves a man to sense, to philosophy, to natural piety, to laws, to reputation; all which may be guides to an outward moral virtue, though religion were not; but superstition dismounts all these, and erecteth an absolute monarchy in the minds of men.

Of the Eighteenth, entitled 'Of Travel,' first published in 1625, it may be enough to give the concluding sentences:—

\* It is not profane to deny the deities of the vulgar, but it is profane to apply the opinions of the vulgar to the divinities.

When a traveller returneth home, let him not leave the countries where he hath travelled altogether behind him, but maintain a correspondence by letters with those of his acquaintance which are of most worth. And let his travel appear rather in his discourse than in his apparel or gesture; and in his discourse let him be rather advised in his answers than forward to tell stories. And let it appear that he doth not change his country manners for those of foreign parts, but only prick in some flowers of that he hath learned abroad into the customs of his own country.

The Nineteenth 'Of Empire,' which is in the collection of 1612, sets out thus:—

It is a miserable state of mind to have few things to desire and many things to fear, and yet that commonly is the case of kings, who, being at the highest, want matter of desire, which makes their minds more languishing and have many representations of perils and shadows, which make their minds the less clear. And this is one reason also of that effect which the Scripture speaketh of—'That the king's heart is inscrutable;' for multitude of jealousies, and lack of some predominant desire that should marshal and put in order all the rest, maketh any man's heart hard to find or sound. Hence it comes likewise that princes many times make themselves desires, and set their hearts upon toys—sometimes upon a building, sometimes upon erecting of an order, sometimes upon the advancing of a person, sometimes upon obtaining excellency in some art or feat of the hand—as Nero for playing on the harp, Domitian for certainty of the hand with the arrow, Commodus for playing at fence, Caracalla for driving chariots, and the like. This seemeth incredible unto those that know not the principle—'That the mind of man is more cheered and refreshed by profiting in small things than by standing at a stay in great.' We see also that kings that have been fortunate conquerors in their first years (it being not possible for them to go forward infinitely, but that they must have some check or arrest in their fortunes) turn in their latter years to be superstitious and melancholy—as did Alexander the Great, Dioclesian, and, in our memory, Charles the Fifth, and others; for he that is used to go forward, and findeth a stop, falleth out of his own favour, and is not the thing he was.

From the Twentieth Essay, 'Of Counsel,' also published in 1612, we extract a small portion at the close:—

It is in vain for princes to take counsel concerning matters, if they take no counsel likewise concerning persons; for all matters are as dead images, and the life of the execution of affairs resteth in the good choice of persons. . . . . In choice of committees for ripening business for the council, it is better to choose indifferent persons than to make an indifferency by putting in those that are strong on both sides. I commend, also, standing commissions—as for trade, for treasure, for war, for suits, for some provinces; for where there be divers particular councils, and but one council of estate (as it is in Spain), they are in effect no more than standing commissions, save that they have greater authority. Let such as are to inform councils out of their particular professions (as lawyers, seamen, mintmen, and the like), be first heard before committees, and then, as occasion serves, before the council. And let them not come in multitudes or in a tribunitious manner, for that is to clamour councils, not to inform them. A long table, and a square table, or seats about the walls, seem things of form, but are things of substance; for at a long table, a few at the upper end in effect sway all the business, but in the other form there is more use of the counsellors' opinions that sit lower. A king, when he presides in council, let him beware how he opens his own inclination too much in that which he propoundeth, for else counsellors will but take the wind of him, and, instead of giving free counsel, will sing him a song of 'Placebo.' \*

The Twenty-first, entitled 'Of Delays,' first published in 1625, is very short: it concludes thus:—

Generally it is good to commit the beginnings of all great actions to Argus with his hundred eyes, and the ends to Briareus with his hundred hands—first to watch and then to speed. For the helmet of Pluto, which maketh the politic man go invisible, is secrecy in the council, and celerity in the execution; for when things are once come to the execution, there is no secrecy comparable to celerity—like the motion of a bullet in the air, which flieth so swift as it outruns the eye.

The Twenty-second, 'Of Cunning,' published in 1612, begins as follows:—

We take cunning for a sinister or crooked wisdom. And

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\* I will make myself agreeable.



certainly there is great difference between a cunning man and a wise man, not only in point of honesty but in point of ability. There be that can pack the cards, and yet cannot play well; so there are some that are good in canvasses and factions that are otherwise weak men. Again, it is one thing to understand persons, and another thing to understand matters; for many are perfect in men's humours that are not greatly capable of the real part of business, which is the constitution of one that hath studied men more than books. Such men are fitter for practice than for counsel, and they are good but in their own alley; turn them to new men and they have lost their aim.

The Twenty-third, also published in 1612, is entitled 'Of Wisdom for a Man's Self,' and is thus wound up:—

Wisdom for a man's self is, in many branches thereof, a depraved thing: it is the wisdom of rats, that will be sure to leave a house somewhat before it fall; it is the wisdom of the fox, that thrusts out the badger who digged and made room for him; it is the wisdom of crocodiles, that shed tears when they would devour. But that which is specially to be noticed, is, that those which (as Cicero says of Pompey) are 'Sui amantes sine rivali,'\* are many times unfortunate; and whereas they have all their time sacrificed to themselves, they become in the end themselves sacrifices to the inconstancy of fortune, whose wings they thought by their self-wisdom to have pinioned.

The Twenty-fourth Essay, entitled 'Of Innovations,' and first published in 1625, we give entire:—

As the births of living creatures at first are ill shapen, so are all innovations, which are the births of time. Yet notwithstanding, as those that first bring honour into their family are commonly more worthy than most that succeed, so the first precedent (if it be good) is seldom attained by imitation. For ill to man's nature, as it stands perverted, hath a natural motion, strongest in continuance; but good, as a forced motion, strongest at first. Surely every medicine is an innovation, and he that will not apply new remedies must expect new evils, for time is the greatest innovator. And if time, of course, alter things to the worse, and wisdom and counsel shall not alter

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\* Lovers of themselves without a rival.

them to the better, what shall be the end? It is true, that what is settled by custom, though it be not good, yet at least it is fit. And these things which have long gone together are as it were confederate within themselves, whereas new things piece not so well; but though they help by their utility, yet they trouble by their inconformity. Besides, they are like strangers, more admired and less favoured. All this is true, if time stood still; which contrariwise moveth so round that a froward retention of custom is as turbulent a thing as an innovation, and they that reverence too much old times are but a scorn to the new. If were good, therefore, that men in their innovations would follow the example of time itself, which, indeed, innovateth greatly, but quietly and by degrees, scarce to be perceived; for otherwise, whatsoever is new is unlooked for, and ever it mends some and pairs other: and he that is holpen, takes it for a fortune, and thanks the time; and he that is hurt, for a wrong, and imputeth it to the author. It is good also not to try experiments in states, except the necessity be urgent, or the utility evident; and well to beware, that it be the reformation that draweth on the change, and not the desire of change that pretendeth the reformation. And lastly, that the novelty, though it be not rejected, yet be held for a suspect; and as the Scripture saith, 'That we make a stand upon the ancient way, and then look about us and discover what is the straight and right way, and so to walk in it.'

The following are the first and last paragraphs of the Twenty-fifth, entitled "Of Despatch," which is in the edition of 1612:—

Affected despatch is one of the most dangerous things to business that can be. It is like that which the physicians call pre-digestion, or hasty digestion, which is sure to fill the body full of crudities and secret seeds of diseases: therefore measure not despatch by the time of sitting, but by the advancement of the business. And as in races it is not the large stride or high lift that makes the speed, so in business the keeping close to the matter and not taking of it too much at once procureth despatch. It is the care of some, only to come off speedily for the time, or to contrive some false periods of business, because they may seem men of despatch. But it is one thing to abbreviate by contracting, another by cutting off; and business so handled at several sittings or meetings goeth commonly backward and forward in an unsteady manner. I knew a wise man

that had it for a by-word, when he saw men hasten to a conclusion, 'Stay a little, that we may make an end the sooner.' . . .

Above all things, order, and distribution, and singling out of parts, is the life of despatch, so as the distribution be not too subtle; for he that doth not divide will never enter well into business, and he that divideth too much will never come out of it clearly. To choose time is to save time, and an unseasonable motion is but beating the air. There be three parts of business—the preparation, the debate or examination, and the perfection; whereof, if you look for despatch, let the middle only be the work of many, and the first and last the work of few. The proceeding upon somewhat conceived in writing doth for the most part facilitate despatch; for though it should be wholly rejected, yet that negative is more pregnant of direction than an indefinite, as ashes are more generative than dust.

Here is the greater part of the Twenty-sixth, entitled "Of Seeming Wise," also published in 1612:—

It hath been an opinion that the French are wiser than they seem, and the Spaniards seem wiser than they are. But howsoever it be between nations, certainly it is so between man and man. For as the apostle saith of godliness, 'Having a show of godliness, but denying the power thereof;' so certainly there are in points of wisdom and sufficiency that do nothing or little very solemnly—*Magno conatu nugas*.\* It is a ridiculous thing, and fit for a satire to persons of judgment, to see what shifts these formalists have, and what prospectives to make superficialities to seem body that hath depth and bulk. Some are so close and reserved as they will not show their wares but by a dark light, and seem always to keep back somewhat; and when they know within themselves they speak of that they do not well know, would nevertheless seem to others to know of that which they may not well speak. Some help themselves with countenance and gestures, and are wise by signs, as Cicero saith of Piso—that when he answered him, he fetched one of his brows up to his forehead, and bent the other down to his chin—'Respondes altero ad frontem sublato, altero ad mentum depresso supercilio, crudelitatem tibi non placere.†' Some think to bear it

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\* Trifles with great parade.

† You answer with one brow raised to your forehead, and the other depressed to your chin, that cruelty is not pleasing to you.

by speaking a great word and being peremptory, and go on, and take by admittance that which they cannot make good. Some, whatsoever is beyond their reach will seem to despise or make light of it, as impertinent or curious, and so would have their ignorance seem judgment. . . . . Seeming wise men may make shift to get opinion, but let no man choose them for employment, for certainly you were better take for business a man somewhat absurd than over formal.

The Twenty-seventh, "Of Friendship," likewise in the collection of 1612, is long; but the following passages are the most notable, or those that best admit of being separated from the context:—

Little do men perceive what solitude is, and how far it extendeth; for a crowd is not company, and faces are but a gallery of pictures, and talk but a tinkling cymbal, where there is no love. . . . .

It is a strange thing to observe how high a rate great kings and monarchs do set upon this fruit of friendship whereof we speak, so great as they purchase it many times at the hazard of their own safety and greatness. For princes, in regard of the distance of their fortune from that of their subjects and servants, cannot gather this fruit, except (to make themselves capable thereof) they raise some persons to be as it were companions, and almost equal to themselves, which many times sorteth to inconvenience. . . . .

Augustus raised Agrippa (though of mean birth) to that height, as when he consulted with Mæcenas about the marriage of his daughter Julia, Mæcenas took the liberty to tell him, 'That he must either marry his daughter to Agrippa, or take away his life, there was no third way, he had made him so great.' With Tiberius Cæsar, Sejanus had ascended to that height, as they two were termed and reckoned as a pair of friends. Tiberius, in a letter to him, saith, 'Hæc pro amicitia nostra non occultavi;'<sup>\*</sup> and the whole senate dedicated an altar to Friendship, as to a goddess, in respect of the great dearness of friendship between them two. The like or more was between Septimius Severus and Plautianus, for he forced his eldest son to marry the daughter of Plautianus, and would maintain

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\* On account of our friendship I have not concealed these matters.

Plautianus in doing affronts to his son; and did write also in a letter to the senate by these words—'I love the man so well, as I wish he may over-live me.' Now if these princes had been as a Trajan or a Marcus Aurelius, a man might have thought that this had proceeded of an abundant goodness of nature; but being men so wise, of such strength and severity of mind, and so extreme lovers of themselves, as all these were, it proveth most plainly that they found their own felicity (though as great as ever happened to mortal men) but as a half-piece, except they might have a friend to make it entire; and yet, which is more, they were princes that had wives, sons, nephews; and yet all these could not supply the comfort of friendship. . . .

The parable of Pythagoras is dark, but true—'Cor ne edito' (Eat not the heart). Certainly if a man would give it a hard phrase, those that want friends to open themselves unto, are cannibals of their own hearts. But one thing is most admirable (wherewith I will conclude this first-fruit of friendship), which is, that this communicating of a man's self to his friend works two contrary effects, for it redoubleth joys and cutteth griefs in halves: for there is no man that imparteth his joys to his friend, but he joyeth the more; and no man that imparteth his griefs to his friend, but he grieveth the less. So that it is in truth of operation upon a man's mind of like virtue as the alchymists use to attribute to their stone for man's body, that it worketh all contrary effects, but still to the good and benefit of nature. . . . .

The second-fruit of friendship is healthful and sovereign for the understanding, as the first is for the affections; for friendship maketh indeed a fair day in the affections from storm and tempests, but it maketh daylight in the understanding out of darkness and confusion of thoughts. Neither is this to be understood only of faithful counsel which a man receiveth from his friend; but before you come to that, certain it is that whosoever hath his mind fraught with many thoughts, his wits and understanding do clarify and break up in the communicating and discoursing with another: he tosseth his thoughts more easily, he marshaleth them more orderly, he seeth how they look when they are turned into words: finally, he waxeth wiser than himself, and that more by an hour's discourse than by a day's meditation. It was well said by Themistocles to the King of Persia, 'That speech was like cloth of Arras opened and put abroad, whereby the imagery doth appear in figure, whereas in thoughts they lie but as in packs.' Neither is this second-fruit of friendship, in opening the understanding, restrained

only to such friends as are able to give a man counsel (they indeed are best); but even without that a man learneth of himself, and bringeth his own thoughts to light, and whetteth his wits as against a stone, which itself cuts not. In a word, a man were better relate himself to a statue or picture than to suffer his thoughts to pass in another. . . . .

Heraclitus saith well in one of his Ænigmas, 'Dry light is ever the best:' and certain it is, that the light that a man receiveth by counsel from another is drier and purer than that which cometh from his own understanding and judgment, which is ever infused and drenched in his affections and customs. So as there is as much difference between the counsel that a friend giveth and that a man giveth himself, as there is between the counsel of a friend and of a flatterer; for there is no such flatterer as in a man's self, and there is no such remedy against flattery of a man's self as the liberty of a friend. . . .

The Twenty-eighth Essay, entitled "Of Expense," which is very short, is the first we have come to of the Ten original Essays published in 1597. It contains, among others, these two practical directions:—

Certainly, if a man will keep but of even-band, his ordinary expenses ought to be but to the half of his receipts; and if he think to wax rich, but to the third part. . . . . A man ought warily to begin charges, which, once begun, will continue; but in matters that return not, he may be more magnificent.

The Twenty-ninth Essay is entitled "Of the True Greatness of Kingdoms and Estates," and appeared in part in the edition of 1612. It is long, and very masterly and characteristic. We will transcribe the most remarkable passages:—

Walled towns, stored arsenals and armories, goodly races of horse, chariots of war, elephants, ordnance, artillery, and the like—all this is but a sheep in a lion's skin, except the breed and disposition of the people be stout and warlike. Nay, number itself in armies importeth not much, where the people is of weak courage; for, as Virgil saith, 'It never troubles a wolf how many the sheep be.' The army of the Persians, in the plains of Arbela, was such a vast sea of people, as it did somewhat astonish the commanders in Alexander's army; who came to him, therefore, and wished him to set upon them by night;

but he answered, 'He would not pilfer the victory;' and the defeat was easy. When Tigranes, the Armenian, being encamped upon a hill with four hundred thousand men, discovered the army of the Romans, being not above fourteen thousand, marching towards him, he made himself merry with it, and said, 'Yonder men are too many for an ambassage, and too few for a fight;' but before the sun set he found them enough to give him the chase with infinite slaughter. Many are the examples of the great odds between number and courage, so that a man may truly make a judgment, that the principal point of greatness in any state is to have a race of military men. Neither is money the sinews of war, as it is trivially said, where the sinews of men's arms in base and effeminate people are failing. For Solon said well to Cræsus (when in ostentation he showed him his gold), 'Sir, if any other come that hath better iron than you, he will be master of all this gold.' Therefore let any prince or state think soberly of his forces, except his militia of natives be of good and valiant soldiers; and let princes on the other side, that have subjects of martial disposition, know their own strength, unless they be otherwise wanting unto themselves. As for mercenary forces, which is the help in this case, all examples show that whatsoever estate or prince doth rest upon them, 'He may spread his feathers for a time, but he will mew them soon after.' . . . . .

By all means it is to be procured, that the trunk of Nebuchadnezzar's tree of monarchy be great enough to bear the branches and the boughs—that is, that the natural subjects of the crown or state bear a sufficient proportion to the stranger-subjects that they govern. Therefore all states that are liberal of naturalization towards strangers are fit for empire; for to think that an handful of people can, with the greatest courage and policy in the world, embrace too large extent of dominion, it may hold for a time, but it will fail suddenly. The Spartans were a nice people in point of naturalization, whereby, while they kept their compass, they stood firm; but when they did spread, and their boughs were become too great for their stem, they became a windfall upon the sudden. Never any state was in this point so open to receive strangers into their body as were the Romans, therefore it sorted with them accordingly, for they grew to the greatest monarchy. Their manner was to grant naturalization (which they called *jus civitatis*) and to grant it in the highest degree, that is, not only *jus commercii*,\*

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\* Right of trade. Digitized by Google

*jus connubii*,\* *jus hæreditatis*,† but also *jus suffragii*‡ and *jus honorum* ;§ and this, not to singular persons alone, but likewise to whole families, yea, to cities and sometimes to nations. Add to this their custom of plantation of colonies, whereby the Roman plant was removed into the soil of other nations; and, putting both constitutions together, you will say, that it was not the Romans that spread upon the world, but it was the world that spread upon the Romans; and that was the sure way of greatness. I have marvelled sometimes at Spain, how they clasp and contain so large dominions with so few natural Spaniards; but sure the whole compass of Spain is a very great body of a tree, far above Rome and Sparta at the first; and besides, though they have not had that usage to naturalize liberally, yet they have that which is next to it; that is to employ, almost indifferently, all nations in their militia of ordinary soldiers, yea, and sometimes in their highest commands. Nay, it seemeth at this instant, they are sensible of this want of natives, as by the ‘Pragmatical Sanction,’ now published, appeareth. . . . .

No body can be healthful without exercise, neither natural body nor politic; and certainly to a kingdom or estate, a just and honourable war is the true exercise. A civil war, indeed, is like the heat of a fever; but a foreign war is like the heat of exercise, and serveth to keep the body in health: for in a slothful peace both courages will effeminate and manners corrupt. But, howsoever it be for happiness, without all question for greatness it maketh to be still, for the most part, in arms; and the strength of a veteran army (though it be a chargeable business), always on foot, is that which commonly giveth the law, or at least the reputation, amongst all neighbour-states; as may well be seen in Spain, which hath had, in one part or other, a veteran army almost continually now by the space of six-score years.

To be master of the sea is an abridgment of a monarchy. Cicero, writing to Atticus of Pompey’s preparation against Cæsar, saith—‘*Consilium Pompeii planè Themistocleum est, putat enim qui mari potitur eum rerum potiri.*’|| And without

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\* Right of marriage. † Right of inheritance.

‡ Right of suffrage. § Right of honours.

|| Pompey’s plan is clearly that of Themistocles, for he believes that whoever is master of the sea will possess the empire.



doubt Pompey had tired out Cæsar if upon vain confidence he had not left that way. We see the great effects of battles by sea. The battle of Actium decided the empire of the world: the battle of Lepanto arrested the greatness of the Turk. There be many examples where sea-fights have been final to the war, but this is when princes or states have set up their rest upon the battles. But thus much is certain, that he that commands the sea is at great liberty, and may take as much and as little of the war as he will; whereas those that be strongest by land, are many times nevertheless in great straits. Surely at this day, with us of Europe, the vantage of strength at sea (which is one of the principal dowries of this kingdom of Great Britain) is great; both because most of the kingdoms of Europe are not merely inland, but girt by the sea, most part of their compass, and because the wealth of both Indies seems in great part but an accessory to the command of the seas.

The wars of latter ages seem to be made in the dark, in respect of the glory and honour which reflected upon men from the wars in ancient time. There be now for martial encouragement some degrees and orders of chivalry, which nevertheless are conferred promiscuously upon soldiers and no soldiers; and some remembrance, perhaps, upon the scutcheon; and some hospitals for maimed soldiers, and such like things. But in ancient times, the trophies erected upon the place of the victory; the funeral laudatives and monuments for those that died in the wars; the crowns and garlands personal; the style of emperor, which the great king of the world after borrowed; the triumphs of the generals upon their return; the great donatives and largesses upon the disbanding of the armies—were things able to inflame all men's courages. But above all, that of the triumph amongst the Romans was not pageants or gaudery, but one of the wisest and noblest institutions that ever was; for it contained three things—honour to the general, riches to the treasury out of the spoils, and donatives to the army. But that honour perhaps were not fit for monarchies, except it be in the person of the monarch himself, or his sons; as it came to pass in the times of the Roman emperors, who did impropriate the actual triumphs to themselves and their sons for such wars as they did achieve in person, and left only for wars achieved by subjects some triumphal garments and ensigns to the general.

The Thirtieth Essay, "Of Regiment (that is, govern-

ment or management) of Health," is another of those published in 1597. It is very short, and it will be sufficient to quote the opening sentences:—

There is a wisdom in this beyond the rules of physic: a man's own observation what he finds good of and what he finds hurt of, is the best physic to preserve health. But it is a safer conclusion to say, This agreeth not well with me, therefore I will not continue it—than this, I find no offence of this, therefore I may use it. For strength of nature in youth passeth over many excesses which are owing a man till his age.

The Thirty-first, entitled "Of Suspicion," was new in 1625. It is also very short; and the following few sentences may be sample enough of it:—

There is nothing makes a man suspect much more than to know little, and therefore men should remedy suspicion by procuring to know more, and not to keep their suspicions in smother. What would men have? Do they think those they employ and deal with are saints? Do they not think they will have their own ends, and be truer to themselves than to them? Therefore there is no better way to moderate suspicions than to account upon such suspicions as true, and yet to bridle them as false. For so far a man ought to make use of suspicions as to provide as, if that should be true that he suspects, yet it may do him no hurt.

The Thirty-second, "Of Discourse," is another of those, most or all of which are short, in the original collection of 1597. Here are two or three sentences of it:—

The honourablest part of talk is to give the occasion, and again to moderate and pass to somewhat else; for then a man leads the dance. It is good in discourse and speech of conversation to vary and intermingle speech of the present occasion with arguments, tales with reasons, asking of questions with telling of opinions, and jest with earnest; for it is a dull thing to tire, and, as we say now, to jade any thing too far. . . . .

A good continued speech, without a good speech of interlocation, shows slowness; and a good reply, or second speech, without a good settled speech, showeth shallowness or weakness;

as we see in beasts, that those that are weakest in the course are yet nimblest in the turn, as it is betwixt the greyhound and the hare. To use too many circumstances ere one come to the matter, is wearisome; to use none all, is blunt.

From the Thirty-third Essay, entitled "Of Plantations," which was first published in 1625, we extract the commencing and concluding remarks, as of more general or enduring applicability:—

Plantations are amongst ancient, primitive, and heroical works. When the world was young it begat more children, but now it is old it begets fewer; for I may justly account new plantations to be the children of former kingdoms. . . . . It is the sinfulllest thing in the world to forsake or destitute a plantation once in forwardness; for besides the dishonour, it is the guiltiness of blood of many commiserable persons.

The Thirty-fourth Essay, "Of Riches," first appeared in the collection of 1612. Its spirit and general tenour may be gathered from the following extracts:—

Of great riches there is no real use, except it be in the distribution, the rest is but conceit: so saith Solomon, 'Where much is, there are many to consume it; and what hath the owner but the sight of it with his eyes?' The personal fruition in any man cannot reach to feel great riches: there is a custody of them, or a power of dole and donative of them, or a fame of them, but no solid use to the owner. Do you not see what feigned prices are set upon little stones and rarities? And what works of ostentation are undertaken, because there might seem to be some use of great riches? But then you will say they may be of use to buy men out of dangers or troubles: as Solomon saith—'Riches are as a stronghold in the imagination of the rich man.' But this is excellently expressed, that it is in imagination, and not always in fact; for certainly great riches have sold more men than they have bought out. . . . . The ways to enrich are many, and most of them foul. Parsimony is one of the best, and yet is not innocent; for it withholdeth men from works of liberality and charity. . . . . It was truly observed by one, that himself came very hardly to a little riches, and very easily to great riches: for when a man's stock is come to that that he can expect the prime of markets, and overcome those bargains, which, for their greatness, are few men's money, and

be partner in the industries of younger men, he cannot but increase mainly. . . . . He that resteth upon gains certain shall hardly grow to great riches, and he that puts all upon adventures doth oftentimes break and come to poverty; it is good, therefore, to guard adventures with certainties that may uphold losses. . . . . Believe not much them that seem to despise riches; for they despise them that despair of them, and none worse when they come to them. Be not penny-wise: riches have wings, and sometimes they fly away of themselves; sometimes they must be set flying to bring in more. . . . . A great estate left to an heir is as a lure to all the birds of prey round about to seize on him, if he be not the better established in years and judgment. Likewise glorious gifts and foundations are like sacrifices without salt, and but the painted sepulchres of alms which soon will putrify and corrupt inwardly: therefore measure not thine advancements by quantity, but frame them by measure, and defer not charities till death; for certainly, if a man weigh it rightly, he that doth so is rather liberal of another man's than of his own.

The Thirty-fifth Essay is entitled "Of Prophecies," and was first published in 1625. It is omitted in the Latin translation of the Essays, perhaps from the impossibility of giving the effect of the popular rhymes to which great part of it relates in that language, and the peculiarly English interest of the principal matters discussed or noticed. The following are extracts:—

When I was in France, I heard from one Doctor Pena that the queen-mother, who was given to curious arts, caused the king her husband's nativity to be calculated under a false name; and the astrologer gave a judgment that he should be killed in a duel, at which the queen laughed, thinking her husband to be above challenges and duels; but he was slain upon a course at tilt, the splinters of the staff of Montgomery going in at his beaver. The trivial prophecy that I heard when I was a child, and Queen Elizabeth was in the flower of her years, was—

‘When hempe is spun,  
England's done:’

whereby it was generally conceived, that after the princes had reigned which had the principal letters of that word ‘hempe’ (which were Henry, Edward, Mary, Philip, and Elizabeth), England should come to utter confusion; which, thanks be to God, is verified only in the change of the name; for that the king's

style is now no more of England, but of Britain. . . . . As for Cleon's dream, I think it was a jest: it was, that he was devoured of a long dragon, and it was expounded of a maker of sausages that troubled him exceedingly. There are numbers of the like kind, especially if you include dreams and predictions of astrology. But I have set down these few only of certain credit for example. My judgment is, that they ought all to be despised, and ought to serve but for winter-talk by the fire-side: though when I say despised, I mean it as for belief; for otherwise the spreading or publishing of them is in no sort to be despised, for they have done much mischief. And I see many severe laws made to suppress them. That that hath given them grace and some credit consisteth in three things—first, that men mark when they hit, and never mark when they miss, as they do generally also of dreams. The second is, that probable conjectures or obscure traditions many times turn themselves into prophecies, while the nature of man, which coveteth divination, thinks it no peril to foretel that which indeed they do but collect. . . . . The third and last (which is the great one) is, that almost all of them, being infinite in number, have been impostures, and by idle and crafty brains merely contrived and feigned after the event past.

The following few sentences are from the Thirty-sixth Essay, entitled "Of Ambition," which is in the collection of 1612:—

Ambition is like choler, which is a humour that maketh men active, earnest, full of alacrity, and stirring, if it be not stopped; but if it be stopped, and cannot have its way, it becometh a dust, and thereby malign and venomous. So ambitious men, if they find the way open for their rising, and still get forward, they are rather busy than dangerous; but if they be checked in their desires they become secretly discontent, and look upon men and matters with an evil eye, and are best pleased when things go backward, which is the worst property in a servant of a prince or state. . . . . It is counted by some a weakness in princes to have favourites, but it is of all others the best remedy against ambitious great ones; for when the way of pleasuring and displeasuring lieth by the favourite, it is impossible any other should be over-great.

We subjoin the whole of the Thirty-seventh, entitled "Of Masques and Triumphs," which was first published in 1625:—

These things are but toys to come amongst such serious observations; but yet since princes will have such things, it is better they should be graced with elegancy than daubed with cost. Dancing to song is a thing of great state and pleasure. I understand it that the song be in quire, placed aloft, and accompanied with some broken music, and the ditty fitted to the device. Acting in song, especially in dialogues, hath an extreme good grace: I say acting, not dancing (for that is a mean and vulgar thing), and the voices of the dialogue would be strong and manly (a bass and a tenor, no treble), and the ditty high and tragical, not nice or dainty. Several quires placed one over against another, and taking the voice by catches, anthem-wise, give great pleasure. Turning dances into figure is a childish curiosity; and generally let it be noted, that those things which I here set down are such as do naturally take the sense, and not respect petty wonderments. It is true, the alterations of scenes, so it be quietly and without noise, are things of great beauty and pleasure; for they feed and relieve the eye before it be full of the same object. Let the scenes abound with light, especially coloured and varied; and let the maskers, or any other that are to come down from the scene, have some motions upon the scene itself before their coming down; for it draws the eye strangely, and makes it with great pleasure to desire to see that it cannot perfectly discern. Let the songs be loud and cheerful, and not chirpings or pulings. Let the music likewise be sharp and loud, and well placed. The colours that show best by candle-light are white, carnation, and a kind of sea-water green; and oes or spangs, as they are of no great cost, so they are of most glory. As for rich embroidery, it is lost and not discerned. Let the suits of the maskers be graceful, and such as become the person when the vizors are off, not after examples of known attires—Turks, soldiers, mariners, and the like. Let anti-masks not be long: they have been commonly of fools, satyrs, baboons, wild-men, antics, beasts, spirits, witches, Æthiops, pigmies, turquets, nymphs, rustics, cupids, statues (moving), and the like. As for angels, it is not comical enough to put them in anti-masks; and anything that is hideous, as devils, giants, is on the other side as unfit. But chiefly, let the music of them be recreative, and with some strange changes. Some sweet odours suddenly coming forth, without any drops falling, are in such a company, as there is steam and heat, things of great pleasure and refreshment. Double masks, one of men, another of ladies, addeth state and variety. But all is nothing, except the room be kept clean and neat.

Queen Elizabeth's time of England, an Irish rebel condemned, put up a petition to the deputy that he might be hanged in a wyth, and not in a halter, because it had been so used with former rebels. There be monks in Russia, for penance, that will sit a whole night in a vessel of water, till they be engaged with hard ice. . . . . But if the force of custom, simple and separate, be great, the force of custom copulate, and conjoined, and collegiate, is far greater. For there example teacheth, company comforteth, emulation quickeneth, glory raiseth : so as in such places the force of custom is in its exaltation. Certainly the great multiplication of virtues upon human nature, resteth upon societies well ordained and disciplined : for commonwealths and good governments do nourish virtue grown, but do not much mend the seeds. But the misery is, that the most effectual means are now applied to the ends least to be desired.

The Fortieth, entitled "Of Fortune," is another of those published in 1612. We will give *we* greater part of it :—

The way of fortune is like the milken way in the sky, which is a meeting or knot of a number of small stars : not seen asunder, but giving light together : so are there a number of little, and scarce discerned virtues, or rather faculties and customs that make men fortunate. The Italians note some of them, such as a man would little think : when they speak of one that cannot do amiss, they will throw in into his other conditions that he hath poco di matto. And certainly there be not two more fortunate properties, than to have a little of the fool, and not too much of the honest. Therefore extreme lovers of their country, or masters, were never fortunate, neither can they be. For when a man placeth his thoughts without himself, he goeth not his own way. . . . . Fortune is to be honoured and respected, and it be but for her daughters, confidence, and reputation : for those two felicity breedeth ; the first within a man's

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Johnson, in his Dictionary, instead of *quech*, gives *queck*, as Bacon's word here ; quoting the passage in a singularly perverted shape in all respects :—"The lads of Sparta were accustomed to be whipped, without so much as *quecking*." His interpretation, however, may be just enough :—"To shrink ; to show pain ; perhaps to complain."

self, the latter in others towards him. All wise men to decline the envy of their own virtues, use to ascribe them to Providence and fortune; for so they may the better assume them: and besides, it is greatness in a man to be the care of the higher powers. So *Cæsar* said to the pilot in the tempest, '*Cæsarem portas, et fortunam ejus.*'\* So *Sylla* chose the name of *Felix*, and not of *Magna*. And it hath been noted, that those who ascribe openly too much to their own wisdom and policy end unfortunate. It is written, that *Timotheus* the Athenian, after he had, in the account he gave to the state of his government, often interlaced his speech, 'and in this fortune had no part,' never prospered in anything he undertook afterwards. Certainly there be, whose fortunes are like *Homer's* verses, that have a slide and easiness more than the verses of other poets; as *Plutarch* saith of *Timoleon's* fortune, in respect of that of *Agésilæus*, or *Epaminondas*: and that this should be, no doubt it is much in a man's self.

The Forty-first, entitled "Of Usury," first appeared in the edition of 1625. By usury Bacon means simply taking interest for money; and, with all his penetration, he was not before his age in his views upon this and other questions of commerce and political economy, as may be seen both from the present essay, and more fully from his *History of Henry the Seventh*. He was too sagacious, however, to contend that the taking of interest for money could be altogether dispensed with or put down; and accordingly, after having here pointed out what he calls "the discommodities of usury," he proceeds:—

On the other side, the commodities of usury are: first, that howsoever usury in some respect hindereth merchandizing, yet in some other it advanceth it: for it is certain, that the greatest part of trade is driven by young merchants, upon borrowing at interest: so as if the usurer either call in, or keep back his money, there will ensue presently a great stand of trade. The second is, that were it not for this easy borrowing upon interest, men's necessities would draw upon them a most sudden undoing, in that they would be forced to sell their means (be it lands or goods) far under foot; and so, whereas

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\* Thou bearest *Cæsar*, and his fortune too.



usury doth but gnaw upon them, bad markets would swallow them quite up. As for mortgaging or pawning, it will little mend the matter; for either men will not take pawns without use, or if they do, they will look precisely for the forfeiture. I remember a cruel monied man in the country that would say, 'The devil take this usury, it keeps us from forfeitures of mortgages and bonds.' The third and last is, that it is a vanity to conceive, that there would be ordinary borrowing without profit; and it is impossible to conceive the number of inconveniences that will ensue, if borrowing be cramped: therefore, to speak of the abolishing of usury is idle. All states have ever had it in one kind, or rate or other; so as that opinion must be sent to Utopia. . . .

The Forty-second Essay, "Of Youth and Age," which is one of those published in 1612, must be given nearly in full:—

A man that is young in years, may be old in hours, if he have lost no time, but that happeneth rarely. Generally youth is like the first cogitations, not so wise as the second; for there is a youth in thoughts as well as in ages: and yet the invention of young men is more lively than that of old, and imaginations stream into their minds better, and, as it were, more divinely. Natures that have much heat, and great and violent desires and perturbations, are not ripe for action till they have passed the meridian of their years; as it was with Julius Cæsar, and Septimius Severus, of the latter of whom it is said, '*Juventutem egit erroribus, imo furoribus plenam*;'\* and yet he was the ablest emperor almost of all the list. But reposed natures may do well in youth, as it is seen in Augustus Cæsar, Cosmus, Duke of Florence, Gaston de Foix, and others. On the other side, heat and vivacity in age is an excellent composition for business. Young men are fitter to invent than to judge, fitter for execution than for counsel, and fitter for new projects than for settled business. For the experience of age in things that fall within the compass of it, directeth them, but in new things abuseth them. The errors of young men are the ruin of business; but the errors of aged men amount but to this, that more might have been done or sooner. Young men in the conduct and manage of actions embrace more than they can hold, stir more than they can quiet, fly to the end without consideration of

\* He spent his youth not merely in errors, but in madness.

the means and degrees, pursue some few principles which they have chanced upon absurdly, care not to innovate, which draws unknown inconveniences; use extreme remedies at first, and, that which doubleth all errors, will not acknowledge or retract them, like an unready horse, that will neither stop nor turn. Men of age object too much, consult too long, adventure too little, repent too soon, and seldom drive business home to the full period, but content themselves with a mediocrity of success. Certainly it is good to compound employments of both; for that will be good for the present, because the virtues of either age may correct the defects of both, and good for succession, that young men may be learners, while men in age are actors; and lastly, good for external accidents, because authority followeth old men, and favour and popularity youth. But for the moral part perhaps youth will have the pre-eminence, as age hath for the politic. A certain Rabbín upon the text, 'Your young men shall see visions, and your old men shall dream dreams,' inferreth, that young men are admitted nearer to God than old, because vision is a clearer revelation than a dream. And certainly the more a man drinketh of the world, the more it intoxicateth; and age doth profit rather in the powers of understanding, than in the virtues of the will and affections. . . .

Of the Forty-third, entitled "Of Beauty," also published in 1612, the following is the most material portion:—

Virtue is like a rich stone, best plain set; and surely virtue is best in a body that is comely, though not of delicate features, and that hath rather dignity of presence, than beauty of aspect. Neither is it almost seen that very beautiful persons are otherwise of great virtue, as if nature were rather busy not to err, than in labour to produce excellency; and therefore they prove accomplished, but not of great spirit, and study rather behaviour than virtue. But this holds not always; for Augustus Cæsar, Titus Vespasianus, Philip le Bel of France, Edward the Fourth of England, Alcibiades of Athens, Ismael the Sophi of Persia, were all high and great spirits, and yet the most beautiful men of their times. . . . That is the best part of beauty which a picture cannot express, no nor the first sight of the life. There is no excellent beauty that hath not some strangeness in the proportion. . . .

And here is the most striking part of the Forty-fourth,

entitled "Of Deformity," which likewise accompanied that on Beauty in the edition of 1612:—

Whosoever hath anything fixed in his person that doth induce contempt, hath also a perpetual spur in himself to rescue and deliver himself from scorn; therefore all deformed persons are extreme bold; first, as in their own defence as being exposed to scorn, but in process of time by a general habit. Also it stirreth in them industry, and especially of this kind to watch and observe the weakness of others, that they may have somewhat to repay. Again, in their superiors it quengeth jealousy towards them, as persons that they think they may at pleasure despise; and it layeth their competitors and emulators asleep, as never believing they should be in possibility of advancement till they see them in possession, so that upon the matter, in a great wit, deformity is an advantage to rising. . . .

The two next Essays, which are intimately connected, and which both appeared first in 1625, although long, will scarcely admit of curtailment. They are among the most elaborate and interesting in the collection. The Forty-fifth, entitled "Of Building," after some introductory remarks, proceeds as follows:—

You cannot have a perfect palace except you have two several sides, a side for the banquet as is spoken of in the book of Esther, and a side for the household; the one for feasts and triumphs and the other for dwelling. I understand both these sides to be not only returns but parts of the front, and to be uniform without, though severally partitioned within, and to be on both sides of a great and stately tower in the midst of the front, that as it were joineth them together on either hand. I would have on the side of the banquet in front one only goodly room above stairs, of some forty feet high, and under it a room for a dressing or preparing place at times of triumphs; on the other side, which is the household side, I wish it divided at the first into a hall and a chapel (with a partition between), both of good state and bigness, and those not to go all the length, but to have at the further end a winter and a summer parlour, both fair; and under these rooms a fair and large cellar sunk under ground, and likewise some privy kitchens with butteries and pantries, and the like; as for the tower I would have it two stories of eighteen foot high apiece above the two wings, and a goodly leads upon the top railed with statues interposed; and the same tower to be divided into rooms as shall be

thought fit. The stairs likewise to the upper rooms, let them be upon a fair open newel and finely railed in with images of wood cast into a brass colour, and a very fair landing place at the top. But this to be, if you do not point any of the lower rooms for a dining place of servants, for otherwise you shall have the servants' dinner after your own, for the steam of it will come up as in a tunnel. And so much for the front, only I understand the height of the first stairs to be sixteen foot, which is the height of the lower room.

Beyond this front is there to be a fair court, but three sides of it of a far lower building than the front, and in all the four corners of that court fair staircases cast into turrets on the outside and not within the row of buildings themselves; but those towers are not to be of the height of the front, but rather proportionable to the lower building. Let the court not be paved, for that striketh up a great heat in summer and much cold in winter, but only some side alleys with a cross, and the quarters to graze being kept shorn, but not too near shorn. The row of return on the banquet side let it be all stately galleries, in which galleries let there be three or five fine cupolas in the length of it, placed at equal distance, and fine coloured windows of several works. On the household side, chambers of presence and ordinary entertainments, with some bed chambers, and let all three sides be a double house without thorough lights on the sides, that you may have rooms from the sun both for forenoon and afternoon. Cast it also that you may have rooms both for summer and winter, shady for summer and warm for winter. You shall have sometimes fair houses so full of glass that one cannot tell where to become to be out of the sun or cold; for inbowed windows I hold them of good use, (in cities indeed upright do better in respect of the uniformity towards the street,) for they be pretty retiring places for conference, and besides they keep both the wind and the sun off, for that which would strike almost through the room doth scarce pass the window; but let them be but few, four in the court on the sides only.

Beyond this court let there be an inward court of the same square and height, which is to be environed with the garden on all sides; and in the inside cloistered on all sides upon decent and beautiful arches as high as the first story. On the under story towards the garden let it be turned to a grotto, or place of shade or estivation, and only have opening and windows towards the garden, and be level upon the floor no whit sunken under ground to avoid all dampishness; and let there be

a fountain or some fair work of statues in the midst of this court, and to be paved as the other court was. These buildings to be for privy lodgings on both sides, and the end for privy galleries, whereof you must foresee that one of them be for an infirmary if the prince or any special person should be sick, with chambers, bed chambers, anticamera, and recamera joining to it; this upon the second story. Upon the ground story a fair gallery open upon pillars, and upon the third story likewise an open gallery upon pillars to take the prospect and freshness of the garden. At both corners of the further side, by way of return, let there be two delicate or rich cabinets daintily paved, richly hanged, glazed with crystalline glass, and a rich cupola in the midst, and all other elegancy that may be thought upon. In the upper gallery too I wish that there may be, if the place will yield it, some fountains running in divers places from the wall, with some fine avoidances. And thus much for the model of the palace, save that you must have, before you come to the front, three courts; a green court plain with a wall about it; a second court of the same but more garnished, with little turrets, or rather embellishments, upon the wall; and a third court to make a square with the front, but not to be built nor yet enclosed with a naked wall, but enclosed with terraces leaved aloft and fairly garnished on the three sides, and cloistered on the inside with pillars and not with arches below. As for offices let them stand at distance with some low galleries to pass from them to the palace itself.

And here is the Forty-sixth, "Of Gardens," in full:—

God Almighty first planted a garden, and indeed it is the purest of human pleasures; it is the greatest refreshment to the spirits of man, without which buildings and palaces are but gross handy-works. And a man shall ever see that when ages grow to civility and elegancy, men come to build stately sooner than to garden finely, as if gardening were the greater perfection. I do hold it in the royal ordering of gardens there ought to be gardens for all the months in the year, in which, severally, things of beauty may be then in season. For December and January and the latter part of November you must take such things as are green all winter; holly, ivy, bays, juniper, cypress trees, yew, pine-apple trees, fir trees, rosemary, lavender, periwinkle, the white, the purple, and the blue, germander, flag, orange trees, lemon trees, and myrtles

if they be stoved, and sweet marjoram warm set. There followeth for the latter part of January and February the mazerion tree, which then blossoms; crocus vernus, both the yellow and the grey; primroses, anemones, the early tulippa, the hyacinthus orientalis, chamairis, frittellaria. For March there come violets, specially the single blue, which are the earliest; the yellow daffodil, the daisy, the almond tree in blossom, the peach tree in blossom, the cornelian tree in blossom, sweet-briar. In April follow the double white violet, the wall-flower, the stock gilly-flower, the cowslip, flower de lice, and lilies of all natures, rosemary flowers, the tulippa, the double peony, the pale daffodil, the French honeysuckle, the cherry tree in blossom, the dammasin and plum trees in blossom, the white thorn in leaf, the lilac tree. In May and June come pinks of all sorts, especially the blush pink; roses of all kinds, except the musk, which comes later; honeysuckles, strawberries, bugloss, columbine, the French marygold, flos africanus, cherry tree in fruit, ribes, figs in fruit, raspe, vine flowers, lavender in flowers, the sweet satyrian with the white flower, herba muscaria, lilium convallium, the apple tree in blossom. In July come gilly-flowers of all varieties, musk roses, the lime tree in blossom, early pears and plums in fruit, genittings, codlins. In August come plums of all sorts in fruit, pears, apricots, barberries, filberts, musk melous, monk's hoods of all colours. In September come grapes, apples, poppies of all colours, peaches, melo-cotones, nectarines, cornelians, warden, quinces. In October and the beginning of November come services, medlars, bullises, roses cut or removed to come late, hollyhocks, and such like. These particulars are for the climate of London, but my meaning is perceived that you may have ver perpetuum\* as the place affords.

And because the breath of flowers is far sweeter in the air, (where it comes and goes like the warbling of music,) than in the hand, therefore nothing is more fit for that delight than to know what be the flowers and plants that do best perfume the air. Roses, damask and red, are fast flowers of their smells, so that you may walk by a whole row of them and find nothing of their sweetness; yea, though it be in a morning's dew. Bays likewise yield no smell as they grow, rosemary little, nor sweet marjoram. That which above all others yields the sweetest smell in the air is the violet, especially the white double violet

\* Perpetual spring.

which comes twice a year, about the middle of April and about Bartholomew-tide; next to that is the musk rose, then the strawberry leaves dying with a most excellent cordial smell, then the flower of the vines, it is a little dust like the dust of a bent, which grows upon the cluster in the first coming forth; then sweet-briar, then wall-flowers, which are very delightful to be set under a parlour or lower chamber window; then pinks and gilly-flowers, especially the matted pink and clove gilly-flower; then the flowers of the lime tree, then the honeysuckles, so they be somewhat afar off. Of bean flowers I speak not because they are field flowers. But these which perfume the air most delightfully, not passed by as the rest but being trodden upon and crushed, are three, that is burnet, wild thyme, and water mints; therefore you are to set whole alleys of them to have the pleasure when you walk or tread.

For gardens (speaking of those which are indeed prince-like as we have done of buildings) the contents ought not well to be under thirty acres of ground, and to be divided into three parts, a green in the entrance, a heath or desert in the going forth, and the main garden in the midst, besides alleys on both sides. And I like well that four acres of ground be assigned to the green, six to the heath, four and four to either side, and twelve to the main garden. The green hath two pleasures; the one, because nothing is more pleasant to the eye than green grass kept finely shorn; the other, because it will give you a fair alley in the midst by which you may go in front upon a stately hedge, which is to enclose the garden. But because the alley will be long and in great heat of the year or day, you ought not to buy the shade in the garden by going in the sun through the green, therefore you are of either side the green to plant a covert alley upon carpenters' work about twelve foot in height, by which you may go in shade into the garden. As for the making of knots or figures with divers coloured earths that they may lie under the windows of the house on that side which the garden stands, they be but toys, you may see as good sights many times in tarts. The garden is best to be square, encompassed on all the four sides with a stately arched hedge, the arches to be upon pillars of carpenters' work of some ten foot high and six foot broad, and the spaces between of the same dimension with the breadth of the arch. Over the arches let there be an entire hedge of some four feet high, framed also upon carpenters' work; and upon the upper hedge over every arch, a little turnet with a belly enough to receive a cage of birds; and over every space between the arches some other

little figure, with broad plates of round coloured glass gilt, for the sun to play upon. But this hedge I intend to be raised upon a bank, not steep but gently slope of some six foot, set all with flowers. Also I understand that this square of the garden should not be the whole breadth of the ground, but to leave on either side ground enough for diversity of side alleys, unto which the two covert alleys of the green may deliver you; but there must be no alleys with hedges at either end of this great enclosure; not at the higher end for letting your prospect upon this fair hedge from the green, nor at the further end for letting your prospect from the hedge through the arches upon the heath.

For the ordering of the ground within the great hedge, I leave it to variety of device, advising nevertheless, that whatsoever form you cast it into, first it be not too busy or full of work, wherein I, for my part, do not like images cut out in juniper or other garden stuff, they be for children. Little low hedges round like welts with some pretty pyramids, I like well; and in some places fair columns upon frames of carpenters' work. I would also have the alleys spacious and fair. You may have closer alleys upon the side grounds, but none in the main garden. I wish also in the very middle a fair mount with three ascents and alleys, enough for four to walk abreast, which I would have to be perfect circles, without any bulwarks or embossments, and the whole mount to be thirty foot high, and some fine banqueting house with some chimneys neatly cast, and without too much glass.

For fountains they are a great beauty and refreshment, but pools mar all, and make the garden unwholesome and full of flies and frogs. Fountains I intend to be of two natures, the one that sprinkleth or spouteth water, the other a fair receipt of water of some thirty or forty foot square, but without fish, or slime, or mud. For the first the ornaments of images gilt, or of marble, which are in use, do well; but the main matter is, so to convey the water as it never stay either in the bowls or in the cistern, that the waters be never by rest discoloured, green or red, or the like, or gather any mossiness or putrefaction. Besides that it is to be cleansed every day by the hand, also some steps up to it, and some fine pavement about it doth well. As for the other kind of fountain, which we may call a bathing-pool, it may admit much curiosity and beauty, where-with we will not trouble ourselves, as that the bottom be finely paved, and with images; the sides likewise, and withal embellished with coloured glass and such things of lustre; encompassed also with fine rails of low statues. E



point is the same, which we mentioned in the former kind of fountain, which is, that the water be in perpetual motion, fed by a water higher than the pool, and delivered into it by fair spouts and then discharged away under ground by some equality of bores, that it stay little. And for fine devices of arching water without spilling, and making it rise in several forms (of feathers, drinking-glasses, canopies, and the like), they be pretty things to look on, but nothing to health and sweetness.

For the heath, which was the third part of our plot, I wish it to be framed, as much as may be, to a natural wildness. Trees I would have none in it, but some thickets made only of sweet-briar and honeysuckle and some wild vine amongst; and the ground set with violets, strawberries, and primroses; for these are sweet and prosper in the shade; and these to be in the heath here and there, not in any order. I like also little heaps, in the nature of mole-hills, (such as are in wild heaths,) to be set some with wild-thyme, some with pinks, some with germander, that gives a good flower to the eye, some with periwinkle, some with violets, some with strawberries, some with cowslips, some with daisies, some with red roses, some with liliun convallium, some with sweet-williams red, some with bears'-foot, and the like low flowers, being withal sweet and sightly. Part of which heaps to be with standards of little bushes pricked upon their top, and part without; the standards to be roses, juniper, holly, barberries (but here and there, because of the smell of their blossom), red currants, gooseberries, rosemary, bays, sweet-briar, and such like. But these standards to be kept with cutting, that they grow not out of course.

For the side grounds you are to fit them with variety of alleys, private, to give a full shade, some of them, wheresoever the sun be. You are to frame some of them likewise for shelter, that when the wind blows sharp, you may walk as in a gallery. And those alleys must be likewise hedged at both ends to keep out the wind; and these closer alleys must be ever finely gravelled, and no grass because of going wet. In many of these alleys likewise, you are to set fruit trees of all sorts, as well upon the walls as in ranges. And this would be generally observed, that the borders wherein you plant your fruit trees, be fair and large, and low and not steep, and set with fine flowers, but thin and sparingly, lest they deceive the trees. At the end of both the side grounds I would have a mount of some pretty height, leaving the wall of the enclosure breast high, to look abroad into the fields.

For the main garden I do not deny but there should be some fair alleys ranged on both sides with fruit trees, and some pretty tufts of fruit trees, and arbours with seats, set in some decent order; but these to be by no means set too thick, but to leave the main garden so as it be not close, but the air open and free; for as for shade, I would have you rest upon the alleys of the side grounds, there to walk, if you be disposed, in the heat of the year or day; but to make account that the main garden is for the more temperate parts of the year; and in the heat of summer, for the morning and the evening or overcast days.

For aviaries, I like them not, except they be of that largeness as they may be turfed, and have living plants and bushes set in them that the birds may have more scope and natural nestling, and that no foulness appear in the floor of the aviary. So I have made a plat-form of a princely garden, partly by precept, partly by drawing, not a model, but some general lines of it, and in this I have spared for no cost. But it is nothing, for great princes, that for the most part taking advice with workmen, with no less cost, set their things together, and sometimes add statuas and such things for state and magnificence, but nothing to the true pleasure of a garden.

The next six Essays, which are all short, were all in the first publication of 1597. The Forty-seventh, "Of Negotiating," concludes thus:—

In dealing with cunning persons we must ever consider their ends to interpret their speeches, and it is good to say little to them, and that which they least look for. In all negotiations of difficulty a man may not look to sow and reap at once, but must prepare business, and so ripen it by degrees.

And this is the close of the Forty-eighth, entitled "Of Followers and Friends:"—

To take advice of some few friends is ever honourable; for lookers on, many times, see more than gamesters, and the vail best discovereth the hill. There is little friendship in the world, and least of all between equals, which was wont to be magnified. That that is, is between superior and inferior, whose fortunes may comprehend the one the other.

From the Forty-ninth, "Of Suitors," we select the following passage:—

*Iniquum petas, ut æquum feras,\** is a good rule where a man hath strength of favour, but otherwise a man were better rise in his suit; for he that would have ventured at first to have lost the suitor, will not in the conclusion lose both the suitor and his own former favour. Nothing is thought so easy a request to a great person, as his letter; and yet, if it be not in a good cause, it is so much out of his reputation. . . .

The Fiftieth is entitled "Of Studies;" here is part of it:—

Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention. . . . Reading maketh a full man, conference a ready man, and writing an exact man. And therefore if a man write little, he had need have a great memory; if he confer little, he had need have a present wit; and if he read little, he had need have much cunning to seem to know that he doth not. Histories make men wise; poets, witty; the mathematics, subtile; natural philosophy, deep; moral, grave; logic and rhetoric, able to contend. *Abeunt studia in mores.†* . . .

The Fifty-first, "Of Faction," begins and ends as follows:—

Many have an opinion, not wise, that for a prince to govern his estate, or for a great person to govern his proceedings, according to the respect to factions, is a principal part of policy; whereas contrariwise, the chiefest wisdom is either in ordering those things which are general and wherein men of several factions do nevertheless agree, or in dealing with correspondence to particular persons one by one. . . . . When factions are carried too high and too violently, it is a sign of weakness in princes, and much to the prejudice both of their authority and business. The motions of factions under kings ought to be like the motions (as the astronomers speak) of the inferior orbs, which may have their proper motions, but yet still are quietly carried by the higher motion of *primum mobile.‡*

And here are a few sentences from the Fifty-second, entitled "Of Ceremonies and Respects:"—

\* You may ask too much, in order to obtain a moderate boon.

† Studies become habits. ‡ The primary moving power.

It doth much add to a man's reputation, and is (as queen Isabella said) 'like perpetual letters commendatory to have good forms;' to obtain them it almost sufficeth not to despise them, for so shall a man observe them in others; and let him trust himself with the rest. For if he labour too much to express them, he shall lose their grace, which is to be natural and unaffected. Some men's behaviour is like a verse wherein every syllable is measured. How can a man comprehend great matters, that breaketh his mind too much to small observations? . . . . It is a good precept generally in seconding another, yet to add somewhat of one's own; as if you would grant his opinion, let it be with some distinction; if you will follow his motion, let it be with condition; if you allow his counsel, let it be with alleging further reason. . . .

The Fifty-third Essay, entitled "Of Praise," was first published in 1612, and commences thus:—

Praise is the reflection of virtue, but it is as the glass or body which giveth the reflection. If it be from the common people, it is commonly false and naught, and rather followeth vain persons than virtuous. For the common people understand not many excellent virtues; the lowest virtues draw praise from them, the middle virtues work in them astonishment or admiration, but of the highest virtues they have no sense or perceiving at all; but shows and species virtutibus similes\* serve best with them. Certainly fame is like a river, that beareth up things light and swollen, and drowns things weighty and solid.

Of the Fifty-fourth, entitled "Of Vain-Glory," which is also in the edition of 1612, the latter part is as follows:—

In fame of learning the flight will be slow, without some feathers of ostentation. Qui de contemendâ gloriâ libros scribunt, nomen suum inscribunt.† Socrates, Aristotle, Galen, were men full of ostentation. Certainly vain-glory helpeth to perpetuate a man's memory; and virtue was never so beholden to human nature, as it received his due at the second hand. Neither had the fame of Cicero, Seneca, Plinius Secundus, borne her age so well if it had not been joined with some

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\* Appearances like to virtues.

† Those who write books on despising glory put their names in the title-page.

vanity in themselves; like unto varnish, that makes ceilings not only shine, but last. . . . Excusations, cessions, modesty itself well governed, are but arts of ostentation. And amongst those arts there is none better than that which Plinius Secundus speaketh of, which is to be liberal of praise and commendation to others, in that wherein a man's self hath any perfection. For, saith Pliny, very wittily, 'In commending another you do yourself right, for he that you commend is either superior to you in that you commend, or inferior. If he be inferior, if he be to be commended, you much more; if he be superior, if he be not to be commended, you much less.' Glorious men are the scorn of wise men, the admiration of fools, the idols of parasites, and the slaves of their own vaunts. . . .

The Fifty-fifth, "Of Honour and Reputation," is one of the original Ten published in 1597. This is one of its sections:—

The true marshalling of the degrees of sovereign honour are these: in the first place are *conditores imperiorum*, founders of states and commonwealths, such as were Romulus, Cyrus, Cæsar, Ottoman, Ismael. In the second place are *legislatores*, lawgivers, which are also called second founders, or *perpetui principes*,\* because they govern by their ordinances after they are gone; such were Lycurgus, Solon, Justinian, Edgar, Alphonsus of Castile, the Wise, that made the *Siete Patridas*. In the third place are *liberatores*,† or *salvatores*;‡ such as compound the long miseries of civil wars, or deliver their countries from servitude of strangers or tyrants; as Augustus Cæsar, Vespasianus, Aurelianus, Theodoricus, King Henry the Seventh of England, King Henry the Fourth of France. In the fourth place are *propagatores*, or *propugnatores imperii*,§ such as in honourable wars enlarge their territories or make noble defence against invaders. And in the last place are *patres patriæ*,|| which reign justly and make the times good wherein they live. Both which last kinds need no examples, they are in such number.

The Fifty-sixth, which was first published in 1612, is entitled "Of Judicature." The following are extracts:—

Judges ought to remember that their office is *ius dicere* and not *ius dare*; to interpret law, and not to make law or give law. Else will it be like the authority claimed by the

\* Perpetual sovereigns. † Deliverers. ‡ Saviours.

§ Extenders or defenders of the state.

|| Fathers of their country.

Church of Rome, which under pretext of exposition of Scripture doth not stick to add and alter, and to pronounce that which they do not find; and by show of antiquity to introduce novelty. Judges ought to be more learned than witty, more reverend than plausible, and more advised than confident. Above all things integrity is their portion and proper virtue; 'Cursed' (saith the law) 'is he, that removeth the landmark.' The mislayer of a mere stone is to blame, but it is the unjust judge that is the capital remover of land-marks, when he defineth amiss of lands and property. One foul sentence doth more hurt than many foul examples; for these do but corrupt the stream, the other corrupteth the fountain. . . . A judge ought to prepare his way to a just sentence, as God useth to prepare his way by raising valleys and taking down hills; so when there appeareth on either side an high hand, violent prosecution, cunning advantages taken, combination, power, great counsel, then is the virtue of a judge seen, to make inequality equal, that he may plant his judgment as upon an even ground. Qui fortiter emungit, elicit sanguinem;\* and where the wine-press is hard wrought, it yields a harsh wine that tastes of the grape-stone. Judges must beware of hard constructions and strained inferences, for there is no worse torture than the torture of laws, especially in case of laws penal; they ought to have care, that that which was meant for terror be not turned into rigour, and that they bring not upon the people that shower whereof the Scripture speaketh, Pluet super eos laqueos;† for penal laws pressed are a shower of snares upon the people. Therefore let penal laws, if they have been sleepers of long, or if they be grown unfit for the present time, be by wise judges confined in the execution, *Judicis officium est, ut res, ita tempora rerum, &c.*‡ In causes of life and death, judges ought (as far as the law permitteth) in justice to remember mercy; and to cast a severe eye upon the example, but a merciful eye upon the person. . . .

The parts of a judge in hearing are four: to direct the evidence; to moderate length, repetition, or impertinency of speech; to recapitulate, select, and collate the material points of that which hath been said; and to give the rule or sentence. Whatsoever is above these is too much, and proceedeth either of glory and willingness to speak, or of impatience to hear, or of

\* Wringing the nose brings blood.

† He will rain snares upon them.

‡ It is the office of a judge to consider not only the facts but the times and circumstances of the facts.

shortness of memory, or of want of a staid and equal attention. It is a strange thing to see, that the boldness of advocates should prevail with judges; whereas they should imitate God, in whose seat they sit, who represseth the presumptuous and giveth grace to the modest. But it is more strange that judges should have noted favourites, which cannot but cause multiplication of fees and suspicion of by-ways. There is due from the judge to the advocate some commendation and gracing where causes are well handled and fair pleaded, especially towards the side which obtaineth not; for that upholds in the client the reputation of his counsel, and beats down in him the conceit of his cause. There is likewise due to the public a civil reprehension of advocates, where there appeareth cunning counsel, gross neglect, slight information, indiscreet pressing, or an over bold defence. And let not the counsel at the bar chop with the judge, nor wind himself into the handling of the cause anew, after the judge hath declared his sentence; but on the other side, let not the judge meet the cause half way, nor give occasion to the party to say, his counsel or proofs were not heard. . . .

From the Fifty-seventh, "Of Anger," which first appeared in 1625, we extract a single paragraph:—

Anger is certainly a kind of baseness, as it appears well in the weakness of those subjects in whom it reigns, children, women, old folks, sick folks. Only men must beware that they carry their anger rather with scorn than with fear; so that they may seem rather to be above the injury than below it, which is a thing easily done if a man will give law to himself in it. . . .

The Fifty-eighth, "Of the Vicissitude of Things," was another of those added by the author to his last edition. It begins thus:—

Solomon saith, 'There is no new thing upon the earth.' So that as Plato had an imagination, 'That all knowledge was but remembrance;' so Solomon giveth his sentence, 'That all novelty is but oblivion.\* . . .

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\* A little lower down comes a sentence which in Mr. Montagu's and most of the common editions stands:—"As for conflagrations and great droughts, they do not merely dispeople, but destroy." In the edition of Bacon's works in 2 vols. 8vo., Lond. 1843, it is given:—"As for conflagrations and great droughts, they do merely dispeople and destroy." Both these

And it is thus wound up:—

In the youth of a state arms do flourish; in the middle age of a state learning, and then both of them together for a time; in the declining age of a state, mechanical arts and merchandise. Learning hath its infancy when it is but beginning, and almost childish; then its youth, when it is luxuriant and juvenile; then its strength of years, when it is solid and reduced; and lastly its old age, when it waxeth dry and exhaust. But it is not good to look too long upon these turning wheels of vicissitude lest we become giddy. As for the philology of them, that is but a circle of tales, and therefore not fit for this writing.

Two Essays are commonly added in the modern impressions; the one entitled "A Fragment of an Essay on Fame;" the other, "Of a King." The Fragment on Fame was first published in 1657 by Dr. Rawley in the first edition of the *Resuscitatio*; and there can be no doubt of its authenticity. The following is the latter part of it, being about the half of what we have:—

Fame is of that force, as there is scarcely any great action wherein it hath not a great part, especially in the war. Mucianus undid Vitellius, by a fame that he scattered, that Vitellius had in purpose to remove the legions of Syria into Germany, and the legions of Germany into Syria; whereupon the legions of Syria were infinitely inflamed. Julius Cæsar took Pompey unprovided, and laid asleep his industry and preparations, by a fame that he cunningly gave out, how Cæsar's own soldiers loved him not; and being wearied with the wars, and laden with the spoils of Gaul, would forsake him as soon as he came into Italy. Livia settled all things for the succession of her son Tiberius, by continual giving out that her husband Augustus was upon recovery and amendment. And it is a usual thing with the bashaws, to conceal the death of the Great Turk from the janizaries and men of war, to save the sacking of Constantinople and other towns, as their manner is. Themistocles made Xerxes, king of Persia, post apace out of Grecia, by giving out that the Grecians had a purpose to break his

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readings are equally inconsistent with the context. The true reading may be gathered from the Latin:—*Illæ populū penitus non absorbent aut destruunt*; that is, "they do not merely [for altogether, completely] dispeople or destroy."



bridge of ships which he had made athwart the Hellespont. There be a thousand such like examples, and the more they are the less they need to be repeated, because a man meeteth with them everywhere: therefore let all wise governors have as great a watch and care over fames, as they have of the actions and designs themselves.

Rawley notes that "the rest was not finished." In a copy of the second edition of the *Resuscitatio* (1661) in the British Museum we find a MS. note in an old hand stating that the Essay is continued in another piece contained in that collection, entitled "The Image (or Civil Character) of Julius Cæsar;" but this appears to be a mere fancy, and a mistaken one. The piece on Julius Cæsar was written by Bacon in Latin, from which what is given in the second and third editions of the *Resuscitatio* is a translation by Rawley; and there is no probability that it was designed to have any connexion with this English Essay on Fame.

The Essay "Of a King" was first published along with another tract entitled "An Explanation what manner of persons those should be that are to execute the power or ordinance of the King's prerogative," in 1642, in a 4to. pamphlet, in which both are attributed to Bacon; and the Essay and Explanation were reprinted in the volume called *The Remains*, 1648, and in the re-impression of that volume in 1656 with the new title of *The Mirror of State and Eloquence*. But they are not included in any of the three editions of the *Resuscitatio* (1657, 1661, 1671); nor are they noticed by Tenison in the *Baconiana* (1679). The external evidence therefore is unfavourable to the authenticity of the Essay; for the collection called *The Remains* is of no authority. The style and manner of thinking, however, are, at least in some places, not unlike Bacon, although the formal division into numbered paragraphs (which may have been the work of a transcriber) is peculiar. The following paragraphs, for instance, might very well have been written by Bacon:—

1. A king is a mortal god on earth, into whom the living God hath lent his own name as a great honour; but withal told him, he should die like a man, lest he should be proud and

flatter himself, that God hath with his name imparted unto him his nature also.

2. Of all kind of men, God is the least beholden unto them; for he doth most for them, and they do ordinarily least for Him.

3. A king that would not feel his crown too heavy for him, must wear it every day; but if he think it too light, he knoweth not of what metal it is made.

12. That king which is not feared is not loved; and he that is well seen in his craft, must as well study to be feared as loved; yet not loved for fear, but feared for love.

We may here also mention a somewhat longer piece, entitled "An Essay on Death," commonly printed, in the complete editions of Bacon, among what are called his Theological Works. The only authority for attributing it to Bacon is that of the *Remains* (1648), in which volume it first appeared. It is a composition of considerable beauty, but not in his manner. In the common collection of the Essays, it may be remembered, there is one on Death (the second), first printed in 1612.

It will be admitted by all that these Essays of Bacon's do at least, as he himself says of them, "come home to men's business and bosoms." They are full of that sort of wisdom which is profitable for the guidance of life, and to which every reader's experience of himself and of others responds. This they are, it is needless to say, without having anything of vulgarity or triviality; on the contrary, nearly every thought is as striking for its peculiarity and refinement as for its truth. But, with all their combined solidity and brilliancy, they are not much marked by any faculty of vision extending beyond actual humanity. Their pervading spirit, without being either low or narrow, is still worldly. It is penetrating and sagacious, rather than either far-seeing or subtle. The genius displayed in them is that of oratory and wit, rather than that of either metaphysics or the higher order of poetry. The author has a greater gift of looking into the heart of man than into the heart of things. He is observant, reflective, ingenious, fanciful, and, to the measure that all that allows, both eloquent and wise.

but, it may be from the form or nature of such compositions not admitting of it, he can hardly be said to be in these *Essays* very eminently either capacious or profound.

• Of its kind, however, though that kind may not be the highest, the writing is wonderful. What a spirit of life there is in every sentence! How admirably is the philosophy everywhere animated and irradiated by the wit; and how fine a balance and harmony is preserved between the wit and the sense, the former never becoming fantastic any more than the latter dull! The moral spirit, too, though worldly, is never offensively so; it is throughout considerate, tolerant, liberal, generous; and, if we have little lofty indignation, we have as little violence, or bitterness, or one-sidedness. It is not a morality with which any tendency to enthusiasm or fanaticism in such matters will sympathize; but yet it is not wanting either in distinctness or in elevation, any more than in a reasonable charity. Prudence is no doubt a large ingredient; but principle is by no means absent. Nor does much appear to be introduced in these *Essays* for mere effect. At any rate, the quantity of idea, of one sort or another, in proportion to the space, is almost without example, at least with so little apparent forcing or straining, so easy and smooth a flow. Brilliant as the light is, it is so managed as to fall softly upon the eye, to satisfy rather than to dazzle. One new or uncommon thought is presented after another in more rapid succession than in almost any other book; and yet the mind of the reader is neither startled nor fatigued, so consummate is the rhetorical art. Our review has necessarily been confined to a series of selections or samples; for, with such compactness everywhere, analysis or abridgment was impossible. But, although many things are left unnoticed in our abstract, we have endeavoured to make it comprehend the portion of each *Essay* which, admitting of being detached from the rest (always of course an indispensable condition), seemed the most remarkable.

## SECTION II.

## THE WISDOM OF THE ANCIENTS.

IN the year 1601 occurred the trial, conviction, and execution of Bacon's friend Essex, and the publication soon after by the government of what was called "A Declaration of the Practices and Treasons" of the earl and his accomplices, which was drawn up by Bacon, who had also appeared on the part of the crown at the trial. It is accordingly included among his works, as well as an "Apology," or defence of his conduct, which he deemed it expedient to print, probably in the same year, in the form of a letter to the Earl of Devonshire. James I. became king of England by the death of Elizabeth, on the 24th of March, 1603; and Bacon was knighted on the 23rd of July, the day before the coronation, on which occasion above three hundred other gentlemen received the same honour. In a letter written a few days previous to his relation Robert Lord Cecil (afterwards Earl of Salisbury), the chief minister of the new king, he intimates that he would be glad to have "this divulged and almost prostituted honour," among other reasons, "because," he says, "I have found out an alderman's daughter, a handsome maiden, to my liking." This was Alice, one of the daughters and co-heirs of Benedict Barnham, Esq., alderman of London, whom he afterwards married. He had also been continued in his rank (or rather office, as it was then considered) of king's counsel by a warrant signed by James at Worksop, on his way to London, on the 21st of April.\*

\* Published by Mr. Collier in the Egerton Papers, p. 367. Mr. Montagu's account, given under the year 1604 (*Life*, p. 108), is, that Bacon was made by patent king's counsel learned

According to Mr. Montagu, it was in the fall of the year 1604 that he prepared and addressed to the king his work (which is, however, only a fragment) upon "The Greatness of the Kingdom of Britain." In 1605 he published his "Two Books of the Proficiency and Advancement of Learning, Divine and Human," also addressed to James. On new year's day, 1606, he presented to the king his short paper entitled "Certain Considerations touching the Plantation in Ireland;" and in the course of the same year, according to Mr. Montagu (*Life*, pp. 140, 141), his "two publications" on "Church Controversies," and the "Pacification of the Church." But in the first place neither of these tracts appears to have been ever published till many years after both James and Bacon himself had left the world: and secondly, it is clear from the second, certainly written in the beginning of the reign of James, that the first must have been written long before the end of the preceding reign. On the 25th of June, 1607, Bacon was at last appointed solicitor-general, on Sir Edward Coke being made Chief Justice of the Common Pleas. This year he is supposed to have communicated to his friends Andrews, then Bishop of Ely, and Sir Thomas Bodley, his exposition in Latin of some of the principles of his philosophy, entitled *Cogitata et Visa*; the letters sent with it, which as there given, however, are both without date, are in the *Resuscitatio*. In 1609, or more probably in

in the law, with a fee of forty pounds a-year, "which," it is added, "is said to have been a 'grace scarce known before.'" For this last expression reference is made in a foot-note to the life by Rawley; but Rawley uses it in speaking of his having been made queen's counsel extraordinary in the reign of Elizabeth, as Mr. Montagu has himself noticed in a preceding page (p. 24). Mr. Montagu adds, but without giving his authority, that the same day on which he was made king's counsel, James granted Bacon "by another patent under the great seal a pension of sixty pounds a-year, for special services received from his brother Anthony Bacon and himself." The same facts are stated in the *Biographia Britannica* on the authority of documents in Rymer's *Fœdera*, and with the additional information that the two patents are dated the 25th of August, 1604.

the beginning of what we should now call the year 1610 he published his Latin Treatise "De Sapientia Veterum" (*Concerning the Wisdom of the Ancients*), of which we have a very good translation by his friend Sir Arthur Gorges (uniformly, as far as we have observed, called Georges by Mr. Montagu),<sup>2</sup> already mentioned as the translator of the Essays into French. This translation was published in 1619, in Bacon's lifetime; and it is very probable that it may have had the advantage of his revision. *The Wisdom of the Ancients* is the next of what may be called the Moral Works which falls to be noticed; and we shall take our extracts from the English translation by Gorges, which is made from a second and enlarged edition of the Latin published in 1617. An Italian translation was also published in 1618, and a French translation in 1619.

Gorges, however, has omitted two short Dedications prefixed to the Latin work; the one (which is placed second) to the author's Alma Mater, the University of Cambridge, the other to the Lord Treasurer the Earl of Salisbury, Chancellor of the University. The address to Salisbury is chiefly remarkable for the elegant turning of the compliments and the general felicity of the expression, qualities not to be adequately represented in a translation. One phrase may be noticed as reflecting a favourite idea of Bacon's; he speaks of philosophy as then through old age falling as it were into a second childhood—*philosophia seculo nostro veluti per senium repuerascens*, as he does, both in the Advancement of Learning, and more at length in the Novum Organum, of ancient times being the youth, and modern times the old age of the world. For the rest, he professes his design in the present treatise to have been to pass over whatever was manifest, obsolete, or common-place, and to produce something which should have a respect to the steeps and high places of life and the more remote recesses of science—*ad vitæ ardua et scientiarum arcana*. In the Dedication to the University, he intimates his hope and belief that some addition to the stores of learning and knowledge may be found to have been made by what he has here written

from the circumstance that contemplation cannot but gain something of new grace and vigour by being transferred, as it has been in his case, to active life—that the richer supply of matter for nourishment must enable it to strike its roots deeper, or at the least to put forth more spreading boughs and a greater show of foliage. You yourselves, he adds, as I apprehend, are scarcely aware over how wide a sphere the dominion of those studies of yours extends, nor to what a multiplicity and variety of matters they apply.

The work is introduced by a Preface, which commences thus :—

The antiquities of the first age (except those we find in sacred writ) were buried in oblivion and silence : silence was succeeded by poetical fables ; and fables again were followed by the records we now enjoy. So that the mysteries and secrets of antiquity were distinguished and separated from the records and evidences of succeeding times by the veil of fiction, which interposed itself and came between those things which perished and those which are extant. . .

It is not his intention, Bacon goes on to state, to treat these ancient parables as mere exercises for ingenuity in the application of them ; but with serious endeavour to labour to extract from them what they may contain of real mystery or hidden knowledge and wisdom. “ And,” he continues,

I am persuaded (whether ravished with the reverence of antiquity, or because in some fables I find such singular proportion between the similitude and the thing signified, and such apt and clear coherence in the very structure of them, and propriety of names wherewith the persons or actors in them are inscribed and intituled) that no man can constantly deny but this sense was in the author's intent and meaning when they first invented them, and that they purposely shadowed it in this sort : for who can be so stupid and blind in the open light, as (when he hears how Fame, after the Giants were destroyed, sprang up as their youngest sister) not to refer it to the murmurs and seditious reports of both sides, which are wont to fly abroad for a time after the suppressing of insurrections ? Or when he hears how the giant Typhon having cut out and

brought away Jupiter's nerves, which Mercury stole from him and restored again to Jupiter, doth not presently perceive how fitly it may be applied to powerful rebellions, which take from princes their sinews of money and authority, but so, that by affability of speech and wise edicts (the minds of their subjects being in time privily and as it were by stealth reconciled) they recover their strength again? Or when he hears how (in that memorable expedition of the gods against the giants) the braying of Silenus his ass conduced much to the profligation of the giants, doth not confidently imagine that it was invented to show how the greatest enterprises of rebels are oftentimes dispersed with vain rumours and fears.

Moreover, to what judgment can the conformity and signification of names seem obscure? Seeing Metis, the wife of Jupiter, doth plainly signify counsel; Typhon, insurrection; Pan, universality; Nemesis, revenge, and the like. Neither let it trouble any man, if sometimes he meet with historical narrations, or additions for ornament's sake, or confusion of times, or something transferred from one fable to another to bring in a new allegory; for it could be no otherwise, seeing they were the inventions of men which lived in divers ages and had also divers ends; some being ancient, others neoterical; some having an eye to things natural, others to moral.

There is another argument, and that no small one neither, to prove that these fables contain certain hidden and involved meanings, seeing some of them are observed to be so absurd and foolish in the very relation that they show, and as it were, proclaim a parable afar off; for such tales as are probable they may seem to be invented for delight, and in imitation of history. And as for such as no man would so much as imagine or relate, they seem to be sought out for other ends. For what kind of fiction is that wherein Jupiter is said to have taken Metis to wife, and, perceiving that she was with child, to have devoured her, whence himself conceiving brought forth Pallas armed out of his head. Truly I think there was never dream (so different to the course of cogitation, and so full of monstrosity) ever hatched in the brain of man. Above all things this prevails most with me and is of singular moment, many of these fables seem not to be invented of those by whom they are related and celebrated, as by Homer, Hesiod, and others; for if it were so, that they took beginning in that age, and from those authors by whom they are delivered and brought to our hands, my mind gives me there could be no great or high matter expected or supposed to proceed from them in respect of



these originals. But if with attention we consider the matter, it will appear that they were delivered and related as things formerly believed and received, and not as newly invented and offered unto us. Besides, seeing they are diversely related by writers that lived near about one and the self-same time, we may easily perceive that they were common things, derived from precedent memorials, and that they became various by reason of the divers ornaments bestowed on them by particular relations. And the consideration of this must needs increase in us a great opinion of them as not to be accounted either the effects of the times or inventions of the poets, but as sacred reliques or abstracted airs of better times, which by tradition from more ancient nations fall into the trumpets and flutes of the Grecians. . . .

If, however, any will obstinately deny all this, leaving them to enjoy the gravity of judgment which they affect, —“although indeed it be but lumpish and almost leaden”—he will present the matter to them in another way :—

There is found among men (and it goes for current) a twofold use of parables, and those (which is more to be admired) referred to contrary ends, conducing as well to the folding up and keeping of things under a veil, as to the enlightening and laying open of obscurities. But omitting the former (rather than to undergo wrangling, and assuming ancient fables as things vagrant and composed only for delight), the latter must unquestionless still remain as not to be wrested from us by any violence of wit, neither can any (that is but meanly learned) hinder, but it must absolutely be received as a thing grave and sober, free from all vanity, and exceeding profitable and necessary to all sciences. This is it, I say, that leads the understanding of man by an easy and gentle passage through all novel and abstruse inventions which any way differ from common received opinions. Therefore in the first ages (when many human inventions and conclusions, which are now common and vulgar, were new and not generally known), all things were full of fables, enigmas, parables, and similes of all sorts, by which they sought to teach and lay open, not to hide and conceal knowledge, especially seeing the understandings of men were in those times rude and impatient, and almost incapable of any subtilties, such things only excepted as were the objects

of sense : for as hieroglyphics preceded letters, so parables were more ancient than arguments. And in these days also, he that would illuminate men's minds anew in any old matter, and that not with discredit and harshness, must absolutely take the same course and use the help of similes. . . .

There is perhaps no work of Bacon's that impresses one so forcibly with admiration of the ingenuity, freshness, and vital energy of his intellect as this treatise on the *Wisdom of the Ancients*. Nothing in his interpretation of the old fables is borrowed or common-place ; every thing is new and his own. Yet it seems all as natural as if no other explanation were possible, and in some instances as if the only wonder were that it should not have been all along perceived by every body. So exquisite is the art of the exposition. And very note-worthy, too, it is how these original views of Bacon's, with all this ready acceptance or accordance which they command, have never yet become vulgar or trite. They have been promulgated for more than two centuries, mixed up during all that time with the general mass of thought ; yet there they still lie as bright and distinguishable as at first, like the crystals imbedded in common clay or gravel. Their originality has preserved them in their integrity, like a powerful salt. Or, they are of too marked a character to admit of their being taken up by any one who chooses, and becoming common property. The king's broad arrow is stamped too deep upon them ; the master mind that first gave them forth has put too much of itself into them—has too livingly shaped, coloured, inspired them all over and through and through.

The fables, or mythological legends, interpreted amount to the number of thirty-one. We must, however, confine our review to a very few of the more remarkable expositions, which we shall give entire, or nearly entire ; for none of them will bear abridgment.

We will begin with that of the story of Typhon, to which an allusion has already been made in the Preface :—

Juno being vexed (say the poets) that Jupiter had begott

Pallas by himself without her, earnestly pressed all the other gods and goddesses that she might also bring forth of herself alone without him; and having by violence and importunity obtained a grant thereof, she smote the earth, and forthwith sprang up Typhon a huge and horrid monster. This strange birth she commits to a serpent (as a foster-father) to nourish it; who no sooner came to ripeness of years but he provokes Jupiter to battle. In the conflict the giant getting the upper hand, takes Jupiter upon his shoulders, carries him into a remote and obscure country, and (cutting out the sinews of his hands and feet) brought them away, and so left him miserably mangled and maimed. But Mercury recovering these nerves from Typhon by stealth, restored them again to Jupiter. Jupiter being again by this means corroborated, assaults the monster afresh, and at the first strikes him with a thunder-bolt, from whose blood serpents were engendered. This monster at length fainting and flying, Jupiter casts on him the mount *Ætna* and with the weight thereof crushed him.

This fable seems to point at the variable fortune of princes, and the rebellious insurrection of traitors in a state. For princes may well be said to be married to their dominions, as Jupiter was to Juno; but it happens now and then, that being deboshed by the long custom of empyring and bending towards tyranny, they endeavour to draw all to themselves, and, contemning the counsel of their nobles and senators, hatched laws in their own brain, that is, dispose of things by their own fancy and absolute power. The people (repining at this) study how to create and set up a chief of their own choice. This project, by the secret instigation of the peers and nobles, doth for the most part take his beginning, by whose connivance the commons being set on edge, there follows a kind of murmuring or discontent in the state, shadowed by the infancy of Typhon, which being nursed by the natural pravity and clownish malignity of the vulgar sort (unto princes as infestious as serpents), is again repaired by renewed strength, and at last breaks out into open rebellion, which, because it brings infinite mischiefs upon prince and people, is represented by the monstrous deformity of Typhon: his hundred heads signify their divided powers; his fiery mouths their inflamed intents; his serpentine circles their pestilent malice in besieging; his iron hands their merciless slaughters; his eagle's talents their greedy rapines; his plumed body their continual rumours and scouts and fears, and such like. And sometimes these rebellions grow so potent that princes are enforced (transported as it were by the rebels,

and forsaking the chief seats and cities of the kingdom) to contract their power, and being deprived of the sinews of money and majesty, betake themselves to some remote and obscure corner within their dominions. But in process of time, if they bear their misfortunes with moderation, they may recover their strength by the virtue and industry of Mercury, that is, they may (by becoming affable and by reconciling the minds and wills of their subjects with grave edicts and gracious speech) excite an alacrity to grant aids and subsidies whereby to strengthen their authority anew. Nevertheless having learned to be wise and wary, they will refrain to try the chance of fortune by war, and yet study how to suppress the reputation of the rebels by some famous action, which if it fall out answerable to their expectation, the rebels finding themselves weakened, and fearing the success of their broken projects, betake themselves to some slight and vain bravadoes like the hissing of serpents, and at length in despair betake themselves to flight, and then when they begin to break, it is safe and timely for kings to pursue and oppress them with the forces and weight of the kingdom as it were with the mountain *Ætna*.

Perhaps there is no one of these interpretations that is upon the whole so admirable as that entitled "Pan, or Nature:" and it is further recommended to special attention as having been selected by Bacon himself to be one of his examples when treating of this method of recovering the lost wisdom of the old world in the second book of his work *De Augmentis Scientiarum*, and there inserted with some additions and other alterations. The original of Pan, he begins by observing, under whose person the ancients have exquisitely described Nature, has been left by them doubtful; some accounts making him to have been the son of Mercury, others the offspring of Penelope and all her suitors, while others say that he was the son of Jupiter and Hybris, which signifies contumely or disdain. In all the accounts, however, it is admitted that the *Parcæ*, or Destinies, were his sisters.

He is pourtrayed by the ancients in this guise; on his head a pair of horns that reach to heaven, his body rough and hairy, his beard long and shaggy, his shape bifurmed above like a

man, below like a beast, his feet like goat's hoofs, bearing these ensigns of his jurisdiction, to wit, in his left hand a pipe of seven reeds, and in his right a sheep-hook or a staff crooked at the upper end, and his mantle made of a leopard's skin. His dignities and offices were these: he was the god of hunters, of shepherds, and of all rural inhabitants; chief president also of hills and mountains, and next to Mercury the ambassador of the gods. Moreover he was accounted the leader and commander of the nymphs, which were always wont to dance the rounds and frisk about him; he was accosted by the Satyrs and the old Sileni. He had power also to strike men with terrors, and those especially vain and superstitious, which are termed panic fears. His acts were not many for ought that can be found in records, the chiefest was, that he challenged Cupid at wrestling, in which conflict he had the foil. The tale goes too, how that he caught the giant Typhon in a net and held him fast. Moreover when Ceres, grumbling and chafing that Proserpina was ravished, had hid herself away, and that all the gods took pains (by dispersing themselves into every corner) to find her out, it was only his good hap (as he was hunting) to light on her, and acquaint the rest where she was. He presumed also to put it to the trial who was the best musician, he or Apollo; and by the judgment of Midas was indeed preferred. But the wise judge had a pair of ass's ears privily chopped to his noddle for his sentence.

Little or nothing, it is added, is reported of his amours. We are only told that he loved the nymph Echo, whom he took to wife; and that Cupid, whom he had irritated by audaciously challenging him to a wrestling-match, in his spite and revenge, inflamed him with a passion for another pretty wench called Syrinx. Moreover he had no issue; only he was the reputed father of a little girl called Iambe,\* that with many pretty tales was wont to make strangers merry. Some, however, think that Iambe was really his daughter by his wife Echo.

This (if any be) is a noble tale, as being laid out and bigbellied with the secrets and mysteries of nature.

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\* Carelessly misprinted Iamle in all, or almost all, the editions of the English translation by Gorges; Mr. Montagu's included.

Pan (as his name imports) represents and lays open the all of things or nature. Concerning his original there are two only opinions that go for current; for either he came of Mercury, that is, the word of God, which the holy Scriptures without all controversy affirm, and such of the philosophers as had any smack of divinity assented unto, or else from the confused seeds of things. For they that would have one simple beginning refer it unto God; or if a materiate beginning, they would have it various in power. So that we may end the controversy with this distribution, that the world took beginning either from Mercury or from the seeds of all things.

Virg. Eclog. 6.

Namque canebat uti magnum per inane coacta  
Semina, terrarumque, animæque, marisque fuissent,  
Et liquidi simul ignis; ut his exordia primis  
Omnia, et ipse tener mundi concreverit orbis.

For rich-vein'd Orpheus sweetly did rehearse  
How that the seeds of fire, air, water, earth,  
Were all pack'd in the vast void universe;  
And how from these as firstlings all had birth,  
And how the body of this orbique frame,  
From tender infancy so big became.

But as touching the third conceit of Pan's original, it seems that the Grecians (either by intercourse with the Egyptians, or one way or other) had heard something of the Hebrew mysteries; for it points to the state of the world, not considered in immediate creation, but after the fall of Adam, exposed and made subject to death and corruption; for in that state it was, and remains to this day, the offspring of God and sin. And therefore all these three narrations concerning the manner of Pan's birth may seem to be true, if it be rightly distinguished between things and times. For this Pan or Nature (which we suspect, contemplate, and reverence more than is fit) took beginning from the word of God by the means of confused matter, and the entrance of prevarication and corruption. The Destinies may well be thought the sisters of Pan or Nature, because the beginnings and continuances, and corruptions, and depressions, and dissolutions, and eminences, and labours, and felicities of things, and all the chances which can happen unto anything are linked with the chain of causes natural.

Horns are attributed unto him because horns are broad at the root and sharp at the ends, the nature of all things being like a pyramis, sharp at the top. For individual or singular things being infinite are first collected into species, which are many also; then from species into generals, and from generals (by ascending) are contracted into things or notions more general, so that at length Nature may seem to be contracted into a unity. Neither is it to be wondered at that Pan toucheth heaven with his horns, seeing the height of nature or universal ideas do in some sort pertain to things divine, and there is a ready and short passage from metaphysic to natural theology.

The body of nature is elegantly and with deep judgment depainted hairy, representing the beams or operations of creatures; for beams are as it were the hairs and bristles of Nature, and every creature is either more or less beamy, which is most apparent in the faculty of seeing, and no less in every virtue and operation that effectuates upon a distant object; for whatsoever works up anything afar off, that may rightly be said to dart forth rays or beams.

Moreover Pan's beard is said to be exceeding long, because the beams or influences of celestial bodies do operate and pierce farthest of all, and the sun (when his higher half is shadowed with a cloud) his beams break out in the lower and looks as if he were bearded.

Nature is also excellently set forth with a biformented body, with respect to the differences between superior and inferior creatures. For the one part, by reason of their pulcritude and equability of motion, and constancy, and dominion over the earth and earthly things, is worthily set out by the shape of man; and the other part in respect of their perturbations and unconstant motions, and therefore needing to be moderated by the celestial, may be well fitted with the figure of a brute beast. This description of his body pertains also to the participation of species, for no natural being seems to be simple, but as it were participating and compounded of two. As for example; man hath something of a beast, a beast something of a plaut, a plant something of an inanimate body; so that all natural things are in very deed biformented, that is to say, compounded of a superior and inferior species.

It is a witty allegory, that same of the feet of a goat, by reason of the upward tending motion of terrestrial bodies towards the air and heaven, for the goat is a climbing creature that loves to be hanging about the rocks and steep mountains. And this is done also in a wonderful manner, even by those things which

are destined to this inferior globe, as may manifestly appear in clouds and meteors.

The two ensigns which Pan bears in his hands do point, the one at harmony, the other at empyry. For the pipe consisting of seven reeds doth evidently demonstrate the consent and harmony and discordant concord of all inferior creatures, which is caused by the motion of the seven planets; and that of the sheep-hook may be excellently applied to the order of nature, which is partly right, partly crooked; this staff therefore or rod is especially crooked in the upper end, because all the works of divine providence in the world are done in a far fetched and circular manner, so that one thing may seem to be effected and yet indeed a clean contrary brought to pass, as the selling of Joseph into Egypt, and the like. Besides in all wise human government, they that sit at the helm do more happily bring their purposes about, and insinuate more easily into the minds of the people by pretexts and oblique courses than by direct methods; so that all sceptres and maces of authority ought in very deed to be crooked in the upper end.

Pan's cloak or mantle is ingeniously feigned to be the skin of a leopard, because it is full of spots. So the heavens are spotted with stars, the sea with rocks and islands, the land with flowers, and every particular creature also is for the most part garnished with divers colours about the superficies, which is as it were a mantle unto it.

The office of Pan can be by nothing so lively conceived and expressed as by feigning him to be the god of hunters, for every natural action, and so by consequence motion and progression, is nothing else but a hunting. Arts and sciences have their works and human counsels their ends which they earnestly hunt after. All natural things have either their food as a prey, or their pleasure as a recreation which they seek for, and that in most expert and sagacious manner.

*Torva læna lupam sequitur, lupus ille capellam,  
Florentem cythisum sequitur lasciva capella.*

The hungry lieness with sharp desire  
Pursues the wolf; the wolf the wanton goat;  
The goat again doth greedily aspire  
To have the trifol juice pass down her throat.

Pan is also said to be the god of the country clowns, because men of this condition lead lives more agreeable unto Nature than those that live in the cities and courts of princes, where



nature by too much art is corrupted. So as the saying of the poet (though in the sense of love) might be here verified :

*Pars minima est ipsa puella sui.*

The maid so trick'd herself with art,  
That of herself she is least part.

He was held to be lord president of the mountains, because in the high mountains and hills nature lays herself most open, and men most apt to view and contemplation.

Whereas *Pari* is said to be (next unto *Mercury*) the messenger of the gods, there is in that a divine mystery contained, for next to the word of God the image of the world proclaims the power and wisdom divine, as sings the sacred poet, *Ps. xix. 1.* " *Cœli enarrant gloriam Dei, atque opera manuum ejus indicat firmamentum.* The heavens declare the glory of God, and firmament sheweth the works of his hands."

The *Nymphs*, that is, the souls of living things, take great delight in *Pan*. For these souls are the delights or minions of Nature, and the direction or conduct of these *Nymphs* is with great reason attributed unto *Pan*, because the souls of all things living do follow their natural dispositions as their guides, and with infinite variety every one of them after his own fashion doth leap and frisk and dance with incessant motion about her. The *Satyrs* and *Sileni* also, to wit, youth and old age, are some of *Pan's* followers; for of all natural things there is a lively, jocund, and (as I may say) a dancing age, and an age again that is dull, bibling, and reeling. The carriages and dispositions of both which ages to some such as *Democritus* was (that would observe them duly) might peradventure seem as ridiculous and deformed as the gambols of the *Satyrs* or the gestures of the *Sileni*.

Of those fears and terrors which *Pan* is said to be the author, there may be this wise construction made; namely, that Nature hath bred in every living thing a kind of care and fear, tending to the preservation of its own life and being, and to the repelling and shunning of all things hurtful. And yet Nature knows not how to keep a mean, but always intermixes vain and empty fears with such as are discreet and profitable; so that all things (if their insides might be seen) would appear full of *Panic* frights. But men, especially in hard, fearful and diverse times, are wonderfully insatuated with superstition, which indeed is nothing else but a *Panic* terror.

Concerning the audacity of *Pan* in challenging *Cupid* at

wrestling ; the meaning of it is, that matter wants no inclination and desire to the relapsing and dissolution of the world into the old Chaos, if her malice and violence were not restrained and kept in order, by the prepotent unity and agreement of things signified by Cupid, or the god of love ; and therefore it was a happy turn for men and all things else, that in that conflict Pan was found too weak and overcome.

To the same effect may be interpreted his catching of Typhon in a net : for howsoever there may sometimes happen vast and unwonted tumors (as the name of Typhon imports) either in the sea or in the air, or in the earth, or elsewhere, yet Nature doth intangle it in an intricate toil, and curb and restrain it, as it were with a chain of adamant, the excesses and insolences of these kind of bodies.

But for as much as it was Pan's good fortune to find out Ceres as he was hunting, and thought little of it, which none of the other gods could do, though they did nothing else but seek her, and that very seriously ; it gives us this true and grave admonition ; that we expect not to receive things necessary for life and manners from philosophical abstractions, as from the greater gods ; albeit they applied themselves to no other study, but from Pan ; that is, from the discreet observation, and experience, and the universal knowledge of the things of this world ; whereby (oftentimes even by chance, and as it were going a hunting) such inventions are lighted upon.

The quarrel he made with Apollo about music, and the event thereof, contains a wholesome instruction, which may serve to restrain men's reasons and judgments with reins of sobriety, from boasting and glorying in their gifts. For there seems to be a twofold harmony, or music ; the one of divine providence, and the other of human reason. Now to the ears of mortals, that is to human judgment, the administration of the world and creatures therein, and the most secret judgments of God, found very hard and harsh ; which folly, albeit it be well set out with ass's ears, yet notwithstanding these ears are secret, and do not openly appear, neither is it perceived or noted as a deformity by the vulgar.

Lastly, it is not to be wondered at, that there is nothing attributed unto Pan concerning loves, but only of his marriage with Echo. For the world or nature doth enjoy itself, and in itself all things else. Now he that loves would enjoy something, but where there is enough there is no place left to desire. Therefore there can be no wanton love in Pan or the world, nor desire to obtain anything (seeing he is contented

with himself) but only speeches, which (if plain) may be intimated by the nymph, Echo, or if more quaint by Syrinx. It is an excellent invention that Pan or the world is said to make choice of Echo only (above all other speeches or voices) for his wife: for that alone is true philosophy, which doth faithfully render the very words of the world; and it is written no otherwise than the world doth dictate, it being nothing else but the image or reflection of it, not adding anything of its own, but only iterates and resounds. It belongs also to the sufficiency or perfection of the world, that he begets no issue; for the world doth generate in respect of its parts, but in respect of the whole how can it generate, seeing without it there is nobody? Notwithstanding all this, the tale of that tattling girl faltered upon Pan, may in very deed with great reason be added to this fable; for by her are represented those vain and idle paradoxes concerning the nature of things which have been frequent in all ages, and have filled the world with novelties, fruitless if you respect the matter, changelings if you respect the kinds, sometimes creating pleasure, sometimes tediousness with their overmuch prattling.

Another of the interpretations repeated with enlargements in the *De Augmentis* is that of the fable of "Perseus, or War:"—

Perseus is said to have been employed by Pallas for the destroying of Medusa, who was very infestuous to the western parts of the world, and especially about the utmost coasts of Hyberia. A monster so dire and horrid, that by her only aspect she turned men into stone. This Medusa alone of all the Gorgons was mortal, the rest not subject to death. Perseus therefore preparing himself for this noble enterprise, had arms and gifts bestowed on him by three of the gods. Mercury gave him wings annexed to his heels, Pluto a helmet, Pallas a shield and a looking-glass. Notwithstanding (although he were thus furnished) he went not directly to Medusa, but first to the Gress, which by the mother's side were sisters to the Gorgons. These Gress from their birth were hoar-headed, resembling old women. They had but one only eye, and one tooth among them all, both which, she that had occasion to go abroad was wont to take with her, and at her return to lay them down again. This eye and tooth they lent to Perseus: and so finding himself thoroughly furnished for the effecting of his design, hastens towards Medusa. Her he found sleeping, and

yet durst not present himself with his face towards her, lest she should awake; but turning his head aside beheld her in Pallas's glass, and (by this means directing his blow) cut off her head; from whose blood gushing out, instantly came Pegasus the flying horse. Her head thus smote off, Perseus bestows on Pallas her shield, which yet retained this virtue, that whatsoever looked upon it should become as stupid as a stone, or like one planet-stricken.

This fable seems to direct the preparation and order, that is to be used in making of war; for the more apt and considerate undertaking whereof, three grave and wholesome precepts (favouring of the wisdom of Pallas) are to be observed.

First—That men do not much trouble themselves about the conquest of neighbour nations, seeing that private possessions and empires are enlarged by different means; for in the augmentation of private revenues, the vicinity of men's territories is to be considered: but in the propagation of public dominions, the occasion and facility of making war, and the fruit to be expected ought to be instead of vicinity. Certainly the Romans, what time their conquests towards the west scarce reached beyond Liguria, did yet in the east bring all the provinces as far as the mountain Taurus within the compass of their arms and command: and therefore Perseus, although he were bred and born in the east, did not yet refuse to undertake an expedition even to the uttermost bounds of the west.

Secondly—There must be a care had that the motives of war be just and honourable, for that begets an alacrity, as well in the soldiers that fight, as in the people that pay, it draws on and procures aids, and brings many other commodities besides. But there is no pretence to take up arms more pious, than the suppressing of Tyranny; under which yoke the people lose their courage, and are cast down without heart and vigour, as in the sight of Medusa.

Thirdly—It is wisely added, that seeing there were three Gorgons (by which wars are represented) Perseus undertook her only that was mortal; that is, he made choice of such a kind of war as was likely to be effected and brought to a period, not pursuing vast and endless hopes.

The furnishing of Perseus with necessaries was that which only advanced his attempt, and drew fortune to be of his side; for he had speed from Mercury, concealing of his counsels from Orcus, and Providence from Pallas.

Neither is it without an allegory, and that full of matter too, that those wings of celerity were fastened to Perseus's heels.

and not to his ancles, to his feet and not to his shoulders; because speed and celerity is required, not so much in the first preparations for war, as in those things which second and yield aid to the first; for there is no error in war more frequent than that prosecutions and subsidiary forces do fail to answer the alacrity of the first onsets.

Now for that helmet which Pluto gave him, powerful to make men invisible, the moral is plain; but that twofold gift of providence (to wit the shield and looking-glass) is full of mortality; for that kind of providence which like a shield avoids the force of blows is not alone needful, but that also by which the strength and motions, and counsels of the enemy are descried, as in the looking-glass of Pallas.

But Perseus albeit he were sufficiently furnished with aid and courage, yet was he to do one thing of special importance before he entered the lists with this monster, and that was to have some intelligence with the Greæ. These Greæ are treasons which may be termed the Sisters of War, not descended of the same stock, but far unlike in nobility of birth; for wars are general and heroical, but treasons are base and ignoble. Their description is elegant, for they are said to be gray-headed, and like old women from their birth; by reason that traitors are continually vexed with cares and trepidations. But all their strength (before they break out into open rebellions) consists either in an eye or in a tooth; for every faction alienated from any state contemplates and bites. Besides, this eye and tooth is as it were common; for whatsoever they can learn and know is delivered and carried from one to another by the hands of faction. And as concerning the tooth, they do all bite alike, and sing the same song, so that hear one and you hear all. Perseus therefore was to deal with these Greæ for the love of their eye and tooth. Their eye to discover, their tooth to sow rumours and stir up envy, and to molest and trouble the minds of men. These things therefore being thus disposed and prepared, he addresses himself to the action of war, and sets upon Medusa as she slept; for a wise captain will ever assault his enemy when he is unprepared and most secure, and then is there good use of Pallas her glass. For most men, before it come to the push, can acutely pry into and discern their enemy's estate; but the best use of this glass is in the very point of danger, that the manner of it may be so considered, as that the terror may not discourage, which is signified by that looking into this glass with the face turned from Medusa.

' The monster's head being cut off there follow two effects. The first was the procreation and raising of Pegasus, by which may evidently be understood Fame, that (flying through the world) proclaims victory. The second is the bearing of Medusa's head in his shield; to which there is no kind of defence for excellency comparable; for the one famous and memorable act prosperously effected and brought to pass, doth restrain the motious and insolencies of enemies, and makes envy herself silent and amazed.

A third of these expositions inserted in the *De Augmentis* is that entitled "Dionysus [the Greek name for Bacchus], or Passions." It is said that Jupiter's paramour, Semele, having bound him by an inviolable oath to grant her one request, desired that he would come to her in the same form in which he was accustomed to visit Juno; the result of which was that the miserable wench was consumed with lightning.

' But the infant which she bare in her womb, Jupiter the father took out, and kept it in a gash which he cut in his thigh, till the months were complete that it should be born. This burden made Jupiter somewhat to limp, whereupon the child (because it was heavy and troublesome to its father, while it lay in his thigh) was called Dionysus. Being born, it was committed to Proserpina for some years to be nursed, and being grown up, it had such a maiden-face, as that a man could hardly judge whether it were a boy or a girl. He was dead also, and buried for a time, but afterward revived. Being but a youth, he invented and taught the planting and dressing of vines, the making also, and use of wine, for which becoming famous and renowned, he subjugated the world even to the uttermost bounds of India. He rode in a chariot drawn with tigers. There danced about him certain deformed hobgoblins called Cobali, Acratus, and others, yea even the Muses also were some of his followers. He took to wife Ariadne, forsaken and left by Theseus. The tree sacred unto him was the ivy. He was held the inventor and institutor of sacrifices, and ceremonies, and full of corruption and cruelty. He had power to strike men with fury or madness; for it is reported, that at the celebration of his orgies, two famous worthies, Pentheus and Orpheus, were torn in pieces by certain frantic women, the one because he got upon a tree to behold their

ceremonies in these sacrifices, the other for making melody with his harp. And for his gesticulations, they are in manner the same with Jupiter's.

There is such excellent morality couched in this fable, as that moral philosophy affords not better; for under the person of Bacchus is described the nature of affection, passion, or perturbation, the mother of which (though never so hurtful) is nothing else but the object of apparent good in the eyes of appetite. And it is always conceived in an unlawful desire rashly propounded and obtained, before well understood and considered; and when it begins to grow, the mother of it, which is the desire of apparent good by too much fervency, is destroyed and perisheth: nevertheless (whilst yet it is an imperfect embryo) it is nourished and preserved in the humane soul (which is as it were a father unto it, and represented by Jupiter), but especially in the inferior part thereof, as in a thigh, where also it causeth so much trouble and vexation, as that good determinations and actions are much hindered and lamed thereby, and when it comes to be confirmed by consent and habit, and breaks out, as it were, into act, it remains yet a while, with Proserpina as with a nurse, that is, it seeks corners and secret places, and as it were, caves under ground, until (the reins of shame and fear being laid aside in a pampered audaciousness) it either takes the pretext of some virtue, or becomes altogether impudent and shameless. And it is most true, that every vehement passion is of a doubtful sex as being masculine in the first motion, but feminine in prosecution.

It is an excellent fiction that of Bacchus's reviving: for passions do sometimes seem to be in a dead sleep, and as it were utterly extinct, but we should not think them to be so indeed, no, though they lay, as it were, in their grave; for, let there be but matter and opportunity offered, and you shall see them quickly to revive again.

The invention of wine is wittily ascribed unto him; every affection being ingenious and skilful in finding out that which brings nourishment unto it: and indeed of all things known to men, Wine is most powerful and efficacious to excite and kindle passions of what kind soever, as being in a manner common nurse to them all.

Again his conquering of nations, and undertaking infinite expeditions is an elegant device; for desire never rests content with what it hath, but with an infinite and insatiable appetite still covets and gapes after more.

His chariot also is well said to be drawn by tigers: for as soon as any affection shall from going afoot, be advanced to ride in a chariot, and shall captivate reason, and lead her in a triumph, it grows cruel, untamed, and fierce against whatsoever withstands or opposeth it.

It is worth the noting also, that those ridiculous hobgoblins are brought in, dancing about his chariot: for every passion doth cause, in the eyes, face and gesture, certain unbecoming, and ill-seeming, apish, and deformed motions, so that they who in any kind of passion, as in anger, arrogance or love, seem glorious and brave in their own eyes, do yet appear to others mis-shapen and ridiculous.

In that the Muses are said to be of his company, it shews that there is no affection almost which is not soothed by some art, wherein the indulgence of wits doth derogate from the glory of the Muses, who (when they ought to be the mistresses of life) are made the waiting-maids of affections.

Again, where Bacchus is said to have loved Ariadne, that was rejected by Theseus; it is an allegory of special observation: for it is most certain, that passions always covet and desire that which experience forsakes; and they all know (who have paid dear for serving and obeying their lusts) that whether it be honour, or riches, or delight, or glory, or knowledge, or any thing else which they seek after, yet are they but things cast off, and by divers men in all ages, after experience had, utterly rejected and loathed.

Neither is it without a mystery, that the ivy was sacred to Bacchus: for the application holds, first, in that the ivy remains green in winter. Secondly, in that it sticks to, embraceth, and overtoppeth so many diverse bodies, as trees, walls, and edifices. Touching the first, every passion doth by resistance and reluctance, and as it were, by an Antiparistasis (like the ivy of the cold of winter), grow fresh and lusty. And as for the other, every predominate affection doth again (like the ivy) embrace and limit all human actions and determinations, adhering and cleaving fast unto them.

Neither is it a wonder, that superstitious rites and ceremonies were attributed unto Bacchus, seeing every giddy-headed humor keeps in a manner revel-rout in false religions: or that the cause of madness should be ascribed unto him, seeing every affection is by nature a short fury, which (if it grow vehement, and become habitual) concludes madness.

Concerning the rending and dismembering of Pentheus &



Orpheus, the parable is plain, for every prevalent affection is outrageous and severe and against curious inquiry, and wholesome and free admonition.

Lastly, that confusion of Jupiter and Bacchus, their persons may be well transferred to a parable, seeing noble and famous acts, and remarkable and glorious merits, do sometimes proceed from virtue, and well ordered reason, and magnanimity, and sometimes from a secret affection, and hidden passion, which are so dignified with the celebrity of fame and glory, that a man can hardly distinguish between the acts of Bacchus and the gests of Jupiter.

We could wish to add several others; but we have space for only one more; that of "Orpheus, or Philosophy:"—

The tale of Orpheus, though common, had never the fortune to be fitly applied in every point. It may seem to represent the image of Philosophy: for the person of Orpheus (a man admirable and divine, and so excellently skilled in all kinds of harmony, that with his sweet ravishing music he did as it were charm and allure all things to follow him) may carry a singular description of Philosophy, for the labours of Orpheus do so far exceed the labours of Hercules in dignity and efficacy, as the works of wisdom excel the works of fortitude.

Orpheus, for the love he bare to his wife, snatched, as it were, from him by untimely death, resolved to go down to hell with his harp, to try if he might obtain her of the infernal powers. Neither were his hopes frustrated, for having appeased them with the melodious sound of his voice and touch, prevailed at length so far, as that they granted him leave to take her away with him; but on this condition, that she should follow him, and he not to look back upon her, till he came to the light of the upper world; which he, impatient of, out of love and care, and thinking that he was in a manner past all danger, nevertheless violated, insomuch that the covenant is broken, and she forthwith tumbles back again headlong into hell. From that time Orpheus falling into a deep melancholy, became a contemner of womankind, and bequeathed himself to a solitary life in the deserts; where, by the same melody of his voice and harp, he first drew all manner of wild beasts unto him, who, (forgetful of their savage fierceness, and casting off the precipitate provocations

of lust and fury, not caring to satiate their voracity by hunting after prey,) as at a Theatre in fawning and reconciled amity one towards another, stand all at the gaze about him, and attentively lend their ears to his music. Neither is this all, for so great was the power and alluding force of his harmony, that he drew the woods and moved the very stones to come and place themselves in an orderly and decent fashion about him. These things succeeding happily, and with great admiration for a time; at length certain Thracian women (possessed with the spirit of Bacchus) made such a horrid and strange noise with their cornets that the sound of Orpheus's harp could no more be heard; insomuch as that harmony, which was the bond of that order and society being dissolved, all disorder began again; and the beasts (returning to their wonted nature) pursued one another unto death as before; neither did the trees or stones remain any longer in their place; and Orpheus himself was by these female Furies torn in pieces, and scattered all over the desert. For whose cruel death the river Helicon (sacred to the Muses) in horrible indignation hid his head under ground and raised it again in another place.

The meaning of this fable seems to be thus. Orpheus's music is of two sorts, the one appeasing the infernal powers, the other attracting beasts and trees. The first may be fitly applied to natural philosophy, the second to moral or civil discipline.

The most noble work of natural philosophy is the restitution and renovation of things corruptible; the other (as a lesser degree of it) the preservation of bodies in their estate, detaining them from dissolution and putrefaction. And if this gift may be done in mortals, certainly it can be done by no other means than by the due and exquisite temper of nature, as by the melody and delicate touch of an instrument. But seeing it is of all things most difficult, it is seldom or never attained unto; and in all likelihood for no other reason, more than through curious diligence and untimely impatience. And therefore philosophy, hardly able to produce so excellent an effect in a pensive humour (and that without cause), busies herself about human objects, and by persuasion and eloquence, insinuating the love of virtue, equity and concord in the minds of men; draws multitudes of people to a society, makes them subject to laws, obedient to government, and forgetful of their unbridled affections whilst they give ear to precepts, and submit themselves to discipline; whence follows the building of houses, erecting of towns, plauting of fields and orchards

with trees and the like, insomuch that it would not be amiss to say, that even thereby stones and woods were called together and settled in order. And after serious trial made and frustrated about the restoring of a body mortal, this care of civil affairs follows in its due place; because by a plain demonstration of the unavoidable necessity of death men's minds are moved to seek eternity by the fame and glory of their merits. It is also wisely said in the fable, that Orpheus was averse from the love of women and marriage, because the delights of wedlock and the love of children do for the most part hinder men from enterprising great and noble designs for the public good, holding posterity a sufficient step to immortality without actions.

Besides even the very works of wisdom (although amongst all human things they do most excel) do nevertheless meet with their periods. For it happens that (after kingdoms and commonwealths have flourished for a time) even tumults and seditions, and wars arise; in the midst of which hurly-burly, first laws are silent, men return to the pravity of their natures; fields and towns are wasted and depopulated; and then (if their fury continue) learning and philosophy must needs be dismembered; so that a few fragments only, and in some places will be found like the scattered boards of shipwreck, so as a barbarous age must follow; and the streams of Helicon being hid under the earth until the vicissitude of things passing, they break out again and appear in some other remote nation, though not perhaps in the same climate.

Very ingenious, too, are the explanations of the fables of Cupid, of Dædalus, of Nemesis, of Prometheus, of the Sphinx, of Proserpina, and of the Sirens.

## SECTION III.

## THE APOPHTHEGMS AND OTHER MORAL WORKS.

THE next fact in Bacon's biography that Mr. Montagu records is, that he was made one of the judges of the New Court of the Verge. But the learned biographer, as is his custom, leaves us to infer, if that were possible, that this appointment did not take place in any year whatever. The account given by Dugdale, in his *Baronage*, is, that in the 9th of King James, which would be in 1611, "he was made joint judge with Sir Thomas Vavasor, then Knight Marshal, of the Knight Marshal's Court, then newly erected within the verge of the king's house." Meanwhile he still held his office of solicitor-general, till he exchanged it for that of attorney-general, on the 27th of October, 1613,—not 1612, as Mr. Montagu makes it—on the promotion of Sir Henry Hobart to be Chief Justice of the Common Pleas, Coke having been removed to the King's Bench. Mr. Montagu makes him to have now composed "his work for compiling and amending the laws of England," meaning the short tract addressed to the king, entitled "A Proposition to his Majesty touching the Compiling and Amendment of the Laws of England." But this paper in the very heading is stated to be "By Sir Francis Bacon, Knight, his Majesty's Attorney-General, and one of his Privy Council;" and it begins "Your Majesty, of your favour, having made me privy councillor, and continuing me in the place of your attorney-general, which is more than was three hundred years before," &c. Now it is certain that Bacon was not sworn of the Privy Council till several years after this. On the meeting of parliament in April, 1614, a question was started in the Commons as to the right of the attorney-general to sit

in that House, on the ground that he was officially an assistant to the House of Lords, on which, indeed, he was, and still is, summoned at the calling of every new parliament to give his attendance. Bacon's predecessor, Hobart, had sat: but it was argued that he had been made attorney-general while he was a member of the House, whereas Bacon had been returned a member after he was attorney-general. In point of fact Hobart's right to sit had also been questioned at first; but after much discussion it had been carried that the matter should be allowed to rest, and he is stated to have retained his seat "by connivance, without other order."\* In Bacon's case, after a committee had been appointed to search for precedents, and had made their report, it was resolved that the attorney-general should remain for that parliament, but that no attorney-general should serve as a member in any future parliament. And, accordingly, no attorney-general appears to have sat in the House of Commons from that time till after the Restoration.

About the same time that Bacon was made attorney-general, there was introduced at court, and taken into the King's household, George Villiers, afterwards the famous Duke of Buckingham, the all-powerful royal favourite of two reigns. Almost from the first Villiers seems to have attached himself to Bacon, or Bacon to him, the understood if not expressed condition or purpose of their alliance being that Bacon should assist the young courtier by his advice, and that the latter should in return employ his influence with the King to promote the professional advancement of his "guide, philosopher, and friend." There is printed in Bacon's works a long letter, or treatise rather, entitled "Advice to Sir George Villiers, when he became favourite to King James, recommending many important instructions how to govern himself in the station of prime minister," and professing to have been written at the request of Villiers. It was to Villiers that Bacon applied to get himself made a privy councillor, which he was made on the 9th of

\* Hatsell, vol.

June, 1616. It must have been after this, therefore, that he wrote his "Proposition touching the Amendment of the Laws." On the resignation of the Lord Chancellor Egerton, Bacon was, on the 7th of March, 1617, made Lord Keeper of the Great Seal; on the 4th of January, 1618,\* he was made Lord Chancellor; and on the 11th of July in the same year he was raised to the peerage as Baron Verulam of Verulam in the county of Herts. "About this time," says Mr. Montagu, "the King conferred upon him the valuable farm of the Alienation Office, and he succeeded in obtaining for his residence York House." The first part of this statement seems to be taken from Rawley's account, who, after enumerating his various offices and honours, makes mention of "other good gifts and bounties of the hand which his majesty gave him, both out of the Broad Seal and out of the Alienation Office, to the value in both of eighteen hundred pounds per annum." Upon taking the seals, however, he had quitted not only his attorney-generalship, which it seems was worth 6000*l.* a year, but also his office of Register of the Court of Star-chamber, which brought him about 1600*l.*, and another office which he held of Chancellor to the Prince of Wales. On the other hand he had many years before this acquired his father's estate of Gorhambury by the decease of his brother Anthony (about 1602); and this manor, Rawley tells us, and other lands and possessions near thereunto adjoining, amounting to a third part more than his grants out of the Broad Seal and the Alienation Office, he retained with the income derived from those grants to his dying day. As for York House, he seems not to have established himself there till about the close of the year 1620. It must have been apparently on the 22nd of January, 1621, that the celebration of his birthday here took place which Ben Jonson has commemorated:—

\* Which was in the 15th of James I., not the 16th, as Dugdale here makes it.

Hail, happy genius of this ancient pile!  
 How comes it all things so about thee smile?  
 The fire, the wine, the men; and in the midst  
 Thou stand'st as if some mystery thou didst!  
 Pardon! I read it in thy face; the day  
 For whose returns, and many, all these pray:  
 And so do I. This is the sixtieth year  
 Since Bacon, and thy lord, was born, and here  
 Son to the grave wise Keeper of the Seal,  
 Fame and foundation of the English weal.  
 What then his father was, that since is he,  
 Now with a title more to the degree;  
 England's High Chancellor; the destined heir  
 In his soft cradle to his father's chair;  
 Whose even thread the Fates spin round and full  
 Out of their choicest and their whitest wool."\*

He had shortly before this published, in a folio volume, the most highly finished and the most celebrated of all his works, his 'Novum Organum Scientiarum,' in two Books, forming the second part of his 'Instauratio Magna.' We have in the *Resuscitatio* a letter from King James to the author thanking him for a copy of his book as just received, which is dated the 16th of October, 1620.

On the 27th of January, 1621 (five days after his birthday), not 1620, as Mr. Montagu has it—Bacon was created Viscount St. Alban. On the 30th of the same month the new parliament met, and on the 15th of March a committee of the House of Commons, which had been appointed to inquire into abuses in the courts of justice, reported that two charges of corruption had been brought against the lord chancellor. On the 17th Bacon presided in the House of Lords for the last time. Mr. Montagu continues to lag a year behind throughout all this. The charges of corruption having in the mean time accumulated to twenty-three, Bacon on the 24th of

\* Jonson's 70th *Underwood*; in *Works, by Gifford*, viii. 440, 441. 'The Biographia Britannica,' indeed, here quotes these very lines to prove that the celebration must have taken place in January, 1620. But "This is the sixtieth year since" must surely mean the same thing with,—“It is sixty years since.”

April (Mr. Montagu says the 22nd) sent in his first submission and confession to the Lords by the hands of the Prince of Wales, and a second and more particular confession on the 30th of the same month. On the same or the next day the seals were sequestered; and on Thursday the 3rd of May, the Commons and their Speaker having appeared at the bar of the Lords and prayed judgment, the Lord Chief Justice, Sir James Ley, who had been commissioned to exercise for the present the office of Speaker in the House of Lords, pronounced sentence, to the effect that the Viscount St. Alban, having been by his own confession found guilty, should be fined forty thousand pounds, and imprisoned in the Tower during the King's pleasure; that he should be for ever incapable of any office, place, or employment in the state or commonwealth; and that he should never again sit in parliament, nor come within the verge of the court. Bacon was ill at this time, and he was not committed to the Tower till the 31st, nor was he detained in confinement more than two days. The king also forgave him his fine; and he was soon after allowed to return to court. At last, he received a full pardon in the beginning of the year 1624. The common account, however, that he was again summoned to parliament in the first year of the next reign appears to be erroneous.

Writing to the king on the 21st of April, 1621, in the very height of the storm which threw him down, we find Bacon thus concluding his letter—with more of strength of heart, it will perhaps be thought, than of moral sensibility:—"Because he that hath taken bribes is apt to give bribes, I will go farther, and present your majesty with a bribe. For if your majesty give me peace and leisure, and God give me life, I will present your majesty with a good History of England, and a better digest of your laws. And so, concluding with my prayers, I rest your majesty's afflicted but ever devoted servant." He certainly did not allow his fall either long to affect his spirits or to interrupt his studies. Before the end of the year he was ready with his 'History of Henry VII.:' it appears from a letter of Sir Thomas Meautys, dated



the 7th of January, 1622, that it had already been perused in manuscript by the king; and it was published probably a few weeks or months after. On the 20th of March, also, we find him sending the king, not indeed his promised digest of the laws, but "an offer," or detailed proposition of such a work. In this same year, too, he composed his unfinished dialogue entitled 'An Advertisement touching an Holy War,' which he inscribed to Bishop Andrews; and he published the portion of his 'Historia Naturalis et Experimentalis' entitled 'De Ventis' (Of Winds), which is arranged as a portion of the Third Part of the *Instauratio Magna*. The next year, 1623, he published in Latin his work entitled 'De Dignitate et Augmentis Scientiarum' (on the Dignity and Advancement of the Sciences), in nine Books, regarded as forming the First Part of the *Instauratio Magna*; and also his 'Historia Vitae et Mortis' (History of Life and Death), arranged as another portion of the Third Part of that work. Various other writings, both in English and Latin, which he composed in his retirement, were not given to the world till after his death. But in 1625, besides the new and greatly enlarged edition of his Essays, a very small 8vo. volume of 307 pages, widely and handsomely printed, entitled 'Apophthegms, new and old, collected by the Right Honourable Francis Lord Verulam, Viscount St. Alban,' once more gave public note, while he still lived, of the unabated activity of his mind and pen.

Bacon's Apophthegms, in this his own edition, are 280 in number; but a good many more have been added in subsequent impressions. Tenison, in the Introduction to the *Baconiana*, says: "His lordship hath received much injury by late editions, of which some have much enlarged, but not at all enriched, the collection; stuffing it with tales and sayings too infacetious for a ploughman's chimney corner." And he particularizes an octavo volume published in 1669 with the title of "The Apophthegms of King James, King Charles, the Marquis of Worcester, the Lord Bacon, and Sir Thomas More." This is described by Mr. Montagu as a reprint of a duodecimo volume printed in 1658, in which there are 184

Apophthegms attributed to Bacon. In the second edition of the *Resuscitatio*, published by Rawley in 1661, 249 Apophthegms are inserted, a few being new, but a good many of those published by Bacon himself being omitted; and in the third edition of the same work, published in 1671, four years after Rawley's death, the number of the Apophthegms is increased to 307 (of which, however, twelve are repetitions). But Tenison expressly notes that this latter is one of the editions in which Bacon has been unfairly dealt with, and he declares that the additions were not made by Rawley. It is curious, by the by, that the publisher of the third edition of the *Resuscitatio* should affirm in an address to the reader that that edition in the First Part (in which the Apophthegms are included) is an exact reprint of the preceding edition; as he also affirms, in another address, that all the pieces in the Second Part were collected and left ready for the press by Rawley. Twenty-seven additional Apophthegms, which may be received as genuine, are in the *Baconiana* published in 1679; and Mr. Montagu observes that there are "a few in Aubrey," by which we suppose is meant Aubrey's 'Lives,' published along with 'Letters written by eminent persons in the seventeenth and eighteenth centuries,' 8vo. 1813. We do not perceive, however, that he has given any of these last in his edition of Bacon's Works. He has only reprinted in his first volume the 280 Apophthegms originally published by Bacon, together with the twenty-seven in the *Baconiana*, and in an appendix, twenty-eight more under the title of Spurious Apophthegms, making altogether 335. The common editions, copying that of Blackburn (4 vols. fol. 1730), give 362 in all; namely, the 296 (after omitting the repetitions) published in the third edition of the *Resuscitatio*; thirty-nine described as "contained in the original edition in octavo, but omitted in later copies;" and the twenty-seven published in the *Baconiana* (of which last, however, three are sometimes omitted, as occurring in the same or nearly the same words in the Essays).

The apophthegms are introduced in the original edition by the following short preface:—

“Julius Cæsar did write a collection of apophthegms, as appears in an epistle of Cicero: I need say no more for the worth of a writing of that nature. It is pity his work is lost, for I imagine they were collected with judgment and choice; whereas that of Plutarch and Stobæus, and much more the modern ones, draw much of the drega. Certainly they are of excellent use. They are *mucrones verborum*, pointed speeches. Cicero prettily calls them *salinas*, salt pits, that you may extract salt out of and sprinkle it where you will. They serve to be interlaced in continued speech. They serve to be recited, upon occasions, of themselves. They serve, if you take out the kernel of them and make them your own. I have, for my recreation in my sickness, fanned the old, not omitting any because they are vulgar,\* for many vulgar ones are excellent good; nor for the meanness of the person, but because they are dull and flat, and adding many new, that otherwise would have died.”

The Apophthegms, or pointed sayings, thus collected by Bacon, are almost all good; very few at least of those published by himself can be pronounced unworthy of preservation. Many of them had been previously made use of by him in his Essays and other writings, and are repeated here for the most part nearly in the same words. Even with the aid he would thus have, however, we may take the liberty of doubting Tenison's assertion that the 280 short stories, filling above 300 printed pages in the original small volume, and above 60 in one of Mr. Montagu's octavos, were all dictated by him in one morning out of his memory. It is true that there are historical mistakes in some of them; but Bacon, as we have seen, does not himself plead the apology of haste, or talk of having written without resorting to books. Many of them, it is evident, he had merely transcribed from his own previous writings.

The following are selected from the original 280:—

\* Generally current.

4. Queen Elizabeth, the morrow of her coronation, went to the chapel; and in the great chamber, Sir John Rainsforth, set on by wiser men (a knight that had the liberty of a buffoon), besought the queen aloud—"That now this good time, when prisoners were delivered, four prisoners, amongst the rest, mought likewise have their liberty who were like enough to be kept still in hold." The queen asked, "Who they were?" and he said, "Matthew, Mark, Luke, and John, who had long been imprisoned in the Latin tongue, and now he desired they mought go abroad among the people in English." The queen answered, with a grave countenance, "It were good, Rainsforth, they were spoken with themselves, to know of them whether they would be set at liberty?"

6. Pace, the bitter fool, was not suffered to come at the queen, because of his bitter humour. Yet at one time, some persuaded the queen that he should come to her, undertaking for him that he should keep compass: so he was brought to her, and the queen said: "Come on, Pace; now we shall hear of our faults." Saith Pace; "I do not use to talk of that that all the town talks on."

9. Queen Ann Bullen, at the time when she was led to be beheaded in the Tower, called one of the king's privy chamber to her, and said to him, "Commend me to the king, and tell him, he is constant in his course of advancing me; from a private gentlewoman he made me a marquise, and from a marquise a queen; and now, he had left no higher degree of earthly honour, he hath made me a martyr."

11. Caesar Borgia, after long division between him and the lords of Romagna, fell to accord with them. In this accord there was an article, that he should not call them at any time altogether in person. The meaning was, that knowing his dangerous nature, if he meant them treason; some one mought be free to revenge the rest. Nevertheless, he did with such fine art and fair carriage win their confidence, that he brought them altogether to council at Cinigagli, where he murdered them all. This act, which was related unto Pope Alexander, his father, by a cardinal, as a thing happy, but very perfidious; the pope said, "It was they that had broke their covenant first, in coming all together."

14. Sir Thomas More had only daughters at the first, and his wife did ever pray for a boy. At last he had a boy, which after, at man's years, proved simple. Sir Thomas said to his wife, "Thou prayedst so long for a boy, that he will be a boy as long as he lives."

33. Bias was sailing, and there fell out a great tempest;

and the mariners, that were wicked and dissolute fellows, called upon the gods; but Bias said to them, "Peace, let them not know you are here." \*

38. Alcibiades came to Pericles, and stayed a while ere he was admitted. When he came in, Pericles civilly excused it, and said, "I was studying how to give my account." But Alcibiades said to him, "If you will be ruled by me, study rather how to give no account."

42. There was a bishop that was somewhat a delicate person, and bathed twice a day. A friend of his said to him, "My lord, why do you bathe twice a day?" The bishop answered; "because I cannot conveniently bathe thrice." †

49. When Vespasian passed from Jewry to take upon him the empire, he went by Alexandria, where remained two famous philosophers, Apollonius and Euphrates. The emperor heard the discourse, touching the matter of state, in the presence of many. And when he was weary of them, he broke off, and in a secret derision, finding their discourses but speculative, and not put in practice, said, "O that I might govern wise men, and wise men govern me."

58. The book of deposing King Richard the Second, and the coming in of Henry the Fourth, supposed to be written by Doctor Hayward, who was committed to the Tower for it, had much incensed Queen Elizabeth; and she asked Mr. Bacon, being then of her learned council, "Whether there were any treason contained in it?" Mr. Bacon intending to do him a pleasure, and to take off the queen's bitterness with a merry conceit, answered, "No, madam, for treason I cannot deliver opinion that there is any, but very much felony." The queen apprehending it gladly, asked, "How, and wherein?" Mr. Bacon answered, "Because he had stolen many of his sentences and conceits out of Coruelius Tacitus."

59. Mr. Popham, when he was speaker, and the lower house had sat long, and done in effect nothing; coming one day to Queen Elizabeth, she said to him, "Now, Mr. Speaker, what has passed in the lower house?" He answered, "If it please your majesty, seven weeks."

63. Nero was wont to say of his master Seneca, "That his style was like mortar of sand, without lime."

65. Queen Elizabeth being to resolve upon a great officer, and being by some, that canvassed for others, put of some doubt

\* This is omitted in the *Resuscitatio*.

† This is another of those omitted in the *Resuscitatio*.

of that person whom she meant to advance, called for Mr. Bacon, and told him, "She was like one with a lanthorn seeking a man," and seemed unsatisfied in the choice she had of men for that place. Mr. Bacon answered her, "That he had heard that in old time there was usually painted on the church walls the day of doom, and God sitting in judgment, and St. Michael by him with a pair of balances; and the soul and the good deeds in the one balance, and the faults and the evil deeds in the other; and the soul's balance went up far too light. Then was our lady painted with a great pair of beads, who cast them into the light balance, and brought down the scale: so he said, place and authority, which were in her hands to give, were like our lady's beads, which though men, through divers imperfections, were too light before, yet when they were cast in made weight competent."

71. Queen Elizabeth was dilatory enough in suits, of her own nature; and the lord treasurer Burleigh, to feed her humour, would say to her, "Madam, you do well to let suitors stay; for I shall tell you, *bis dat, qui cito dat* :\* if you grant them speedily, they will come again the sooner."

72. They feigned a tale of Sextus Quintus, that after his death he went to hell, and the porter of hell said to him, "You have some reason to offer yourself to this place; but yet I have order not to receive you: you have a place of your own, purgatory; you may go thither." So he went away, and sought purgatory a great while, and could find no such place. Whereupon he took heart, and went to heaven, and knocked; and St. Peter asked, "Who was there?" he said, "Sextus Pope." Whereunto St. Peter said, "Why do you knock? you have the keys." Sextus answered, "It is true, but it is so long since they were given, as I doubt the wards of the lock be altered."

77. The deputies of the reformed religion, after the massacre that was upon St. Bartholomew's day, treated with the king and queen-mother, and some other of the council for a peace. Both sides were agreed upon the articles. The question was, upon the security of performance. After some particulars propounded and rejected, the queen-mother said, "Why, is not the word of a king sufficient security?" One of the deputies answered, "No, by St. Bartholomew, madam."

85. One was saying that his great grandfather, and grandfather and father, died at sea; said another that heard him, "And I were as you, I would never come at sea." "Why," saith

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\* He gives twice who gives quick.

he, "where did your great grandfather, and grandfather and father die?" He answered, "Where but in their beds?" Saith the other, "And I were as you, I would never come in bed."

91. There was a dispute, whether great heads or little heads had the better wit? And one said, "It must needs be the little; for that it is a maxim, *omne majus continet in se minus*."

92. Solon; when he wept for his son's death, and one said to him, "Weeping will not help," answered, "Alas, therefore I weep, because weeping will not help."

100. Trajan would say of the vain jealousy of princes, that seek to make away those that aspire to their succession; "that there was never king that did put to death his successor."

113. There was a marriage made between a widow of great wealth and a gentleman of a great name, that had no estate or means. Jack Roberts said, "That marriage was like a black pudding; the one brought blood, and the other brought suet and oatmeal."\*

125. Augustus Caesar would say; "That he wondered that Alexander feared he should want work, having no more to conquer; as if it were not as hard a matter to keep as to conquer."

134. The Romans, when they spake to the people, were wont to stile them ye Romans; when commanders in war spake to their army, they stiled them, my soldiers. There was a mutiny in Caesar's army, and somewhat the soldiers would have had, yet they would not declare themselves in it, but only demanded a mission, or discharge, though with no intention it should be granted: but knowing that Caesar had at that time great need of their services, thought by that means to wrench him to their other desires: whereupon with one cry they asked mission. Caesar, after silence made, said; "I for my part, ye Romans." This title did actually speak them to be dismissed: which voice they had no sooner heard, but they mutinied again; and would not suffer him to go on with his speech, until he had called them by the name of his soldiers: and so with that one word he appeased the sedition.

137. Diogenes begging, as divers philosophers then used, did beg more of a prodigal man than of the rest which were present. Whereupon one said to him; "See your baseness, that when you find a liberal mind, you will take most of him." "No," said Diogenes, "but I mean to beg of the rest again."

138. Jason the Thessalian was wont to say, "that some

\* This is omitted in the *Resuscitatio*.  
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things must be done unjustly, that many things may be done justly."

139. Sir Nicholas Bacou being keeper of the seal, when Queen Elizabeth, in progress, came to his house at Redgrave, and said to him, "My lo', what a little house you have gotten?" said, "Madam, my house is well, but it is you that have made me too great for my house."

149. Croesus said to Cambyses, "That peace was better than war; because in peace the sons did bury their fathers, but in the wars the fathers did bury their sons."\*

158. Philip, Alexander's father, gave sentence against a prisoner what time he was drowsy, and seemed to give small attention. The prisoner, after sentence was pronounced, said, "I appeal." The king, somewhat stirred, said, "To whom do you appeal?" The prisoner answered, "From Philip when he gave no ear, to Philip when he shall give ear."

159. The same Philip maintained arguments with a musician in points of his art, somewhat peremptorily, but the musician said to him, "God forbid, sir, your fortune were so hard that you should know these things better than myself."

167. Cato Major would say, "That wise men learnt more by fools, than fools by wise men."

168. When it was said to Anaxagoras, "The Athenians have condemned you to die:" he said again, "And Nature them."

181. One of the seven was wont to say, "That laws were like cobwebs; where the small flies were caught, and the great broke through."

191. There was a law made by the Romans against the bribery and extortion of the governors of provinces. Cicero saith in a speech of his to the people, "That he thought the provinces would petition to the state of Rome to have that law repealed. For," saith he, "before the governors did bribe and extort as much as was sufficient for themselves; but now they bribe and extort as much as may be enough not only for themselves, but for the judges, and jurors, and magistrates."

193. Pyrrhus, when his friends congratulated to him his victory over the Romans, under the conduct of Fabricius, but with great slaughter of his own side, said to them again, "Yes, but if we have such another victory, we are undone."

194. Cineas was an excellent orator and statesman, and principal friend and counsellor to Pyrrhus; and falling in in-

\* This was omitted in the *Resuscitatio*.



ward talk with him, and discerning the king's endless ambition, Pyrrhus opened himself unto him, that he intended first a war upon Italy, and hoped to achieve it; Cineas asked him, "Sir, what will you do then?" "Then," said he, "we will attempt Sicily." Cineas said, "Well, sir, what then?" Said Pyrrhus, "If the gods favour us, we may conquer Africa and Carthage." "What then, Sir," saith Cineas. "Nay, then," saith Pyrrhus, "we may take our rest, and sacrifice and feast every day, and make merry with our friends." "Alas, sir," said Cineas, "may we not do so now, without all this ado?"

199. Themistocles said of speech, "That it was like arras, that spread abroad shews fair images, but contracted is but like packs."\*

200. Bresquet, jester to Francis I. of France, did keep a calendar of fools, wherewith he did use to make the king sport, telling him over the reason why he put any one into his calendar. When Charles V., emperor, upon confidence of the noble nature of Francis, passed through France, for the appeasing of the rebellion of Gaunt, Bresquet put him into his calendar. The king asked him the cause. He answered, "Because you have suffered at the hands of Charles the greatest bitterness that ever prince did from another, nevertheless he would trust his person into your hands." "Why, Bresquet," said the king, "what wilt thou say, if thou seest him pass back in as great safety, as if he marched through the midst of Spain?" Saith Bresquet, "Why, then, I will put him out, and put you in."

203. When peace was renewed with the French, in England, divers of the great councillors were presented from the French with jewels: the Lord Henry Howard, being then earl of Northampton, and a councillor, was omitted. Whereupon the king said to him, "My lord, how happens it that you have not a jewel as well as the rest?" My lord answered according to the fable in Æsop; "Non sum Gallus, itaque non reperi gemmam."†

206. Cosmos duke of Florence was wont to say of perfidious friends, "that we read, that we ought to forgive our enemies; but we do not read that we ought to forgive our friends."

240. There was a politic sermon that had no divinity in

\* This was omitted in the *Resuscitatio*.

† I am not a cock [the word signifies also a Gaul or Frenchman], therefore I have found no precious stone.

it, was preached before the king. The king, as he came forth, said to Bishop Andrews, "Call you this a sermon?" The bishop answered, "And it please your majesty, by a charitable construction, it may be a sermon."\*

261. The Lady Paget, that was very private with Queen Elizabeth, declared herself much against her match with Monsieur. After Monsieur's death, the queen took extreme grief, at least as she made show, and kept within her bed-chamber and one ante-chamber for three weeks' space, in token of mourning; at last she came forth into her privy-chamber, and admitted her ladies to have access to her, and amongst the rest my Lady Paget presented herself with a smiling countenance. The queen bent her brows, and seemed to be highly displeased, and said to her, "Madam, you are not ignorant of my extreme grief, and do you come to me with a countenance of joy?" My Lady Paget answered, "Alas! and may it please your majesty, it is impossible for me to be absent from you for three weeks, but that when I see you, I must look cheerfully." "No, no," said the queen, not forgetting her former averseness to the match, "you have some other conceit in it, tell me plainly." My lady answered, "I must obey you: it is this. I was thinking how happy your majesty was, in that you married not Monsieur; for seeing you take such thought for his death, being but your friend; if he had been your husband, sure it would have cost you your life."

262. Sir Edward Dyer, a grave and wise gentleman, did much believe in Kelly the alchemist, that he did indeed the work, and made gold; insomuch that he went into Germany, where Kelly then was, to inform himself more fully thereof. After his return, he dined with my Lord of Canterbury, where at that time was at the table Dr. Brown the physician. They fell in talk of Kelly. Sir Edward Dyer turning to the archbishop said, "I do assure your grace, that that I shall tell you is truth, I am an eye-witness thereof; and if I had not seen it, I should not have believed it. I saw Master Kelly put of the base metal into the crucible; and after it set a little upon the fire, and a very small quantity of the medicine put in, and stirred with a stick of wood, it came forth in great proportion, perfect gold; to the touch, to the hammer, to the test." My lord archbishop said, "You had need take heed of what you say, Sir Edward Dyer, for here is an infidel at the board." Sir Edward Dyer said again pleasantly, "I

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\* This was omitted in the *Resuscitatio*.

would have looked for an infidel sooner in any place than at your grace's table." "What say you, Dr. Brown?" saith the bishop. Dr. Brown answered, after his blunt and huddling manner. "The gentleman hath spoken enough for me." "Why," saith the bishop, "what hath he said?" "Marry," saith Dr. Brown, "he said, he would not have believed it, except he had seen it, and no more will I."

273. Dr. Laud said, "That some hypocrites and seeming mortified men, that held down their heads like bulrushes, were like the little images that they place in the very bowing of the vaults of churches, that look as if they held up the church, but are but puppets."

The following are from the small additional number published by Tenison in the *Baconiana*, which may also be confidently received as genuine:—

5. Queen Elizabeth seeing Sir Edward in her garden, looked out at her window, and asked him in Italian, "What does a man think of when he thiuks of nothing?" Sir Edward, who had not had the effect of some of the queen's grants so soon as he had hoped and desired, paused a little; and then made answer, "Madam, he thinks of a woman's promise." The queen shrunk in her head; but was heard to say, "Well, Sir Edward, I must not confute you." Anger makes dull men witty, but it keeps them poor.

25. The Lord Bacon was wont to commend the advice of the plain old man at Buxton, that sold besoms; a proud lazy young fellow came to him for a besom upon trust; to whom the old man said, "Friend, hast thou no money? borrow of thy back, and borrow of thy belly, they 'll ne'er ask thee again, I shall be dunning thee every day."

27. Jack Weeks said of a great man, just then dead, who pretended to some religion, but was none of the best livers, "Well, I hope he is in heaven. Every man thinks as he wishes; but if he be in heaven, 't were pity it were known."

Bacon's own arrangement of the Apophthegms being quite changed in the *Resuscitatio*, it is not very easy to ascertain all the omissions and additions; but as 39 of the original 280 are stated to have been left out, and the entire number (without counting repetitions) in the third edition of the *Resuscitatio* is 295, it follows that there must be 54 in that which are not in Bacon's own collec-

tion. Mr. Montagu, without intimating that there are any more, gives 28 of them in a note under the title of 'Spurious Apophthegms.' Even of these, however, a few may possibly be genuine; and at any rate two or three are worth transcribing: —

12. A great officer at court, when my Lord of Essex was first in trouble, and he and those that dealt for him would talk much of my lord's friends and of his enemies, answered to one of them, "I will tell you, I know but one friend and one enemy my lord hath; and that one friend is the queen, and that one enemy is himself."

14. My Lord of Leicester, favourite to Queen Elizabeth, was making a large chace about Cornbury Park, meaning to enclose it with posts and rails, and one day was casting up his charge what it would come to, Mr. Goldingham, a free-spoken man, stood by, and said to my lord, "Methinks your lordship goeth not the cheapest way to work." "Why, Goldingham?" said my lord. "Marry, my lord," said Goldingham, "count you but upon the posts, for the country will find you the railing."

20. A notorious rogue, being brought to the bar, and knowing his case to be desperate, instead of pleading, he took to himself the liberty of jesting, and thus said, "I charge you in the king's name, to seize and take away that man (meaning the judge) in the red gown, for I go in danger because of him."

26. When my Lord President of the Council was newly advanced to the Great Seal, Gondamar came to visit him; my lord said, "That he was to thank God and the king for that honour; but yet, so he might be rid of the burthen, he would very willingly forbear the honour. And that he formerly had a desire, and the same continued with him still, to lead a private life." Gondamar answered that he would tell him a tale "Of an old rat that would needs leave the world: and acquainted the young rats that he would retire into his hole and spend his days solitarily; and would enjoy no more comfort: and he commanded them, upon his high displeasure, not to offer to come in unto him. They forbore two or three days; at last, one that was more hardy than the rest, incited some of his fellows to go in with him, and he would venture to see how his father did; for he might be dead. They went in, and found the old rat sitting in the midst of a rich Parmesan cheese." So he applied the fable after his witty manner.

The remaining pieces included under the head of 'Moral Works' in the common editions of Bacon's writings, are only the collection of sentences entitled 'Ornamenta Rationalia;' and the 'Short Notes for Civil Conversation.'

The *Ornamenta Rationalia* were first published by Tenison in the *Baconiana* (1679). In his Introduction he informs us that Bacon "also gave to those wise and polite sayings the title of *Sententiæ Stellares*; either because they were sentences which deserved to be pointed to by an asterisk in the margin; or because they much illustrated and beautified a discourse in which they were disposed in due place and order: as the stars in the firmament are so many glorious ornaments of it, and set off with their lustre the wider and less adorned spaces." But the collection as originally made by Bacon had not come to Tenison's hands: it is, he proceeds, "either wholly lost or thrown into some obscure corner; but I fear the first. I have now three catalogues in my hands of the unpublished papers of Sir Francis Bacon, all written by Dr. Rawley himself. In every one of these appears the title of *Ornamenta Rationalia*; but in the bundles which came with those catalogues, there is not one of those *Sentences* to be found. I held myself obliged, in some sort and as I was able, to supply this defect; it being once in my power to have preserved this paper. For a copy of it was long since offered me by that doctor's only son, and my dear friend (now with God), Mr. William Rawley; of whom, if I say no more, it is the greatness of my grief for that irreparable loss which causeth my silence. I was the more negligent in taking a copy, presuming I might upon any occasion command the original, and because that was then in such good hands. Now there remains nothing with me but a general remembrance of the quality of that collection. It consisted of divers short sayings, aptly and smartly expressed, and containing in them much of good sense in a little room. These he either made or took from others, being moved so to do by the same reason which caused him to gather together his *Apophtegms*,"

The original collection, it is afterwards added, "was (as I remember) gathered partly out of his own store and partly from the antients; and accordingly 'tis supplied out of his own works and the *Mimi* of *Publius*." *Publius* is *Publius Syrus* (or the *Syrian*), the *Mimographer*, who flourished at Rome in the half century immediately preceding our era, and from whose lost *Mimi*, or *Mimes*, about a thousand pregnant or pithy remarks have been preserved, and often printed. Of these *Tenison* has selected 36, to supply the loss of those collected by *Bacon*. And to these he has added 73 sentences collected out of *Bacon's* own writings, mostly from the *Essays*. The title '*Ornamenta Rationalia*' comprehends both these collections, and not only the first of them, as it is made to 'do by *Mr. Montagu*, and in all the common editions of *Bacon's* works.

The '*Short Notes for Civil Conversation*' are taken, with the *Essay on Death* already mentioned, from the *Remains*, published in 1648. They consist of only nine short paragraphs or observations, of which the following is the third:—

In all kinds of speech, either pleasant, grave, severe, or ordinary, it is convenient to speak leisurely, and rather drawingly than hastily; because hasty speech confounds the memory, and oftentimes, besides unseemliness, drives a man either to a nonplus or unseemly stammering, harping upon that which should follow; whereas a slow speech confirmeth the memory, [and] addeth a conceit of wisdom to the hearers, besides a seemliness of speech and countenance.

## SECTION IV.

## THE THEOLOGICAL WORKS.

OF what are called Bacon's Theological writings the first published, as far as is known, are his *Meditationes Sacræ*, or *Religious Meditations*, which we have both in Latin and in English; the Latin copy having appeared, as already mentioned, along with the *Essays* as first published in 1597; the English, with the second edition of the *Essays*, dated 1598. They were probably originally written in Latin; but the English version may also be Bacon's own. The Latin title is preserved in both the original editions.

The *Meditationes Sacræ* are twelve short compositions of the same kind with the other *Essays*, except that they are on religious subjects. When the *Essays* were extended in the later editions, many things that were added were taken from the *Meditationes Sacræ*, which were withdrawn from all the editions after that of 1606. One or two of the new *Essays* are indeed almost the same with what had previously appeared as *Meditations*. Other thoughts originally published under that title were afterwards transferred to the *Advancement of Learning*.

The titles of the *Meditations* are, 1. Of the Works of God and Man; 2. Of the Miracles of our Saviour; 3. Of the Innocency of the Dove, and the Wisdom of the Serpent; 4. Of the Exaltation of Charity; 5. Of the Moderation of Cares; 6. Of Earthly Hope; 7. Of Hypocrites; 8. Of Impostors; 9. Of the several kinds of Imposture; 10. Of Atheism; 11. Of Heresies; 12. Of the Church and the Scripture. Each begins with or is headed by a text of Scripture, on which it is in fact a brief comment, generally very ingenious, and either propounding a new interpretation of the words, or setting the subject in a peculiar and striking

light. Here is the Fourth, "Of the Exaltation of Charity :"—

*"If I have rejoiced at the overthrow of him that hated me, or took pleasure when adversity did befall him."*—The detestation or renouncing of Job. For a man to love again where he is loved, it is the charity of publicans contracted by mutual profit and good offices; but to love a man's enemies is one of the cunningest points of the law of Christ, and an imitation of the divine nature. But yet again, of this charity there be divers degrees, whereof the first is to pardon our enemies when they repent, of which charity there is a shadow and image even in noble beasts; for of lions it is a received opinion that their fury and fierceness ceaseth towards anything that yieldeth and prostrateth itself. The second degree is to pardon our enemies though they persist, and without satisfactions and submissions. The third degree is not only to pardon and forgive, and forbear our enemies, but to deserve well of them and to do them good. But all these three degrees either have or may have in them a certain bravery and greatness of the mind rather than pure charity; for when a man perceiveth virtue to proceed and flow from himself, it is possible that he is puffed up, and takes contentment rather in the fruit of his own virtue than in the good of his neighbours; but if any evil overtake the enemy from any other coast than from thyself, and thou in the inwardest motives of thy heart be grieved and compassionate, and dost no ways insult as if thy days of right and revenge were at last come; this I interpret to be the height and exaltation of Charity.

The Fifth, "Of the Moderation (the moderating or restraining) of Cares," is as follows :—

*"Sufficient for the day is the evil thereof."*—There ought to be a measure in worldly cares, otherwise they are both unprofitable, as those which oppress the mind and astonish the judgment, and prophane, as those which savour of a mind which promiseth to itself a certain perpetuity in the things of this world; for we ought to be day's men, and not to-morrow's men, considering the shortness of our time; and as he saith, "Laying hold on the present day;" for future things shall in their turns become presents, therefore the care of the present sufficeth. And yet moderate cares (whether they concern our particular or common wealth, or our friends) are not blamed.



But herein is a twofold excess; the one when the chain or thread of our cares is extended and spun out to an over great length, and unto times too far off, as if we could bind the divine Providence by our provisions, which, even with the heathen, was always found to be a thing insolent and unlucky; for those which did attribute much to fortune, and were ready at hand to apprehend with alacrity the present occasions, have for the most part in their actions been happy; but they who in a compass wisdom have entered into a confidence that they had belayed all events, have for the most part encountered misfortune. The second excess is when we dwell longer in our cares than is requisite for due deliberating or firm resolving; for who is there amongst us that careth no more than sufficeth either to resolve of a course or to conclude upon an impossibility, and doth not still chew over the same things, and tread a maze in the same thoughts, and vanisheth in them without issue or conclusion. Which kind of cares are most contrary to all divine and human respects.

And here is the Sixth, "Of Earthly Hope:"—

*"Better is the sight of the eye, than the apprehension of the mind."*—Pure sense, receiving everything according to the natural impression, makes a better state and government of the mind, than these same imaginations and apprehensions of the mind; for the mind of man hath this nature and property even in the gravest and most settled wits, that from the sense of every particular, it doth as it were bound and spring forward, and take hold of other matters, foretelling unto itself that all shall prove like unto that which beateth upon the present sense; if the sense be of good, it easily runs into an unlimited hope, and into a like fear when the sense is of evil, according as is said

"The oracle of hopes doth oft abuse."

And that contrary,

"A froward soothsayer is fear in doubts."

But yet of fear there may be made some use, for it prepareth patience and awaketh industry:

"No shape of ill comes new or strange to me,  
All sorts set down, yea, and prepared be."

But hope seemeth a thing altogether unprofitable; for to what end serveth this conceit of good? Consider and note a

little: if the good fall out less than thou hopest; good though it be, yet less because it is, it seemeth rather loss than benefit through thy excess of hope. If the good prove equal and proportionable in event to thy hope, yet the flower thereof by thy hope is gathered, so as when it comes the grace of it is gone, and it seems used, and therefore sooner draweth on satiety. Admit thy success prove better than thy hope, it is true a gain seems to be made: but had it not been better to have gained the principal by hoping for nothing, than the increase by hoping for less; and this is the operation of hope in good fortunes; but in misfortunes it weakeneth all force and vigour of the mind; for neither is there always matter of hope, and if there be, yet if it fail but in part, it doth wholly overthrow the constancy and resolution of the mind; and besides, though it doth carry us through, yet it is a greater dignity of mind to bear evils by fortitude and judgment, than by a kind of absenting and alienation of the mind from things present to things future, for that it is to hope. And therefore it was much lightness in the poets to fain hope to be as a counter-poison of human diseases, as to mitigate and assuage the fury and anger of them, whereas indeed it doth kindle and enrage them, and causeth both doubling of them and relapses. Notwithstanding we see that the greatest number of men give themselves over to their imaginations of hope and apprehensions of the mind in such sort, that ungrateful towards things past, and in a manner unmindful of things present, as if they were ever children and beginners, they are still in longing for things to come. "I saw all men walking under the sun, resort and gather to the second person, which was afterwards to succeed: this is an evil disease, and a great idleness of the mind."

But perhaps you will ask the question, whether it be not better, when things stand in doubtful terms, to preserve the best, and rather hope well than distrust; specially seeing that hope doth cause a greater tranquillity of mind?

Surely I do judge a state of mind which in all doubtful expectations is settled and floateth not, and doth this out of a good government and composition of the affections, to be one of the principal supporters of man's life: but that assurance and repose of the mind, which only rides at anchor upon hope, I do reject as wavering and weak. Not that it is not convenient to foresee and pre-suppose out of a sound and sober conjecture, as well the good as the evil, that thereby we may fit our actions to the probabilities and likelihoods of their event, so that this be a work of the understanding and judg-

ment, with a due bent and inclination of the affection. But which of you hath so kept his hopes within limits, as when it is so that you have out of a watchful and strong discourse of the mind set down the better success to be in apparency the more likely; you have not dwelt upon the very muse and forethought of the good to come, and giving scope and favour unto your mind to fall into such cogitations as into a pleasant dream? And this it is which makes the mind light, frothy, unequal, and wandering. Wherefore all our hope is to be bestowed upon the heavenly life to come: but here on earth the purer our sense is from the infection and tincture of imagination, the better and wiser soul.

“The sum of life to little doth amount,  
And therefore doth forbid a longer count.”

The Eighth, “Of Impostors,” is very short:—

“*Whether we be transported in mind, it is to Godward; or whether we be sober, it is to youward.*”—This is the true image and true temper of a man, and of him that is God’s faithful workman; his carriage and conversation towards God is full of passion, of zeal, and of trammises; thence proceed groans unspeakable, and exultings likewise in comfort, ravishment of spirit, and agonies; but contrariwise, his carriage and conversation towards men is full of mildness, sobriety, and applicable demeanour. Hence is that saying, “I am become all things to all men,” and such like. Contrary it is with hypocrites and impostors, for they in the church and before the people set themselves on fire, and are carried as it were out of themselves, and becoming as men inspired with holy furies, they set heaven and earth together; but if a man did see their solitary and separate meditations and conversation, whereunto God is only privy, he might, towards God, find them not only cold and without virtue, but also full of ill-nature and leaven; “Sober enough to God, and transported only towards men.”

We add the Tenth, “Of Atheism,” as an example of the manner in which parts of these Meditations were afterwards worked up into Essays. The reader may compare the following with the Sixteenth Essay, which has the same title:—

“*The fool hath said in his heart there is no God.*”—First, it is to be noted, the Scripture saith, “The fool hath said in

his heart," and not "thought in his heart;" that is to say, he doth not so fully think it in judgment, as he hath a good will to be of that belief; for seeing it makes not for him that there should be a God, he doth seek by all means accordingly to persuade and resolve himself, and studies to affirm, prove, and verify it to himself as some theme or position: all which labour notwithstanding, that sparkle of our creation light whereby men acknowledge a Deity burneth still within; and in vain doth he strive utterly to alienate it or put it out, so that it is out of the corruption of his heart and will, and not out of the natural apprehension of his brain and conceit, that he doth set down his opinion, as the comical poet saith, "Then came my mind to be of mine opinion," as if himself and his mind had been two divers things; therefore the atheist hath rather said, and held in his heart, than thought or believed in his heart that there is no God. Secondly, it is to be observed, that he hath said in his heart, and not spoken it with his mouth. But again you shall note, this smothering of this persuasion within the heart cometh to pass for fear of government and of speech amongst men; for as he saith, "To deny God in a public argument were much, but in a familiar conference were current enough:" for if this bridle were removed, there is no heresy which would contend more to spread and multiply, and disseminate itself abroad, than atheism: neither shall you see those men which are drenched in this frenzy of mind to breathe almost anything else, or to inculcate even without occasion anything more than speech tending to atheism, as may appear in Lucretius the Epicure, who makes of his invectives against religion as it were a burthen or verse of return to all his other discourses; the reason seems to be, for that the atheist not relying sufficiently upon himself, floating in mind and unsatisfied, and enduring within many faintings, and as it were fails of his opinion, desires, by other men's opinions agreeing with his, to be recovered and brought again; for it is a true saying, "Whoso laboureth earnestly to prove an opinion to another, himself distrusts it." Thirdly, it is a fool that hath so said in his heart, which is most true; not only in respect that he hath no taste in those things which are supernatural and divine, but in respect of human and civil wisdom. For first of all, if you mark the wits and dispositions which are inclined to atheism, you shall find them light, scoffing, impudent, and vain; briefly, of such a constitution as is most contrary to wisdom and moral gravity. Secondly, amongst statesmen and politics, those which have been of greatest depths and compass,

and of largest and most universal understanding, have not only in cunning made their profit in seeming religious to the people, but in truth have been touched with an inward sense of the knowledge of Deity, as they which you shall evermore note to have attributed much to fortune and providence. Contrariwise, those who ascribed all things to their own cunning and practices, and to the immediate and apparent causes, and as the prophet saith, "Have sacrificed to their own nets," have been always but petty counterfeit statesmen, and not capable of the greatest actions. Lastly, this I dare affirm in knowledge of nature, that a little natural philosophy, and the first entrance into it, doth dispose the opinion to atheism; but on the other side, much natural philosophy and wading deep into it will bring about men's minds to religion. Wherefore atheism every way seems to be joined and combined with folly and ignorance, seeing nothing can be more justly allotted to be the saying of fools than this, *There is no God.*

The following is the Twelfth Meditation, "Of the Church and the Scriptures:"—

*"Thou shalt protect them in thy tabernacle from the contradiction of tongues."*—The contradiction of tongues doth everywhere meet with us out of the tabernacle of God, therefore whithersoever thou shalt turn thyself thou shalt find no end of controversies, except thou withdraw thyself into that tabernacle. Thou wilt say it is true, and that it is to be understood of the unity of the church. But hear and note. There was in the tabernacle the ark, and in the ark the testimony or tables of the law: what dost thou tell me of the husk of the tabernacle without the kernel of the testimony? the tabernacle was ordained for the keeping and delivering over from hand to hand of the testimony. In like manner, the custody and passing over of the Scriptures is committed unto the Church, but the life of the tabernacle is the testimony.

The most considerable of Bacon's theological writings are his pieces entitled "An Advertisement touching the Controversies of the Church of England," and "Certain Considerations touching the better Pacification and Edification of the Church of England." In his Life (cxl.) Mr. Montagu tells us that he produced these "two publications" both in the same year 1606. But it is

clear from the discourses themselves that the one was written a long time before the other. They appear to have been first published in 1640 or 1641. There is a copy of the "Considerations" in the British Museum in small quarto with the date 1640; and in one of the volumes of the King's Pamphlets, preserved in the same collection, is a copy, in the same size, of the "Advertisement," with the title of "A Wise and Moderate Discourse concerning Church Affairs; as it was written long since by the famous author of those Considerations, which seem to have some reference to this; now published for the common good; imprinted in the year 1641." This description would seem to imply that the "Considerations" had been originally prefixed; and it will be found on examining the pamphlet that the beginning is evidently wanting, for the above title, besides that it is not in capitals as if it were intended to stand at the commencement of the publication, is printed not on the first but on the second leaf of the sheet. The Discourse which it heads had probably been added to a second edition of the "Considerations;" and it would not appear to have been published anonymously, as Blackburn and Mr. Montagu assert. There are MS. copies in the Museum both of the Advertisement and the Considerations; of the latter at least more than one copy. Both tracts were afterwards authenticated by being inserted by Dr. Rawley in the *Resuscitatio* (1657); and they may be considered to be alluded to in the following paragraph of the Preface to that collection:—"It is true that, for some of the pieces herein contained, his lordship did not aim at the publication of them, but at the preservation only, and prohibiting them from perishing; so as to have been reposed in some private shrine or library. But now, for that, through the loose keeping of his lordship's papers whilst he lived, divers surreptitious copies have been taken, which have since employed the press with sundry corrupt and mangled editions, whereby nothing hath been more difficult than to find the Lord Saint Alban in the Lord Saint Alban, and which have presented (some of them) rather a fardle of nonsense

than any true expressions of his lordship's happy vein, I thought myself, in a sort, tied to vindicate these injuries and wrongs done to the monuments of his lordship's pen, and at once, by setting forth the true and genuine writings themselves, to prevent the like evasions for the time to come."

The Considerations appear to have been addressed to King James very soon after his accession;\* and the author there speaks of having long held the same opinions, "as may appear," he adds, "by that which I have many years since written of them, according to the proportion nevertheless of my weakness." There can hardly be a doubt that these words refer to the Advertisement, which must therefore have been written long before the end of the reign of Elizabeth. The manner in which it is spoken of might very well be taken to carry it back to 1590, when Bacon was only about thirty; but even if we should assign it to a date two or three years later, it would still be his earliest known composition. It is a very able and striking discourse, remarkable both for the writing and for the thought or reasoning, and curious for a display of theological learning, a familiarity with the original authorities in that department of scholarship, which in our degenerate day would be thought to do honour to a bishop, and which we might safely defy the united force of all the inns of court to match. It commences thus:—

It is but ignorance, if any man find it strange, that the state of religion, especially in the days of peace, should be exercised and troubled with controversies: for as it is the condition of the Church militant to be ever under trials, so it cometh to pass, that when the fiery trial of persecution ceaseth, there succeedeth another trial, which, as it were, by contrary blasts of doctrine, doth sift and winnow men's faith, and proveth whether they know God aright; even as that other of afflictions disco-

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\* The heading of a copy in Ayscough MS. 4263, describes them as "dedicated to his Most Excellent Majesty at his first coming in:" (the last five words, however, being in a different hand from the rest of the title).

vereth whether they love him better than the world. Accordingly was it foretold by Christ, saying, "that in the later times it should be said, Lo here, lo there is Christ;" which is to be understood, not as if the very person of Christ should be assumed and counterfeited, but his authority and pre-eminence, which is to be the truth itself, should be challenged and pretended. Thus have we read and seen to be fulfilled that which followeth, "Ecce in deserto, ecce in penetralibus:"\* while some have sought the truth in the conventicles and conciliables of heretics and sectaries; others in the external face and representation of the Church; and both sorts have been seduced. Were it then that the controversies of the Church of England were such, as they did divide the unity of the spirit, and not only such as do unswathe her of her bands, the bands of peace, yet could it be no occasion for any pretended Catholic to judge us, or for any irreligious person to despise us; or if it be, it shall [but happen to us all as it hath used to do; to them to be hardened, and to us to endure the good pleasure of God. But now that our contentions are such, as we need not so much that general canon and sentence of Christ pronounced against heretics, "Erratis, nescientes Scripturas, et potestatem Dei;" you do err, not knowing the Scripture and the power of God: as we need the admonition of St. James, "Let every man be swift to hear, slow to speak, slow to wrath;" and that the wound is no way dangerous, except we poison it with our remedies: as the former sort of men have less reason to make themselves music in our discord, so I have good hope that nothing shall displease ourselves, which shall be sincerely and modestly propounded for the appeasing of these dissensions, for if any shall be offended at this voice, "Vos estis fratres;" ye are brethren, why strive ye, he shall give great presumption against himself, that he is the party that doth his brethren wrong.

The controversies themselves I will not enter into, as judging that the disease requireth rather rest than any other cure. Thus much we all know and confess, that they be not of the highest nature, for they are not touching the high mysteries of faith, such as detained the churches for many years after their first peace, what time the heretics moved curious questions, and made strange anatomies of the natures and person of Christ; and the catholic fathers were compelled to follow them with all subtlety of decisions and determinations to exclude them

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\* Behold he is in the desert; behold he is in the secret chambers of the house.



from their evasions, and to take them in their labyrinths; so as it is rightly said, "illis temporibus, iugeniosa res fuit, esse Christianum;" in those days it was an iugenious and subtle thing to be a Christian.

Neither are they concerning the great parts of the worship of God, of which it is true, that "non servatur unitas in credendo, nisi eadem adsit in colendo;" there will be kept no unity in believing, except it be entertained in worshipping; such as were the controversies of the east and west churches touching images, and such as are many of those between the church of Rome and us: as about the adoration of the sacrament, and the like; but we contend about ceremonies and things indifferent, about the external policy and government of the church; in which kind, if we could but remember that the ancient and true bonds of unity are "one faith, one baptism," and not one ceremony, one policy; if we would observe the league amongst Christians, that is penned by our Saviour, "he that is not against us is with us;" if we could but comprehend that saying, "differentiæ rituum commendant unitatem doctrinæ;" the diversities of ceremonies do set forth the unity of doctrine; and that "habet religio quæ sunt æternitatis, habet quæ sunt temporis;" religion hath parts which belong to eternity, and parts which pertain to time: and if we did but know the virtue of silence and slowness to speak, commended by St. James, our controversies of themselves would close up and grow together: but most especially, if we would leave the over-weening and turbulent humours of these times, and revive the blessed proceeding of the Apostles and fathers of the primitive church, which was, in the like and greater cases, not to enter into assertions and positions, but to deliver counsels and advices, we should need no other remedy at all: "si eadem consulis, frater, quæ affirmas, consulenti debetur reverentia, cum non debeatur fides affirmanti;" brother, if that which you set down as an assertion, you would deliver by way of advice, there were reverence due to your counsel, whereas faith is not due to your affirmation. St. Paul was content to speak thus, "Ego, non Dominus," I, and not the Lord: "Et, secundum consilium meum;" according to my counsel. But now men do too lightly say, "Non ego, sed Dominus;" Not I, but the Lord: yea, and bind it with a heavy denunciation of his judgments, to terrify the simple, which have not sufficiently understood out of Solomon, that "the causeless curse shall not come."

A wish is then expressed that "there were an end  
 cease made of this immodest and deformed man-

ner of writing lately entertained, whereby matter of religion is handled in the style of the stage"—in evident allusion to the Martin Mar-Prelate controversy, which began in 1589, a circumstance which may help to settle the date of the discourse.

To leave all reverent and religious compassion towards evils, or indignation towards faults, and to turn religion into a comedy or satire; to search and rip up wounds with a laughing countenance, to intermix Scripture and scurrility sometimes in one sentence, is a thing far from the devout reverence of a Christian, and scant becoming the honest regard of a sober man: "*Non est major confusio, quam serii et joci;*" there is no greater confusion than the confounding of jest and earnest. The majesty of religion, and the contempt and deformity of things ridiculous, are things as distant as things may be. Two principal causes have I ever known of atheism; curious controversies and profane scoffing: now that these two are joined in one, no doubt that sect will make no small progression.

Bacon objects, however, to the vain policy of attempting to suppress the Puritan or anti-hierarchical pamphlets.

And indeed we see it ever falleth out, that the forbidden writing is always thought to be certain sparks of truth that fly up into the faces of those that seek to choke it, and tread it out; whereas a book authorized is thought to be but "*temporis voces,*" the language of the time. But in plain truth I do find, to mine understanding these pamphlets as meet to be suppressed as the other. First, because as the former sort deface the government of the Church in the persons of the bishops and prelates, so the other doth lead into contempt the exercises of religion in the persons of sundry preachers; so as it disgraceth an higher matter, though in the meaner person.

And he concludes this part of his subject as follows:—

As it were to be wished that these writings had been abortive, and never seen the sun; so the next is, since they be come abroad, that they be censured, by all that have understanding and conscience, as the intemperate extravagancies of some light persons. Yea farther, that men beware, except they mean to adventure to deprive themselves of all sense of religion, and to pave their own hearts, and make them as th-

highway, how they may be conversant in them, and much more how they delight in that vein; but rather to turn their laughing into blushing, and to be ashamed, as of a short madness, that they have in matters of religion taken their disport and solace. But this, perchance, is of these faults which will be soonest acknowledged; though I perceive, nevertheless, that there want not some who seek to blanch and excuse it.

He then proceeds:—

But to descend to a sincere view and consideration of the accidents and circumstances of these controversies, wherein either part deserveth blame or imputation, I find generally, in causes of Church matters, that men do offend in some or all of these five points.

The first is, the giving occasion unto the controversies: and also the inconsiderate and ungrounded taking of occasion.

The next is, the extending and multiplying the controversies to a more general opposition or contradiction than appeareth at the first propounding of them, when men's judgments are least partial.

The third is, the passionate and unbrotherly practices and proceedings of both parts towards the persons each of others, for their discredit and suppression.

The fourth is, the courses holden and entertained on either side, for the drawing of their partisans to a more straight union within themselves, which ever importeth a farther distraction of the entire body.

The last is, the undue and inconvenient propounding, publishing and debating of the controversies. In which point the most palpable error hath been already spoken of, as that, which through the strangeness and freshness of the abuse first offereth itself to the conceits of all men.

Now concerning the occasion of the controversies, it cannot be denied, but that the imperfections in the conversation and government of those which have chief place in the Church, have ever been principal causes and motives of schisms and divisions. For whilst the bishops and governors of the Church continue full of knowledge and good works; whilst they feed the flock indeed; whilst they deal with the secular states in all liberty and resolution, according to the majesty of their calling, and the precious care of souls imposed upon them, so long the Church is "situated" as it were "upon a hill;" no man maketh question of it, or seeketh to depart from it; but when these virtues in the fathers and leaders of the Church have lost their light, and that they wax worldly, lovers of themselves, and

pleasers of men, then men begin to grope for the Church as in the dark; they are in doubt whether they be the successors of the Apostles, or of the Pharisees; yea, howsoever they sit in Moses' chair, yet they can never speak, "tanquam auctoritatem habentes," as having authority, because they have lost their reputation in the consciences of men, by declining their steps from the way which they trace out to others; so as men had need continually have sounding in their ears this same "Nolite exire," Go not out; so ready are they to depart from the Church upon every voice. And therefore it is truly noted by one that writeth as a natural man, that the humility of the friars did, for a great time, maintain and bear out the irreligion of bishops and prelates.

For this is the double policy of the spiritual enemy, either by counterfeit holiness of life to establish and authorise errors; or by corruption of manners to discredit and draw in question truth and things lawful. This concerneth my lords the bishops, unto whom I am witness to myself, that I stand affected as I ought. No contradiction hath supplanted in me the reverence that I owe to their calling; neither hath any detraction or calumny imbas'd mine opinion of their persons. I know some of them, whose names are most pierced with these accusations, to be men of great virtues; although the disposition of the times, and the want of correspondence many ways, is enough to frustrate the best endeavours in the edifying of the Church. And for the rest, generally, I can condemn none. I am no judge of them that belong to so high a Master; neither have I "two witnesses." And I know it is truly said of Fame, that

"Pariter facta, atque infecta canebat."\*

The second occasion of controversies, is the nature and humour of some men. The Church never wanteth a kind of persons which love the salutation of Rabbi, master; not in ceremony or compliment, but in an inward authority which they seek over men's minds, in drawing them to depend upon their opinions, and to seek knowledge at their lips. These men are the true successors of Diotrefes, the lover of pre-eminence, and not lord bishops. Such spirits do light upon another sort of natures, which do adhere to these men; "quorum gloria in obsequio;" † stiff followers and such as zeal mar-

\* "Things done relates, not done she feigns; and mingles truth with lies."—*Dryden's Fourth Aeneid*.

† Whose glory is in obedience.

vellously for those whom they have chosen for their masters. This latter sort, for the most part, are men of young years, and superficial understanding, carried away with partial respects of persons, or with the enticing appearance of godly names and pretences: "*Pauci res ipsas sequuntur, plures nomina rerum, plurimi nomina magistrorum;*" few follow the things themselves, more the names of the things, and most the names of their masters.

The third occasion of controversies I observe to be, an extreme and unlimited detestation of some former heresy or corruption of the Church already acknowledged and convicted. This was the cause that produced the heresy of Arius, grounded especially upon detestation of Gentilism, lest the Christian should seem, by the assertion of the equal divinity of our Saviour Christ, to approach unto the acknowledgment of more gods than one. The detestation of the heresy of Arius produced that of Sabellius; who holding for execrable the dissimilitude which Arius pretended in the Trinity, fled so far from him, as he fell upon that other extremity, to deny the distinction of persons; and to say, they were but only names of several offices and dispensations. Yea, most of the heresies and schisms of the Church have sprung up of this root; while men have made it as it were their scale, by which to measure the bounds of the most perfect religion; taking it by the farthest distance from the error last condemned. These be "*posthumi heresiarum filii;*" heresies that arise out of the ashes of other heresies that are extinct and amortised.

This manner of apprehension doth in some degree possess many in our times. They think it the true touchstone to try what is good and evil, by measuring what is more or less opposite to the institutions of the church of Rome, be it ceremony, be it policy, or government; yea, be it other institutions of greater weight, that is ever most perfect which is removed most degrees from that church; and that is ever polluted and blemished, which participateth in any appearance with it. This is a subtle and dangerous conceit for men to entertain; apt to delude themselves, more apt to delude the people, and most apt of all to calumniate their adversaries. This surely, but that a notorious condemnation of that position was before our eyes, had long since brought us to the re-baptisation of children baptised according to the pretended catholic religion: for I see that which is a matter of much like reason, which is the re-ordaining of priests, is a matter already resolutely maintained. It is very meet that men beware how they be abused by this opinion; and that they know, that it is a consideration of much

greater wisdom and sobriety to be well advised, whether in general demolition of the institution of the church of Rome, there were not, as men's actions are imperfect, some good purged with the bad, rather than to purge the Church, as they pretend, every day anew; which is the way to make a wound in the bowels as is already begun.

The fourth and last occasion of controversies he declares to be the partial affectation and imitation of foreign churches; and then he proceeds to trace the growth and progress of the controversy actually disturbing the Church:—

It may be remembered that, on that part which calls for reformation, was first propounded some dislike of certain ceremonies supposed to be superstitious; some complaint of dumb ministers who possess rich benefices; and some invectives against the idle and monastical continuance within the universities, by those who had livings to be resident upon; and such like abuses. Thence they went on to condemn the government of bishops as an hierarchy remaining to us of the corruptions of the Roman church, and to except to sundry institutions in the Church, as not sufficiently delivered from the pollutions of former times. And lastly, they are advanced to define of an only and perpetual form of policy in the Church; which without consideration of possibility, and foresight of peril, and perturbation of the Church and State, must be erected and planted by the magistrate. Here they stay. Others, not able to keep footing on so steep ground, descend farther; that the same must be entered into and accepted of the people, at their peril, without the attending of the establishment of authority. And so in the mean time they refuse to communicate with us, reputed us to have no Church. This has been the progression of that side: I mean of the generality. For I know, some persons, being of the nature, not only to love extremities, but also to fall to them without degrees, were at the highest strain at the first.

But the defenders of the Church, he shows, had not kept one tenor neither. Besides they had taken far too high a ground in regard to the matters in dispute.

It is very hard to affirm that the discipline which they say we want is one of the essential parts of the worship of God,

and not to affirm withal that the people themselves, upon peril of salvation, without staying for the magistrate, are to gather themselves into it. I demand, if a civil state should receive the preaching of the word and baptism, and interdict and exclude the sacrament of the Lord's supper, were not men bound, upon danger of their souls, to draw themselves to congregations wherein they might celebrate this mystery, and not to content themselves with that part of God's worship which the magistrate had authorised? This I speak, not to draw them into the mislike of others, but into a more deep consideration of themselves: "*Fortasse non redeunt, quia suum progressum non intelligunt.*"

Again, to my lords the bishops I say that it is hard for them to avoid blame, in the opinion of an indifferent person, in standing so precisely upon altering nothing. "*Leges, novis legibus non recreatæ, acescunt;*" laws, not refreshed with new laws, wax sour. "*Qui mala non permutat, in bonis non perseverat;*" without change of ill a man cannot continue the good. To take away many abuses supplanteth not good orders, but establisheth them. "*Morosa moris retentio res turbulenta est, æque ac novitas;*" a contentious retaining of custom is a turbulent thing, as well as innovation. A good husband is ever pruning in his vineyard or his field; not unseasonably indeed, not unskilfully, but lightly; he findeth ever somewhat to do. We have heard of no offers of the bishops of bills in parliament; which, no doubt, proceeding from them to whom it properly belongeth, would have everywhere received acceptance. . . . .

I pray God to inspire the bishops with a fervent love and care of the people, and that they may not so much urge things in controversy as things out of controversy, which all men confess to be gracious and good: and thus much for the second point.

The next point which he takes up is the unbrotherly proceedings of both parties. This charge, he observes, chiefly touches that side having most power to do injury.

The wrongs of them which are possessed of the government of the Church towards the other may hardly be dissembled or excused: they have charged them as though they denied tribute to Cæsar, and withdrew from the civil magistrate the obedience which they have ever performed and taught. They have sorted and coupled them with the "family of love," whose

heresies they have laboured to destroy and confute. They have been swift of credit to receive accusations against them from those that have quarrelled with them but for speaking against sin and vice. Their accusations and inquisitions have been strict, swearing men to blanks and generalities, not included within compass of matter certain, which the party which is to take the oath may comprehend, which is a thing captious and strainable. Their urging of subscription to their own articles is but "*laccessere et irritare morbos ecclesie*,"\* which otherwise would spend and exercise themselves. "*Non consensum quarit sed disidium, qui, quod factis prestat, in verbis exigit.*" He seeketh not unity, but division, which exacteth that in words which men are content to yield in action. And it is true there are some which, as I am persuaded, will not easily offend by inconformity who notwithstanding make some conscience to subscribe; for they know this note of inconstancy and defection from that which they have long held shall disable them to do that good which otherwise they might do; for such is the weakness of many, that their ministry should be thereby discredited. As for their easy silencing of them, in such great scarcity of preachers, it is to punish the people, and not them. Ought they not, I mean the bishops, to keep one eye open to look upon the good that those men do, not to fix them both upon the hurt that they suppose cometh by them? Indeed such as are intemperate and incorrigible, God forbid they should be permitted to preach; but shall every inconsiderate word, sometimes captiously watched, and for the most part hardly enforced, be as a forfeiture of their voice and gift in preaching?

As for the libels and invectives of the other party, he conceives them to be mere headless arrows, which can do little or no real harm. Only, with regard to the practice adopted by the worst set of them, of calling to their aid "certain mercenary bands, which impugn bishops and other ecclesiastical dignities, to have the spoil of their endowments and livings; of these," he says, "I cannot speak too hardly. It is an intelligence between incendiaries and robbers, the one to fire the house, the other to rifle it." He censures also their affectation of "certain cognizances and differences, wherein they seek to correspond amongst themselves,

\* To excite and irritate the diseases of the church.



and to be separate from others." And he objects to their systematic depreciation of men as pious and preachers as scriptural as themselves.

Now for their own manner of preaching, what is it? Surely they exhort well and work compunction of mind, and bring men well to the question, "*Viri fratres, quid faciemus?*"\* But that is not enough, except they resolve the question. They handle matters of controversy weakly, and "obiter,"† and as before a people that will accept of anything. In doctrine of manners there is little but generality and repetition. The word, the bread of life, they toss up and down, they break it not: they draw not their directions down "*ad casus conscientiaë,*" that a man may be warranted in his particular actions whether they be lawful or not; neither indeed are many of them able to do it, what through want of grounded knowledge, what through want of study and time. It is a compendious and easy thing to call for the observation of the Sabbath-day, or to speak against unlawful gain; but what actions and works may be done upon the Sabbath, and what not; and what courses of gain are lawful, and in what cases: to set this down, and to clear the whole matter with good distinctions and decisions, is a matter of great knowledge and labour, and asketh much meditation and conversing in the Scriptures, and other helps which God has provided and preserved for instruction.

Again, they carry not an equal hand in teaching the people their lawful liberty, as well as their restraints and prohibitions; but they think a man cannot go too far in that that hath a show of a commandment.

They forget that there are *sins* on the right hand as well as on the left; and that the word is double-edged, and cutteth on both sides, as well the profane transgressions as the superstitious observances. Who doubteth but that it is as unlawful to shut where God hath opened, as to open where God hath shut; to bind where God hath loosed, as to loose where God hath bound? Amongst men it is commonly as ill taken to turn back favours as to disobey commandments. In this kind of zeal, for example, they have pronounced generally, and without difference, all untruths unlawful; notwithstanding that the midwives are directly reported to have been blessed for their excuse; and Rahab is said by faith to have concealed

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\* Men and brethren, what shall we do? † By the way.

the spies; and Solomon's selected judgment proceeded upon a simulation; and our Saviour, the more to touch the hearts of the two disciples with an holy dalliance, made as if he would have passed Emmaus. . . . .

Another point of great inconvenience and peril is, to entitle the people to hear controversies, and all kinds of doctrine. They say no part of the counsel of God is to be suppressed, nor the people defrauded; so as the difference which the Apostle maketh between milk and strong meat is confounded; and his precept that the weak be not admitted unto questions and controversies taketh no place.

But most of all is to be suspected, as a seed of farther inconvenience, their manner of handling the Scriptures; for whilst they seek express Scripture for everything, and that they have, in a manner, deprived themselves and the Church of a special help and support, by embasing the authority of the fathers, they resort to naked examples, conceited inferences and forced allusions, such as do mine into all certainty of religion.

. Another extremity is the excessive magnifying of that which, though it be a principal and most holy institution, yet hath its limits, as all things else have. We see wheresoever, in a manner, they find in the Scriptures the word spoken of, they expound it of preaching; they have made it, in a manner, of the essence of the sacrament of the Lord's supper, to have a sermon precedent; they have, in a sort, annihilated the use of liturgies and forms of divine service, although the house of God be denominated of the principal, "*domus orationis*," a house of prayer, and not a house of preaching. As for the life of the good monks and hermits in the primitive church, I know they will condemn a man as half a papist if he should maintain them as other than profane because they heard no sermons. In the mean time, what preaching is, and who may be said to preach, they move no question; but, as far as I see, every man that presumeth to speak in chair is accounted a preacher. But I am assured that not a few that call hotly for a preaching ministry deserve to be the first themselves that should be expelled. All which errors and misproceedings they do fortify and intrench by an addicted respect to their own opinions, and an impatience to hear contradiction or argument; yea, I know some of them that would think it a tempting of God to hear or read what may be said against them; as if there could be a "*Quod bonum est tenete*,"\* without an "*Omnia probate*,"† going before. . . . .

\* Hold to that which is good.

† Prove all things.

I know the work of exhortation doth chiefly rest upon these men, and they have seal and hate of sin: but again, let them take heed that it be not true which one of their adversaries said, that they have but two small wants, knowledge and love. And so I conclude this point. . . .

Lastly, whatsoever be pretended, the people is no meet arbitrator, but rather the quiet, modest, private assemblies and conferences of the learned. "*Qui apud incapacem loquitur, non disceptat, sed calumniatur.*"\* The press and pulpit would be freed and discharged of these contentions; neither promotion on the one side, nor glory and heat on the other, ought to continue those challenges and cartels at the cross and other places; but rather all preachers, especially all such as be of good temper, and have wisdom with conscience, ought to inculcate and beat upon a peace, silence, and surceance. Neither let them fear Solon's law, which compelled in factions every particular person to range himself on the one side; nor yet the fond calamity of neutrality; but let them know that is true which is said by a wise man, that neutrals in contentions are either better or worse than either side.

Its moderation and impartiality of tone would scarcely, it is to be feared, recommend this paper to any party at the time when it was written; and Bacon, upon further consideration or upon advising with his friends, probably saw good reason for suppressing it. Nor would it have been very acceptable to either side at a much later date even than that at which it was actually published, when the great struggle between the established church and the nonconformists was renewed with more earnestness than ever in the next century. Any chance that such an exhortation has of being listened to is only when men are beginning to think of a contest; and it has not much chance then. So long as the state of things is or seems to be tolerably tranquil, the dominant side rejects all such counsel as uncalled for and almost treacherous; and when the storm has fairly begun it soon drowns or makes men deaf to all sounds but its own. At no time indeed is such advice as Bacon here gives calculated to produce immediately much of a popular impression; it

\* He who speaks to an incompetent auditor, does not discourse, but utters calumnies.

may after a long while work itself into the general mind ; but at first it finds only an individual here and there disposed to receive it, and they are those by whom it is least needed. It was addressed without effect to the inflamed and angry tempers of the two parties on the eve of the civil war ; after about another half-century it appears that the excellent Archbishop Saneroft collated and corrected both the Advertisement and the Considerations with great care, probably with the view of republishing them in aid of his favourite scheme of a comprehension of the Dissenters. They were first printed as we now have them from the copies left by him in Blackburne's edition of Bacon's works, in 4 vols. folio, 1730.

The discourse entitled " Certain Considerations touching the better Pacification and Edification of the Church of England " is longer and still more elaborate than the " Advertisement ; " but it consists in part of a repetition of some things in that earlier paper, and, from going more into a detailed examination of the then existing circumstances of the Church, is not throughout of so much interest for all times and seasons. It is addressed, as already mentioned, to King James, and commences thus :—

The unity of your Church, excellent Sovereign, is a thing no less precious than the union of your kingdoms ; being both works wherein your happiness may contend with your worthiness. Having therefore presumed, not without your Majesty's gracious acceptation, to say somewhat on the one, I am the more encouraged not to be silent on the other ; the rather because it is an argument that I have travelled in before. But Solomon commendeth a word spoken in season ; and as our Saviour, speaking of the discerning of seasons, saith, " When you see a cloud rising in the west, you say it will be a shower : " So your Majesty's rising to this monarchy in the west parts of the world, doth promise a sweet and fruitful shower of many blessings upon this Church and commonwealth ; a shower of that influence as the very first dews and drops thereof have already laid the storms and winds throughout Christendom ; reducing the very face of Europe to a more peaceable and amiable countenance. But to the purpose.

It is very true, that these ecclesiastical matters are things

not properly appertaining to my profession; which I was not so inconsiderate but to object to myself; but finding that it is many times seen that a man that standeth off, and somewhat removed from a plot of ground, doth better survey it and discover it than those which are upon it, I thought it not impossible but that I, as a looker-on, might cast mine eyes upon some things which the actors themselves, especially some being interested, some led and addicted, some declared and engaged, did not or would not see. And knowing, in my conscience, whereto God beareth witness, that the things which I shall speak, spring out of no vein of popularity, ostentation, desire of novelty, partiality to either side, disposition to intermeddle, or any the like leaven; I may conceive hope, that what I want in depth of judgment may be countervailed in simplicity and sincerity of affection. But of all things this did most animate me; that I found in these opinions of mine, which I have long held and embraced, as may appear by that which I have many years since written of them, according to the proportion nevertheless of my weakness, a consent and conformity with that which your Majesty hath published of your own most Christian, most wise, and moderate sense, in these causes; wherein you have well expressed to the world, that there is infused in your sacred breast, from God, that high principle and position of government,—That you ever hold the whole more dear than any part.

An eulogium upon James follows, in part the same with that afterwards inserted in the beginning of the *Advancement of Learning*; and then, before entering upon the special matters in dispute, two objections are taken up which directly confront and oppose themselves to reformation; the first, that it is against good policy to innovate anything in church matters; the other, that all reformation must be after one platform, or plan. Here is part of what is advanced touching the first:—

For the first of these, it is excellently said by the prophet, "State super vias antiquas, et videte, quænam sit via recta et vera, et ambulate in eâ."\* So as he doth not say, "State super vias antiquas et ambulate in eis."† For it is true, that with all wise and moderate persons, custom and usage obtaineth that re-

\* Stand fast in the old ways, and see what is righteous and good, and walk in that.

† Stand fast in the old ways, and walk in them.

verence as it is sufficient matter to move them to make a stand, and to discover, and take a view; but it is no warrant to guide and conduct them; a just ground, I say, it is of deliberation, but not of direction. But on the other side, who knoweth not that time is truly compared to a stream that carrieth down fresh and pure waters into that salt sea of corruption which environeth all human actions. And therefore if man shall not by his industry, virtue, and policy, as it were with an oar, row against the stream and inclination of time; all institutions and ordinances, be they never so pure, will corrupt and degenerate. But not to handle this matter common-place like, I would only ask, why the civil state should be purged and restored by good and wholesome laws, made every third or fourth year in parliament assembled, devising remedies as fast as time breedeth mischief; and contrariwise the ecclesiastical state should still continue upon the dregs of time, and receive no alteration now for these five-and-forty years and more? If any man shall object, that if the like intermission had been used in civil causes also, the error had not been great: surely the wisdom of the kingdom hath been otherwise in experience for three hundred years' space at least. But if it be said to me, that there is a difference between civil causes and ecclesiastical, they may as well tell me that churches and chapels need no reparations, though castles and houses do: whereas commonly, to speak truth, dilapidations of the inward and spiritual edifications of the Church of God are in all times as great as the outward and material. Sure I am that the very word and style of reformation used by our Saviour, "*Ab initio non fuit sic*,"\* was applied to church matters, and those of the highest nature, concerning the law moral. . . .

There remaineth yet an objection, rather of suspicion than of reason; and yet such as I think maketh a great impression in the minds of very wise and well affected persons, which is, that if way be given to mutation, though it be in taking away abuses, yet it may so acquaint men with sweetness of change as it will undermine the stability even of that which is sound and good. This surely had been a good and true allegation in the ancient contentions and divisions between the people and the senate of Rome; where things were carried at the appetites of multitudes, which can never keep within the compass of any moderation: but, these things being with us to have an orderly passage, under a king who hath a royal

\* It hath not been so from the beginning.

power and approved judgment, and knoweth as well the measure of things as the nature of them; it is surely a needless fear. For they need not doubt but your Majesty, with the advice of your council, will discern what things are intermingled like the tares amongst the wheat, which have their roots so entwined and entangled, as the one cannot be pulled up without endangering the other; and what are mingled but as the chaff and the corn, which need but a fan to sift and sever them. So much therefore for the first point, of no reformation to be admitted at all.

In regard to the second point, that there should be but one form of discipline in all churches, Bacon admits that it is a matter about which volumes have been compiled, and that cannot therefore be fully argued in brief space; but, he adds, "I, for my part, do confess, that in revolving the Scriptures I could never find any such thing; but that God had left the like liberty to the Church government as he had done to the civil government; to be varied according to time, and place, and accidents, which nevertheless his high and divine providence doth order and dispose." He then proceeds to the particular questions of controversy, or rather of reformation; and considers, in succession, the Government of Bishops; the Liturgy, Ceremonies, and Subscription; the demand for a Preaching Ministry; the alleged abuse of Excommunication; Non-Residents, and Pluralities; the provision to be made for sufficient Maintenance of the Clergy. Upon all these subjects the inclination of his opinion is, as in the former paper, for a middle course, as the most likely to prove generally satisfying and comprehensive, and for a sacrifice of mere forms and other non-essentials to conscientious scruples. Yet he is far from approving of all the notions and demands of the opponents of the established system. It will be sufficient that we give what he says on a Preaching Ministry:—

To speak of a learned ministry: it is true that the worthiness of the pastors and ministers is of all other points of religion the most summary; I do not say the greatest, but the most effectual towards the rest: but herein, to my understanding,

while men go on in zeal to hasten this work, they are not aware of as great or greater inconvenience than that which they seek to remove. For while they inveigh against a dumb ministry they make too easy and too promiscuous an allowance of such as they account preachers; having not respect enough to their learnings in other arts, which are handmaids to divinity; not respect enough to years, except it be in case of extraordinary gift; not respect enough to the gift itself, which many times is none at all. For God forbid, that every man that can take unto himself boldness to speak an hour together in a church, upon a text, should be admitted for a preacher, though he mean never so well. I know there is a great latitude in gifts, and a great variety in auditories and congregations; but yet so as there is "aliquid infimum,"\* below which you ought not to descend. For you must rather leave the ark to shake as it shall please God, than put unworthy hands to hold it up. And when we are in God's temple, we are warned rather to "put our hands upon our mouth than to offer the sacrifice of fools." And surely it may be justly thought, that amongst many causes of Atheism, which are miserably met in our age, as schisms and controversies, profane scoffs in holy matters and others; it is not the least that divers do adventure to handle the word of God, which are unfit and unworthy. And herein I would have no man mistake me, as if I would extol curious and affected preaching; which is as much on the other side to be disliked, and breedeth atheism and scandal as well as the other: for who would not be offended at one that cometh into the pulpit as if he came upon the stage to play parts or prizes? neither on the other side, as if I would discourage any who hath any tolerable gift.

But upon this point I ground three considerations:—first, whether it were not requisite to renew that good exercise which was practised in this Church some years, and afterwards put down by order indeed from the Church, in regard of some abuse thereof, inconvenient for these times; and yet against the advice and opinion of one of the greatest and gravest prelates of this land, and was commonly called prophesying; which was this:—That the ministers within a precinct did meet upon a week-day in some principal town, where there was some ancient grave minister that was president, and an auditory admitted of; gentlemen or other persons of leisure. Then every minister successively, beginning with the youngest, did handle one and the same part of Scripture, spending severally some

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\* A lowest point.



quarter of an hour or better, and in the whole some two hours; and so the exercise being begun and concluded with prayer, and the president giving a text for the next meeting, the assembly was dissolved. And this was, as I take it, a fortnight's exercise: which, in my opinion, was the best way to frame and train up preachers to handle the word of God as it ought to be handled, that hath been practised. For we see orators have their declamations, lawyers have their moots, logicians their sophisms, and every practice of science hath an exercise of erudition and initiation before men come to the life; only preaching, which is the worthiest, and wherein it is most danger to do amiss, wanteth an introduction, and is ventured and rushed upon at the first. But unto this exercise of the prophecy I would wish these two additions: the one, that after this exercise, which is in some sort public, there were immediately a private meeting of the same ministers, where they might brotherly admonish the one the other, and especially the elder sort the younger, of anything that had passed in the exercise, in matter or manner, unsound and uncomely: and in a word, might mutually use such advice, instruction, comfort, or encouragement, as occasion might minister; for public reprehension were to be debarred. The other addition that I mean is, that the same exercise were used in the universities for young divines before they presumed to preach, as well as in the country, for ministers. For they have in some colleges an exercise called a common-place, which can in no degree be so profitable, being but the speech of one man at one time. And if it be feared that it may be occasion to whet men's speeches for controversies, it is easily remedied, by some strict prohibition, that matters of controversy tending any way to the violating or disquieting the peace of the Church, be not handled or entered into; which prohibition, in regard there is ever to be a grave person president or moderator, cannot be frustrated. The second consideration is, whether it were not convenient there should be a more exact probation and examination of ministers; namely, that the bishops do not ordain alone, but by advice; and then that ancient holy order of the Church might be revived; by the which the bishop did ordain ministers but at four set times of the year; which were "Quatuor tempora;" which are now called Ember-weeks; it being thought fit to accompany so high an action with general fasting and prayer, and sermons and all holy exercises; and the names likewise of those that were to be ordained, were published some days before their ordination; to the end exceptions might be taken, if just cause were. The third consideration is,

that if the case of the Church of England be, that were a computation taken of all the parochian churches, allowing the union of such as were too small and adjacent, and again a computation to be taken of the persons who were worthy to be pastors; and upon the said account if it fall out that there are many more churches than pastors, then of necessity recourse must be had to one of these remedies; either that pluralities must be allowed, especially if you can by permutation make the benefices more compatible; or that there be allowed preachers to have a more general charge, to supply and serve by turn parishes unfurnished: for that some churches should be provided of pastors able to teach, and others wholly destitute, seemeth to me to be against the communion of saints and Christians, and against the practice of the primitive Church.

There is an unfinished Dialogue of Bacon's, entitled "An Advertisement touching an Holy War, written in the year 1622," which is partly of a theological character; but it may be said to relate more directly to foreign politics, and we shall therefore reserve it till we come to his political writings, among which it has been commonly reckoned.

His remaining theological compositions are only a few short pieces. The first is his "Confession of Faith," first published in a quarto pamphlet of twelve pages, in 1641; then in the *Remains*, 1648; then by Rawley, in the *Resuscitatio*, 1657. Of its authenticity, therefore, there can be no doubt. It exists also in various manuscripts in the British Museum: one copy (Birch MS. 4263) Mr. Montagu conceives to be in Bacon's own hand-writing. In the *Remains* the Confession is stated to have been written by him about the time when he was Solicitor-General (A.D. 1607-1612). It is admitted to be a perfectly orthodox exposition of the leading doctrines of the Christian faith, as held by the Church of England; and it has all Bacon's usual luminousness and force of expression. The following are perhaps its most noticeable particulars:—He declares his belief, that, after his creation in the divine image, "Man made a total defection from God, presuming to imagine that the commandments and prohibitions of God were not the rules of good and evil, but that good and evil had their own principles and beginnings, and lusted after the knowledge of

those imagined beginnings; to the end to depend no more upon God's will revealed, but upon himself and his own light as a God; than the which there could not be a sin more opposite to the whole law of God." Upon the subject of the Incarnation his statement is, "that the Word did not only take flesh, or was joined to flesh, but was made flesh, though without confusion of substance or nature; so as the Eternal Son of God and the ever-blessed Son of Mary was one person; so one, as the blessed Virgin may be truly and catholicly called Deipara, the Mother of God; so one, as there is no unity in universal nature, not that of the soul and body of man, so perfect." Another article is, "That the Church hath no power over the Scriptures to teach or command any thing contrary to the written word; but is the ark wherein the tables of the first Testament were kept and preserved; that is to say, the Church hath only the custody and delivery over of the Scriptures committed unto the same; together with the interpretation of them, but such only as is conceived from themselves." This is a very distinct and fair statement of the right of interpretation as claimed by the Church of England, and of the difference upon that point between the English Church and the Church of Rome, which latter asserts the right of interpreting absolutely and without any restriction, from tradition or by mere authority as well as from lights furnished by the Scriptures themselves. The following are the concluding articles:—

That there is also an holy succession in the prophets of the New Testament and Fathers of the Church, from the time of the apostles and disciples which saw our Saviour in the flesh; unto the consummation of the work of the ministry; which persons are called from God by gift, or inward anointing; and the vocation of God followed by an outward calling and ordination of the Church.

I believe that the souls of such as die in the Lord are blessed, and rest from their labours, and enjoy the sight of God, yet so; as they are in expectation of a farther revelation of their glory in the last day. At which time all flesh of man shall arise and be changed, and shall appear and receive from Jesus Christ eternal judgment; and the glory of the saints shall then be full; and the kingdom shall be given up to God the father: from

which time all things shall continue for ever in that being and state, which then they shall receive. So as there are three times, if times they may be called, or part of eternity. The first, the time before beginnings, when the Godhead was only, without the being of any creature: the second, the time of the mystery, which continueth from the creation to the dissolution of the world: and the third, the time of the revelation of the sons of God; which time is the last, and is everlasting without change.

The next of these pieces that falls to be noticed is entitled "The Characters of a Believing Christian, in Paradoxes and seeming Contradictions." It is said to have been first published by itself in 1645; it is included in the collection of *Remains* published in 1648; a collated copy is stated to have been found among the papers of Archbishop Sancroft; but it does not appear in the *Resuscitatio*; it is nowhere noticed either by Rawley or Tenison; and no manuscript of it is known to exist. In these circumstances its authenticity has been doubted. We do not see any thing either in the style or in the spirit and intention of the paper which should make it unlikely to have been written by Bacon.\* He has

\* But if any reader would see all the evidence stated at full or more than full length, he may resort to Mr. Montagu's Preface to the Seventh Volume of his edition of Bacon's Works, from p. xxvii. to p. xl. inclusive. This is altogether one of the most remarkable of Mr. Montagu's Prefaces, perhaps the most remarkable of them all. To the usual inundation and tumult of digressive matter, all but swamping the material or pertinent facts, is in this instance added the peculiarity of a sudden termination of the disquisition, without explanation or apology, after only the first third part of the proposed ground has been gone over: we have the Theological Tracts, designated Section First, or at least four of the eight, described and discussed with the most diffuse minuteness of detail, the last four merely noticed all in half a page and then the Miscellaneous pieces, and the Judicial Charges and Tracts, forming the Second and Third Divisions, quietly omitted, as if some leaves were torn out of the volume. As a typographical curiosity, too, this Preface is probably without its match in modern literature. Nearly the whole of the seventeen volumes of this standard edition of the Works of Bacon appear to have been printed from unread proofs, but throughout this Preface the compositor has exerted

elsewhere distinctly avowed his opinion that reason and faith are not only different, but in a certain sense opposed the one to the other. A remarkable passage in the beginning of the Ninth Book of the *De Augmentis Scientiarum*, might almost seem to have been written for an introduction to these Paradoxes:—" *Prærogativa Dei totum hominem complectitur; &c.*;" that is, "The prerogative of God comprehends the whole man, and stretches over our reason not less than over our will; so that man must renounce himself, and draw near to God, in his universal being. Wherefore, as we are bound to obey the divine law, although our will struggle against it, in like manner we must believe the word of God even when it shocks our reason. For if we believe only such things as are agreeable to our reason, we assent to the matter, not to the author; which is no more than what we are wont to do even to a suspected witness . . . . By how much any divine mystery is the more revolting and incredible, so

himself with no common skill and success to turn nearly every third or fourth sentence into a puzzle. Let the reader for instance try what he can make of the following:—[This tract is thus noticed by Archbishop Tenison in the "Baconiana." "His Confession of Faith," written by him in English, and turned into Latin by Doctor Rawley; upon which there was some correspondence between Dr. Maynwaring and Dr. Rawley, as the archbishop, in describing the letters to Lord Bacon, says, "The Second is, a letter from Dr. Maynwaring to Dr. Rawley, concerning his lordship's 'Confession of Faith.'"]—Or of this beginning of one of the notes:—[Blackburn, in the fourth volume of his edition of Bacon, A.D. 1730, p. 438, says, "Archbishop Sancroft has reflected some credit on them by a careful review, having in very many instances corrected and prepared them for the press: among the other unquestioned writings of his lordship, I annex some of the passages from Blackburn, where Archbishop Sancroft is mentioned."] The publication of this standard edition began, a little to the surprise of the subscribers, with the *Second* volume and when the *First* followed it appeared with cancels for no fewer than twenty-seven pages in different parts of its predecessor; but after this striking illustration it seems to have been thought that the reader might as well be left to make the necessary corrections in the succeeding volumes for himself.

much the more honour do we render to God in believing it, and so much the nobler is the victory of our faith. . . . And indeed, if we will truly consider it, it is a higher use of the mind to believe than to know, as we can know in this state of existence. For in knowing we are acted upon by sense, which is reflected from material objects; but in believing, by spirit, which is the worthier agent. It is otherwise in the state of glory; for then faith shall cease, and we shall know even as we are known.\* Read with this explanation, the Paradoxes are perfectly consistent with every thing else that Bacon has written; they contain no impiety or infidelity, but are in fact only a statement of the manner in which the subject *must* have presented itself to him when he brought his ingenious, refusing, antithetical mind to bear upon it. There are thirty-four of them in all; but the following may suffice for a sample:—

1. A Christian is one that believes things his reason cannot comprehend; he hopes for things which neither he nor any man alive ever saw: he labours for that which he knoweth he shall never obtain; yet in the issue, his belief appears not to be false; his hope makes him not ashamed; his labour is not in vain.

6. He praises God for his justice, and yet fears him for his mercy. He is so ashamed as that he dares not open his mouth before God; and yet he comes with boldness to God, and asks him any thing he needs. He is so humble as to acknowledge himself to deserve nothing but evil; and yet believes that God means him all good. He is one that fears always, yet is as bold as a lion. He is often sorrowful, yet always rejoicing; many times complaining, yet always giving of thanks. He is most lowly-minded, yet the greatest aspirer; most contented, yet ever craving.

24. He is often tossed and shaken, yet is as Mount Sion; he is a serpent and a dove; a lamb and a lion; a reed and a cedar. He is sometimes so troubled, that he thinks nothing to be true in religion; yet if he did think so, he could not at all be troubled. He thinks sometimes that God hath no mercy for him, yet resolves to die in the pursuit of it. He believes, like

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\* This is an extension of a passage near the end of the Second Book of the Advancement of Learning.

Abraham, against hope, and though he cannot answer God's logic, yet, with the woman of Canaan, he hopes to prevail with the rhetoric of importunity.

33. His death makes not an end of him. His soul which was put into his body, is not to be perfected without his body; yet his soul is more happy when it is separated from his body, than when it was joined unto it: And his body, though torn in pieces, burnt to ashes, ground to powder; turned to rottenness, shall be no loser.

34. His advocate, his surety shall be his judge; his mortal part shall become immortal; and what was sown in corruption and defilement shall be raised in incorruption and glory; and a finite creature shall possess an infinite happiness. Glory be to God.

Of Bacon's firm belief not only in the general truth of Christianity, but in all its most mysterious doctrines as commonly received, no doubt can be entertained by any mind that has come without prejudice to the perusal of his writings. He has indeed been charged in modern times by some controversialists of the ultra-Roman party with employing so many professions of faith and piety merely to mask his real convictions from the vulgar eye, while he has at the same time, it is pretended, in other passages either allowed the truth to escape him inadvertently, or purposely taken care to make himself sufficiently intelligible to the more discerning reader. But this is the mere virulence and lunacy of party hatred. The whole strain of what Bacon has written, it may be safely affirmed, without the exception of a single sentence, testifies to his mind being made up in favour of the truth of Revelation. And that not from mere education, or use and wont, but from reflection and examination for himself. He was evidently a great reader of theological works; he displays a familiar acquaintance with the learning both of ecclesiastical history and of polemics, as well as with the Scriptures; and at the same time all his expositions and arguments have the unmistakable air of having mingled with and taken their colour from his own mind. Besides, it is to misconceive Bacon's character both intellectual and moral, to suppose him to have been a person likely, in the age in which he lived, to diverge

from the crowd into doubt or infidelity. He was as likely to have tried to raise a rebellion in the land on some question of practical politics. And his genius was dogmatical and sanguine, not at all sceptical; what it delighted in was the building up and embellishing of systems of opinion; it would have been far more apt in any age to employ itself in inventing new supports for such a system as Christianity—so stimulating to both the reason and the imagination—than in searching with cold metaphysical subtlety for insufficiency or weakness in those upon which men commonly relied.

Among his theological works are inserted four Prayers, the longest of which was first published in the *Remains* (1648), and is there entitled "A Prayer made and used by the late Lord Chancellor." But another first printed in the Second Part of the *Resuscitatio* (1661), and there entitled "A Prayer or Psalm made by my Lord Bacon, Chancellor of England," is far more interesting, both as a composition and from the circumstances in which it appears to have been written. Mr. Montagu has hinted a suspicion of its possible non-authenticity, founded on a doubt whether the Second Part of the *Resuscitatio*, although published in the name and during the life of Rawley, nevertheless may not contain some matter of which Bacon was not the author and which may have been introduced by the bookseller without the sanction of its professed editor. But fortunately there exists in the British Museum (Ayscough MS. 4268), a copy of this Prayer in the handwriting of Rawley's amanuensis, being most probably the copy from which it was printed in the *Resuscitatio*. This is more satisfactory than the assertion in No. 267 of the *Tatler*, understood to be by Addison, that the Prayer, with the title we have given, "was found amongst his lordship's papers, written with his own hand:" the heading in question is certainly not what Bacon himself would naturally have prefixed to it. The Prayer must have been composed, as will be perceived, after he had ceased to be Chancellor, or at least after the storm before which he fell had burst upon him. It is a composition of eminent beauty, combining el



tion with pathos perhaps in as high a degree as any thing that was ever written:—

Most gracious Lord God, my merciful Father, from my youth up, my Creator, my Redeemer, my Comforter. Thou, O Lord, soundest and searchest the depths and secrets of all hearts: thou acknowledgest the upright of heart: thou judgest the hypocrite: thou ponderest men's thoughts and doings as in a balance: thou measurest their intentions as with a line: vanity and crooked ways cannot be hid from thee.

Remember, O Lord, how thy servant hath walked before thee: remember what I have first sought, and what hath been principal in my intentions. I have loved thy assemblies: I have mourned for the divisions of thy Church: I have delighted in the brightness of thy sanctuary. This vine which thy right hand hath planted in this nation, I have ever prayed unto thee, that it might have the first and the latter rain; and that it might stretch her branches to the seas and to the floods. The state and bread of the poor and oppressed have been precious in mine eyes: I have hated all cruelty and hardness of heart: I have, though in a despised weed, procured the good of all men. If any have been my enemies, I thought not of them; neither hath the sun almost set upon my displeasure; but I have been as a dove, free from superfluity of maliciousness. Thy creatures have been my books, but thy Scriptures much more. I have sought thee in courts,\* fields, and gardens; but I have found thee in thy temples.

Thousands have been my sins, and ten thousands my transgressions: but my sanctifications have remained with me, and my heart, through thy grace, hath been an unquenched coal upon thine altar. O Lord, my strength, I have since my youth met with thee in all my ways; by thy fatherly compassions, by thy comfortable chastisements, and by thy most visible providence. As thy favours have increased upon me, so have thy corrections; so as thou hast been always near me, O Lord; and ever as my worldly blessings were exalted, so secret darts from thee have pierced me; and when I have ascended before men, I have descended in humiliation before thee. And now, when I thought most of peace and honour, thy hand is heavy upon me, and hath humbled me according to thy former loving-

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\* The common copies, and also the MS., have "the courts;" which, however, is evidently inadmissible.

kindness; keeping me still in thy fatherly school, not as a bastard, but as a child. Just are thy judgments upon me for my sins, which are more in number than the sands of the sea, but have no proportion to thy mercies. For what are the sands of the sea to the sea, earth, heavens? And all these are nothing to thy mercies.\* Besides my innumerable sins, I confess before thee, that I am debtor to thee for the gracious talent of thy gifts and graces, which I have neither put into a napkin, nor put it, as I ought, to exchangers, where it might have made best profit, but misspent it in things for which I was least fit: so I may truly say, my soul hath been a stranger in the course of my pilgrimage. Be merciful unto me, O Lord, for my Saviour's sake, and receive me into thy bosom, or guide me in thy ways.

Two other short Prayers were first printed in the *Baconiana* (1679). One is there stated to have been called by Bacon himself "The Student's Prayer;" it is a translation from one of the paragraphs of the Preface published with the *Novum Organum* in 1620:—

To God the Father, God the Word, God the Spirit, we pour forth most humble and hearty supplications; that he remembering the calamities of mankind, and the pilgrimage of this our life, in which we wear out days few and evil, would please to open to us new refreshments out of the fountains of his goodness, for alleviating of our miseries. This also we humbly and earnestly beg, that human things may not prejudice such as are divine; neither that from the unlocking of the gates of sense, and the kindling of a greater natural light, anything of incredulity, or intellectual night, may arise in our minds towards divine mysteries. But rather, that by our mind thoroughly cleansed and purged from fancy and vanities, and yet subject and per-

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\* In Mr. Montagu's and all the common editions the reading is "For what are the sands of the sea, earth, heavens, and all these are nothing to thy mercies." For this nonsense the copy in the Tatler substitutes "for what are the sands of the sea? Earth, heavens, and all these are nothing to thy mercies." The MS. in the Museum has been injured, and is partially obliterated; but the reading given in the text (we believe for the first time), though some of the writing has become very faint, may still be detected.

fectly given up to the divine oracles, there may be given unto faith the things that are faith's. Amen.

The other is stated to have been entitled by Bacon "The Writer's Prayer:" it is translated from the concluding paragraph of the exposition of the entire plan of the *Instauratio Magna* (*Distributio Operis*) which was also prefixed to the *Novum Organum* on its first publication:—

Thou, O Father, who gavest the visible light as the first-born of thy creatures, and didst pour into man the intellectual light as the top and consummation of thy workmanship, be pleased to protect and govern this work, which coming from thy goodness, returneth to thy glory. Thou, after thou hadst reviewed the works which thy hands had made, beheldest that every thing was very good, and thou didst rest with complacency in them. But man, reflecting on the works which he had made, saw that all was vanity and vexation of spirit, and could by no means acquiesce in them. Wherefore, if we labour in thy works with the sweat of our brows, thou wilt make us partakers of thy vision and thy sabbath. We humbly beg that this mind may be stedfastly in us; and that thou, by our hands, and also by the hands of others, on whom thou shalt bestow the same spirit, wilt please to convey a largess of new alms to thy family of mankind. These things we commend to thy everlasting love, by our Jesus, thy Christ, God with us. Amen.

Lastly, there is "The Translation of Certain Psalms into English Verse," first published by Bacon himself in a 4to. pamphlet, in 1628, and reprinted in the Second Part of the *Resuscitatio* (1661). In a Dedication to his "Very good friend, Mr. George Herbert (the well-known sacred poet)," Bacon describes these performances as the poor exercise of his sickness, meaning, according to Tenison, a sickness which he had had in this year 1625. The Psalms which he versifies are the First, the Twelfth, the Ninetieth, the Hundred and Fourth, the Hundred and Twenty-sixth, the Hundred and Thirty-seventh, and the Hundred and Forty-ninth. The translation, or paraphrase, which he produces of the First, will be a sufficient specimen:—

Who never gave to wicked reed \*  
 A yielding and attentive ear;  
 Who never sinners' paths did tread,  
 Nor sat him down in scorner's chair;  
 But maketh it his whole delight  
 On law of God to meditate;  
 And therein spendeth day and night:  
 That man is in a happy state.

He shall be like the fruitful tree  
 Planted along a running spring,  
 Which, in due season, constantly  
 A goodly yield of fruit doth bring;  
 Whose leaves continue always green,  
 And are no prey to winter's pow'r:  
 So shall that man not once be seen  
 Surprised with an evil hour.

With wicked men it is not so,  
 Their lot is of another kind:  
 All as the chaff, which to and fro  
 Is toss'd at mercy of the wind.  
 And when he shall in judgment plead,  
 A casting sentence bide he must:  
 So shall he not lift up his head  
 In the assembly of the just.

For why? the Lord hath special eye  
 To be the godly's stay at call:  
 And hath given over, righteously,  
 The wicked man to take his fall.

The attempt, it will be perceived, is not very successful; but it is one in which Milton has failed, as well as Bacon; and it may therefore be concluded that there is something in this old Hebrew poetry not very pliable to the trammels of English metre, at least of the more formal or artificial kind. Perhaps what the genius of Milton chiefly wanted for such a task was more of natural impulsiveness and spontaneous fervour; and there Bacon was also deficient. But the latter, with all his wonderful abundance and promptitude of fancy, and also his lofti-

\* Counsel.

ness and grandeur of conception, was essentially a rhetorician, not a poet. He wanted sensibility in all its forms. If he was a deep thinker, of depth of feeling he certainly had no capacity. There is no passion in anything he has written, any more than there was ever anything high-spirited in his conduct. His verses might have had the coloured light of poetry, but they would have had none of its fire. And, perhaps, in other respects also his nature, both moral and intellectual, wanted the unity and completeness, the harmonious combination of opposite endowments, necessary for "the vision and the faculty divine" which makes a great poet.

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## SECTION V.

## THE HISTORICAL WORKS.

BACON has himself in his Latin Letter to Father Fulgentio, written towards the close of his life, classed together his Moral and his Historical works; and they come properly under the same division. They are distinguished by the same general character from his other writings: from his Philosophical or Scientific works on the one hand; from his Letters, and other remains chiefly referring to the events of his own life or of his own time, on the other. Under these three heads all his writings may be conveniently enough arranged. His Moral and Theological works are full of narrative or historical passages; his Historical works of moral disquisition and reflection. History, in truth, is only ethical and economical speculation in a narrative form, the actual exemplification of the principles and precepts of moral wisdom.

Bacon's principal and indeed only considerable historical work is his 'History of the Reign of King Henry the Seventh,' first published, in a folio volume, in 1622. "This," says Tenison, "was the first book which he composed after his retirement from an active life." We have already had occasion to quote his Letter to the King of the 21st of April, 1621, announcing his intention of writing it.

In another Letter to the King, dated the 8th of October, he seems to speak of it as already finished: "I durst not," he says, "have presumed to entreat your majesty to look over the book, and correct it, or at least to signify what you would have amended; but, since you are pleased to send for the book, I will hope for it." It had, as we have seen from the Letter of Sir Thomas Meautys, been perused by his majesty in manuscript

before the 7th of January of the following year. The author presents printed copies of his work to the king and Buckingham in Letters dated from Gorhambury the 20th of March, 1622.\* In a Letter to Meautys, dated the 21st, he expressly speaks of it as having been three months in the king's hands. When it appeared in print, it was introduced by a short Dedication, without date, to the Prince of Wales (afterwards Charles I.). The first translation of it appears to have been that into French, which was published in 8vo. at Paris in 1627. The Latin version was first published at London in 1638, in folio, in the collection of pieces, entitled 'Francisci Baconi, Baronis, &c., Moraliũ et Civilium Tomus—ab ipso honoratissimo auctore, præterquam in paucis, Latinitate donatus; Cura et fide Guilielmi Rawley, &c.' to which we have already had occasion to refer. This title-page would seem to entitle us to conclude that the History of Henry the Seventh had been turned into Latin by Bacon himself; since, from its extent, it certainly cannot well come under the description of the few things in the volume excepted from the general statement that he had been his own translator. Rawley also, in his Life of Bacon, expressly mentions the translation into Latin of this History as among "the fruits and productions of his last five years." And in the Dedication of the last edition of the Essays to the Duke of Buckingham, as we have seen, Bacon himself speaks of

\* Mr. Montagu, in his bibliographical Preface to the History (*Works*, vol. iii.), throws the whole statement into confusion by making it appear as if the letter of October, 1621, had been written *subsequently* to those of March, 1622 (or 1621, according to the then mode of reckoning). Throughout his edition, as far as we have observed, Mr. Montagu's attention is never by any chance once awakened to the circumstance that in Bacon's time the year did not end till the 24th of March; and the quantity of perplexity, contradiction, and unintelligibility occasioned in every part of his labours by this single inadvertency is past all describing. In the present instance, the substance of the Letters ought to have prevented their misarrangement.

having now also translated his History into Latin. In the first instance, however, as would appear from his Letter to Mr. Toby Matthew, quoted in a preceding section, he had contemplated getting the History as well as the Essays translated by another hand.

One biographer of Bacon after another has spoken of the History of Henry the Seventh as a performance in which Bacon's ability and eloquence almost deserted him, or at least as a work markedly and indisputably inferior to everything else of any considerable pretension that he has left us. No race of writers so repeat and parrot one another as the common tribe of biographers—so take both facts and opinions upon trust. And, in the case especially of a voluminous writer, it is from his biographers and not from himself that the popular notion of him is almost exclusively derived. The vulgar judgment upon Bacon's Henry the Seventh, we may with perfect safety affirm, can only have come out of the work not having been read by the generality of those who have written about it. No probable dulness or insensibility in the critic could otherwise have either originated or taken up so false a notion. It is simply a fact, which will not bear disputing, that this History of Bacon's is, in the first place, one of the most characteristic of his works, and one which he has evidently executed most *con amore* and with his whole heart and soul in what he was about; and, secondly, that it is one of the most animated, graphic, and altogether felicitous historical pieces in the language. The list of our historical works of eminent merit, indeed, is so short that it would not be much to ask, what else have we of the same kind that is better or so good; but we may observe that, when it first appeared, the best judges could find only one other work, Camden's Latin Annals of the Reign of Elizabeth, to compare with it; and nobody who knows the two will now admit that respectable but not brilliant performance to be even an example of the same kind of writing. If Bacon's Henry the Seventh had any worthy precursor it was Sir Thomas More's Richard the Third, of which it is in fact the continuation. But that is merely a fragment. And, after



men, and that the Staffords were in arms in Worcestershire, and had made their approaches to the city of Worcester to assault it. The king, as a prince of great and profound judgment, was not much moved with it; for that he thought it was but a rag or remnant of Bosworth field, and had nothing in it of the main party of the House of York. But he was more doubtful of the raising of forces to resist the rebels, than of the resistance itself; for that he was in a core of people whose affections he suspected. But the action enduring no delay, he did speedily levy and send against the Lord Lovel to the number of three thousand men, ill armed but well assured, being taken some few out of his own train, and the rest out of the tenants and followers of such as were safe to be trusted, under the conduct of the Duke of Bedford. And as his manner was to send his pardons rather before the sword than after, he gave permission to the duke to proclaim pardon to all that would come in; which the duke upon his approach to Lord Lovel's camp did perform. And it fell out as the king expected; the heralds were the great ordnance. For the Lord Lovel, upon proclamation of pardon, mistrusting his men, fled into Lancashire and lurking for a time with Sir Thomas Broughton, after sailed over into Flanders to the Lady Margaret; and his men, forsaken of their captain, did presently submit themselves to the duke. The Staffords likewise, and their forces, hearing what had happened to the Lord Lovel, in whose success their chief trust was, despaired and dispersed; the two brothers taking sanctuary at Colnham, a village near Abingdon. Which place upon view of their privilege in the King's Bench, being judged no sufficient sanctuary for traitors, Humphrey was executed at Tyburn; and Thomas, as being led by his elder brother, was pardoned. So this rebellion proved but a blast, and the king having by this journey purged a little the dregs and leaven of the northern people that were before in no good affection towards him, returned to London.

Then follows the story of the first Pretender, Lambert Simnell:—

There followed this year, being the second of the king's reign, a strange accident of state, whereof the relations which we have are so naked, as they leave it scarce credible; not for the nature of it, for it hath fallen out often, but for the manner and circumstance of it, especially in the beginnings. Therefore we shall make our judgment upon the things themselves,

as they give light one to another, and as we can dig truth out of the mine. The king was green in his estate; and contrary to his own opinion and desert both, was not without much hatred throughout the realm. The root of all was the discountenancing of the House of York; which the general body of the realm still affected. This did alienate the hearts of the subjects from him daily more and more, especially when they saw, that after his marriage, and after a son born, the king did, nevertheless, not so much as proceed to the coronation of the queen, not vouchsafing her the honour of a matrimonial crown; for the coronation of her was not till almost two years after, when danger had taught him what to do. But much more when it was spread abroad, whether by error or the cunning of malcontents, that the king had a purpose to put to death Edward Plantagenet closely in the Tower: whose case was so nearly paralleled with that of Edward the Fourth's children, in respect of the blood, like age, and the very place of the Tower, as it did refresh and reflect upon the king a most odious resemblance, as if he would be another King Richard. And all this time it was still whispered everywhere, that at least one of the children of Edward the Fourth was living: which bruit was cunningly somented by such as desired innovation. Neither was the king's nature and customs greatly fit to disperse these mists, but contrariwise, he had a fashion rather to create doubts than assurance. Thus was fuel prepared for the spark: the spark, that afterwards kindled such a fire and combustion, was at the first contemptible.

There was a subtle priest called Richard Simon, that lived in Oxford, and had to his pupil a baker's son, named Lambert Simnell, of the age of some fifteen years, a comely youth, and well favoured, not without some extraordinary dignity and grace of aspect. It came into this priest's fancy, hearing what men talked, and in hope to raise himself to some great bishopric, to cause this lad to counterfeit and personate the second son of Edward the Fourth, supposed to be murdered; and afterwards, for he had changed his intention in the manage, the Lord Edward Plantagenet, then prisoner in the Tower, and accordingly to frame him and instruct him in the part he was to play. This is that which, as was touched before, seemeth scarcely credible; not that a false person should be assumed to gain a kingdom, for it hath been seen in ancient and late times; nor that it should come into the mind of such an abject fellow to enterprise so great a matter; for high conceits do sometimes come streaming into the imaginations of bas

persons, especially when they are drunk with news and talk of the people. But here is that which hath no appearance: that this priest being utterly unacquainted with the true person, according to whose pattern he should shape his counterfeit, should think it possible for him to instruct his player either in gesture or fashions, or in recounting past matters of his life and education; or in fit answers to questions, or the like, any ways to come near the resemblance of him whom he was to represent. For this lad was not to personate one that had been long before taken out of his cradle, or conveyed away in his infancy, known to few; but a youth, that till the age almost of ten years had been brought up in a court where infinite eyes had been upon him. For King Edward, touched with remorse of his brother the Duke of Clarence's death, would not indeed restore his son, of whom we speak, to be Duke of Clarence, but yet created him Earl of Warwick, reviving his honour on the mother's side; and used him honourably during his time, though Richard the Third afterwards confined him. So that it cannot be, but that some great person that knew particularly and familiarly Edward Plantagenet, had a hand in the business, from whom the priest might take his aim. That which is most probable, out of the precedent and subsequent acts is, that it was the queen-dowager from whom this action had the principal source and motion. For certain it is she was a busy negotiating woman, and in her withdrawing chamber had the fortunate conspiracy for the king against King Richard the Third been hatched; which the king knew, and remembered perhaps but too well; and was at this time extremely discontent with the king, thinking her daughter, as the king handled the matter, not advanced but depressed: and none could hold the book so well to prompt and instruct this stage-play as she could. Nevertheless it was not her meaning, nor no more was it the meaning of any of the better and sager sort that favoured this enterprise, and knew the secret, that this disguised idol should possess the crown; but at his peril to make way to the overthrow of the king; and that done they had their several hopes and ways. That which doth chiefly fortify this conjecture is, that as soon as the matter brake forth in any strength, it was one of the king's first acts to cloister the queen-dowager in the nunnery of Bermondsey, and to take away all her lands and estate; and this by a close council, without any legal proceeding, upon far-fetched pretences, that she had delivered her two daughters out of sanctuary to King Richard, contrary to promise. Which proceeding being even at that time taxed for

rigorous and undue, both in matter and manner, makes it very probable there was some greater matter against her, which the king upon reason of policy, and to avoid envy, would not publish. It is likewise no small argument that there was some secret in it, and some suppressing of examinations, for that the priest Simon himself, after he was taken, was never brought to execution; no, not so much as to public trial, as many clergymen were upon less treasons, but was only shut up close in a dungeon. Add to this, that after the Earl of Lincoln, a principal person of the House of York, was slain in Stoke-field, the king opened himself to some of his council, that he was sorry for the earl's death, because by him, he said, he might have known the bottom of his danger.

But to return to the narration itself: Simon did first instruct his scholar for the part of Richard, Duke of York, second son to King Edward the Fourth; and this was at such time as it was voiced, that the king purposed to put to death Edward Plantagenet, prisoner in the Tower, whereat there was great murmur. But hearing soon after a general bruit that Plantagenet had escaped out of the Tower, and thereby finding him so much beloved amongst the people, and such rejoicing at his escape, the cunning priest changed his copy, and chose now Plantagenet to be the subject his pupil should personate, because he was more in the present speech and votes of the people; and it pieced better, and followed more close and handsomely, upon the bruit of Plantagenet's escape. But yet doubting that there would be too near looking, and too much perspective into his disguise, if he should show it here in England; he thought good, after the manner of scenes in stage plays and masks, to show it afar off; and therefore sailed with his scholar into Ireland, where the affection to the House of York was most in height. The king had been a little improvident in the matters of Ireland, and had not removed officers and counsellors, and put in their places, or at least intermingled, persons of whom he stood assured, as he should have done, since he knew the strong bent of that country towards the House of York; and that it was a ticklish and unsettled state, more easy to receive distempers and mutations than England was. But trusting to the reputation of his victories and successes in England, he thought he should have time enough to extend his cares afterwards to that second kingdom.

Wherefore, through this neglect, upon the coming of Simon with his pretended Plantagenet into Ireland, all things were prepared for revolt and sedition, almost as if they had been set

and plotted beforehand.—Simon's first address was to the Lord Thomas Fitz-Gerard, Earl of Kildare, and deputy of Ireland; before whose eyes he did cast such a mist, by his own insinuation, and by the carriage of his youth, that expressed a natural princely behaviour, as joined perhaps with some inward vapours of ambition and affection in the earl's own mind, left him fully possessed, that it was the true Plantagenet. The earl presently communicated the matter with some of the nobles, and others there, at the first secretly; but finding them of like affection to himself, he suffered it of purpose to vent and pass abroad; because they thought it not safe to resolve till they had a taste of the people's inclination. But if the great ones were in forwardness, the people were in fury, entertaining this airy body or phantasm with incredible affection; partly out of their great devotion to the House of York; partly out of a proud humour in the nation, to give a king to the realm of England. Neither did the party in this heat of affection, much trouble themselves with the attainder of George, Duke of Clarence; having newly learned by the king's example, that attainders do not interrupt the conveying of title to the crown. And as for the daughters of King Edward the Fourth, they thought King Richard had said enough for them; and took them to be but as of the king's party, because they were in his power and at his disposing. So that with marvellous consent and applause, this counterfeit Plantagenet was brought with great solemnity to the castle of Dublin, and there saluted, served, and honoured as king; the boy becoming it well, and doing nothing that did bewray the baseness of his condition. And within a few days after he was proclaimed king in Dublin, by the name of King Edward the Sixth; there being not a sword drawn in King Henry his quarrel.

Henry's first proceeding, for reasons which are somewhat mysterious, was the seclusion of the queen dowager, his mother-in-law, in the nunnery of Bermondsey:—

This lady was amongst the examples of great variety of fortune. She had first from a distressed suitor, and desolate widow, been taken to the marriage bed of a bachelor king, the goodliest personage of his time; and even in his reign she had endured a strange eclipse by the king's flight, and temporary depriving of the crown. She was also very happy, in that she had by him fair issue; and continued his nuptial love, helping herself by some obsequious bearing and dissembling of his

pleasures to the very end. She was much affectionate to her own kindred, even unto faction; which did stir great envy in the lords of the king's side, who counted her blood a disparagement to be mingled with the king's. With which lords of the king's blood joined also the king's favourite, the Lord Hastings; who, notwithstanding the king's great affection to him, was thought at times, through her malice and spleen, not to be out of danger of falling. After her husband's death she was matter of tragedy, having lived to see her brother beheaded, and her two sons deposed from the crown, bastarded in their blood, and cruelly murdered. All this while nevertheless she enjoyed her liberty, state, and fortunes: but afterwards again, upon the rise of the wheel, when she had a king to her son-in-law, and was made grandmother to a grandchild of the best sex; yet was she upon dark and unknown reasons, and no less strange pretences, precipitated and banished the world into a nunnery; where it was almost thought dangerous to visit her, or see her; and where not long after she ended her life: but was by the king's commandment buried with the king her husband, at Windsor. She was foundress of Queen's College in Cambridge. For this act the king sustained great obloquy, which nevertheless, besides the reason of state, was somewhat sweetened to him by a great confiscation.

A page or two farther on we are introduced to another female member of the House of York, destined to figure conspicuously in the sequel, the Lady Margaret of Burgundy:—

Margaret was second sister to King Edward the Fourth, and had been second wife to Charles, surnamed the Hardy, Duke of Burgundy, by whom, having no children of her own, she did, with singular care and tenderness, intend the education of Philip and Margaret, grandchildren to her former husband; which won her great love and authority among the Dutch. This Princess, having the spirit of a man and malice of a woman, abounding in treasure by the greatness of her dower and her provident government, and being childless, and without any nearer care, made it her design and enterprise to see the majesty royal of England once again replaced in her house, and had set up King Henry as a mark at whose overthrow all her actions should aim and shoot, insomuch as all the counsels of his succeeding troubles came chiefly out of that quiver. And she bare such a mortal hatred to the house of Lancaster

and personally to the King, as she was noways mollified by the conjunction of the houses in her niece's marriage, but rather hated her niece as the means of the King's ascent to the crown, and assurance therein.

The cause of the Pretender had been taken up in England, most probably with a view to ulterior objects of his own, by John Earl of Lincoln, son of John de la Pole, Duke of Suffolk, and of Elizabeth, King Edward the Fourth's eldest sister, a man of great wit and courage; two thousand Germans had come over under the command of Martin Swart, a valiant and experienced captain; and the rebels in these circumstances determined to leave Ireland, and to strike their great blow in England. "The King, in the mean time, who at the first when he heard what was done in Ireland, though it troubled him, yet thought he should be well enough able to scatter the Irish as a flight of birds, and rattle away this swarm of bees with their king; when he heard afterwards that the Earl of Lincoln was embarked in the action, and that the Lady Margaret was declared for it, he apprehended the danger in a true degree as it was, and saw plainly that his kingdom must again be put to the stake, and that he must fight for it." And here is the narrative of the bloody issue as it was determined near Newark, in Nottinghamshire, on the 16th of June, 1487:—

The Earl, nothing dismayed, came forward that day unto a little village called Stoke and there encamped that night, upon the brow or hanging of a hill. The King next day presented him battle upon the plain, the fields there being open and champaign. The Earl courageously came down and joined battle with him. Concerning which battle the relations that are left unto us are so naked and negligent, though it be an action of so recent memory, as they rather declare the success of the day than the manner of the fight. They say that the King divided his army into three battails, whereof the vant-guard only, well strengthened with wings, came to fight: that the fight was fierce and obstinate and lasted three hours before the victory inclined either way, save that judgment might be made by that the King's vant-guard of itself maintained fight against the whole

power of the enemies (the other two battails remaining out of action), what the success was like to be in the end—that Martin Swart with his Germans performed bravely, and so did those few English that were on that side: neither did the Irish fail in courage or fierceness, but, being almost naked men, only armed with darts and skeins, it was rather an execution than a fight upon them, insomuch as the furious slaughter of them was a great discouragement and appalment to the rest: that there died upon the place all the chieftains, that is, the Earl of Lincoln, the Earl of Kildare, Francis Lord Lovel, Martin Swart, and Sir Thomas Broughton, all making good the fight without any ground given. Only of the Lord Lovel there went a report that he fled, and swam over Trent on horseback, but could not recover the farther side by reason of the steepness of the bank, and so was drowned in the river. But another report leaves him not there, but that he lived long after in a cave or vault. The number that was slain in the field was, of the enemy's part, four thousand at the least, and of the King's part, one half his vant-guard, besides many hurt, but none of name. There were taken prisoners, amongst others, the counterfeit Plantagenet, now Lambert Simnell again, and the crafty priest, his tutor. For Lambert, the King would not take his life, both out of magnanimity, taking him but as an image of wax that others had tempered and moulded, and likewise out of wisdom, thinking that if he suffered death he would be forgotten too soon, but, being kept alive, he would be a continual spectacle, and a kind of remedy against the like enchantments of people in time to come. For which cause he was taken into service in his court to a base office in his kitchen, so that, in a kind of "mattacina" of human fortune, he turned a brooch that had worn a crown; whereas fortune commonly doth not bring in a comedy or farce after a tragedy. And afterwards he was preferred to be one of the King's falconers. As to the priest, he was committed close prisoner, and heard of no more—the King loving to seal up his own dangers.

Passing over many other things, all brilliantly related, we will now proceed to the more famous story of the second Pretender, Perkin Warbeck, first heard of in 1492:—

At this time the King began again to be haunted with spirits, by the magic and curious arts of the Lady Margaret, who raised up the ghost of Richard, Duke of York, second son to King Edward the Fourth, to walk and vex the King. This was a



finer counterfeit stone than Lambert Simnell, better done and worn upon greater hands, being graced after with the wearing of a King of France and a King of Scotland, not of a Duchess of Burgundy only. And for Simnell, there was not much in him more than that he was a handsome boy, and did not shame his robes. But this youth of whom we are now to speak was such a mercurial as the like hath seldom been known, and could make his own part if at any time he chanced to be out. Wherefore this, being one of the strangest examples of a personation that ever was, in elder or later times, it deserveth to be discovered and related at the full—although the King's manner of showing things by pieces and by dark lights hath so muffled it, that it hath been left almost as a mystery to this day.

The Lady Margaret, whom the King's friends called Juno, because she was to him as Juno was to Æneas, stirring both heaven and hell to do him mischief, for a foundation of her particular practices against him, did continually, by all means possible, nourish, maintain, and divulge the flying opinion that Richard, Duke of York, second son to Edward the Fourth, was not murdered in the Tower, as was given out, but saved alive. For that those who were employed in that barbarous fact, having destroyed the elder brother, were stricken with remorse and compassion towards the younger, and set him privily at liberty to seek his fortune. This lure she cast abroad, thinking that this fame and belief, together with the fresh example of Lambert Simnell would draw, at one time or other, some birds to strike upon it. She used likewise a further diligence, not committing all to chance, for she had some secret espials, like to the Turks' commissioners for children of tribute, to look abroad for handsome and graceful youths, to make Plantagenets and Dukes of York. At the last she did light on one, in whom all things met as one would wish, to serve her turn for a counterfeit Richard, Duke of York.

This was Perkin Warbeck, whose adventures we shall now describe. For first, the years agreed well. Secondly, he was a youth of fine favour and shape. But more than that, he had such a crafty and bewitching fashion, both to move pity, and to induce belief, as was like a kind of fascination and enchantment to those that saw him or heard him. Thirdly, he had been from his childhood such a wanderer, or, as the King called him, such a land-loper, as it was extreme hard to hunt out his nest and parents. Neither again could any man, by company or conversing with him, be able to say or detect well what he was, he did so fit from place to place. Lastly, there was a circumstance, which is mentioned by one that wrote in the same time,

that is very likely to have made somewhat to the matter, which is, that King Edward the Fourth was his godfather. Which, as it is somewhat suspicious for a wanton prince to become gossip in so mean a house, and might make a man think that he might indeed have in him some base blood of the house of York; so at the least, though that were not, it might give the occasion to the boy, in being called King Edward's godson, or, perhaps in sport, King Edward's son, to entertain such thoughts in his head. For tutor he had none, for ought that appears, as Lambert Simnell had, until he came unto the Lady Margaret, who instructed him.

Thus, therefore, it came to pass: there was a townsman of Tournay, that had borne office in that town, whose name was John Osbeck, a convert Jew, married to Catharine de Faro, whose business drew him to live for a time with his wife at London, in King Edward the Fourth's days. During which time he had a son by her, and, being known in the Court, the King, either out of a religious nobleness because he was a convert, or upon some private acquaintance, did him the honour to be god-father to his child, and named him Peter. But afterwards, proving a dainty and effeminate youth, he was commonly called by the diminutive of his name, Peterkin or Perkin. For as for the name of Warbeck, it was given him when they did but guess at it, before examinations had been taken. But yet he had been so much talked of by that name, as it stuck by him after his true name of Osbeck was known. While he was a young child, his parents returned with him to Tournay. There he was placed in the house of a kinsman of his, called John Stenbeck, at Antwerp, and so roved up and down between Antwerp and Tournay, and other towns of Flanders for a good time, living much in English company and having the English tongue perfect. In which time, being grown a comely youth, he was brought by some of the espials of the Lady Margaret into her presence. Who, viewing him well, and seeing that he had a face and personage that would bear a noble fortune, and finding him otherwise of a fine spirit and winning behaviour, thought she had now found a curious piece of marble to carve out an image of a Duke of York. She kept him by her a great while, but with extreme secrecy. The while she instructed him by many Cabinet conferences. First, in princely behaviour and gesture, teaching him how he should keep state, and yet with a modest sense of his misfortunes. Then she informed him of all the circumstances and particulars that concerned the person of Richard, Duke of York, which he was

to act, describing unto him the personages, lineaments, and features of the King and Queen, his pretended parents; and of his brother and sisters, and divers others, that were nearest him in his childhood; together with all passages, some secret, some common, that were fit for a child's memory, until the death of King Edward. Then she added the particulars of the time from the King's death, until he and his brother were committed to the Tower, as well during the time he was abroad as while he was in sanctuary. As for the times while he was in the Tower, and the manner of his brother's death, and his own escape, she knew they were things, that a very few could control. And therefore she taught him only to tell a smooth and likely tale of those matters, warning him not to vary from it. It was agreed likewise between them what account he should give of his peregrination abroad, intermixing many things which were true, and such as they knew others could testify, for the credit of the rest, but still making them to hang together with the part he was to play. She taught him likewise how to avoid sundry captious and tempting questions which were like to be asked of him. But in this she found him so nimble and shifting, as she trusted much to his own wit and readiness, and therefore laboured the less in it. Lastly, she raised his thoughts with some present rewards, and further promises, setting before him chiefly the glory and fortune of a crown if things went well, and a sure refuge to her Court if the worst should fall. After such time as she thought he was perfect in his lesson, she began to cast with herself from what coast this blazing star should first appear, and at what time it must be upon the horizon of Ireland, for there had the like meteor strong influence before. The time of the apparition to be when the King should be engaged into a war with France. But well she knew that whatsoever should come from her would be held suspected. And therefore if he should go out of Flanders immediately into Ireland, she might be thought to have some hand in it. And besides, the time was not yet ripe, for that the two kings were then upon terms of peace. Therefore she wheeled about; and to put all suspicion afar off, and loth to keep him any longer by her, for that she knew secrets are not long-lived, she sent him unknown into Portugal, with the Lady Brampton, an English lady, that embarked for Portugal at that time, with some privado of her own, to have an eye upon him, and there he was to remain, and to expect her further directions. In the meantime she omitted not to prepare things for his better welcome and accepting, not only in the kingdom of Ireland, but in the court

of France. He continued in Portugal about a year, and by that time the King of England called his Parliament, as hath been said, and declared open war against France. Now did the sign reign, and the constellation was come, under which Perkin should appear. And therefore he was straight sent unto by the Duchess, to go for Ireland, according to the first designment. In Ireland he did arrive, at the town of Cork. When he was thither come, his own tale was, when he made his confession afterwards, that the Irishmen, finding him in some good clothes, came flocking about him, and bare him down that he was the Duke of Clarence that had been there before. And after, that he was Richard the Third's base son. And lastly, that he was Richard, Duke of York, second son to Edward the Fourth. But that he, for his part, renounced all these things, and offered to swear, upon the Holy Evangelists, that he was no such man; till at last they forced it upon him, and bade him fear nothing, and so forth. But the truth is, that immediately upon his coming into Ireland, he took upon him the said person of the Duke of York, and drew unto him complices and partakers by all the means he could devise. Insomuch as he wrote his letters unto the Earls of Desmond and Kildare, to come in to his aid, and be of his party; the originals of which letters are yet extant.

Somewhat before this time, the duchess had also gained unto her a near servant of King Henry's own, one Stephen Frion, his secretary for the French tongue; an active man, but turbulent and discontented. This Frion had fled over to Charles, the French king, and put himself into his service, at such time as he began to be in open enmity with the king. Now King Charles, when he understood of the person and attempts of Perkin, ready of himself to embrace all advantages against the King of England, instigated by Frion, and formerly prepared by the Lady Margaret, forthwith despatched one Lucas and this Frion, in the nature of ambassadors to Perkin, to advertise him of the king's good inclination to him, and that he was resolved to aid him to recover his right against King Henry, an usurper of England, and an enemy of France; and wished him to come over unto him at Paris. Perkin thought himself in heaven now that he was invited by so great a king in so honourable a manner. And imparting unto his friends in Ireland, for their encouragement, how fortune called him, and what great hopes he had, sailed presently into France. When he was come to the court of France, the king received him with great honour, saluted and styled him by the name of the Duke of

York : lodged him and accommodated him in great state. And the better to give him the representation and the countenance of a prince, assigned him a guard for his person, whereof the Lord Congresall was captain. The courtiers likewise, though it be ill mocking with the French, applied themselves to their king's bent, seeing there was reason of state for it. At the same time there repaired unto Perkin divers Englishmen of quality; Sir George Neville, Sir John Taylor, and about one hundred more, and amongst the rest this Stephen Frion, of whom we spake, who followed his fortune both then and for a long time after, and was, indeed, his principal counsellor and instrument in all his proceedings. But all this on the French king's part was but a trick, the better to bow King Henry to peace. And therefore upon the first grain of incense that was sacrificed upon the altar of peace at Boloign, Perkin was smoked away. Yet would not the French king deliver him up to King Henry, as he was laboured to do, for his honour's sake, but warned him away and dismissed him. And Perkin, on his part, was as ready to be gone, doubting he might be caught up underhand. He therefore took his way into Flanders, unto the Duchess of Burgundy, pretending that, having been variously tossed by fortune, he directed his course thither as to a safe harbour, noways taking knowledge that he had ever been there before, but as if that had been his first address. The Duchess, on the other part, made it as new strange to see him, pretending, at the first, that she was taught and made wise, by the example of Lambert Simnell, how she did admit of any counterfeit stuff, though, even in that, she said, she was not fully satisfied. She pretended at the first, and that was ever in the presence of others, to pose him and sift him, thereby to try whether he were indeed the very Duke of York or no. But seeming to receive full satisfaction by his answers, she then feigned herself to be transported, with a kind of astonishment, mixt of joy and wonder, at his miraculous deliverance, receiving him as if he were risen from death to life, and inferring that God, who had in such wonderful manner preserved him from death, did likewise reserve him for some great and prosperous fortune. As for his dismissal out of France, they interpreted it, not as if he were detected or neglected for a counterfeit deceiver, but contrariwise, that it did show manifestly unto the world that he was some great matter, for that it was his abandoning that, in effect, made the peace, being no more but the sacrificing of a poor distressed prince unto the utility and ambition of two mighty monarchs. Neither was Perkin, for his part, wanting to himself, either in gracious or

princely behaviour, or in ready and apposite answers, or in contenting and caressing those that did apply themselves unto him, or in pretty scorn and disdain to those that seemed to doubt of him; but in all things did notably acquit himself, insomuch as it was generally believed, as well amongst great persons as amongst the vulgar, that he was indeed Duke Richard. Nay, himself, with long and continual counterfeit-ing, and with oft telling a lie, was turned by habit almost into the thing he seemed to be, and from a liar to a believer. The duchess, therefore, as in a case out of doubt, did him all princely honour, calling him always by the name of her nephew, and giving the delicate title of the white rose of England, and appointed him a guard of thirty persons, halberdiers, clad in a party-coloured livery of murrey and blue, to attend his person. Her court, likewise, and generally the Dutch and strangers, in their usage towards him, expressed no less respect.

The news hereof came blazing and thundering over into England, that the Duke of York was sure alive. As for the name of Perkin Warbeck, it was not at that time come to light, but all the news ran upon the Duke of York; that he had been entertained in Ireland, bought and sold in France, and was now plainly avowed, and in great honour in Flanders. These fames took hold of divers; in some upon discontent, in some upon ambition, in some upon levity and desire of change, and in some few upon conscience and belief, but in most upon simplicity, and in divers out of dependence upon some of the better sort, who did in secret favour and nourish these bruits. And it was not long ere these rumours of novelty had begotten others of scandal and murmur against the king and his Government, taxing him for a great taxer of his people, and discountenancer of his nobility. The loss of Britain and the peace with France were not forgotten. But chiefly they fell upon the wrong that he did his queen, in that he did not reign in her right. Wherefore, they said, that God had now brought to light a masculine branch of the house of York, that would not be at his courtesy, howsoever he did depress his poor lady. And yet, as it fareth with things which are current with the multitude, and which they affect, these fames grew so general, as the authors were lost in the generality of the speakers; they being like running weeds that have no certain root, or like footings up and down impossible to be traced. But after awhile these ill humours drew to an head, and settled secretly in some eminent persons, which were Sir William Stanley, lord chamberlain of the king's household, the Lord Fitzwater, Sir Simon Mount-

fort, and Sir Thomas Thwaites. These entered into a secret conspiracy to favour Duke Richard's title. Nevertheless none engaged their fortunes in this business openly but two, Sir Robert Clifford and Master William Barley, who sailed over into Flanders, sent, indeed, from the party of the conspirators here, to understand the truth of those things that passed there, and not without some help of monies from hence; provisionally to be delivered, if they found and were satisfied that there was truth in these pretences. The person of Sir Robert Clifford, being a gentleman of fame and family, was extremely welcome to the Lady Margaret, who, after she had conference with him, brought him to the sight of Perkin, with whom he had often speech and discourse. So that in the end, won either by the duchess to affect, or by Perkin to believe, he wrote back into England, that he knew the person of Richard, Duke of York, as well as he knew his own, and that this young man was undoubtedly he. By this means all things grew prepared to revolt and sedition here, and the conspiracy came to have a correspondence between Flanders and England.

The king, on his part, was not asleep, but to arm or levy forces yet, he thought would but show fear, and do this idol too much worship. Nevertheless the ports he did shut up, or at least kept a watch on them, that none should pass to or fro that was suspected: but, for the rest, he chose to work by countermeine. His purposes were two: the one to lay open the abuse, the other to break the knot of the conspirators. To detect the abuse there were but two ways: the first, to make it manifest to the world that the Duke of York was indeed murdered, the other to prove that, were he dead or alive, yet Perkin was a counterfeit. For the first, thus it stood. There were but four persons that could speak upon knowledge to the murder of the Duke of York: Sir James Tirrel, the employed man from King Richard; John Dighton and Miles Forrest, his servants, the two butchers or tormentors, and the priest of the Tower that buried them. Of which four, Miles Forrest and the priest were dead, and there remained alive only Sir James Tirrel and John Dighton. These two the king caused to be committed to the Tower, and examined touching the manner of the death of the two innocent princes. They agreed both in a tale, as the king gave out, to this effect: that King Richard having directed his warrant for the putting of them to death to Brackenbury, the lieutenant of the Tower, was by him refused. Whereupon the king directed his warrant to Sir James Tirrel, to receive the keys of the Tower from the lieutenant, for the space of a night, for the King's

special service. That Sir James Tirrel accordingly repaired to the Tower by night, attended by his two servants afore-named, whom he had chosen for that purpose. That himself stood at the stair-foot, and sent these two villains to execute the murder. That they smothered them in their bed, and, that done, called up their master to see their naked dead bodies, which they had laid forth. That they were buried under the stairs, and some stones cast upon them. That when the report was made to King Richard, that his will was done, he gave Sir James Tirrel great thanks, but took exception to the place of their burial, being too base for them that were king's children. Whereupon, another night, by the king's warrant renewed, their bodies were removed by the priest of the Tower, and buried by him in some place which, by means of the priest's death soon after, could not be known. Thus much was then delivered abroad, to be the effect of those examinations; but the king, nevertheless, made no use of them in any of his declarations, whereby, as it seems, those examinations left the business somewhat perplexed. And as for Sir James Tirrel, he was soon after beheaded in the Tower-yard for other matters of treason. But John Dighton, who, it seemeth, spake best for the king, was forthwith set at liberty, and was the principal means of divulging this tradition. Therefore, this kind of proof being left so naked, the king used the more diligence in the latter, for the tracing of Perkin. To this purpose he sent abroad into several parts, and especially into Flanders, divers secret and nimble scouts and spies, some feigning themselves to fly over unto Perkin, and to adhere to him, and some under other pretences, to learn, search, and discover all the circumstances and particulars of Perkin's parents, birth, person, travels up and down, and in brief to have a journal as it were of his life and doings. He furnished these, his employed men, liberally with money, to draw on and reward intelligences; giving them also in charge, to advertise continually what they found, and, nevertheless, still go on. And ever, as one advertisement and discovery called up another, he employed other new men, where the business did require it. Others he employed in a more special nature and trust, to be his pioneers in the main countermine. These were directed to insinuate themselves into the familiarity and confidence of the principal persons of the party in Flanders, and so to learn what associates they had, and correspondents, either here in England or abroad; and how far every one engaged, and what new ones they meant afterwards to try or board. And as this for the persons, so for the actions themselves, to discover to the



bottom, as they could, the utmost of Perkin's and the conspirators, their intentions, hopes, and practices. These latter best-be-trust spies had some of them further instructions to practise and draw off the best friends and servants of Perkin, by making remonstrance to them how weakly his enterprise and hopes were built, and with how prudent and potent a king they had to deal; and to reconcile them to the king with promise of pardon and good conditions of reward. And, above the rest, to assail, sap, and work into the constancy of Sir Robert Clifford, and to win him, if they could, being the man that knew most of their secrets, and who, being won away, would most appal and discourage the rest, and in a manner break the knot.

There is a strange tradition that the king, being lost in a wood of suspicions, and not knowing whom to trust, had both intelligence with the confessors and chaplains of divers great men; and for the better credit of his espials abroad with the contrary side, did use to have them cursed at Paul's, by name, amongst the bead-roll of the king's enemies, according to the custom of those times. These espials plied their charge so roundly, as the king had an anatomy of Perkin alive, and was likewise well informed of the particular correspondent conspirators in England, and many other mysteries were revealed; and Sir Robert Clifford in especial won to be assured to the king, and industrious and officious for his service. The king, therefore, receiving a rich return of his diligence, and great satisfaction touching a number of particulars, first divulged and spread abroad the imposture and juggling of Perkin's person and travels, with the circumstances thereof throughout the realm; not by proclamation, because things were yet in examination, and so might receive the more or the less, but by court fames, which commonly print better than printed proclamations. Then thought he it also time to send an ambassage unto Archduke Philip into Flanders, for the abandoning and dismissing of Perkin. Herein he employed Sir Edward Poynings and Sir William Warham, doctor of the canon law. The archduke was then young, and governed by his council, before whom the ambassadors had audience, and Dr. Warham spake in this manner:

“ My lords, the king our master is very sorry that, England and your country here of Flanders having been counted as man and wife for so long a time, now this country of all others should be the stage where a base counterfeit should play the part of a King of England; not only to his grace's disquiet

and dishonour, but to the scorn and reproach of all sovereign princes. To counterfeit the dead image of a king in his coin is an high offence by all laws, but to counterfeit the living image of a king in his person, exceedeth all falsifications, except it should be that of a Mahomet, or an Antichrist, that counterfeit divine honour. The king hath too great an opinion of this sage council, to think that any of you is caught with this fable, though way may be given by you to the passion of some, the thing in itself is so improbable. To set testimonies aside of the death of Duke Richard, which the king hath upon record, plain and infallible, because they may be thought to be in the king's own power, let the thing testify for itself. Sense and reason no power can command. Is it possible, trow you, that King Richard should damn his soul and foul his name with so abominable a murder, and yet not mend his case? Or do you think that men of blood, that were his instruments, did turn to pity in the midst of their execution? Whereas, in cruel and savage beasts, and men also, the first draught of blood doth yet make them more fierce and enraged. Do you not know that the bloody executioners of tyrants do go to such errands with an halter about their neck; so that if they perform not they are sure to die for it? And do you think that these men would hazard their own lives for sparing another's? Admit they should have saved him, what should they have done with him? Turn him into London streets, that the watchmen or any passenger that should light upon him might carry him before a justice, and so all come to light? Or should they have kept him by them secretly? That surely would have required a great deal of care, charge, and continual fear. But, my lords, I labour too much in a clear business. The king is so wise, and hath so good friends abroad, as now he knoweth Duke Perkin from his cradle. And because he is a great prince, if you have any good poet here, he can help him with notes to write his life; and to parallel him with Lambert Simnell, now the king's falconer. And therefore, to speak plainly to your lordships, it is the strangest thing in the world that the Lady Margaret, excuse us if we name her, whose malice to the king is both causeless and endless, should now, when she is old, at the time when other women give over child-bearing, bring forth two such monsters; being not the births of nine or ten months but of many years. And whereas other natural mothers bring forth children weak, and not able to help themselves, she bringeth forth tall striplings, able, soon after their coming into the world, to bid battle to mighty kings. My lords, we stay unwillingly upon this part. We would

to God that lady would once taste the joys which God Almighty doth serve up unto her, in beholding her niece to reign in such honour, and with so much royal issue, which she might be pleased to account as her own. The king's request unto the archduke and your lordships might be, that, according to the example of King Charles, who hath already discarded him, you would banish this unworthy fellow out of your dominions. But because the king may justly expect more from an ancient confederate, than from a new reconciled enemy, he maketh this request unto you to deliver him up into his hands; pirates and impostors of this sort being fit to be accounted the common enemies of mankind, and no ways to be protected by the law of nations."

Perkin afterwards obtained the countenance and assistance of King James the Fourth of Scotland, who gave him in marriage the Lady Catherine Gordon, daughter of the Earl of Huntley, being a near kinswoman of his own, "and a young virgin of excellent beauty and virtue." In the winter of 1496-7, the Scottish King made an inroad into the northern counties of England, carrying his protégé along with him. Scarcely was this trouble over when an insurrection broke out in Cornwall against the levying of a subsidy which had been granted by the parliament:—

The Cornish being a race of men, stout of stomach, mighty of body and limb, and that lived hardy in a barren country, and many of them could, for a need, live under ground, that were tanners. They muttered extremely, that it was a thing not to be suffered, that for a little stir of the Scots, soon blown over, they should be thus grinded to powder with payments; and said it was for them to pay that had too much, and lived idly. But they would eat their bread they got with the sweat of their brows, and no man should take it from them. And as in the tides of people once up, there want not commonly stirring winds to make them more rough; so this people did light upon two ringleaders or captains of the rout. The one was one Michael Joseph, a blacksmith or farrier, of Bodmin, a notable talking fellow, and no less desirous to be talked of. The other was Thomas Flammock, a lawyer, who, by telling his neighbours commonly upon any occasion that the law was on their side, had gotten great sway amongst them. This man

talked learnedly, and as if he could tell how to make a rebellion, and never break the peace. He told the people, that subsidies were not to be granted, nor levied in this case; that is, for wars of Scotland; for that the law had provided another course, by service of escuage, for those journeys; much less when all was quiet, and war was made but a pretence to pill and pill the people. And therefore that it was good they should not stand now like sheep before the sheavers, but put on harness, and take weapons in their hands. Yet to do no creature hurt but go and deliver the king a strong petition for the laying down of those grievous payments, and for the punishment of those that had given him that counsel; to make others beware how they did the like in time to come. And said, for his part he did not see how they could do the duty of true Englishmen, and good liege-men, except they did deliver the king from such wicked ones, that would destroy both him and the country. Their aim was at Archbishop Merton and Sir Reginald Bray, who were the king's screens in this envy.

After that these two, Flammeck and the blacksmith, had by joint and several pratings found tokens of consent in the multitude, they offered themselves to lead them, until they should hear of better men to be their leaders, which they said would be ere long: telling them further, that they would be but their servants, and first in every danger; but doubted not but to make both the west-end and the east-end of England to meet in so good a quarrel; and that all, rightly understood, was but for the king's service. The people upon these seditious instigations, did arm, most of them with bows and arrows, and bills, and such other weapons of rude and country people, and forthwith under the command of their leaders, which in such cases is ever at pleasure, marched out of Cornwall through Devonshire unto Taunton in Somersetshire, without any slaughter, violence, or spoil of the country. At Taunton they killed in fury an officious and eager commissioner for the subsidy, whom they called the Provost of Perin. Thence they marched to Wells, where the Lord Audley, with whom their leaders had before some secret intelligence, a nobleman of an ancient family, but inquiet and popular, and aspiring to rain, came in to them, and was by them, with great gladness and cries of joy, accepted as their general: they being now proud that they were led by a nobleman. The Lord Audley led them on from Wells to Salisbury, and from Salisbury to Winchester. Thence the foolish people, who, in effect, led their leaders, had a mind to be led into Kent, fancying that the people there would join

with them; contrary to all reason or judgment, considering the Kentish men had showed great loyalty and affection to the king so lately before. But the rude people had heard Flammock say, that Kent was never conquered, and that they were the freest people of England. And upon these vain noises, they looked for great matters at their hands, in a cause which they conceited to be for the liberty of the subject. But when they were come into Kent, the country was so well settled, both by the king's late kind usage towards them, and by the credit and power of the Earl of Kent, the Lord Abergavenny, and the Lord Cobham, as neither gentleman nor yeoman came in to their aid, which did much damp and dismay many of the simpler sort; insomuch as divers of them did secretly fly from the army, and went home: but the sturdier sort, and those that were most engaged, stood by it, and rather waxed proud, than failed in hopes and courage. For as it did somewhat appal them, that the people came not in to them, so it did no less encourage them, that the king's forces had not set upon them, having marched from the west unto the east of England. Wherefore they kept on their way, and encamped upon Blackheath, between Greenwich and Eltham, threatening either to bid battle to the king, for now the seas went higher than to Mortou and Bray, or to take London within his view; imagining with themselves there to find no less fear than wealth. . . .

When therefore the rebels were encamped on Blackheath, upon the hill, whence they might behold the city of London, and the fair valley about it; the king knowing well, that it stood him upon, by how much the more he had hitherto protracted the time in not encountering them, by so much the sooner to despatch with them, that it might appear to have been no coldness in fore-slowing, but wisdom in choosing his time; resolved with all speed to assail them, and yet with that providence and surety, as should leave little to venture or fortune. And having very great and puissant forces about him, the better to master all events and accidents, he divided them into three parts; the first was led by the Earl of Oxford in chief, assisted by the Earls of Essex and Suffolk. These noblemen were appointed, with some cornets of horse and bands of foot, and good store of artillery, wheeling about to put themselves beyond the hill where the rebels were encamped; and to beset all the skirts and descents thereof, except those that lay towards London; whereby to have these wild beasts, as it were, in a toil. The second part of his forces, which were those that were to be most in action, and upon which he relied most for the for-

tune of the day, he did assign to be led by the lord chamberlain, who was appointed to set upon the rebels in front, from that side which is towards London. The third part of his forces, being likewise great and brave forces, he retained about himself, to be ready upon all events to restore the fight, or consummate the victory; and meanwhile to secure the city. And for that purpose he encamped in person in Saint George's Fields, putting himself between the city and the rebels. But the city of London, specially at the first, upon the near encamping of the rebels, was in great tumult: as it useth to be with wealthy and populous cities, especially those which for greatness and fortune are queens of their regions, who seldom see out of their windows or from their towers, an army of enemies. But that which troubled them most, was the conceit, that they dealt with a rout of people, with whom there was no composition or condition, or orderly treating, if need were; but likely to be bent altogether upon rapine and spoil. And although they had heard that the rebels had behaved themselves quietly and modestly by the way as they went; yet they doubted much that would not last, but rather make them more hungry, and more in appetite to fall upon spoil in the end. Wherefore there was great running to and fro of people, some to the gates, some to the walls, some to the water-side: giving themselves alarms and panic fears continually. Nevertheless both Tate the lord mayor, and Shaw and Haddon the sheriffs, did their parts, stoutly and well, in arming and ordering the people. And the king likewise did adjoin some captains of experience in the wars to advise and assist the citizens. But soon after, when they understood that the king had so ordered the matter, that the rebels must win three battles, before they could approach the city, and that he had put his own person between the rebels and them, and that the great care was, rather how to impound the rebels that none of them might escape, than that any doubt was made to vanquish them; they grew to be quiet and out of fear; the rather for the confidence they reposed, which was not small, in the three leaders, Oxford, Essex, and D'Aubigny; all men well famed and loved amongst the people. As for Jaspas, Duke of Bedford, whom the king used to employ with the first in his wars, he was then sick and died soon after.

It was the two and twentieth of June, and a Saturday, which was the day of the week the king fancied, when the battle was fought: though the king had, by all the art he could devise, given out a false day, as if he prepared to give the

rebels battle on the Monday following, the better to find them unprovided, and in disarray. The lords that were appointed to circle the hill, had some days before planted themselves, as at the receipt, in places convenient. In the afternoon, towards the decline of the day, which was done the better to keep the rebels in opinion that they should fight that day, the Lord D'Aubigny marched on towards them, and first beat some troops of them from Deptford-bridge, where they fought manfully; but being in no great number, were soon driven back, and fled up to their main army upon the hill. The army at that time, hearing of the approach of the king's forces, were putting themselves in array, not without much confusion. But neither had they placed, upon the first high ground towards the bridge, any forces to second the troops below, that kept the bridge; neither had they brought forwards their main battle, which stood in array far into the heath, near to the ascent of the hill. So that the earl with his forces mounted the hill, and recovered the plain without resistance. The Lord D'Aubigny charged them with great fury; insomuch as it had like, by accident, to have brangled the fortune of the day: for, by inconsiderate forwardness in fighting in the head of his troops, he was taken by the rebels, but immediately rescued and delivered. The rebels maintained the fight for a small time, and for their persons showed no want of courage; but being ill armed, and ill led, and without horse or artillery, they were with no great difficulty cut in pieces, and put to flight. And for their three leaders the Lord Audley, the blacksmith, and Flammock, as commonly the captains of commotions are but half-couraged men, suffered themselves to be taken alive. The number slain on the rebels' part were some two thousand men: their army amounting, as it is said, unto the number of sixteen thousand. The rest were, in effect, all taken; for that the hill, as was said, was encompassed with the king's forces round about. On the king's part there died about three hundred, most of them shot with arrows, which were reported to be of the length of a tailor's yard; so strong and mighty a bow the Cornish men were said to draw.

The victory thus obtained, the king created divers banners, as well upon Blackheath, where his lieutenant had won the field, whither he rode in person to perform the said creation, as in St. George's Fields, where his own person had been encamped. And for matter of liberality, he did, by open edict, give the goods of all the prisoners unto those that had taken them; either to take them in kind or compound for them

as they could. After matter of honour and liberality, followed matter of severity and execution. The Lord Audley was led from Newgate to Tower-hill, in a paper coat painted with his own arms; the arms reversed, the coat torn, and he at Tower-hill beheaded. Flammock and the blacksmith were hanged, drawn, and quartered at Tyburn: the blacksmith taking pleasure upon the hurdle, as it seemeth by words that he uttered, to think that he should be famous in after-times. The king was once in mind to have sent down Flammock and the blacksmith to have been executed in Cornwall, for the more terror; but being advertised that the country was yet unquiet and boiling, he thought better not to irritate the people further. All the rest were pardoned by proclamation, and to take out their pardons under seal, as many as would. So that, more than the blood drawn in the field, the king did satisfy himself with the lives of only three offenders, for the expiation of this great rebellion.

The following extracts give us the conclusion of the story of Perkin:—

The King of Scotland, though he would not formally retract his judgment of Perkin, wherein he had engaged himself so far; yet in his private opinion, upon often speech with the Englishmen, and divers other advertisements, began to suspect him for a counterfeit. Wherefore in a noble fashion he called him unto him, and recounted the benefits and favours that he had done him in making him his ally, and in provoking a mighty and opulent king by an offensive war in his quarrel, for the space of two years together; nay more, that he had refused an honourable peace, whereof he had a fair offer, if he would have delivered him; and that, to keep his promise with him, he had deeply offended both his nobles and people whom he might not hold in any long discontent; and therefore required him to think of his own fortunes, and to choose out some fitter place for his exile: telling him withal, that he could not say, but the English had forsaken him before the Scottish, for that, upon two several trials, none had declared themselves on his side; but nevertheless he would make good what he said to him at his first receiving, which was that he should not repent him for putting himself into his hands; for that he would not cast him off, but help him with shipping and means to transport him where he should desire. Perkin, not descending at all from his stage-like greatness, answered the king in few words



that he saw his time was not yet come ; but whatsoever his fortunes were, he should both think and speak honour of the king. Taking his leave, he would not think on Flanders, doubting it was but hollow ground for him since the treaty of the archduke, concluded the year before ; but took his lady, and such followers as would not leave him, and sailed over into Ireland. . . .

All this while the rebellion of Cornwall, whereof we have spoken, seemed to have no relation to Perkin ; save that perhaps Perkin's proclamation had stricken upon the right vein, in promising to lay down exactions and payments, and so had made them now and then have a kind thought on Perkin. But now these bubbles by much stirring began to meet, as they use to do upon the top of water. The king's lenity, by that time the Cornish rebels who were taken and pardoned, and, as it was said, many of them sold by them that had taken them, for twelve pence and two shillings a piece, were come down into their country, had rather emboldened them than reclaimed them ; insomuch as they stuck not to say to their neighbours and countrymen, that the king did well to pardon them, for that he knew he should leave few subjects in England, if he hanged all that were of their mind ; and began whetting and inciting one another to renew the commotion. Some of the subtlest of them, hearing of Perkin's being in Ireland, found means to send to him to let him know, that if he would come over to them they would serve him.

When Perkin heard this news, he began to take heart again, and advised upon it with his council, which were principally three : Herne, a mercer that had fled for debt ; Skelton, a tailor ; and Astley, a scrivener ; for Secretary Frion was gone. These told him, that he was mightily overseen, both when he went into Kent, and when he went into Scotland ; the one being a place so near London, and under the king's nose ; and the other a nation so distasted with the people of England, that if they had loved him never so well, yet they could never have taken his part in that company. But if he had been so happy as to have been in Cornwall at the first, when the people began to take arms there, he had been crowned at Westminster before this time. For, these kings, as he had now experience, would sell poor princes for shoes. But he must rely wholly upon people ; and therefore advised him to sail over with all possible speed into Cornwall ; which accordingly he did, having in his company four small barks, with some six score or seven score fighting men. He arrived in September at Whitsand-Bay,

and forthwith came to Bodmin, the blacksmith's town; where there assembled unto him to the number of three thousand men of the rude people. There he set forth a new proclamation, stroking the people with fair promises, and humouring them with invectives against the king and his government. And as it fareth with smoke, that never loseth itself till it be at the highest; he did now before his end raise his style, entitling himself no more Richard, Duke of York, but Richard the Fourth, King of England. His council advised him by all means to make himself master of some good walled town; as well to make his men find the sweetness of rich spoils, and to allure to him all loose and lost people, by like hopes of booty; as to be a sure retreat to his forces, in case they should have any ill day, or unlucky chance in the field. Wherefore they took heart to them, and went on, and besieged the city of Exeter, the principal town for strength and wealth in those parts. . .

Perkin, hearing this thunder of arms, and preparations against him from so many parts, raised his siege, and marched to Taunton; beginning already to squint one eye upon the crown and another upon the sanctuary; though the Cornish men were become, like metal often fired and quenched, churlish, and that would sooner break than bow; swearing and vowing not to leave him, till the uttermost drop of their blood were spilt. He was at his rising from Exeter between six and seven thousand strong, many having come unto him after he was set before Exeter, upon fame of so great an enterprise, and to partake of the spoil; though upon the raising of his siege some did slip away. When he was come near Taunton, he dissembled all fear, and seemed all the day to use diligence in preparing all things ready to fight. But about midnight he fled with three-score horse to Bewdley in the New Forest, where he and divers of his company registered themselves sanctuary-men, leaving his Cornish men to the four winds; but yet thereby easing them of their vow, and using his wonted compassion, not to be by when his subjects' blood should be spilt. The king, as soon as he heard of Perkin's flight, sent presently five hundred horse to pursue and apprehend him, before he should get either to the sea, or to that same little island called a sanctuary. But they came too late for the latter of these. Therefore all they could do, was to beset the sanctuary, and to maintain a strong watch about it, till the king's pleasure were further known. As for the rest of the rebels, they, being destituted of their head, without stroke stricken, sub-

mitted themselves unto the king's mercy. And the king, who commonly drew blood, as physicians do, rather to save life than to spill it, and was never cruel when he was secure; now he saw the danger was past, pardoned them all in the end, except some few desperate persons, which he reserved to be executed, the better to set off his mercy towards the rest. There were also sent with all speed some horse to St. Michael's Mount in Cornwall, where the Lady Catharine Gordon was left by her husband, whom in all fortunes she entirely loved; adding the virtues of a wife to the virtues of her sex. The king sent in the greater diligence, not knowing whether she might be with child, whereby the business would not have ended in Perkin's person. When she was brought to the king, it was commonly said, that the king received her not only with compassion, but with affection; pity giving mere impression to her excellent beauty. Wherefore comforting her, to serve as well his eye as his fame, he sent her to his queen to remain with her; giving her very honourable allowance for the support of her estate, which she enjoyed both during the king's life and many years after. The name of the white rose, which had been given to her husband's false title, was continued in common speech to her true beauty. . . .

The king did also, while he was at Exeter, appoint the Lord Darcy, and others, commissioners, for the fining of all such as were of any value, or had any hand or partaking in the aid or comfort of Perkin, or the Cornish men, either in the field or in the flight.

These commissioners proceeded with such strictness and severity, as did much obscure the king's mercy in sparing of blood, with the bleeding of so much treasure. Perkin was brought unto the king's court, but not to the king's presence; though the king, to satisfy his curiosity, saw him sometimes out of a window, or in passage. He was in shew at liberty, but guarded with all care and watch that was possible, and willed to follow the king to London. But from his first appearance upon the stage, in his new person of a sycophant, or juggler, instead of his former person of a prince, all men may think how he was exposed to the derision not only of the courtiers, but also of the common people, who flocked about him as he went along: that one might know afar off where the owl was by the flight of birds; some mocking, some wondering, some cursing, some prying and picking matter out of his countenance and gesture to talk of: so that the false honour

and respects, which he had so long enjoyed, was plentifully repaid in scorn and contempt. As soon as he was come to London, the king gave also the city the solace of this May-game; for he was conveyed leisurely on horseback, but not in any ignominious fashion, through Cheapside and Cornhill, to the Tower, and from thence back again unto Westminster, with the churm of a thousand taunts and reproaches. But to amend the show, there followed a little distance of Perkin, an inward counsellor of his, one that had been serjeant farrier to the king. This fellow, when Perkin took sanctuary, chose rather to take an holy habit than an holy place, and clad himself like an hermit, and in that weed wandered about the country, till he was discovered and taken. But this man was bound hand and foot upon the horse, and came not back with Perkin, but was left at the Tower, and within few days after executed. Soon after, now that Perkin could tell better what himself was, he was diligently examined; and after his confession taken, an extract was made of such parts of them as were thought fit to be divulged, which was printed and dispersed abroad; wherein the king did himself no right; for as there was a laboured tale of particulars, of Perkin's father and mother, and grandsire and grandmother, and uncles and cousins, by names and surnames, and from what places he travelled up and down; so there was little or nothing to purpose of anything concerning his designs, or any practices that had been held with him; nor the Duchess of Burgundy herself, that all the world did take knowledge of, as the person that had put life and being into the whole business, so much as named or pointed at. So that men missing of that they looked for, looked about for they knew not what, and were in more doubt than before; but the king chose rather not to satisfy, than to kindle coals. . . .

It was not long but Perkin, who was made of quicksilver, which is hard to hold or imprison, began to stir. For deceiving his keepers, he took him to his heels, and made speed to the sea-coasts. But presently all corners were laid for him, and such diligent pursuit and search made, as he was fain to turn back, and get him to the house of Bethlehem, called the priory of Sheen (which had the privilege of Sanctuary), and put himself into the hands of the prior of that monastery. The prior was thought an holy man, and much revered in those days. He came to the king, and besought the king for Perkin's life only, leaving him otherwise to the king's discretion. Many about the king were again more hot than ever, to have the king take him forth and hang him. But the king, that had

an high stomach, and could not hate any that he despised, bid, "Take him forth, and set the knave in the stocks;" and so promising the prior his life, he caused him to be brought forth. And within two or three days after, upon a scaffold set up in the palace court at Westminster, he was fettered and set in the stocks for the whole day. And the next day after, the like was done by him at the cross in Cheapside, and in both places he read his confession, of which we made mention before; and was from Cheapside conveyed and laid up in the Tower. . .

But it was ordained, that this winding-ivy of a Plantagenet should kill the true tree itself. For Perkin, after he had been awhile in the Tower, began to insinuate himself into the favour and kindness of his keepers, servants to the lieutenant of the Tower, Sir John Digby, being four in number; Strangeways, Blewet, Astwood, and Long Roger. These varlets, with mountains of promises, he sought to corrupt, to obtain his escape; but knowing well, that his own fortunes were made so contemptible, as he could feed no man's hopes, and by hopes he must work, for rewards he had none, he had contrived with himself a vast and tragical plot; which was, to draw into his company Edward Plantagenet, Earl of Warwick, then prisoner in the Tower; whom the weary life of a long imprisonment, and the often and renewing fears of being put to death, had softened to take any impression of counsel for his liberty. This young prince he thought these servants would look upon, though not upon himself; and therefore, after that by some message by one or two of them, he had tasted of the Earl's consent; it was agreed that these four should murder their master, the lieutenant, secretly, in the night, and make their best of such money and portable goods of his, as they should find ready at hand, and get the keys of the Tower, and presently let forth Perkin and the Earl. But this conspiracy was revealed in time, before it could be executed. And in this again the opinion of the king's great wisdom did surcharge him with a sinister fame, that Perkin was but his bait, to entrap the Earl of Warwick. And in the very instant while this conspiracy was in working, as if that also had been the king's industry, it was fatal, that there should break forth a counterfeit Earl of Warwick, a cordwainer's son, whose name was Ralph Wilford; a young man taught and set on by an Augustin friar, called Patrick. They both from the parts of Suffolk came forwards into Kent, where they did not only privily and underhand give out that this Wilford was the true Earl of Warwick, but also the friar, finding some light credence in the

people, took the boldness in the pulpit to declare as much, and to incite the people to come in to his aid. Whereupon they were both presently apprehended, and the young fellow executed, and the friar condemned to perpetual imprisonment. This also happening so opportunely, to represent the danger to the king's estate from the Earl of Warwick, and thereby to colour the king's severity that followed; together with the madness of the friar so vainly and desperately to divulge a treason, before it had gotten any manner of strength: and the saving of the friar's life, which nevertheless was, indeed, but the privilege of his order; and the pity in the common people, which if it run in a strong stream, doth ever cast up scandal and envy, made it generally rather talked than believed that all was but the king's device. But howsoever it were, hereupon Perkin, that had offended against grace now the third time, was at the last proceeded with, and by commissioners of oyer and determiner, arraigned at Westminster, upon divers treasons committed and perpetrated after his coming on land, within this kingdom, for so the judges advised, for that he was a foreigner, and condemned, and a few days after executed at Tyburn; where he did again openly read his confession, and take it upon his death to be true. This was the end of this little cockatrice of a king, that was able to destroy those that did not espy him first. It was one of the longest plays of that kind that hath been in memory, and might perhaps have had another end, if he had not met with a king both wise, stout, and fortunate.

We can only, in addition, afford room for the conclusion of the work, containing the character of King Henry:—

This king, to speak of him in terms equal to his deserving, was one of the best sort of wonders—a wonder for wise men. He had parts both in his virtues and his fortune, not so fit for a common-place as for observation. Certainly he was religious, both in his affection and observance. But as he could see clear, for those times, through superstition, so he would be blinded, now and then, by human policy. He advanced churchmen; he was tender in the privilege of sanctuaries, though they wrought him much mischief. He built and endowed many religious foundations, besides his memorable hospital of the Savoy; and yet was he a great alms-giver in secret, which showed that his works in public were dedicated rather to God's glory than his own. He professed always to love and

seek peace; and it was his usual preface in his treatise, that when Christ came into the world peace was sung, and when he went out of the world peace was bequeathed. And this virtue could not proceed out of fear or softness, for he was valiant and active, and therefore no doubt it was truly Christian and moral. Yet he knew the way to peace was not to seem to be desirous to avoid war; therefore would he make offers and fames of wars till he had mended the conditions of peace. It was also much, that one that was so great a lover of peace should be so happy in war: for his arms, either in foreign or civil wars, were never infortunate; neither did he know what a disaster meant. The war of his coming in, and the rebellions of the Earl of Lincoln and the Lord Audley, were ended by victory; the wars of France and Scotland, by peaces sought at his hands; that of Britain by accident of the duke's death; the insurrection of the Lord Lovel, and that of Perkin at Exeter and in Kent, by flight of the rebels before they came to blows. So that his fortune of arms was still inviolate; the rather sure, for that in the quenching of the commotions of his subjects, he ever went in person; sometimes reserving himself to back and second his lieutenants, but ever in action; and yet that was not merely forwardness, but partly distrust of others.

He did much maintain and countenance his laws, which, nevertheless, was no impediment to him to work his will; for it was so handled that neither prerogative nor profit went to diminution. And yet as he would sometimes strain up his laws to his prerogative, so he would also let down his prerogative to his parliament; for mint, and wars, and martial discipline, things of absolute power, he would nevertheless bring to parliament. Justice was well administered in his time, save where the king was party; save also that the council-table intermeddled too much with "meum" and "tuum." For it was a very court of justice during his time, especially in the beginning; but in that part both of justice and policy which is the durable part, and cut, as it were, in brass or marble, which is the making of good laws, he did excel. And with his justice he was also a merciful prince; as in whose time there were but three of the nobility that suffered—the Earl of Warwick, the Lord Chamberlain, and the Lord Audley; though the first two were, instead of numbers, in the dislike and obloquy of the people. But there were never so great rebellions expiated with so little blood drawn by the hand of justice, as the two rebellions of Blackheath and Exeter. As for the severity used upon those which were taken in Kent, it was but a scum

of people. His pardons went ever both before and after his sword. But then he had withal a strange kind of interchanging of large and unexpected pardons with severe executions, which, his wisdom considered, could not be imputed to any inconstancy or inequality, but either to some reason which we do not now know, or to a principle he had set unto himself, that he would vary and try both ways in turn. But the less blood he drew, the more he took of treasure: and, as some construed it, he was the more sparing in the one that he might be the more pressing in the other, for both would have been intolerable. Of nature assuredly he coveted to accumulate treasure, and was a little poor in admiring riches. The people, into whom there is infused, for the preservation of monarchies, a natural desire to discharge their princes, though it be with the unjust charge of their counsellors and ministers, did impute this unto Cardinal Morton and Sir Reginald Bray, who, as it after appeared, as counsellors of ancient authority with him, did so second his humours, as nevertheless they did temper them. Whereas Empson and Dudley that followed, being persons that had no reputation with him, otherwise than by the servile following of his bent, did not give way only as the first did, but shape him way to those extremities, for which himself was touched with remorse at his death, and which his successor renounced and sought to purge. This excess of his had at that time many glosses and interpretations. Some thought the continual rebellions wherewith he had been vexed had made him grow to hate his people; some thought it was done to pull down their stomachs, and to keep them low; some, for that he would leave his son a golden fleece; some suspected he had some high design upon foreign parts; but those perhaps shall come nearest the truth that fetch not their reasons so far off, but rather impute it to nature, age, peace, and a mind fixed upon no other ambition or pursuit. Whereunto I should add, that having every day occasion to take notice of the necessities and shifts for money of other great princes abroad, it did the better, by comparison, set off to him the felicity of full coffers. As to his expending of treasure, he never spared charge which his affairs required; and in his buildings was magnificent; but his rewards were very limited, so that his liberality was rather upon his own state and memory than upon the deserts of others.

He was of an high mind, and loved his own will and his own way, as one that revered himself and would reign indeed. Had he been a private man he would have been termed proud; but in a wise prince it was but keeping of distance, which



indeed he did towards all, not admitting any near or full approach neither to his power or to his secrets, for he was governed by none. His queen, notwithstanding she had presented him with divers children, and with a crown also, though he would not acknowledge it, could do nothing with him. His mother he revered much, heard little; for any person agreeable to him for society, such as was Hastings to King Edward the Fourth, or Charles Brandon after to King Henry the Eighth, he had none; except we should account for such persons Fox, and Bray, and Empson, because they were so much with him. But it was but as the instrument is much with the workman. He had nothing in him of vain-glory, but yet kept state and majesty to the height; being sensible that majesty maketh the people bow, but vain-glory howeth to them.

To his confederates abroad he was constant and just, but not open; but rather such was his inquiry, and such his closeness, as they stood in the light towards him, and he stood in the dark to them. Yet without strangeness, but with a semblance of mutual communication of affairs. As for little envies or emulations upon foreign princes, which are frequent with many kings, he never had many, but went substantially to his own business. Certain it is that though his reputation was great at home, yet it was greater abroad. For foreigners that could not see the passages of affairs, but made their judgments upon the issues of them, noted that he was ever in strife, and ever aloft. It grew also from the airs which the princes and states abroad received from their ambassadors and agents here, which were attending the court in great number, whom he did not only content with courtesy, reward, and privateness, but, upon such conferences as passed with them, put them in admiration to find his universal insight into the affairs of the world; which, though he did suck chiefly from themselves, yet that which he had gathered from them all seemed admirable to every one, so that they did write ever to their superiors in high terms concerning his wisdom and art of rule; nay, when they were returned, they did commonly maintain intelligence with him: such a dexterity he had to impropriate to himself all foreign instruments.

He was careful and liberal to obtain good intelligence from all parts abroad; wherein he did not only use his interest in the liegers here, and his pensioner, which he had both in the court of Rome and other the courts of Christendom, but the industry and vigilancy of his own ambassadors in foreign parts: for which purpose his instructions were ever extreme,

curious, and articulate; and in them more articles touching inquisition than touching negotiation, requiring likewise from his ambassadors an answer in particular and distinct articles respectively to his questions.

As for his secret spies, which he did employ both at home and abroad, by them to discover what practices and conspiracies were against him, surely his case required it, he had such moles perpetually working and casting to undermine him. Neither can it be reprehended; for if spies be lawful against lawful enemies, much more against conspirators and traitors. But indeed to give them credence by oaths or curses, that cannot be well maintained; for those are too holy vestments for a disguise. Yet surely there was this further good in his employing of these spies and familiars; that as the use of them was cause that many conspiracies were revealed, so the fame and suspicion of them kept, no doubt, many conspiracies from being attempted.

Towards his queen he was nothing uxorious, and scarce indulgent; but companionable and respectful, and without jealousy. Towards his children he was full of paternal affection, careful of their education, aspiring to their high advancement, regular to see that they should not want of any due honour and respect, but not greatly willing to cast any popular lustre upon them.

To his council he did refer much, and sat oft in person, knowing it to be the way to assist his power and inform his judgment. In which respect also he was fairly patient of liberty, both of advice and of vote, till himself were declared. He kept a strait hand on his nobility, and chose rather to advance clergymen and lawyers, which were more obsequious to him, but had less interest in the people, which made for his absoluteness but not for his safety; insomuch as, I am persuaded, it was one of the causes of his troublesome reign; for that his nobles, though they were loyal and obedient, yet did not co-operate with him, but let every man go his own way. He was not afraid of an able man, as Lewis the Eleventh was; but contrariwise, he was served by the ablest men that were to be found, without which his affairs could not have prospered as they did. For war, Bedford, Oxford, Surrey, D'Aubigny, Brooke, Poynings; for other affairs, Morton, Fox, Bray, the Prior of Lanthony, Warham, Urswick, Hussey, Frowick, and others. Neither did he care how cunning they were that he did employ, for he thought himself to have the master-reach. And as he chose well, so he held them up well; for it is a strange

thing, that though he were a dark prince, and infinitely suspicious, and his times full of secret conspiracies and troubles, yet in twenty-four years' reign he never put down or discomposed counsellor, or near servant, save only Stanley, the lord chamberlain. As for the disposition of his subjects in general towards him, it stood thus with him; that of the three affections which naturally tie the hearts of the subjects to their sovereigns, love, fear, and reverence, he had the last in height, the second in good measure, and so little of the first as he was beholding to the other two.

He was a prince sad, serious, and full of thoughts and secret observations, and full of notes and memorials of his own hand, especially touching persons. As, whom to employ, whom to reward, whom to inquire of, whom to beware of, what were the dependencies, what were the factions, and the like; keeping, as it were, a journal of his thoughts. There is to this day a merry tale, that his monkey, set on, as it was thought, by one of his chamber, tore his principal note-book all to pieces, when by chance it lay forth; whereat the court, which liked not those pensive accounts, was almost tickled with sport.

He was indeed full of apprehensions and suspicions, but as he did easily take them, so he did easily check them and master them, whereby they were not dangerous, but troubled himself more than others. It is true, his thoughts were so many, as they could not well always stand together; but that which did good one way, did hurt another: neither did he at sometimes weigh them aright in their proportions. Certainly, that rumour which did him so much mischief, that the Duke of York should be saved and alive, was, at the first, of his own nourishing, because he would have more reason not to reign in right of his wife. He was affable and both well and fair spoken, and would use strange sweetness and blandishments of words where he desired to effect or persuade anything that he took to heart. He was rather studious than learned, reading most books that were of any worth in the French tongue; yet he understood the Latin, as appeareth in that Cardinal Hadrian and others, who could very well have written French, did use to write to him in Latin.

For his pleasures, there is no news of them; and yet by his instructions to Marsin and Stile, touching the Queen of Naples, it seemeth he could interrogate well touching beauty. He did by pleasures as great princes do by banquets, come and look a little upon them, and turn away. For never prince was more

wholly given to his affairs, nor in them more of himself; inso-much as in triumphs of jousts, and tourneys, and balls, and masks, which they then called disguises, he was rather a princely and gentle spectator, than seemed much to be delighted.

No doubt, in him, as in all men, and most of all in kings, his fortune wrought upon his nature, and his nature upon his fortune. He attained to the crown not only from a private fortune, which might endow him with moderation, but also from the fortune of an exiled man, which had quickened in him all seeds of observation and industry. And his times, being rather prosperous than calm, had raised his confidence by success, but almost marred his nature by troubles. His wisdom, by often evading from perils, was turned rather into a dexterity to deliver himself from dangers, when they pressed him, than into a providence to prevent and remove them afar off. And even in nature, the sight of his mind was like some sights of eyes—rather strong at hand than to carry afar off; for his wit increased upon the occasion, and so much the more if the occasion were sharpened by danger. Again, whether it were the shortness of his foresight, or the strength of his will, or the dazzling of his suspicions, or what it was—certain it is, that the perpetual troubles of his fortunes, there being no more matter out of which they grew, could not have been without some great defects and main errors in his nature, customs, and proceedings, which he had enough to do to save and help with a thousand little industries and watches. But those do best appear in the story itself. Yet take him with all his defects, if a man should compare him with the kings his concurrents in France and Spain, he shall find him more politic than Lewis the Twelfth of France, and more entire and sincere than Ferdinando of Spain: but if you shall change Lewis the Twelfth for Lewis the Eleventh, who lived a little before, then the consort is more perfect; for that Lewis the Eleventh, Ferdinando, and Henry, may be esteemed for the “tres magi” of kings of those ages. To conclude, if this king did no greater matters, it was long of himself; for what he minded, he compassed.

He was a comely personage, a little above just stature, well and straight limbed, but slender. His countenance was reverend, and a little like a churchman; and as it was not strange or dark, so neither was it winning or pleasing, but as the face of one well disposed; but it was to the disadvantage of the painter, for it was best when he spake.

His worth may bear a tale or two, that may put upon him

somewhat that may seem divine. When the Lady Margaret, his mother, had divers great suitors for marriage, she dreamed one night that one in the likeness of a bishop, in pontifical habit, did tender her Edmund, Earl of Richmond, the king's father, for her husband; neither had she ever any child but the king, though she had three husbands. One day when King Henry the Sixth, whose innocency gave him holiness, was washing his hands at a great feast, and cast his eye upon King Henry, then a young youth, he said, "This is the lad that shall possess quietly that that we now strive for." But that that was truly divine in him, was that he had the fortune of a true Christian as well as of a great king, in living exercised and dying repentant; so as he had an happy warfare in both conflicts, both of sin and the cross.

He was born at Pembroke Castle, and lieth buried at Westminster in one of the stateliest and daintiest monuments of Europe, both for the chapel and for the sepulchre. So that he dwelleth more richly dead, in the monument of his tomb, than he did alive in Richmond, or any of his palaces. I could wish he did the like in this monument of his fame.

Other expressions of Bacon's, as well as these last words, indicate sufficiently his own estimation of this remarkable work. In a letter, for instance, sent with a presentation copy to the Queen of Bohemia, he writes—"If King Henry the Seventh were alive again, I hope verily he would not be so angry with me for not flattering him, as well pleased in seeing himself so truly described in colours that will last and be believed." So in another letter written about the same time or shortly after to Bishop Andrews, he says, "Now being, as I am, no more able to do my country service, it remained unto me to do it honour, which I have endeavoured to do in my work of the reign of King Henry the Seventh." And we have seen his anxiety to have the work translated into Latin, in the hope, as he expresses it in his letter to Matthew, that, since he had lost much time with his own age, he might thereby recover it with posterity.

This was not the only historical work in which the spirited and hopeful old man engaged after his loss of office. We have also from his pen the commencement of a *History of the Reign of Henry the Eighth*, first printed

in the *Miscellany Works*, published by Rawley, in 4to., at London, in 1629. "This work," says Tenison, "he undertook upon the motion of King Charles the First, but, a greater king not lending him time, he only began it; for that which we have of it was, it seems, but one morning's work." It appears, however, that the work was actually commenced, or at least undertaken, while Charles was still prince. Writing to Buckingham, then at Madrid, on the 21st of February, 1623, we find him thus expressing himself:—"I beseech your lordship, of your nobleness, vouchsafe to present my most humble duty to his highness, who I hope ere long will make me leave King Henry the Eighth, and set me on work in relation of his highness's adventures." And in a letter sent to the prince, with a copy of the *De Augmentis Scientiarum*, in the latter part of the same year, he writes—"For Henry the Eighth, to deal truly with your highness, I did so despair of my health this summer, as I was glad to choose some such work as I might compass within days; so far was I from entering into a work of length. Your highness's return hath been my restorative. When I shall wait upon your highness, I shall give you a farther account." The fragment that remains is striking, but very short, and can scarcely be all that was prepared.

And there is a longer fragment, entitled *The Beginning of the History of Great Britain* (or of the kingdom from the union of the crowns), which is also very spirited. This is evidently the performance about which we have a letter in the *Resuscitatio* (Part I. 3rd edit. p. 26), headed 'A Letter to the King, upon the sending unto him a Beginning of an History of his Majesty's Times.' The letter is without date, but it was probably written in 1624. The portion of the work sent with the letter is described as "but a leaf or two.\*"

\* But Mr. Montagu is quite mistaken in supposing that another longer letter in the same collection (pp. 24, 25), headed 'A Letter to the Lord Chancellor touching the History of Britain,' which he quotes in his bibliographical Preface, with

There are two short biographical sketches, or rather characters, by Bacon, one of Julius Cæsar, the other of Augustus, which may be classed with his historical writings. Both were written by him in Latin; and the ori-

all Stephens's annotations, to the extent of nearly half a dozen pages, relates to the same work. The History of Great Britain there spoken of is another project altogether—a history of the two kingdoms of England and Scotland *before* the accession of James. "I conceived," Bacon writes, "it would be honour for his majesty, and a work very memorable, if this island of Great Britain, as it is now joined in monarchy for the ages to come, so it were joined in history *for the times past*, and that one just and complete history were compiled of both nations." The letter is undated; but it was evidently written not at the close, but in the earlier part of James's reign; and the lord chancellor to whom it is addressed was not, as Mr. Montagu appears to assume, Bacon's successor in the great seal, Williams (who, by the bye, never had the title of chancellor), but his predecessor, Lord Ellesmere. Instead of having been written by Bacon at the end of his life and after his loss of office, it was most probably written before he had even become Solicitor-General. There is no allusion in it to his ever having held any public employment. "For all this while," he says towards the close, "I assure myself I cannot be mistaken by your lordship, as if I sought an office or employment for myself; for no man knows better than your lordship, that, if there were in me any faculty thereunto, yet neither my course of life nor profession would permit it." So that he does not even propose himself for the writer of the work. And would he have spoken of himself as known to have no faculty for historical writing, after the publication of his *Henry the Seventh*? But to put the point beyond dispute, it is only necessary to observe that a considerable part of the letter, recounting the course of events from the time of Henry the Eighth, is evidently the germ of a remarkable passage in the second book of the *Advancement of Learning*, which was published in 1605. The letter was therefore written in or before that year. Since this note was written, we find the letter, for the first time correctly printed from the original, in Mr. Collier's learned and valuable "*Catalogue of the Library at Bridgewater House*," 4to., Lon., 1837; and the date turns out to be "Gray's Inn, 2nd April, 1605."

ginals were first published by Rawley, in the *Opuscula Varia Posthuma*, 8vo. Lond. 1658. English translations of both had been given by Rawley the year before in the First Part of the *Resuscitatio*. And there are also two pieces on Queen Elizabeth; one written in English, the other in Latin; and a shorter piece entitled *The Praise of Henry Prince of Wales*. The following are extracts from the English eulogy on Elizabeth, first published by Stephens in 1734, with the title of 'Mr. Bacon's Discourse in the Praise of His Sovereign:—

No praise of magnanimity, nor of love, nor of knowledge, can intercept her praise, that planteth and nourisheth magnanimity by her example, love by her person, and knowledge by the peace and serenity of her times. And if these rich pieces be so fair unset, what are they set, and set in all perfection? Magnanimity no doubt consisteth in contempt of peril, in contempt of profit, and in meriting of the times wherein one liveth. For contempt of peril, see a lady that cometh to a crown after the experience of some adverse fortune, which for the most part extenuateth the mind, and maketh it apprehensive of fears. No sooner she taketh the sceptre into her sacred hands, but she putteth on a resolution to make the greatest, the most important, the most dangerous alteration that can be in a state, the alteration of religion. This she doth, not after a sovereignty established and continued by sundry years, when custom might have bred in her people a more absolute obedience; when trial of her servants might have made her more assured whom to employ; when the reputation of her policy and virtue might have made her government redoubted, but at the very entrance of her reign, when she was green in authority, her servants scant known unto her, the adverse part not weakened, her own part not confirmed. Neither doth she reduce or reunite her realm to the religion of the states about her, that the evil inclination of the subject might be countervailed by the good correspondence in foreign parts: but contrariwise, she introduceth a religion exterminated and persecuted both at home and abroad. Her proceeding herein is not by degrees and by stealth, but absolute and at once. Was she encouraged thereto by the strength she found in leagues and alliances with great and potent confederates? No, but she found her realm in wars with her nearest and mightiest neighbours. She stood single and alone, and in league only



with one, that after the people of her nation had made his wars, left her to make her own peace: one that could never be by any solicitation moved to renew the treaties; and one that since hath proceeded from doubtful terms of amity to the highest acts of hostility. Yet, notwithstanding the opposition so great, the support so weak, the season so improper; yet, I say, because it was a religion wherein she was nourished and brought up; a religion that freed her subjects from pretence of foreign powers, and, indeed, the true religion; she brought to pass this great work with success worthy so noble a resolution. See a queen that, when a deep and secret conspiracy was plotted against her sacred person, practised by subtile instruments, embraced by violent and desperate humours, strengthened and bound by vows and sacraments, and the same was revealed unto her (and yet the nature of the affairs required farther ripening before the apprehension of any of the parties), was content to put herself into the guard of the Divine Providence, and her own prudence, to have some of the conspirators in her eyes, to suffer them to approach to her person, to take a petition of the hand that was conjured for her death; and that with such majesty of countenance, such mildness and serenity of gesture, such art and impression of words, as had been sufficient to have repress and bound the hand of a conspirator if he had not been discovered. Lastly, see a queen, that when her realm was to have been invaded by an army, the preparation whereof was like the travel of an elephant, the provisions whereof were infinite, the setting forth whereof was the terror and wonder of Europe; it was not seen that her cheer, her fashion, her ordinary manner was anything altered: not a cloud of that storm did appear in that countenance wherein peace doth ever shine; but with excellent assurance, and advised security, she inspired her council, animated her nobility, redoubled the courage of her people, still having this noble apprehension, not only that she would communicate her fortune with them, but that it was she that would protect them, and not they her: which she testified by no less demonstration than her presence in camp. Therefore, that magnanimity that neither feareth greatness of alteration, nor the views of conspirators, nor the power of enemy, is more than heroicall. . . .

The opulency of the peace such, as if you have respect, to take one sign for many, to the number of fair houses that have been built since her reign, as Augustus said "that he had received the city of brick, and left it of marble;" so she may say, she received it a realm of cottages, and hath made it a realm

of palaces : the state of traffic great and rich : the customs, notwithstanding these wars and interruptions, not fallen : many profitable trades, many honourable discoveries : and lastly, to make an end where no end is, the shipping of this realm so advanced, and made so mighty and potent, as this island is become, as the natural site thereof deserved, the lady of the sea ; a point of so high consequence, as it may be truly said, that the commandment of the sea is an abridgment or a quintessence of a universal monarchy. . . .

Lastly, to touch the mighty general merit of this queen, bear in mind that her benignity and beneficence hath been as large as the oppression and ambition of Spain. For to begin with the church of Rome, that pretended apostolic see is become but a donative cell of the King of Spain ; the vicar of Christ is become the King of Spain's chaplain ; he parteth the coming in of the new Pope for the treasure of the old : he was wont to exclude but some two or three cardinals, and to leave the election of the rest ; but now he doth include, and present directly some small number, all incapable and incompatible with the conclave, put in only for colour, except one or two. The states of Italy, they be like little quillets of freehold being intermixed in the midst of a great honour or lordship. France is turned upside down, the subject against the king, cut and mangled infinitely, a country of Rodomonts and Royetelets, farmers of the ways : Portugal usurped by no other title than strength and vicinity : the Low Countries warred upon, because he seeketh not to possess them, for they were possessed by him before, but to plant there an absolute and martial government, and to suppress their liberties : the like at this day attempted upon Arragon : the poor Indies, whereas the Christian religion generally brought enfranchisement of slaves in all places where it came, in a contrary course are brought from freemen to be slaves, and slaves of most miserable condition : sundry trains and practices of this king's ambition in Germany, Denmark, Scotland, the east towns, are not unknown. Then it is her government, and her government alone, that hath been the sconce and fort of all Europe, which hath let this proud nation from overrunning all. If any state be yet free from his factions erected in the bowels thereof ; if there be any state under his protection upon whom he usurpeth not ; if there be any subject to him that enjoyeth moderate liberty, upon whom he tyrannizeth not ; let them all know, it is by the mercy of this renowned queen, that standeth between them and their misfortunes. These be some of the beams of noble and radiant magnanimity, in contempt of peril

which so manifestly, in contempt of profit which so many admire, and in merit of the world which so many include in themselves; set forth in my simplicity of speech, with much loss of lustre, but with near approach of truth; as the sun is seen in the water. . . .

If this be presumption, let him bear the blame that owneth the verses. What shall I speak of her rare qualities of compliment; which as they be excellent in the things themselves, so they have always besides 'somewhat of a queen; and as queens use shadows and veils with their rich apparel, methinks in all her qualities there is somewhat that flieth from ostentation, and yet inviteth the mind to contemplate her more.

What should I speak of her excellent gift of speech, being a character of the greatness of her conceit, the height of her degree, and the sweetness of her nature? What life, what edge is there in those words and glances wherewith at pleasure she can give a man long to think; be it that she mean to daunt him, to encourage him, or to amaze him! How admirable is her discourse, whether it be in learning, state, or love! What variety of knowledge, what rareness of conceit, what choice of words, what grace of utterance! Doth it not appear, that though her wit be as the adamant of excellences, which draweth out of any book ancient or new, out of any writing or speech, the best; yet she refineth it, she enricheth it far above the value wherein it is received? And is her speech only that language which the child learneth with pleasure, and not those which the studious learn with industry? Hath she not attained, besides her rare eloquence in her own language, infinitely polished since her happy times, changes of her language both learned and modern? So that she is able to negotiate with divers ambassadors in their own languages; and that with no disadvantage unto them, who I think cannot but have a great part of their wits distracted from their matters in hand to the contemplation and admiration of such perfections. What should I wander on to speak of the excellences of her nature, which cannot endure to be looked on with a discontented eye: of the constancy of her favours, which maketh service as a journey by land, whereas the service of other princes is like an embarking by sea. For her royal wisdom and policy of government, he that shall note and observe the prudent temper she useth in admitting access; of the one side maintaining the majesty of her degree, and on the other side not prejudicing herself by looking to her estate through too few windows: her exquisite judgment in choosing and finding good servants, a point be-

yond the former : her profound discretion in assigning and appropriating every of them to their aptest employment : her penetrating sight in discovering every man's ends and drifts : her wonderful art in keeping servants in satisfaction, and yet in appetite : her inventing wit in contriving plots and overturns : her exact caution in censuring the propositions of others for her service : her foreseeing events : her usage of occasions :—he that shall consider of these, and other things that may not well be touched, as he shall never cease to wonder at such a queen, so he shall wonder the less, that in so dangerous times, when wits are so cunning, humours extravagant, passions so violent, the corruptions so great, the dissimulations so deep, factions so many, she hath notwithstanding done such great things, and reigned in felicity.

To speak of her fortune, that which I did reserve for a garland of her honour ; and that is, that she liveth a virgin, and hath no children ; so it is that which maketh all her other virtues and acts more sacred, more august, more divine. Let them leave children that leave no other memory in their times. "*Brutorum æternitas, soboles.*" Revolve in histories the memories of happy men, and you shall not find any of rare felicity but either he died childless, or his line spent soon after his death, or else was unfortunate in his children. Should a man have them to be slain by his vassals, as the posthumus of Alexander the Great was ? or to call them his imposthumes, as Augustus Cæsar called his ? Peruse the catalogue : Cornelius Sylla, Julius Cæsar, Flavius Vespasianus, Severus, Constantinus the Great, and many more. "*Generare et liberi, humana : creare et operari, divina.*" . . . . .

In the Low Countries, the Lammas-day, the retreat of Ghent, the day of Zutphen, and the prosperous progress of this summer ; the bravado in Portugal, and the honourable exploits in the aid of the French king, besides the memorable voyages in the Indies ; and lastly, the good entertainment of the invincible navy, which was chased till the chasers were weary, after infinite loss, without taking a cock-boat, without firing a sheep-cot, sailed on the mercies of the wind and the discretion of their adventures, making a perambulation or pilgrimage about the northern seas, and ignobling many shores and points of land by shipwreck ; and so returned home with scorn and dishonour much greater than the terror and expectation of their setting forth.

These virtues and perfections, with so great felicity, have made her the honour of her times, the admiration of the world,

the suit and aspiring of greatest kings and princes, who yet durst never have aspired unto her, but as their minds were raised by love.

But why do I forget that words do extenuate and embase matters of so great weight? Time is her best commender, which never brought forth such a prince, whose imperial virtues contend with the excellency of her person; both virtues contend with her fortune, and both virtue and fortune contend with her fame.

“Orbis amor, famæ carmen, cœlique pupilla;  
Tu decus omne tuis, tu decus ipsa tibi!”

END OF VOL. I.

**B A C O N ;**  
**H I S W R I T I N G S**  
**AND**  
**H I S P H I L O S O P H Y .**

**BY GEO. L. CRAIK, M.A.**

**IN THREE VOLUMES.**

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# BACON;

## HIS WRITINGS, AND HIS PHILOSOPHY.

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### PART II.

#### BACON'S PHILOSOPHICAL WORKS.

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##### INTRODUCTION.

ALL Bacon's philosophical writings may be reduced to the scheme of his *Instauratio Magna*—may be arranged as either parts or appendages of that work. The spacious plan of the *Instauratio*, as sketched by Bacon himself, comprehends alike those of them that were published before it was conceived or announced, and whatever he afterwards wrote.

In our examination or analysis, therefore, of these writings, we shall take them in the order in which they stand, or may most naturally be placed, in the *Instauratio*; but it will be convenient, for clearness of reference, that we also enumerate here the successive dates at which they were severally published.

The 'Fragment of the Colours of Good and Evil,' otherwise entitled 'Places of Persuasion and Dissuasion,' was published, with the first edition of the *Essays*, in 1597. This tract, as we shall find, has been incorporated by Bacon himself in the *De Augmentis Scientiarum*, or First Part of the *Instauratio*.

The 'Two Books of the Proficiency and Advancement of Learning,' were published in English in 1605. They were afterwards expanded by the author into the Nine Books of the Latin Treatise *De Augmentis Scientiarum*.

The Latin treatise 'De Sapientia Veterum' (Of the Wisdom of the Ancients), of which an account has already been given among the Moral Works, may also be noticed here, as being in part incorporated with the *De Augmentis Scientiarum*. It was published by itself in 1610.

The 'Novum Organum Scientiarum,' forming the Second Part of the *Instauratio*, was published in Latin in 1620. It was accompanied not only by its own proper Preface, but also by a Preface and other Prolegomena to the entire *Instauratio*, including, in particular, what is entitled the *Distributio Operis*, or exposition of the Six Parts of which that great work was to consist. This was the first announcement of the *Instauratio Magna*.

In 1622 was published a portion of the Third Part of the *Instauratio*, under the title of 'Francisci Baconis de Verulamio, Vice-Comitis Sancti Albani, Historia Naturalis et Experimentalis ad Condendam Philosophiam; sive Phænomena Universi: Quæ est Instauratiæ Magnæ Pars Tertia.' It consisted of the 'Historia Ventorum' (History of the Winds), with the *Aditus*, or Prefaces, of five other similar histories.

This volume was followed in 1623 by the 'Historia Vitæ et Mortis' (History of Life and Death), another of the Six Histories intended to compose the Third Part of the *Instauratio*.

In the same year, 1623, was published the entire treatise 'De Dignitate et Augmentis Scientiarum' (On the Dignity and Advancement of the Sciences), in Nine Books; being a translation into Latin and expansion of the Two Books of the *Advancement of Learning*, and forming the First Part of the *Instauratio*. This was the last portion of the *Instauratio* published by Bacon himself.

In 1627, after Bacon's death, his chaplain, Dr. Rawley, published the Ten Centuries of his 'Sylva Sylvarum, or Natural History,' in English, designed to form another portion of the Third Part of the *Instauratio*. It had been prepared for the press, and Rawley's Preface to it had been written, before the death of the author.

In 1653 Isaac Gruter published at Amsterdam, in a

duodecimo volume of about 500 pages, a collection of what he called the Writings of Bacon in Natural and Universal Philosophy—'Francisci Baconi de Verulamio Scripta in Naturali et Universali Philosophia'—all, as he states, new to the world, and copied from manuscripts carefully corrected by the author, and bequeathed by him to the care of the most noble William Boswell, that is, Sir William Boswell, minister or agent of James I. and Charles II. in Holland. And it is true that in his will Bacon, after directing his executors, and especially Sir John Constable, and his "very good friend, Mr. Bosvile," to take care that of all his writings, meaning his printed works, both English and Latin, there may be books fair bound and placed in the king's library, and in the libraries of the University of Cambridge, and of Trinity College, and of Bennett College, and of the University of Oxford, and of the Archbishop of Canterbury, and of Eton College, adds; "Also I desire my executors, especially my brother Constable, and also Mr. Bosvile, presently after my decease, to take into their hands all my papers whatsoever, which are either in cabinets, boxes, or presses, and them to seal up until they may at their leisure peruse them." Nevertheless, most of the pieces printed by Gruter are, from whatever cause, extremely inaccurate; and some of them are evidently only the first drafts of what we have elsewhere in a more perfect form. Of several, however, we have no other original copies.\*

In the First Part of the collection entitled 'Resus-

\* Three Letters from Gruter to Rawley are published by Tenison, with translations, in the *Baconiana*, pp. 221—241. In the first, dated from the Hague, 29th May, 1652, he says:—"I send you here a catalogue of those writings which I had in MS. out of the study of Sir William Boswel, and which I now have by me, either written by the Lord Bacon himself, or by some English amanuensis, but by him revised; as the same Sir William Boswel (who was pleased to admit me to a most intimate familiarity with him) did himself tell me." "These," Tenison notes, "were the papers which J. Gruter afterwards published under the title of *Scripta Philosophica*." Google

citatio,' published by Rawley in 1657, one piece occurs which may be reckoned among Bacon's Philosophical Writings, his 'Letter and Discourse to Sir Henry Savill touching Helps for the Intellectual Powers.'

In 1658 Rawley published a collection of Bacon's Posthumous Works, under the title of 'Opuscula Varia Posthuma, Philosophica, Civilia, et Theologica, Francisci Baconis, &c., nunc primum edita;' which contained several philosophical treatises not previously printed, and also more perfect copies of some of those edited by Gruter.

A tract in English entitled 'Articles of Enquiry touching Metals,' &c., appeared along with an edition of the 'Sylva Sylvarum' in 1662; the publisher, William Lee, who is the same by whom all the editions both of the *Sylva* and of the *Resuscitatio* had been brought out, stating at the end that he had received it some months before from Rawley corrected for the press. And perhaps a few other short discourses may have first got abroad at various times in similar pamphlets, which are now unknown or difficult to be procured. "If it be objected," says Rawley, in his Preface to the First Part of the *Resuscitatio*, "that some few of the pieces whereof this whole consisteth had visited the public light before, it is true that they had been obtruded to the world by unknown hands, but with such scars and blemishes upon their faces that they could pass but for a spurious and adulterine brood, and not for his lordship's legitimate issue; and the publishers and printers of them deserve to have an action of defamation brought against them by the State of Learning for disgracing and personating his Lordship's works."

Of Archbishop Tenison's collection, entitled 'Baconiana, or Certain Genuine Remains of Sir Francis Bacon, &c., now the first time faithfully published,' which appeared in 1679, one division consists of 'Philosophical Remains,' or 'Arguments appertaining to Natural Philosophy,' and another of 'Medical Remains.'

Finally, a few additions were made to this portion of Bacon's works by the publication, in 1734, of 'Letters

and Remains of the Lord Chancellor Bacon ; collected by Robert Stephens, Esq., late Historiographer Royal ; or, as the title runs in the second edition, published in 1736, ' Letters, Memoirs, Parliamentary Affairs, State Papers, &c., with some curious pieces in Law and Philosophy ; published from the Originals of the Lord Chancellor Bacon.' This is commonly called Stephens's second collection ; his first, published in 1702, being entitled ' Letters of Sir Francis Bacon, &c., now collected, with an Historical Introduction ;' or, in the second edition, published in 1736, ' Original Letters and Memoirs, written by the Lord Chancellor Bacon during the reign of King James I. . . . collected and published, with remarks, by Robert Stephens, Esq., late Historiographer Royal : to which is prefixed a large Historical Introduction.'

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## SECTION I.

## PROLEGOMENA TO THE INSTAURATIO MAGNA.

THE 'Novum Organum,' or Second Part of the *Instauratio*, when first published in 1620, was accompanied, as has been stated above, by certain preliminary announcements, which, however, were evidently intended to be introductory to the entire *Instauratio Magna*. They are four in number, and are eminently deserving of our attention before entering upon the perusal of the work which they precede and usher in.

First there presents itself a brief but solemn and striking proclamation of the general design of the work, headed, 'Franciscus de Verulamio sic cogitavit, talemque apud se rationem instituit; quam viventibus et posteris notam fieri ipsorum interesse putavit' (Francis of Verulam thus thought, and proceeded in considering things in his own mind after this manner; which he deemed that it concerned both his contemporaries and posterity that they should be made acquainted with). It commences thus, to adopt a translation slightly modified from the old one by Gilbert Wats, which, although disfigured by some affectation or pedantry, is both closer to the original and more expressive than that of Dr. Shaw:—"Seeing it was manifest to him that the human understanding creates itself much trouble, nor makes an apt and sober use of such aids as are within the command of man; from whence infinite ignorance of things, and from the ignorance of things innumerable disadvantages; his opinion was, that with all our industry we should endeavour, if haply that same commerce of the mind and of things (than which a greater blessing can hardly be found upon earth, at least among earthly felicities) might by any means be entirely

restored, or at least brought to terms of nearer correspondence." This, then, we are to keep in remembrance, is the great purpose of the author:—to restore, or rather to establish that "commercium mentis et rerum,"—that direct intercourse between the mind and things—by which alone he conceives we can ever rightly understand and turn to proper account the natural forces and capabilities by which we are surrounded.

He goes on to observe that he had no hope at all that the prevailing errors would rectify themselves, either by the inherent power of the understanding or by the aid of dialectic, or logic; because the primary notions which the mind was wont almost passively and supinely to drink in, and from which all others spring, were unsound, confused, and rashly abstracted from the realities to which they relate; while there was the like luxuriant variety and inconstancy in the second and sequent notions; so that it came to pass that the whole system of reasoning which men employed in the inquisition of nature was not well put together and built up, but was merely a showy pile without any sound foundation. For, whilst men admired and celebrated the imaginary powers of the mind, her true faculties, such as they might be made, if due aids were made use of by her, and she were to carry herself complyingly towards things instead of insulting over them, were passed over and allowed to lie unused.

"This one way, therefore," he concludes, "remaineth, that the whole business be attempted anew with better preparations, or defences against error; and that there be a universal INSTAURATION, or re-construction, of the arts and sciences, and of all human learning, upon a due basis." That is the meaning of the word *Instauratio*: it was used by the Romans for the repetition of anything; and generally with a special view to correctness or completeness of performance; as, for instance, of games or sacrifices of which the first performance had been unsatisfactory. It is properly a building up, and is nearly the same thing with a restoration.

Of what remains of this preliminary intimation of the

design of the *Instauratio* the following are the most remarkable passages:—"It does not escape him how untrodden and solitary is the way of this experiment, and how hard it may be for him to win belief in its practicability. Nevertheless, he thought that he ought not to desert either the undertaking or himself, but should at least make trial of entering upon the road which alone is pervious and penetrable to the mind of man. . . . . And being uncertain when these things might hereafter come into any other mind, led principally by this consideration that he had heard of no one hitherto who had applied himself to such cogitations, he determined to publish by themselves such portions of his design as he had been enabled first to finish. . . . Assuredly he esteemed any other ambition whatsoever as inferior to what he had thus taken in hand; for this which is here treated of either is nothing; or is so great that he may well be contented with the merit of that alone and seek for nought beyond it."

Then follows a Dedication to the King, James I. This address can in strictness be understood as referring only to the *Novum Organum*, which alone accompanied it when it first appeared; but it is sufficiently applicable also to the whole of the *Instauratio Magna*. What Bacon proposed as his new method, although recommended and illustrated in other parts of the *Instauratio*, is only formally propounded or explained in the *Novum Organum*. It is there that what he conceives to be the novelty of his general views or principles is chiefly to be found. In any circumstances, therefore, his preparatory observations on his main design would have had a special reference to that part of the work.

What he offers, he tells his majesty, is at least altogether new; new in its very kind; yet copied, he adds, from a very ancient original, namely, from the world itself and the nature of things and of the human mind. He has himself been accustomed to esteem the work as the offspring rather of time than of wit; for the only thing wonderful in it is, that the first conception of the truths it contains, and such strong suspicions respecting



the opinions which have hitherto prevailed, should come into any one's head ; after that, the rest followed naturally. Afterwards he expressly describes his work as a new torch kindled amid the darkness of philosophy to be a light to all coming time, and as a regeneration and instauration of the sciences. What he has put into men's hands, however, he remarks in conclusion, is the organ or instrument ; the materials on which it is to be employed must be sought from things themselves.

Next we have a Preface of considerable length, headed " On the State of the Sciences, that it is not prosperous nor greatly advanced ; and that another way altogether than what hath been heretofore known must be opened to the human understanding, and other helps obtained, in order that the mind may be able to exercise its right over the nature of things."

" It seems to us," he begins, " that men neither properly understand what acquisitions they have made, nor what powers they are endowed with ; the former they overrate, the latter they underrate. And so it comes to pass, that, either holding such arts as are generally known and practised in an immoderate estimation, they seek nothing more ; or, undervaluing themselves beyond what in equity they ought, they waste their powers upon things of lighter significance, and refrain from making trial of them in such a way as might be really to the purpose." It is, as usual, impossible to abridge what follows ; the compactness of the statement sets any such attempt at defiance ; all that can be done is to extract a few of the leading remarks, omitting the connexion, or leaving the reader to make it out for himself. Here then are the passages, not which are the most ingenious or brilliant, but which are most material for the understanding of the author's design, and of his own conception of what he had accomplished in the work the principal portion of which he now laid before the world :—" As for the utility or profitableness of existing knowledge, we must speak out plainly, and declare that our philosophy, which we have derived principally from the Greeks, seems to be but a childhood of knowledge, and

to have the qualities of childhood, as being apt for idle talk, but impotent and immature for generating any thing; for it is of controversies rank and fertile, but of works barren and fruitless. . . . If this sort of wisdom were not altogether a lifeless thing, it is evident that that could never have happened which now for many ages hath continued; that the sciences thence resulting should thus stand still, in a manner immoveable in their first footsteps, without any augmentation worthy of the human race; to such a degree, that not only assertion remains assertion, but even question remains question, and is not determined by disputation about it, but fixed and nourished; and that all tradition and succession of discipline represents and exhibits the persons only of teacher and hearer, not of inventor and of another adding something of note to what his predecessor has invented or discovered. In the mechanic arts we see the contrary thing to happen: they, as if they drank in some life-inspiring breeze, daily increase, and are perfected; and, appearing for the most part rude, and even burthensome and shapeless, in the hands of their first authors, in course of time acquire new virtues and a certain adaptation or serviceableness, so that the wishes and desires of men sooner fail and change than those arts arrive at their height and perfection. Philosophy, on the contrary, and the intellectual sciences are, like statues, adored and celebrated, but are not carried forward; nay, commonly, they are of most vigour when first produced, and ever after go on degenerating. . . . Let no one affirm that the sciences, increasing by degrees, have at length come to a certain full stature, and have at last, as having finished the course allotted to them, fixed themselves in the works of some few authors; so that now nothing better can be found out, and it only remains that what has been invented should be cultivated and adorned. It were to be wished, indeed, that such were the case. But the more correct and the truer account is, that this enslaved condition of the sciences is nought else than a thing bred from the audacity of a few, and the sloth and pusillanimity of the rest of mankind. For as soon as any particular science has in parts been some-

what diligently tilled and laboured, some one has usually arisen, confident in his talent, and accepted and celebrated on account of the compendiousness of his method, who in so far as regards appearances has established the art, but in reality has corrupted the labours of his predecessors. Yet what he has done is wont to be well-pleasing to succeeding generations on account of the easy utility of his work, and their wearisomeness and impatience of renewed inquiry. And if any one be moved by the inveterate agreement of opinions, as if it were the verdict of time, let him know that he leans upon a very weak and fallacious consideration. For we are in great part ignorant even of what has been made known and published abroad in the several arts and sciences at various times and places; much more of what individuals have attempted and thought of in private. So that neither the births nor the abortions of time stand recorded in any patent and authentic register. Nor is general consent and its long continuance, to be held of so much importance. For, however various may be the kinds of civil polity, there is but one political state of the sciences, and that always has been, and always will be, democratic. And with the people the doctrines that most flourish are ever either contentious and pugnacious, or specious and vain; such, that is to say, as either ensnare assent or win it by blandishment. And so, without question, the greatest wits in every age have been overborne, and in a sort tyrannized over; whilst men of capacity and comprehension above the vulgar, yet consulting their own reputation, have submitted themselves to the overswaying judgment of time and the multitude. Therefore, if in any time or place more profound contemplations have perchance emerged and revealed themselves, they have been forthwith tossed and extinguished by the winds and tempests of popular opinions; insomuch that time, like a river, has carried down to us that which is light and blown up, but sunk and drowned whatever was weighty and solid. . . . The philosophy that has been delivered down to us and generally received may for the most part be thus described:—barren as to effects, fruitful in questions;

languid and backward in growth ; presenting a show of perfection in the whole, but ill filled up in the parts ; popular in its predilections, but suspected by its authors themselves, and for that reason fortified and faced out with sundry artifices. . . . Nobody has yet been found who has rested enough upon things themselves and upon experience. And some who have committed themselves to the waves of experience, and have become almost mechanics, yet in their very experience practise a roving manner of inquisition, and do not war with it according to any certain rule. Nay, many have proposed to themselves certain petty tasks, thinking it a great thing if they can but work out some one invention, by a method not less impotent than unscientific. No one rightly and successfully teaches the nature of any thing in the thing itself ; but all, after a laborious varying of experiments, instead of finding any thing in which they can acquiesce and rest, find only matter for further inquiry. And there is one thing in especial which is not to be omitted, namely, that all the industry employed in experimenting has from the beginning caught with a too forward and intemperate eagerness at certain purposed effects ; has sought, I say, for fruit-bearing instead of light-bearing experiments ; and not imitated the divine method, which on the first day created light alone, and to that devoted one whole day, nor on that day produced any works formed of matter, but only descended to such works on the following days. . . . . The received system of dialectic, although it may be applied with perfect propriety in civil matters, and in such arts as stand upon discourse and opinion, yet is a long way from reaching to the subtilty of nature ; and, by catching at what it cannot master, has done more to confirm and as it were to rivet errors, than to open the way to truth. . . . The edifice of this universe is, in its structure, to the human intellect contemplating it, like a labyrinth ; where from all sides there present themselves so many ambiguous pathways, such fallacious similitudes of things and their signs, such oblique and interwoven windings and knots of nature ; and the journey over it is to be constantly made under the

uncertain light of the senses, sometimes shining out, sometimes hiding itself, through the forests of experience and particular facts. Nay, even the guides, as has been said, who offer themselves, are themselves perplexed, and help to increase the number of errors, and of those who err. In a case so difficult we must despair of the human judgment acting merely by its natural force, or even of achieving any thing of moment by the utmost happiness of fortune; for the victory cannot be won either by any excellence of genius, however great, or by chance experiments, however frequently repeated. Our steps must be guided by a clue; and all the way onwards, even from the first perceptions of the senses, must be secured by a certain method. . . . The ancients, indeed, showed themselves admirable in those things which depend upon genius and abstract meditation. But, as in former ages, when men in navigating used to direct their course only by their observation of the stars, they were indeed able to coast the shores of the old continent, or to cross some of the minor inland seas; yet before the ocean could be crossed, and the regions of the new world discovered, it was necessary that the use of the mariner's needle, as a more trusty and certain conductor, should have become known; even so, those things which heretofore have been found out in the arts and sciences are of such sort that they might have been arrived at by practice, meditation, observation, and discussion, as being nearer to the senses, and lying almost immediately under common notions; but before we can make our approaches to the more remote and hidden things of nature, it is of necessity required that a better and more perfect use and operative application of the human mind and intellect be introduced. . . . All who before ourselves have applied themselves to the discovery of the arts, after having only for a little while turned their eyes upon things, and instances, and experience, then straightway, as if invention were nothing more than a certain process of excogitation, have fallen as it were to invoke their own spirits to utter oracles to them. But we, modestly and perseveringly keeping ourselves conver-

sant among things, never withdraw our understanding hence for a longer space than is sufficient to allow the images and beams of things (as happens in the senses) to meet and concentrate;\* whence it happens that not much is left to mere strength and excellence of wit. . . . And in this manner we believe that we have established for ever a true and legitimate marriage between the empiric and rational faculties, whose sullen and inauspicious divorce and separation has thrown all things into confusion in the family of mankind."

Even through the medium of a translation, and in the otherwise imperfect form in which we have been obliged to present it, the extraordinary merit of this Preface to the *Instauratio Magna* as a piece of writing will be felt by every reader. In ingenuity and eloquence, in life and pregnancy of style, in richness and beauty of illustration, and in easy strength of execution, it may vie with anything else that we have of Bacon's. But notwithstanding the large proportion of truth which it unquestionably contains, is its philosophic soundness equal to its rhetorical brilliancy?

Bacon, we apprehend, in all his speculations upon the

\* That is, apparently, to meet and arrange themselves into a distinct representation in the understanding, in the same manner as they do when conveying impressions to the senses. According to this interpretation the images and beams, or rays, both express nearly the same thing—the emanations figuratively supposed to proceed from objects by which they make themselves to be perceived by the senses and the mind. The original is:—"Nos vero—intellectum longius a rebus non abstrahimus quam ut rerum imagines et radii (ut in sensu fit) coire possint." Mr. Wood's translation in Mr. Montagu's edition is; "We abstract our understanding no further from them [things] than is necessary to prevent the confusion of the images of things with their radiation, a confusion similar to that we experience by our senses." But this is plainly the very opposite of what the Latin states. *Ut possint coire* can never mean "to prevent the confusion." Even if the *imagines* and the *radii* are to be understood as different, the translation of the clause must be, that they *may* come together, not that *may not* be mingled or confused.

subject here and elsewhere, confounds two things which are quite distinct in their nature—the method of invention or discovery, and the exposition or theory of the method,—and attributes an efficiency to the latter which in reality belongs only to the former. It is a common fallacy. As Bacon's *Novum Organum* is conceived to have first taught the art of discovery, so the old *Organon* of Aristotle is very generally supposed to have first taught men the art of reasoning. But the incontrovertible fact is, that men reasoned just as well before the time of Aristotle as they have done since. What his *Organon* taught or expounded was not the art but the science of reasoning; that is to say, it investigated what reasoning was, and reduced its formulæ to a system. It no more taught or could teach the art of reasoning than his treatise on the *Poetical* taught or could teach the art of writing poetry; or than La Place's *Mécanique Céleste* can be said to teach the art of constructing the heavens.

The system of the heavens, the nature of poetical thought and expression, the laws according to which the mind reasons, are all nearly alike removed from the class of things that can be inculcated by precept. They are subjects for scientific examination, not for being taught as arts. Of the three cases, that of the writing of poetry, as involving the observance of certain forms which are in some degree traditionary or conventional, and admit of being specified and reduced to rules, is the only one in which anything properly called an art is possible. And several Arts of Poetry have been written. But has any man ever been made a poet by studying an Art of Poetry? Has better poetry been written since poetry was made an art than before? The truth is, that all that an art of poetry can teach has nothing more to do with what really constitutes poetry than sweeping in the hearth has with making the fire to burn.

As for the art of reasoning, it is as great an absurdity to talk of such an art as it would be to talk of the art of falling through the air when a man has been thrown out of a window. There is but one way of reasoning. That is to say, a given mind in a given state can reason only in

one way. To take the common example, let a person believe or understand that all men are mortal, and also that John is a man, and he cannot help performing the act of reasoning, which consists in inferring from these two statements, called premisses, the conclusion that John is mortal. No art is required to teach him to do this, as no discipline to which his mind could be subjected could possibly prevent him from doing it. He is without power to do otherwise. And so it is in every other case in which an act of reasoning is performed.

Do all minds, then, reason equally well? In the strict sense of the term *reason*, they do. Let any two minds equally well apprehend the propositions which form the premisses of a syllogism, and they will infallibly draw from them the same conclusion. The conclusion is, in fact, nothing else than the new form which one of the premisses necessarily assumes as soon as it is viewed along with the other. It assumes this new form to the mind by a law of nature as irresistible as that by which a visible object changes its colour to the eye according to the colour of the light that is made to fall upon it, or of the medium through which it is seen.

Logic does not undertake either to supply the power of comprehending the premisses of a syllogism where it is wanting, or to direct the mind in the selection of the premisses from which it is to draw its conclusions. It does not concern itself at all with the premisses—not even with the question of their truth. All men are *immortal*; John is a man; therefore John is *immortal*; that is as correct a syllogism, or as good logic, as the example asserting the opposite, which is commonly given.

Yet in the soundness and judicious selection of the premisses lies all the practical value of any reasoning. The difference in knowledge and capacity between two minds will never be indicated by their disagreeing as to the conclusion to be drawn from the same premisses, when equally well understood by each; but it will be indicated by the one comprehending the premisses more readily or more correctly than the other, or by the one admitting the truth of premisses which the other doubts



or rejects, or, most decisively of all, by the fortunate points of view and courses of inquiry which are adopted by the one and which do not suggest themselves to the other. But of all this logic takes no account.

The utmost that logic can do is to make a single deduction. When the syllogism is completed, its function is performed, its power is gone. In the common example quoted above, when we have arrived at the conclusion that John is mortal, we cannot by any aid of logic advance another step. Among all its formulæ there is not one that will help us over another inch of ground. If we would carry the speculation further; it must be done by a mental act, which is altogether out of the province of logic, the introduction of a new premiss. It is in the selection of that premiss that the real ability of the reasoner is shown, and that all the value and success of the reasoning consists. As for the conclusions of the successive syllogisms, they are, in moral speculation at least, most commonly not even set down; they are left for the reader to deduce for himself; it is held to be sufficient that he is supplied with the premisses by which they may be suggested, or rather in which they are involved.

But not only is the invention or selection of his premisses, upon which it thus appears that all the success of the reasoner or speculator depends, a thing that is not taught or pretended to be taught by logic; it is manifestly a thing not to be taught at all. It is no more to be taught than the writing of poetry is to be taught. That which alone distinguishes one man from another in ratiocinative speculation, beside what difference there may be between them in their knowledge of the subject, is the difference of the degrees in which they are gifted with quickness, clearness, and comprehensiveness of mental vision—which are qualities as unsusceptible of being communicated by precept as is the quality of being six feet high.

Now what Bacon calls invention or discovery in the arts and sciences is merely a mode of ratiocinative speculation. Such speculation may be carried on by words or

without words—by propositions or by experiments. It is the same mental power working with different instruments, or upon different materials. It is equally in the one case as in the other a power evidently incommunicable by teaching, and which no exposition of its nature or manner of operation can ever convey to him who has it not. It is not of the nature of a spade, or a musquet, or an algebraic formula, or of any thing else which can be put into men's hands as an *organum*, or instrument.

Without questioning the truth of the doctrine preached by Bacon, that it is from the observation and examination of things that science must begin, we deny that the promulgation of this truth, however new it might have been as a proposition, was giving men any *novum organum*, or new instrument of discovery. The practice of the method which he asserts to be the only one by which discoveries can be made, and his assertion, or demonstration if you will, to that effect, have no necessary connexion. Although the assertion had never been made before, the practice may have been going on from the beginning of the world. Indeed, the assertion itself implies the previous existence of the practice, unless it is to be held that no discoveries whatever had been made in the arts and sciences, except perhaps by accident, until Bacon arose.

Exactly the same doctrine that Bacon has laid down for science and philosophy has also been announced, and in our own day generally accepted, as the true faith in poetry. Here too it has been proclaimed that nothing is to be done without the study of the realities of nature—that nature is the supreme rule and standard—that “the art itself is nature.” After some generations in which poets had been more accustomed to look to certain great masters than to this greater mistress, they have been recalled, or rather they have returned, to their true allegiance. For in every such case of the establishment of juster and higher views in any department of intellectual pursuit, the practice precedes the preaching. The better faith always shows itself in production before it takes the form of proposition. It was the poets who

taught the critics here, not the critics who taught the poets. But what critic or theorist ever imagined that, in inculcating what we may call the new doctrine as to this matter, he was putting into the hands of men any thing of the nature of a new organ or instrument? So far from that, the doctrine itself involved the very opposite admission or affirmation. If its account of the nature of poetical production was correct, the practice of the doctrine could be no novelty, whatever the formal statement of it might be; for whatever true poetry had any where been produced was a proof of the practice having been followed. And neither in poetry nor in philosophy could any theory of the method of invention, however correct or complete, communicate any thing of the faculty of invention. It might as reasonably have been expected that the announcement of the true theory of the circulation of the blood would work some great and general improvement in the beating of people's pulses.

Accordingly, in point of fact, the exercise of the inventive faculty, either in poetry or in science, has clearly never been affected by the prevalent state of criticism or the philosophy of method, or by the views in these departments of speculation which may have been entertained by the individual poet or scientific inventor. The poetry that is fullest of invention, fullest of reality and of life, was produced before the birth of criticism; and it never has been pretended that the invention of any of the greatest poets of any age has been quickened or strengthened by the critical theories of their time. Nobody has dreamed of calling Aristotle the Father of Poetry because he wrote a treatise upon the Poetical; although, if no poetry of earlier date had been preserved, this title would doubtless have been claimed for him, and we might possibly have been assured that no poetry would have been produced down to the present hour if that treatise of his had not been written. Such a claim would not have been more preposterous than that which is set up for Bacon as having been the Father of Modern Science. From causes, some of which he has himself explained in this Preface to the *Instauratio*, the spirit of

independent investigation had for many centuries given way in every department of thought before the spirit of submission to authority and acquiescence in dogmas and creeds of old establishment. It was not more the case in science than in literature. Even for a considerable time after what is called the revival of letters in the fifteenth century, the imitation of the ancient models was the only thing attempted or dreamed of by the most aspiring genius. The habit of thought was universal; in every thing men looked only to the mighty and glorious past. And the immense superiority of that past might almost be said to justify them; it was little to be wondered at that the writers and philosophers of classic Greece and Rome should be looked back to as almost a race of superior beings by all the generations that had succeeded them. Least of all was a thought of questioning their authority likely to occur to that generation upon whom the sunlight of their genius first re-emerged in full effulgence from the clouds that had obscured it for a thousand years. But by the time that Bacon's great work appeared, in the early part of the seventeenth century, this all-believing reverence for antiquity had long begun to pass away. The true spirit of scientific inquiry had fairly re-awakened, and discoveries which had already wrought a complete revolution in physical science had been made by Copernicus, by Tycho Brahe, by Kepler, by Galileo, by Bacon's own countryman Gilbert, and others. Bacon, indeed, does not appear to have been aware of this; he speaks with contempt repeatedly of the new views both of Gilbert and of Copernicus; the others, we believe, he nowhere mentions. But that makes no difference: it is indisputable that the very thing which he is supposed to have been the first to teach, men were already busy doing in all directions. And of the illustrious succession of inventors and discoverers who have since appeared in every department of the field of science, it is equally certain that very few, if any, have either been distinguished as students of Bacon's writings, or can reasonably be supposed to have even indirectly acquired such knowledge of the spirit or principles of what is

called his method. Where is the case in which it can be clearly or even probably made out that any discovery of mark has been arrived at through that method, followed more closely than it would necessarily have been in the particular instance although Bacon had never expounded it or had never lived? If the history of all the great inventions and discoveries of the last two hundred years were to be traced, we doubt if the proportion of them that would be found to be fairly attributable to the inspiration of Bacon would turn out to be much more considerable than that of the great poems of the last two thousand years that may be attributed to the inspiration of Aristotle.

The Preface to the *Instauratio Magna* is followed by a longer discourse entitled *Distributio Operis*, or The Distribution of the Work. It consists, or rather will consist, it is intimated, of Six Parts; entitled, the 1st, *The Partitions, or Divisions, of the Sciences*; the 2nd, *The Novum Organum* (that is, The New Organ or Instrument), or Directions respecting the Interpretation of Nature; the 3rd, *Phenomena of the Universe*, or Natural and Experimental History for the building up of a Philosophy; the 4th, *The Scala Intellectus* (or Ladder for the Understanding); the 5th, *Prodromi* (that is, Precursors), or Anticipations of the Second Philosophy; the 6th, *The Second Philosophy*, or Active Science. We will translate so much as will suffice to explain what the author contemplated setting forth under each of these divisions:—

“The First Part exhibits the sum, or universal description, of that knowledge or doctrine in possession of which the human race is up to this time. . . . And our Partitions include not only those things that have been found out and are known, but those also which have been hitherto passed over and may be said to be owing. . . . And it will be our constant care to subjoin either instructions for the supplying of such deficiencies, or even sometimes a portion of the work completed by ourselves, by way of example for the whole. For we have undertaken, not to measure out regions in our mind, like augurs

nature really acknowledges to be known to her, and as enter into the very marrow of things.

“ But by far the greatest work which we set in motion is in the form of the induction, and in the conclusion which is attained to by means of it. For that form, of which the dialecticians speak, which proceeds by mere enumeration, is a puerile thing, precarious in its conclusions, exposed to danger from any contrary instance, and occupying itself only with matters generally known; nor does it lead to any result. But science requires an induction of such a form as may solve and separate experiments, and by means of due exclusions and rejections may bring out conclusions which shall be necessarily true. . . .

“ Nor is even this all. For we carry down the foundations of the sciences to a greater depth, and construct them with greater solidity, and begin our investigations from a higher point, than has been hitherto done; subjecting to examination those things which the vulgar logic takes on trust. . . . We have resolved that true logic should force even supposed first principles to give reasons for themselves, until they are clearly evident. And, in so far as respects the first notions of the understanding, there is no one of those things which the understanding, left to itself, has collected, but is held by us in suspicion. . . . Nay we sift in many ways the information of the senses themselves. . . . To obviate the risks thence arising, we have with much and faithful service sought and collected helps for the senses from all quarters; that substitutions may make up for their deficiencies and rectifications for their variations. Nor do we attempt that so much by instruments as by experiments. For the subtilty of experiments is far greater than that of the senses, assisted even by the most exquisite instruments; we speak of such experiments as are skilfully and artistically imagined and applied in accordance with the design of the inquiry.

“ Such are the means which we prepare for the kindling and immission of the light of nature; and they might of themselves be sufficient if the human under-

standing were quite plain, and resembled a smoothed table. But, seeing that the minds of men are so wonderfully beset, that a clear and polished surface for receiving the true rays of things is altogether wanting, a necessity arises that we should seek a remedy for this also.

“The spectres by which the mind is pre-occupied are either adscititious or innate. The adscititious have made their way into the minds of men either from the assertions and sects of the philosophers, or from the perverse rules which have been laid down for demonstrations. But the innate are inherent in the nature of the understanding itself, which may be shown to be much more prone to error than the senses. . . . And the two former kinds of spectres may with difficulty be eradicated; the latter not at all. All that can be done is, to indicate them. . . . Wherefore this doctrine of the purifying of the understanding, that it may be fitted for the reception of truth, is reduced to three reprehensions; the reprehension of philosophies, the reprehension of demonstrations, and the reprehension of the natural reason of man. . . . And this is the Second Part of the work.

“But it is our intention not only to point out and prepare the ways, but also to enter upon them. The Third Part of the work, therefore, comprehends the phenomena of the universe; that is, experience of every kind, and such a natural history as may serve for a foundation on which to rear a system of philosophy. For no manner of demonstration, or form of interpreting nature, however excellent for defending and sustaining the mind from error and failure, can also provide and supply it with the material of knowledge. But by all who would not guess and divine, but discover and know, and who desire not to invent buffooneries and fables about worlds,\* but to inspect, and as it were to dissect, the nature of this real world, all knowledge must be sought from things

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\* This, which is Mr. Wood's translation, appears to be the best that can be given of “*simiolas et fabulas mundorum comminisci.*” But the word *simiolas* is, we believe, unknown to the Latin language.

themselves. Nor can any substitution or compensation of wit, or meditation, or augmentation, suffice in the stead of this labour, and inquisition, and perambulation of the world; not if all the wit of all men were to combine for the purpose. The labour, therefore, must be undergone, or the undertaking for ever abandoned. . . . It would be of no use to smooth the mirror if there were nothing for it to reflect. . . . But our natural history also, like our logic, differs in many respects from that which is generally received; in its end or office, in its very structure and compilation, in its nicety, finally, in its selection, and the order in which it is arranged in reference to what follows it.

“For, in the first place, we propose such a natural history as may not so much amuse by variety of matter, or even profit by present fruit of experiments, as shed light upon the discovery of causes, and yield the first milk for the nursing of philosophy. . . .

“And as for the compilation, our history will be not only that of nature in a state of freedom and ease, when, that is to say, she flows on and performs her work spontaneously—such as is a history of the celestial bodies, of meteors, of the earth and sea, of minerals, plants, and animals; but much rather of nature constrained and vexed, that is, when she is thrust down from her proper state, and pressed upon and made to take a new form, by the art and ministry of man. . . .

“Nor do we present the history only of bodies, but we have besides thought it right to exert our diligence to prepare separately also a history of properties themselves; of those, we mean, which may be deemed to be as it were cardinal in nature, and in which the first elements of nature plainly reside, as being matter in its first passions and desires; namely, density, rarity, heat, cold, consistency, fluidity, gravity, levity, and many more. . . .

“After having thus guarded the understanding with the surest helps and protections, and prepared with most severe selection a complete host of divine works, it may seem that nothing more remains but that we proceed at once to philosophy itself. Yet in a matter so arduous



and doubtful it appears requisite that some things should be interposed;\* partly for the purpose of instruction, partly for present use. Of these the first is, that some examples be offered of investigation and discovery according to our system and method. . . . We speak now of such examples only as may be of the nature of types and models, placing as it were before our eyes the whole process of the mind, and the continuous frame and order of discovery in particular subjects, and they various and of note. . . . To examples of this kind, therefore, we devote the Fourth Part of our work; which in fact is nothing else than a particular and expanded application of the Second Part.

“The Fifth Part is introduced only for a temporary purpose, until what remains can be finished. . . . It is made up of whatsoever things we have ourselves either found out, or proved, or added; and that not exclusively by the proper methods and rules of interpretation, but simply by that same exercise of the understanding which other men are accustomed to use in investigation and discovery.

“Finally, the Sixth Part of our work, to which all the other parts are subservient and ministerial, at length discloses and propounds that philosophy which is educed and constituted out of that legitimate, chaste, and severe inquisition, which we have previously taught and prepared. But to accomplish and bring to a termination this last part is a thing both beyond our strength and beyond our hopes. We hope indeed to furnish no contemptible beginning of it; the fortune of the human race will supply the end; which will be such perhaps as, in the present state of things and of men’s minds, the imagination cannot easily comprehend or take measure of.”

The panoramic view of his vast design which Bacon spreads out before us in this preliminary discourse, is for

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\* The meaning is not, as Mr. Wood gives it, “a few reflections must necessarily be *here* inserted.” The “*quaedam interponenda*” are the subjects of the Fourth Part of the work, the *Scala Intellectus*.

the greater part as luminous and distinct as it is sweeping and magnificent. It will convey a complete conception to whoever will study it attentively of the general nature and object at least of the three first parts of the *Instauratio Magna*; the latter portion of the work, upon the actual composition of which the author cannot be said to have ever properly entered, seems to have floated somewhat vaguely before his own eye, and it may be said to form a distant back-ground in the picture he has here sketched. In our abstract, we have omitted much of the mere eloquence and illustration, with many ingenious, penetrating, and most felicitously expressed remarks; but we have preserved all the substance of the statement.

Bacon's adoption of the designation of a new logic, or dialectics, for his proposed method of investigating nature, and his comparison of the method with the vulgar or common logic, are sufficiently accounted for by the use that had come to be made of logical formulæ in the discussion of scientific questions. It is true that the syllogism is the universal form of reasoning, that all demonstration when fully developed and expressed must fall into one or other of the varieties of that form. The defect of the scientific reasoning of the schools, therefore, did not consist in its addictedness to syllogistic forms. The most perfect reasoning in the world, that of Euclid's Elements of Geometry, is every where a series of syllogisms. The error of the philosophy, both physical and moral, which formerly prevailed, and against which Bacon directs his attacks, lay in the employment of the syllogism for a purpose for which it was wholly incompetent, which was altogether beside its function and out of its province. A syllogism can establish no absolute truth. Its conclusion may be absolutely true: but all that the syllogism makes out, or professes to establish, is, that it is true provided the premisses are true. A syllogism is only a conditional affirmation. It is a statement that, given certain things, a certain other thing will follow. And one of the advantages which the syllogisms of geometry have is, that their premisses are all pure sup-

positions, mere conceptions which the mind forms without having to look beyond itself. We are not denying that the conceptions or suppositions are true. They have in fact the peculiar character of being such that it is impossible for the mind not to believe them to be true. But, for that matter, the Arabian Nights' Entertainments might be delivered in a series of syllogisms. Given, it might be said, so many genies, giants, and enchanters, and such and such effects will follow. The one proposition would be as true as the other; the conclusion would be true if the premisses were true; and that is all that logic can make out in any case. The old writers on science were wont to employ it as if they thought it could do a great deal more. Its proper and only function is the exposition of an argument; they seemed often to think that a correctly constructed syllogism was the sufficient explanation of a phenomenon.

At the same time Bacon is not justified in making this matter of charge against the common logic. There is usually no fault to be found with the mere logic of the old scientific writers. Their conclusions are legitimately deduced from their premisses; and that is all that can be required on the score of logic. The single respect in which their demonstrations are objectionable is, that they often set out from false or insufficiently established premisses; but with the establishment of premisses, as such, logic has nothing to do; its sole office is the deduction of conclusions. Its premisses are assigned to it, or may be assumed at pleasure.

It is true that a false proposition which is adopted as one of the premisses of a syllogism has often been previously obtained as the conclusion of another syllogism. But, although false as a premiss, it may have been true as a conclusion; that is to say, it may have been quite legitimately deduced from other premisses. In that case the fault of the demonstration will still be, as before, that some one or other of the premisses has been false.

The greatest amount of misconception and confusion of thought, however, in regard to these subjects, has been occasioned by Bacon's describing the method he proposes

for the investigation of natural phenomena and processes as a new logic, and designating it by the term induction. It has become common to distinguish it as the Inductive Logic.

Whatever else may be new in the Baconian method, there most certainly neither is, nor can be, any novelty in its logic. If there were, it would only be an illegal, that is, an unreasonable or absurd method. For nobody has ever pretended that the old logic is false; the worst charge that has been brought against it is that it is useless or inefficient. To talk of a new logic, differing in its principles from the old, is tantamount to talking of a new geometry, or a new species of square or circle.

But what Bacon understands by Induction is not a logic at all, or anything of the nature of a logic. Induction is the name given by the logicians to that kind of syllogism in which a universal conclusion is obtained from premisses relating to particulars, instead of a particular conclusion being derived from a universal proposition, as is more commonly the case. But the enumeration of particulars in such an induction is complete; and the conclusion, therefore, is as necessary as in the common syllogism. Thus, John, Thomas, and Henry, are each dark-haired; John, Thomas, and Henry make up all the family of the Smiths; therefore the Smiths are all dark-haired; is an example of logical induction. Bacon's induction is altogether different. In that, from a number of particular instances, examined by means of observation and experiment, and sifted by the proper rejections or exclusions, we infer, not by the necessary laws of thought (with which alone logic concerns itself), but on our experience of the uniformity of the operations of nature, on grounds of analogy, or on other such considerations, that a certain thing is probably universally true. This is not such a process as comes within the domain of logic, which, as already explained, undertakes to teach nothing more than how two propositions having a certain relation combine to generate a third, and in so teaching is entirely indifferent as to whether the generating propositions be true or false. A logical induction does not, any more than a logical deduc-

tion, look beyond the mind itself: logic is the science of a certain mental process, not the science or art of the collection and examination of material facts. Its conclusions are, in all cases, necessary and irresistible, the premisses being admitted; and depend for their reception by the mind in no degree upon its knowledge or experience of any kind, or even upon the degree of its judgment, or capacity of weighing evidence. There is no evidence to be weighed or balanced in a syllogism, whether deductive or inductive: all the evidence is upon one side.

It is true that so much of the Baconian Induction as consists in drawing the conclusion may be resolved into a logical form, by introducing, or assuming that there is always present to the mind, as one of the premisses, a proposition asserting the uniformity of the operations of nature. In this way the major proposition will be, What is found in examined instances will be found in all instances; the minor, A certain thing is what is found in examined instances; the conclusion, Therefore the same thing will be found in all instances. The middle term, (that by which the two premisses are connected so long as they continue distinct, and which like a bridge becomes unnecessary, and is removed, when they are in the conclusion brought together into one affirmation) will be, What is found in examined instances. But this only proves that, in so far as the Baconian Induction is a logical process, its logic is merely the common logic. As the term is used by Bacon, however, it includes also, and that, we may say, as its principal part, another process, the collection and examination of the instances, which, as we have seen, is not a logical process at all.

## SECTION II.

THE TREATISE DE DIGNITATE ET AUGMENTIS SCIENTIARUM; FORMING THE FIRST PART OF THE INSTAURATIO MAGNA.

WHEN the treatise *De Augmentis Scientiarum* was published, by itself, in 1623, it was introduced by a short advertisement from Dr. Rawley, Bacon's chaplain, the more essential portion of which is to the following effect:—"Since it hath pleased my lord to do me the honour of making use of my assistance in setting forth his works, I have thought that it would not be improper for me briefly to inform the reader of some things which concern this First Volume. The present treatise, on the Dignity and Advancement of the Sciences, was published by his lordship eighteen years ago, in the English language, and in two Books only; and was addressed to his majesty, as it still is. Not long afterwards he became anxious to have it translated into Latin; having heard that that was desired in foreign countries, and being, moreover, himself wont often to say that books written in the modern tongues would ere long become bankrupt. He now, accordingly, publishes such a translation, executed by persons distinguished for their eloquence, and revised and corrected, besides, by himself. The First Book is merely a translation, and is very little changed; but the remaining eight, which declare the partitions of learning, and formerly made only one Book, come forth now as a new work. The principal reason which moved his lordship thus to rewrite and amplify the work was this; that, in publishing long afterwards his *Instauratio Magna*, he appointed the *Partitions of the Sciences* to be the first part of that work; and to be followed first by the *Novum Organum*, then by the *Historia Naturalis*, and so forth. Finding, then, the said

part relating to the Partitions of the Sciences already executed (though less solidly than the dignity of the argument demanded), he thought the best thing he could do would be to go over again what he had written, and to bring it to the state of a satisfactory and completed work. And in this way he considers that he fulfils the promise which he has given respecting the First Part of the *Instauratio*." It had been noted at the end of the *Distributio*, published with the *Novum Organum*, that the First Part of the *Instauratio*, comprehending the Partitions of the Sciences, was wanting; but that the said Partitions might in part be gathered from the Second Book of 'The Proficiency and Advancement of Learning, Divine and Human.'

In his Life of Bacon prefixed in English to the *Resuscitatio* (1657), and in Latin to the *Opuscula Posthuma* (1658), Rawley speaks of the translation of the 'Advancement of Learning' into Latin somewhat differently from what he does in this advertisement. In the English Life, in enumerating in their order the "books and writings, both in English and Latin," written by Bacon after his retirement, he merely mentions the "*De Augmentis Scientiarum*, or *The Advancement of Learning*, put into Latin, with several enrichments and enlargements," as if the translation had been wholly Bacon's own. In the Latin Life he expresses himself more emphatically: in there noticing the *De Augmentis* he describes it as a work which the author bestowed much labour in turning from English into Latin by his own exertions, or as the phrase might almost be rendered, without assistance;—"in quo e lingua vernacula, proprio Marte, in Latinam transferendo honoratissimus auctor plurimum desudavit." We must probably, however, understand the meaning of the worthy chaplain to be only that the translation was in part done by Bacon himself; and his words, in truth, strictly taken, do not assert more. In the *Resuscitatio* Rawley has printed among other Letters of Bacon's one entitled 'A Letter of Request to Doctor Playfer to translate the book of *Advancement of Learning* into Latin.' There Bacon,

after some explanation of his design in writing the *Advancement*—in which, he says, he had only taken upon him “to ring a bell to call other wits together, which is the meanest office,”—adds, “It cannot but be consonant to my desire to have that bell heard as far as can be . . . . And therefore, the privateness of the language considered, wherein it is written, excluding so many readers; as on the other side, the obscurity of the argument, in many parts of it, excludeth many others; I must account it a second birth of that work if it may be translated into Latin, without manifest loss of the sense and matter. For this purpose I could not represent to myself any man into whose hands I do desire more earnestly that work should fall than yourself; for, by that I have heard and read, I know no man a greater master in commanding words to serve matter. Nevertheless I am not ignorant of the worth of your labours; whether such as your place and profession imposeth, or such as your own virtue may, upon your voluntary election, take in hand. But I can lay before you no other persuasions than either the work itself may affect you with, or the honour of his majesty, to whom it is dedicated; or your own particular inclination to myself; who, as I never took so much comfort in any labour of mine own, so I shall never acknowledge myself more obliged in anything to the labour of another than in that which shall assist it; which your labour, if I can by my place, profession, means, friends, travail, work, deed, requite unto you, I shall esteem myself so straitly bound thereunto as I shall be ever most ready to take and seek occasion of thankfulness.” Doctor Thomas Playfer, or. Playfere, who was Margaret Professor of Divinity in the University of Cambridge, died in the beginning of the year 1608; so that the letter must have been written before then. Tenison relates, in the Introduction to the *Baconiana* (1679), that the translation was undertaken and actually begun by Playfer. “The Doctor,” he says, “was willing to serve so excellent a person, and so worthy a design; and within a while sent him a specimen of a Latin translation. But men generally come short



of themselves when they strive to outdo themselves. They put a force upon their natural genius, and by straining of it crack and disable it. And so, it seems, it happened to that worthy and elegant man. Upon this great occasion he would be over-accurate; and he sent a specimen of such superfine Latinity, that the Lord Bacon did not encourage him to labour further in that work, in the penning of which he desired not so much neat and polite as clear, masculine, and apt expression." At this time, probably, Bacon contemplated nothing more than a correct translation of the English work, without additions. When he long afterwards determined to extend it so as that it might serve for the First Part of the *Instauratio*, "he caused that part of it," Tenison tells us, "which he had written in English to be translated into the Latin tongue by Mr. Herbert [that is, George Herbert the poet], and some others who were esteemed masters in the Roman eloquence." If we are to understand this in what seems to be the natural and proper sense of the words, it would appear to have been only so much of the *De Augmentis* as had been already published under the title of the *Advancement of Learning* that was rendered into Latin by Herbert and his fellow-labourers; what was added, we are left to suppose, Bacon wrote in Latin, while, in the rest, also, "he so suited the style to his conceptions, by a strict castigation of the whole work," as Tenison adds, "that it may deservedly seem his own." We may add what Bacon has himself said in his letter to Bishop Andrews, prefixed to his 'Advertisement touching an Holy War,' and written in 1623: "For that my book of *Advancement of Learning* may be some preparative or key for the better opening of the *Instauratio*; because it exhibits a mixture of new conceits and old, whereas the *Instauratio* gives the new unmixed, otherwise than with some little aspersion of the old for taste's sake; I have thought good to procure a translation of that book into the general language, not without great and ample additions and enrichment thereof, especially in the Second Book, which handles the Partition of Sciences; in such

sort as I hold it may serve in lieu of the First Part of the *Instauration*, and acquit my promise in that part."

A few additional facts proper to be mentioned here may be gleaned from various letters of Bacon's, in which mention is made of the *Advancement of Learning* or of the *De Augmentis*. In a letter to his friend, Sir Toby Matthew, sent with a copy of the former on its first publication in 1605, we find him writing:—"I have now at last taught that child to go, at the swaddling whereof you were. My work touching the Proficiency and Advancement of Learning, I have put into two Books; whereof the former, which you saw, I can't but account as a page to the latter. I have now published them both: whereof I thought it a small adventure to send you a copy, who have more right to it than any man, except Bishop Andrews, who was my inquisitor." From this it would appear that the First Book of the *Advancement* had been completed probably some years before the second was added. In the letter accompanying the copy of the *De Augmentis* sent to the King Bacon writes:—"This book was the first thing that ever I presented to your majesty; and, it may be, will be the last. For I had thought it should have been *posthuma proles*. But God hath otherwise disposed for a while. It is a translation, but almost enlarged to a new work. I had good helps for the language. I have been also mine own *index expurgatorius*, that it may be read in all places. For, since my end of putting it into Latin was to have it read everywhere, it had been an absurd contradiction to free it in the language, and to pen it up in the matter." To the Prince he writes;—"I send your highness, in all humbleness, my book of *Advancement of Learning*, translated into Latin, but so enlarged as it may go for a new work. It is a book, I think, will live, and be a citizen of the world as English books are not."

The *De Augmentis* was not reprinted in the lifetime of the author; and the first edition is now an extremely rare book. The copy which Bacon presented to King James is still preserved in the British Museum. The subsequent editions Tenison complains of as having been

less correct. The work was early translated into French, through the means of the Marquis Fiat, ambassador from the King of France at the English court; but in this translation "there are," according to Tenison, "many things wholly omitted, many things perfectly mistaken, and some things (especially such as relate to religion) wilfully perverted." There is also a modern French translation, filling the first three volumes of the 'Oeuvres de François Bacon, traduites par Lasalle, avec des notes Critiques, Historiques, et Littéraires,' 6 tomes, 8vo.; à Dijon, 1800. It has been reprinted, but without the notes, in a volume of the 'Panthéon Littéraire,' entitled 'Oeuvres Philosophiques, Morales, et Politiques, de François Bacon; avec une notice biographique par J. A. C. Buchon,' 8vo.; Paris, 1836. There are two English translations. One, by Gilbert Wats, was printed in folio at Oxford in 1640, and again at London in 1674. The other makes part of 'The Philosophical Works of Francis Bacon, by Peter Shaw, M.D.;' first printed at London in 3 vols. 4to., in 1733; again, in the same form, in 1737; and a third time in 12 vols. 8vo., in 1807.

Mr. Hallam has stated, in his 'Introduction to the History of the Literature of Europe,' that more than two-thirds of the *De Augmentis* are a version, with slight interpolation or omission, from the *Advancement of Learning*, and that consequently less than one third of the former treatise consists of new matter. This is, we apprehend, an under statement of the extent of the additions. The First Book of the *De Augmentis* is nearly a translation of the *Advancement*; something is omitted, but hardly any thing added. The Second Book of the *Advancement*, however, which is nearly three times as long as the first, is more than doubled in the remaining eight Books of the *De Augmentis*. The new matter, therefore, instead of making less than a third, makes more than three-sevenths, or not much less than half of the whole work; while it makes more than the half of that portion of the work to which the additions are chiefly confined.

The *Advancement of Learning* sets out with the

following panegyrical address to King James, which is retained, with very slight abridgment, in the *De Augmentis* :—

There were, under the law, excellent king, both daily sacrifices, and freewill offerings; the one proceeding upon ordinary observance, the other upon a devout cheerfulness: in like manner there belongeth to kings from their servants both tribute of duty and presents of affection. In the former of these I hope I shall not live to be wanting, according to my most humble duty, and the good pleasure of your majesty's employments: for the latter, I thought it more respective to make choice of some oblation, which might rather refer to the propriety and excellence of your individual person, than to the business of your crown and state.

Wherefore, representing your majesty many times unto my mind, and beholding you not with the inquisitive eye of presumption, to discover that which the Scripture telleth me is inscrutable, but with the observant eye of duty and admiration; leaving aside the other parts of your virtue and fortune, I have been touched, yea, and possessed with an extreme wonder at those your virtues and faculties, which the philosophers call intellectual; the largeness of your capacity, the faithfulness of your memory, the swiftness of your apprehension, the penetration of your judgment, and the facility and order of your elocution: and I have often thought, that of all the persons living that I have known, your majesty were the best instance to make a man of Plato's opinion, that all knowledge is but remembrance, and that the mind of man by nature knoweth all things, and hath but her own native and original notions (which by the strangeness and darkness of this tabernacle of the body are sequestered) again revived and restored: such a light of nature I have observed in your majesty, and such a readiness to take flame and blaze from the least occasion presented, or the least spark of another's knowledge delivered. And as the Scripture saith of the wisest king, "That his heart was as the sands of the sea;" which though it be one of the largest bodies, yet it consisteth of the smallest and finest portions; so hath God given your majesty a composition of understanding admirable, being able to compass and comprehend the greatest matters, and nevertheless to touch and apprehend the least; whereas it should seem an impossibility in nature, for the same instrument to make itself fit for great and small works. And for your gift of speech, I call to mind what Cornelius Tacitus saith of Au-

gustus Cæsar : " Augusto profluens, et quæ principem deceret, eloquentia fuit."\* For, if we note it well, speech that is uttered with labour and difficulty, or speech that savoureth of the affectation of art and precepts, or speech that is framed after the imitation of some pattern of eloquence, though never so excellent, all this has somewhat servile, and holding of the subject. But your majesty's manner of speech is indeed princelike, flowing as from a fountain, and yet streaming and branching itself into nature's order, full of facility and felicity, imitating none, and inimitable by any. And as in your civil estate there appeareth to be an emulation and contention of your majesty's virtue with your fortune; a virtuous disposition with a fortunate regiment; a virtuous expectation, when time was, of your greater fortune, with a prosperous possession thereof in the due time; a virtuous observation of the laws of marriage, with most blessed and happy fruit of marriage; a virtuous and most Christian desire of peace, with a fortunate inclination in your neighbour princes thereunto: so likewise, in these intellectual matters, there seemeth to be no less contention between the excellency of your majesty's gifts of nature, and the universality and perfection of your learning. For I am well assured that this which I shall say is no amplification at all, but a positive and measured truth; which is that there hath not been since Christ's time any king or temporal monarch, which has been so learned in all literature and erudition, divine and human. For let a man seriously and diligently revolve and peruse the succession of the emperors of Rome; of which Cæsar the dictator, who lived some years before Christ, and Marcus Antonius, were the best learned; and so descend to the emperors of Græcia, or of the West; and then to the lines of France, Spain, England, Scotland, and the rest, and he shall find this judgment is truly made. For it seemeth much in a king, if by the compendious extractions of other men's wits and labours, he can take hold of any superficial ornaments and shows of learning; or if he countenance and prefer learning and learned men: but to drink indeed of the true fountains of learning, nay, to have such a fountain of learning in himself, in a king, and in a king born, is almost a miracle. And the more, be-

\* Augustus had a fluent delivery, such as becomes a prince. (The translations at the foot of the page of Latin passages and phrases in the *Advancement of Learning* are for the most part the same with those of Dr. W. C. Taylor's edition of that work, 8vo., Lond., 1840.)

cause there is met in your majesty a rare conjunction, as well of divine and sacred literature, as of profane and human; so as your majesty standeth invested of that triplicity, which in great veneration was ascribed to the ancient Hermes; the power and fortune of a king, the knowledge and illumination of a priest, and the learning and universality of a philosopher. This propriety, inherent and individual attribute in your majesty, deserveth to be expressed not only in the fame and admiration of the present time nor in the history or tradition of the ages succeeding, but also in some solid work, fixed memorial, and immortal monument, bearing a character or signature both of the power of a king, and the difference and perfection of such a king.

Therefore I did conclude with myself, that I could not make unto your majesty a better oblation than of some treatise tending to that end, whereof the sum will consist of these two parts; the former, concerning the excellency of learning and knowledge, and the excellency of the merit and true glory in the augmentation and propagation thereof: the latter, what the particular acts and works are, which have been embraced and undertaken for the advancement of learning; and again, what defects and undervalues I find in such particular acts: to the end, that though I cannot positively or affirmatively advise your majesty or propound unto you framed particulars; yet I may excite your princely cogitations to visit the excellent treasure of your own mind, and thence to extract particulars for this purpose, agreeable to your magnanimity and wisdom.

First, in vindicating the excellence of learning, "to clear the way, and, as it were, to make silence," in order that the true testimonies concerning its dignity may be the better heard, "without the interruption of tacit objections," the author thinks "good to deliver it from the discredit and disgraces which it hath received, all from ignorance, but ignorance severally disguised; appearing sometimes in the zeal and jealousy of divines, sometimes in the severity and arrogancy of politicians, and sometimes in the errors and imperfections of learned men themselves." Bacon is never more ingenious or more eloquent than in handling a theological topic; and we will quote, as a specimen of the present argument, his answer to the objections of the divines, who, he observes, are wont to say that the aspiring to know-

ledge was the original temptation and cause of the fall ; and, among other disparagements, that many learned men have been arch-heretics ; that learned times have been inclined to atheism ; and that the contemplation of second causes, which is philosophy, withdraws the mind from dependence upon God, the first cause, which is religion. Partly from his early reading and the natural bent of his genius, partly in accommodation to the spirit of his age, which required that every subject should be viewed with some reference to theology, Bacon has introduced his theological notions into almost all his writings. He is fond, also, of repeating his new and peculiar thoughts of all kinds, and several of those which repeatedly occur elsewhere figure in the following passage :—

To discover then the ignorance and error of this opinion, and the misunderstanding in the grounds thereof, it may well appear these men do not observe or consider, that it was not the pure knowledge of nature and universality, a knowledge by the light whereof man did give names unto other creatures in Paradise, as they were brought before him, according unto their proprieties, which gave the occasion to the fall ; but it was the proud knowledge of good and evil, with an intent in man to give law unto himself, and to depend no more upon God's commandments, which was the form of the temptation. Neither is it any quantity of knowledge, how great soever, that can make the mind of man to swell ; for nothing can fill, much less extend the soul of man, but God and the contemplation of God ; and therefore Solomon, speaking of the two principal senses of inquisition, the eye and the ear, affirmeth that the eye is never satisfied with seeing nor the ear with hearing ; and if there be no fulness, then is "the continent greater than the content :"\* so of knowledge itself, and the mind of man, whereto the senses are but reporters, he defineth likewise in these words, placed after that calendar or ephemerides, which he maketh of the diversities of times and seasons for all actions and purposes ; and concludeth thus : "God hath made all things beautiful, or decent, in the true return of their seasons : also he hath placed the world in man's heart, yet cannot man find out the work which God worketh from the beginning to the end : " declaring,

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\* The thing containing greater than the thing contained.

not obscurely, that God hath framed the mind of man as a mirror or glass, capable of the image of the universal world, and joyful to receive the impression thereof, as the eye joyeth to receive light; and not only delighted in beholding the variety of things and vicissitude of times, but raised also to find out and discern the ordinances and decrees, which throughout all those changes are infallibly observed. And although he doth insinuate that the supreme or summary law of nature, which he calleth "The work which God worketh from the beginning to the end, is not possible to be found out by man;" yet that doth not derogate from the capacity of the mind, but may be referred to the impediments, as of shortness of life, ill conjunction of labours, ill tradition of knowledge over from hand to hand, and many other inconveniences, whereunto the condition of man is subject. For that nothing parcel of the world is denied to man's inquiry and invention, he doth in another place rule over, when he saith, "The spirit of man is as the lamp of God, wherewith he searcheth the inwardness of all secrets." If then such be the capacity and receipt of the mind of man, it is manifest that there is no danger at all in the proportion or quantity of knowledge, how large soever, lest it should make it swell or out-compass itself; no, but it is merely the quality of knowledge, which, be it in quantity more or less, if it be taken without the true corrective thereof, hath in it some nature of venom or malignity, and some effects of that venom, which is ventosity or swelling. This corrective spice, the mixture whereof maketh knowledge so sovereign, is charity, which the apostle immediately addeth to the former clause: for so he saith, "Knowledge bloweth up, but charity buildeth up;" not unlike unto that which he delivereth in another place: "If I spake," saith he, "with the tongues of men and angels, and had not charity, it were but as a tinkling cymbal;" not but that it is an excellent thing to speak with the tongues of men and angels, but because, if it be severed from charity, and not referred to the good of men and mankind, it hath rather a sounding and unworthy glory than a meriting and substantial virtue. And as for that censure of Solomon, concerning the excess of writing and reading books, and the anxiety of spirit which redoundeth from knowledge; and that admonition of St. Paul, "That we be not seduced by vain philosophy;" let those places be rightly understood, and they do indeed excellently set forth the true bounds and limitations, whereby human knowledge is confined and circumscribed; and yet without any such contracting or coarctation, but that it may comprehend all the universal nature



of things. For these limitations are three. The first, that we do not so place our felicity in knowledge as we forget our mortality; the second, that we make application of our knowledge, to give ourselves repose and contentment, and not distaste or repining; the third, that we do not presume by the contemplation of nature to attain to the mysteries of God. For as touching the first of these, Solomon doth excellently expound himself in another place of the same book, where he saith, "I saw well that knowledge recedeth as far from ignorance as light doth from darkness; and that the wise man's eyes keep watch in his head, whereas the fool roundeth about in darkness: but withal I learned, that the same mortality involveth them both." And for the second, certain it is, there is no vexation or anxiety of mind which resulteth from knowledge, otherwise than merely by accident; for all knowledge and wonder (which is the seed of knowledge) is an impression of pleasure in itself; but when men fall to framing conclusions out of their knowledge, applying it to their particular, and ministering to themselves thereby weak fears or vast desires, there groweth that carefulness and trouble of mind which is spoken of; for then knowledge is no more "*Lumen siccum*," whereof Heraclitus the profound said, "*Lumen siccum optima anima*;"\* but it becometh "*Lumen madidum, or maceratum*,"† being steeped and infused in the humours of the affections. And as for the third point, it deserveth to be a little stood upon, and not to be lightly passed over: for if any man shall think by view and inquiry into these sensible and material things to attain that light whereby he may reveal unto himself the nature or will of God, then indeed is he spoiled by vain philosophy; for the contemplation of God's creatures and works produceth (having regard to the works and creatures themselves) knowledge, but having regard to God, no perfect knowledge, but wonder, which is a broken knowledge. And therefore it was most aptly said by one of Plato's school, "That the sense of man carrieth a resemblance with the sun, which, as we see, openeth and revealeth all the terrestrial globe; but then again it obscureth and concealeth the stars and celestial globe: so doth the sense discover natural things, but it darkeneth and shutteth up divine." And hence it is true, that it hath proceeded that divers great learned men have been heretical, whilst they have

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\* Dry light (or intelligence) is the best animating principle.

† Moistened or steeped light.

sought to fly up to the secrets of the Deity by the waxen wings of the senses. And as for the conceit that too much knowledge should incline a man to atheism, and that the ignorance of second causes should make a more devout dependence upon God, who is the first cause; first, it is good to ask the question which Job asked of his friends—"Will you lie for God, as one man will do for another, to gratify him?" For certain it is that God worketh nothing in nature but by second causes; and if they would have it otherwise believed, it is mere imposture, as it were in favour towards God, and nothing else but to offer to the Author of truth the unclean sacrifice of a lie. But farther, it is an assured truth, and a conclusion of experience, that a little or superficial knowledge of philosophy may incline the mind of man to atheism, but a farther proceeding therein doth bring the mind back again to religion: for in the entrance of philosophy, when the second causes, which are next unto the senses, do offer themselves to the mind of man, if it dwell and stay there it may induce some oblivion of the highest cause; but when a man passeth on farther, and seeth the dependence of causes, and the works of Providence, then, according to the allegory of the poets, he will easily believe that the highest link of nature's chain must needs be tied to the foot of Jupiter's chair. To conclude, therefore, let no man, upon a weak conceit of sobriety, or an ill-applied moderation, think or maintain, that a man can search too far, or be too well studied in the book of God's word, or in the book of God's works, divinity, or philosophy; but rather let men endeavour an endless progress or proficience in both; only let men beware that they apply both to charity, and not to swelling—to use, and not to ostentation; and again, that they do not unwisely mingle or confound these learnings together.

We will add a portion of what he says on the head of the discredit that learning has received from learned men themselves:—

Martin Luther, conducted no doubt by a higher Providence, but in discourse of reason, finding what a province he had undertaken against the Bishop of Rome and the degenerate traditions of the church, and finding his own solitude, being no ways aided by the opinions of his own time, was enforced to awake all antiquity, and to call former times to his succour, to make a party against the present time. So that the ancient authors, both in divinity and in humanity, which had long time slept in libraries, began generally to be read and revolved.

This by consequence did draw on a necessity of a more exquisite travail in the languages original, wherein those authors did write, for the better understanding of those authors, and the better advantage of pressing and applying their words. And thereof grew again a delight in their manner of style and phrase, and an admiration of that kind of writing; which was much furthered and precipitated by the enmity and opposition that the propounders of those primitive, but seeming new opinions, had against the schoolmen; who were generally of the contrary part, and whose writings are altogether in a different style and form; taking liberty to coin and frame new terms of art to express their own sense, and to avoid circuit of speech, without regard to the pureness, pleasantness, and, as I may call it, lawfulness of the phrase or word. And again, because the great labour that then was with the people (of whom the Pharisees were wont to say, "Execrabilis ista turba, quæ non novit legem"\*), for the winning and persuading of them, there grew of necessity in chief price and request eloquence and variety of discourse, as the fittest and forciblest access into the capacity of the vulgar sort; so that these four causes concurring, the admiration of ancient authors, the hate of the schoolmen, the exact study of languages, and the efficacy of preaching, did bring in an affectionate study of eloquence and *copia*† of speech, which then began to flourish. This grew speedily to an excess; for men began to hunt more after words than matter, and more after the choiceness of the phrase, and the round and clean composition of the sentence, and the sweet falling of the clauses, and the varying and illustration of their works with tropes and figures, than after the weight of matter, worth of subject, soundness of argument, life of invention, or depth of judgment. Then grew the flowing and watery vein of Osorius, the Portugal bishop, to be in price. Then did Sturmius spend such infinite and curious pains upon Cicero the orator, and Hermogenes the rhetorician, besides his own books of periods, and imitation, and the like. Then did Car of Cambridge, and Ascham, with their lectures and writings, almost deify Cicero and Demosthenes, and allure all young men that were studious, unto that delicate and polished kind of learning. Then did Erasmus take occasion to make the scoffing echo—"Decem annos consumpsi in legendo Cice-

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\* The vulgar crowd, which knows not the law, is accursed.

† Fluency.

rone;”\* and the echo answered in Greek, “*Ove*, “*Asine*.”† Then grew the learning of the schoolmen to be utterly despised as barbarous. In sum, the whole inclination and bent of those times was rather towards *copia* than weight.

Here, therefore, is the first distemper of learning, when men study words and not matter; whereof though I have represented an example of late times, yet it hath been, and will be, “*secundum majus et minus*” in all time. And how is it possible but this should have an operation to discredit learning, even with vulgar capacities, when they see learned men’s works like the first letter of a patent or limned book, which, though it hath large flourishes, yet it is but a letter? It seems to me that Pygmalion’s frenzy is a good emblem or portraiture of this vanity; for words are but the images of matter, and except they have life of reason and invention, to fall in love with them is all one as to fall in love with a picture.

But yet, notwithstanding, it is a thing not hastily to be condemned, to clothe and adorn the obscurity, even of philosophy itself, with sensible and plausible elocution; for hereof we have great examples in Xenophon, Cicero, Seneca, Plutarch, and of Plato also in some degree; and hereof likewise there is great use. For surely, to the severe inquisition of truth, and the deep progress into philosophy, it is some hindrance; because it is too early satisfactory to the mind of man, and quengeth the desire of further search, before we come to a just period: but then if a man be to have any use of such knowledge in civil occasions, of conference, counsel, persuasion, discourse, or the like, then shall he find it prepared to his hands in those authors which write in that manner. But the excess of this is so justly contemptible, that as Hercules, when he saw the image of Adonis, Venus’ minion, in a temple, said, in disdain, “*Nil sacri es;*”‡ so there is none of Hercules’ followers in learning, that is, the more severe and laborious sort of inquirers into truth, but will despise those delicacies and affectations, as indeed capable of no divineness. And thus much of the first disease or distemper of learning.

The second, which followeth, is in nature worse than the former: for as substance of matter is better than beauty of words, so, contrariwise, vain matter is worse than vain words; wherein it seemeth the reprehension of St. Paul was not only proper for those times, but prophetic for the times following;

\* I have spent ten years in reading Cicero.

† Donkey.

‡ You possess no sanctity.

and not only respective to divinity, but extensive to all knowledge : "Devita profanas vocum novitates, et oppositiones falsi hominis scientiæ."\* For he assigneth two marks and badges of suspected and falsified science ; the one, the novelty and strangeness of terms—the other, the strictness of positions, which of necessity doth induce oppositions, and questions, and altercations. Surely, like as so many substances in nature, which are solid, do putrify and corrupt into worms, so it is the propriety of good and sound knowledge to putrify and to dissolve into a number of subtle, idle, unwholesome, and, as I may term them, vermiculate questions, which have indeed a kind of quickness, and life of spirit, but no soundness of matter or goodness of quality. This kind of degenerate learning did chiefly reign amongst the schoolmen, who, having sharp and strong wits, and abundance of leisure, and small variety of reading (but their wits being shut up in the cells of a few authors, chiefly Aristotle their dictator, as their persons were shut up in the cells of monasteries and colleges), and knowing little history, either of nature or time, did, out of no great quantity of matter, and infinite agitation of wit, spin out unto us those laborious webs of learning which are extant in their books. For the wit and mind of man, if it work upon matter, which is the contemplation of the creatures of God, worketh according to the stuff, and is limited thereby ; but if it work upon itself, as the spider worketh his web, then it is endless, and brings forth indeed cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit.

The following short paragraph, with which he concludes his observations on this branch of the subject, is interesting, as showing that Bacon, with all his contempt for the logic of the schoolmen, was not insensible to their merits in various respects. Part of the passage is somewhat abridged in the Latin :

Notwithstanding, certain it is that if those schoolmen, to their great thirst of truth and unwearied travail of wit, had joined variety and universality of reading and contemplation, they had proved excellent lights, to the great advancement of all learning and knowledge ; but as they are, they are great

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\* Avoid profane and vain babblings, and oppositions of science, falsely so called.

undertakers indeed, and fierce with dark keeping: but as in the inquiry of the divine truth, their pride inclined to leave the oracle of God's word, and to vanish in the mixture of their own inventions; so in the inquisition of nature, they ever left the oracle of God's works, and adored the deceiving and deformed images, which the unequal mirror of their own minds, or a few received authors or principles, did represent unto them. And thus much for the second disease of learning.

For the third vice or disease of learning, which concerneth deceit or untruth, it is of all the rest the foulest, as that which doth destroy the essential form of knowledge, which is nothing but a representation of truth; for the truth of being and the truth of knowing are one, differing no more than the direct beam and the beam reflected. This vice therefore brancheth itself into two sorts—delight in deceiving, and aptness to be deceived; imposture and credulity, which, although they appear to be of a diverse nature, the one seeming to proceed of cunning and the other of simplicity, yet certainly they do for the most part concur; for, as the verse noteth,

Percontatorem fugito, nam garrulus idem est,\*

an inquisitive man is a prattler, so, upon the like reason, a credulous man is a deceiver: as we see it in fame, that he that will easily believe rumours, will as easily augment rumours, and add somewhat to them of his own; which Tacitus wisely noteth, when he saith, "Fingunt simul creduntque:"† so great an affinity hath fiction and belief.

He then proceeds:—

And as for the facility of credit which is yielded to arts and opinions, it is likewise of two kinds; either when too much belief is attributed to the arts themselves, or to certain authors in any art. The sciences themselves, which have had better intelligence and confederacy with the imagination of man than with his reason, are three in number; astrology, natural magic, and alchemy; of which sciences, nevertheless, the ends or pretences are noble. For astrology pretendeth to discover that correspondence or concatenation, which is between the superior globe and the inferior: natural magic pretendeth to call and

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\* Avoid an inquisitive man, for he is also a tell-tale.

† They invent and believe at the same time.

reduce natural philosophy from variety of speculations to the magnitude of works : and alchemy pretendeth to make separation of all the unlike parts of bodies, which in mixtures of nature are incorporate. But the derivations and prosecutions to these ends, both in the theories and in the practices, are full of error and vanity ; which the great professors themselves have sought to veil over and conceal by enigmatical writings, and referring themselves to auricular traditions and such other devices, to save the credit of impostors. And yet surely to alchemy this right is due, that it may be compared to the husbandman whereof Æsop makes the fable ; that, when he died, told his sons, that he had left unto them gold buried under ground in his vineyard ; and they digged over all the ground, and gold they found none ; but by reason of their stirring and digging the mould about the roots of their vines, they had a great vintage the year following : so assuredly the search and stir to make gold hath brought to light a great number of good and fruitful inventions and experiments, as well for the disclosing of nature, as for the use of man's life.

And as for the overmuch credit that hath been given unto authors in sciences, in making them dictators, that their words should stand, and not counsels, to give advice ; the damage is infinite that sciences have received thereby, as the principal cause that hath kept them low, at a stay without growth or advancement. For hence it hath come, that in arts mechanical the first deviser comes shortest, and time addeth and perfecteth : but in sciences the first author goeth farthest, and time loseth and corrupteth. So, we see, artillery, sailing, printing, and the like, were grossly managed at the first, and by time accommodated and refined : but, contrariwise, the philosophies and sciences of Aristotle, Plato, Democritus, Hippocrates, Euclides, Archimedes, of most vigour at the first and by time degenerate and embased ; whereof the reason is no other, but that in the former many wits and industries have contributed in one, and in the latter many wits and industries have been spent about the wit of some one, whom many times they have rather depraved than illustrated. For as water will not ascend higher than the level of the first spring-head from whence it descendeth, so knowledge derived from Aristotle, and exempted from liberty of examination, will not rise again higher than the knowledge of Aristotle. And therefore although the position be good, "*Oportet discentem credere,*"\* yet it must be

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\* A learner should believe.

coupled with this, "Oportet edoctum judicare;"\* for disciples do owe unto masters only a temporary belief, and a suspension of their own judgment till they be fully instructed, and not an absolute resignation, or perpetual captivity: and therefore, to conclude this point, I will say no more, but so let great authors have their due, as time, which is the author of authors, be not deprived of his due, which is, further and further to discover truth.

Besides these three diseases, however, he remarks, "there are some other rather peccant humours than formed diseases," which are not altogether to be passed over:—

The first of these is the extreme affecting of two extremities; the one antiquity, the other novelty; wherein it seemeth the children of time do take after the nature and malice of the father. For as he devoureth his children, so one of them seeketh to devour and suppress the other; while antiquity envieth there should be new additions, and novelty cannot be content to add, but it must deface: surely, the advice of the prophet is the true direction in this matter, "State super vias antiquas, et videte quænam sit via recta et bona, et ambulate in ea."† Antiquity deserveth that reverence, that men should make a stand thereupon, and discover what is the best way; but when the discovery is well taken, then to make progression. And to speak truly, "Antiquitas sæculi juvenus mundi."‡ These times are the ancient times, when the world is ancient, and not those, which we account ancient "ordine retrogrado,"§ by a computation backward from ourselves.

This paragraph is noticeable as containing, we believe, the earliest announcement by Bacon of a thought which is, perhaps, of all the striking things that he has said, the one that most readily occurs to recollection in connexion with his name. He has himself repeated the idea of antiquity being the youth, and modern times comparatively the manhood, of the world, in other parts

\* The educated man should judge for himself.

† Stand fast in the old ways, and see what is righteous and good, and walk therein.

‡ Antiquity of time is the childhood of the world.

§ In a retrograde order.



of his writings (as he is in the habit of doing with all his remarkable thoughts); it will be found, in particular, eloquently expanded in the First Book of the *Novum Organum*; but it is perhaps principally indebted for its celebrity to its strong accordance with the whole spirit of the Baconian philosophy. Nevertheless, from the manner in which it is here introduced as a Latin phrase, there would seem to be some reason for doubting whether it be an original thought of Bacon's. It has much the appearance of some aphorism or adage of the schools.\*

Some of the other errors that infest learning are thus noticed :—

Another error, of a diverse nature from all the former, is the over early and peremptory reduction of knowledge into arts and methods; from which time commonly sciences receive small or no augmentation. But as young men, when they knit and shape perfectly, do seldom grow to a further stature; so knowledge, while it is in aphorisms and observations, it is in growth: but when it once is comprehended in exact methods, it may perchance be further polished and illustrated, and accommo-

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\* A friend, however, who, if we were to name him, would be recognised as one of the first of living authorities on all points connected with the history of learning and philosophy, informs us that he feels certain of having never met with the expression or the thought in any writer previous to Bacon, although the view of modern times as the advanced age of the world is familiar enough. It may be added, that Bacon's remark appears to have been received as new by his friend Sir Henry Wotton; who, in a letter thanking him for the *Novum Organum*, after having read the First Book and a few aphorisms of the Second, says, "I have learned thus much by it already: that we are extremely mistaken in the computation of antiquity by searching it backwards, because, indeed, the first times were the youngest, especially in points of natural discovery and experience." It takes somewhat, however, from Sir Henry's authority, that he should not have been aware of the promulgation of the thought by Bacon fourteen years before in the *Advancement of Learning*.

dated for use and practice; but it increaseth no more in bulk and substance. . . . .

Another error is an impatience of doubt, and haste to assertion without due and mature suspension of judgment. For the two ways of contemplation are not unlike the two ways of action, commonly spoken of by the ancients; the one plain and smooth in the beginning, and in the end impassable; the other rough and troublesome in the entrance, but after a while fair and even: so it is in contemplation; if a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties. . . . .

But the greatest error of all the rest is the mistaking or misplacing of the last or furthest end of knowledge: for men have entered into a desire of learning and knowledge, sometimes upon a natural curiosity, and inquisitive appetite; sometimes to entertain their minds with variety and delight; sometimes for ornament and reputation; and sometimes to enable them to victory of wit and contradiction; and most times for lucre and profession; and seldom sincerely to give a true account of their gift of reason, to the benefit and use of men: as if there were sought in knowledge a couch, whereupon to rest a searching and restless spirit; or a terrace for a wandering and variable mind to walk up and down with a fair prospect; or a tower of state, for a proud mind to raise itself upon; or a fort or commanding ground, for strife and contention; or a shop for profit or sale; and not a rich storehouse, for the glory of the Creator, and the relief of man's estate. But this is that which will indeed dignify and exalt knowledge, if contemplation and action may be more nearly and straightly conjoined and united together than they have been; a conjunction like unto that of the two highest planets, Saturn, the planet of rest and contemplation, and Jupiter, the planet of civil society and action: howbeit I do not mean, when I speak of use and action, that end before mentioned of the applying of knowledge to lucre and profession; for I am not ignorant how much that diverteth and interrupteth the prosecution and advancement of knowledge, like unto the golden ball thrown before Atalanta, which while she goeth aside and stoopeth to take up, the race is hindered;

*Declinat cursus, aurumque volubile tollit.\**

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\* Turns from the course to grasp the rolling gold.

Neither is my meaning, as was spoken of Socrates, to call philosophy down from heaven to converse upon the earth; that is to leave natural philosophy aside, and to apply knowledge only to manners and policy. But as both heaven and earth do conspire and contribute to the use and benefit of man; so the end ought to be, from both philosophies to separate and reject vain speculations, and whatsoever is empty and void, and to preserve and augment whatsoever is solid and fruitful: that knowledge may not be, as a courtesan, for pleasure and vanity only, or as a bondwoman to acquire and gain to her master's use; but as a spouse, for generation, fruit, and comfort.

The abuses sometimes accompanying the love of knowledge having been thus freely censured, and objections thereby obviated, the author now proceeds to the second thing that he had proposed to accomplish in this First Book, the exposition of the dignity and worth of learning. After having adduced what he calls the divine testimony and evidence, or that which is to be discovered in the Scriptures and the works of God, he turns to human proofs. Here he is led into a digression on the benefits that follow to mankind, "when kings themselves, or persons of authority under them, or other governors in commonwealths and popular estates, are endued with learning:"—

Which felicity of times under learned princes (to keep still the law of brevity, by using the most eminent and selected examples), doth best appear in the age which passed from the death of Domitian the emperor until the reign of Commodus: comprehending a succession of six princes, all learned, or singular favourers and advancers of learning; which age for temporal respects, was the most happy and flourishing that ever the Roman empire (which then was a model of the world) enjoyed: a matter revealed and prefigured unto Domitian in a dream the night before he was slain; for he thought there was grown behind upon his shoulders a neck and a head of gold: which came accordingly to pass in those golden times which succeeded: of which princes we will make some commemoration; wherein although the matter will be vulgar, and may be thought fitter for a declamation than agreeable to a treatise infolded as this is, yet because it is pertinent to the point it

hand, "neque semper arcum tendit Apollo,"\* and to name them only were too naked and cursory, I will not omit it altogether.

The first was Nerva; the excellent temper of whose government is by a glance in Cornelius Tacitus touched to the life: "Postquam divus Nerva res olim insociabiles miscuisset, imperium et libertatem."† And in token of his learning, the last act of his short reign, left to memory, was a missive to his adopted son Trajan, proceeding upon some inward discount at the ingratitude of the times, comprehended in a verse of Homer's:

Telis, Phœbe, tuis lacrymas ulciscere nostras.‡

Trajan, who succeeded, was for his person not learned: but if we will hearken to the speech of our Saviour, that saith, "He that receiveth a prophet in the name of a prophet, shall have a prophet's reward," he deserveth to be placed amongst the most learned princes: for there was not a greater admirer of learning, or benefactor of learning; a founder of famous libraries, a perpetual advancer of learned men to office, and a familiar converser with learned professors and preceptors, who were noted to have then most credit in court. On the other side, how much Trajan's virtue and government was admired and renowned, surely no testimony of grave and faithful history doth more livelily set forth, than that legend tale of Gregorius Magnus, bishop of Rome, who was noted for the extreme envy he bore towards all heathen excellency: and yet he is reported, out of the love and estimation of Trajan's moral virtues, to have made unto God passionate and fervent prayers for the delivery of his soul out of hell: and to have obtained it, with a caveat that he should make no more such petitions. In this prince's time also, the persecutions against the Christians received intermission, upon the certificate of Plinius Secundus, a man of excellent learning and by Trajan advanced.

Adrian, his successor, was the most curious man that lived, and the most universal inquirer; insomuch as it was noted for an error in his mind, that he desired to comprehend all

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\* Nor does Apollo always bend the bow.

† When the divine Nerva united things formerly irreconcilable,—power and liberty.

‡ O Phœbus, with thy darts avenge our tears.

things, and not to reserve himself for the worthiest things : falling into the like humour that was long before noted in Philip of Macedon ; who, when he would needs over-rule and put down an excellent musician in an argument touching music, was well answered by him again, " God forbid, Sir," said he, " that your fortune should be so bad, as to know these things better than I." It pleased God likewise to use the curiosity of this emperor as an inducement to the peace of his church in those days. For having Christ in veneration, not as a God or Saviour, but as a wonder or novelty ; and having his picture in his gallery, matched with Apollonius, with whom, in his vain imagination, he thought he had some conformity ; yet it served the turn to allay the bitter hatred of those times against the Christian name, so as the church had peace during his time. And for his government civil, although he did not attain to that of Trajan's in glory of arms, or perfection of justice, yet in deserving of the weal of the subject he did exceed him. For Trajan erected many famous monuments and buildings ; insomuch as Constantine the Great in emulation was wont to call him " Parietaria " (wall flower), because his name was upon so many walls : but his buildings and works were more of glory and triumph than use and necessity. But Adrian spent his whole reign, which was peaceable, in a perambulation or survey of the Roman empire ; giving order, and making assignation where he went, for re-edifying of cities, towns, and forts decayed ; and for cutting of rivers and streams, and for making bridges and passages, and for policying of cities and commonalties with new ordinances and constitutions, and granting new franchises and incorporations, so that his whole time was a very restoration of all the lapses and decays of former times.

Antoninus Pius, who succeeded him, was a prince excellently learned ; and had the patient and subtle wit of a schoolman ; insomuch as in common speech, which leaves no virtue untaxed, he was called " cymini sector," (a carver or divider of cummin,) which is one of the least seeds ; such a patience he had and settled spirit, to enter into the least and most exact differences of causes ; a fruit no doubt of the exceeding tranquillity and serenity of his mind ; which being no ways charged or incumbered, either with fears, remorse, or scruples, but having been noted for a man of the purest goodness, without all fiction or affectation, that hath reigned or lived, made his mind continually present and entire. He likewise approached a degree nearer unto Christianity, and became, as

Agrippa said unto St. Paul, "half a Christian;" holding their religion and law in good opinion, and not only ceasing persecution, but giving way to the advancement of Christians.

There succeeded him the first "divi fratres,"\* the two adoptive brethren, Lucius Commodus Verus (son to Ælius Verus, who delighted much in the softer kind of learning, and was wont to call the poet Martial his Virgil), and Marcus Aurelius Antoninus; whereof the latter, who obscured his colleague and survived him long, was named the philosopher: who as he excelled all the rest in learning, so he excelled them likewise in perfection of all royal virtues: insomuch as Julianus the emperor, in his book entitled 'Cæsares,' being as a pasquin or satire to deride all his predecessors, feigned that they were all invited to a banquet of the gods, and Silenus the Jester set at the nether end of the table, and bestowed a scoff on every one as they came in; but when Marcus Philosophus came in, Silenus was gravelled, and out of countenance, not knowing where to carp at him; save at the last he gave a glance at his patience towards his wife. And the virtue of this prince, continued with that of his predecessor, made the name of Antoninus so sacred in the world, that though it were extremely dishonoured in Commodus, Caracalla, and Heliogabalus, who all bore the name, yet when Alexander Severus refused the name, because he was a stranger to the family, the senate with one acclamation said, "Quomodo Augustus, sic et Antoninus."† In such renown and veneration was the name of these two princes, in those days, that they would have it as a perpetual addition in all the emperor's styles. In this emperor's time also the church for the most part was in peace; so as in this sequence of six princes we do see the blessed effects of learning in sovereignty, painted forth in the greatest table of the world.

But for a tablet, or picture of smaller volume (not presuming to speak of your majesty that liveth), in my judgment the most excellent is that of Queen Elizabeth, your immediate predecessor in this part of Britain; a princess that, if Plutarch were now alive to write lives by parallels, would trouble him, I think, to find for her a parallel amongst women. This lady was endued with learning in her sex singular and rare even amongst masculine princes; whether we speak of learning,

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\* The divine brothers.

† Such as Augustus was Antonianus is.

language, or of science, modern or ancient, divinity or humanity: and unto the very last year of her life she was accustomed to appoint set hours for reading, scarcely any young student in a university more daily, or more dully. As for her government, I assure myself, I shall not exceed if I do affirm that this part of the island never had forty-five years of better times; and yet not through the calmness of the season, but through the wisdom of her regimen. For if there be considered of the one side, the truth of religion established, the constant peace and security, the good administration of justice, the temperate use of the prerogative, nor slackened, nor much strained, the flourishing state of learning, sortable to so excellent a patroness, the convenient estate of wealth and means, both of crown and subject, the habit of obedience, and the moderation of discounts; and there be considered, on the other side, the differences of religion, the troubles of neighbour countries, the ambition of Spain, and opposition of Rome; and then, that she was solitary and of herself: these things, I say, considered, as I could not have chosen an instance, so recent and so proper, so I suppose I could not have chosen one more remarkable or eminent to the purpose now in hand, which is concerning the conjunction of learning in the prince with felicity in the people.

All this is very much abridged in the Latin; the account of the Roman emperors is reduced to about a third of the space which it occupies in the original English, and the panegyric upon Elizabeth is omitted altogether.

We can only afford to give one short paragraph more from the splendid conclusion of this First Book:—

Again, for the pleasure and delight of knowledge and learning, it far surpasseth all other in nature: for, shall the pleasures of the affections so exceed the senses, as much as the obtaining of desire or victory exceedeth a song or a dinner; and must not, of consequence, the pleasures of the intellect or understanding exceed the pleasures of the affections? We see in all other pleasures there is a satiety, and after they be used, their verdure departeth; which showeth well they be but deceits of pleasure, and not pleasures; and that it was the novelty which pleased, and not the quality: and therefore we see that voluptuous men turn friars, and ambitious princes

turn melancholy. But of knowledge there is no satiety, but satisfaction and appetite are perpetually interchangeable; and therefore appeareth to be good in itself simply, without fallacy or accident. Neither is that pleasure of small efficacy and contentment to the mind of man, which the poet Lucretius describeth elegantly.

*Suave mari magno turbantibus æquora ventis, &c.*

“It is a view of delight,” saith he, “to stand or walk upon the shore side, and to see a ship tossed with tempest upon the sea: or to be in a fortified tower, and to see two battles join upon a plain; but it is a pleasure incomparable, for the mind of man to be settled, landed, and fortified in the certainty of truth; and from thence to descry and behold the errors, perturbations, labours and wanderings up and down of other men.”

Lastly, leaving the vulgar arguments, that by learning man excelleth man in that wherein man excelleth beasts; that by learning man ascendeth to the heavens and their motions, where in body he cannot come and the like; let us conclude with the dignity and excellency of knowledge and learning in that whereunto man's nature doth most aspire, which is, immortality or continuance: for to this tendeth generation, and raising of houses and families; to this tend buildings, foundations, and monuments; to this tendeth the desire of memory, fame, and celebration, and in effect the strength of all other human desires. We see then how far the monuments of wit and learning are more durable than the monuments of power or of the hands. For have not the verses of Homer continued twenty-five hundred years, or more, without the loss of a syllable or letter; during which time, infinite palaces, temples, castles, cities, have been decayed, and demolished? It is not possible to have the true pictures or statues of Cyrus, Alexander, Cæsar; no, nor of the kings or great personages of much later years; for the originals cannot last, and the copies cannot but lose of the life and truth. But the images of men's wits and knowledges remain in books, exempted from the wrong of time, and capable of perpetual renovation. Neither are they fitly to be called images, because they generate still, and cast their seeds in the minds of others, provoking and causing infinite actions and opinions in succeeding ages: so that if the invention of the ship was thought so noble, which carrieth riches and commodities from place to place, and consociateth the most remote regions in participation of their fruits, how much more are letters to be magnified,



which, as ships, pass through the vast seas of time, and make ages so distant to participate of the wisdom, illuminations, and inventions, the one of the other!

The new matter introduced in the Second Book of the *De Augustis* amounts to about the quantity of the old retained. It is divided into thirteen chapters. Among the introductory remarks are the following, which are nearly the same in the Latin as in the English:—

Inasmuch as most of the usages and orders of the universities were derived from more obscure times, it is the more requisite they be re-examined. In this kind I will give an instance or two, for example sake, of things that are the most obvious and familiar. The one is a matter, which though it be ancient and general, yet I hold to be an error; which is that scholars in universities come too soon and too unripe to logic and rhetoric, arts fitter for graduates than children and novices: for these two, rightly taken, are the gravest of sciences, being the arts of arts; the one for judgment the other for ornament: and they be the rules and directions how to set forth and dispose matter: and therefore for minds empty and unfraught with matter, and which have not gathered that which Cicero calleth “sylva” and “suppellex,” stuff and variety, to begin with those arts (as if one should learn to weigh, or to measure, or to paint the wind), doth work but this effect, that the wisdom of those arts, which is great and universal, is almost made contemptible, and is degenerate into childish sophistry and ridiculous affectation. And further the untimely learning of them hath drawn on, by consequence, the superficial and unprofitable teaching and writing of them, as fitteth indeed to the capacity of children. Another is a lack I find in the exercises used in the universities, which do make too great a divorce between invention and memory; for their speeches are either premeditated, “in verbis conceptis,”\* where nothing is left to invention, or merely extemporal, where little is left to memory; whereas in life and action there is least use of either of these, but rather of intermixtures of premeditation and invention, notes and memory; so as the exercise fitteth nor the practice, nor the image the life; and it is ever a true rule in exercises, that they be framed as near as may be to the life of practice; for otherwise

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\* Set forms of words.

they do pervert the motions and faculties of the mind, and not prepare them. The truth whereof is not obscure, when scholars come to the practices of professions, or other actions of civil life; which when they set into, this want is soon found by themselves, and sooner by others. But this part touching the amendment of the institutions and orders of universities, I will conclude with the clause of Cæsar's letter to Oppius and Balbus, "*Hoc quemadmodum fieri possit, nonnulla mihi in mentem veniunt, et multa reperiri possunt; de iis rebus rogo vos ut cogitationem suscipiatis.*" . . . .

The last defect which I will note is, that there hath not been, or very rarely been, any public designation of writers or inquirers concerning such parts of knowledge as may appear not to have been already sufficiently laboured or undertaken; unto which point it is an inducement to enter into a view and examination what parts of learning have been prosecuted, and what omitted: for the opinion of plenty is amongst the causes of want, and a great quantity of books maketh a show rather of superfluity than lack; which surcharge nevertheless is not to be remedied by making no more books, but by making more good books, which, as the serpent of Moses, might devour the serpents of the enchanters.

The author then enters upon the proper subject of the work by laying down what he calls the Partitions of the Sciences, or the General Distribution of Human Knowledge. This is an attempt that has been often made since Bacon first set the example, but hardly perhaps yet with perfect success. The general outline of Bacon's scheme is sufficiently simple. He assigns all human learning either to the Memory, to the Imagination, or to the Reason; the domain of the first being History; that of the second, Poesy; that of the third, Philosophy. The subdivisions are exhibited in a table; and the explanation of their nature, and of the extent to which they have been cultivated, or to which they remain unknown or unreclaimed, is the object of the work. In this Second Book are included both History and Poesy;

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\* I have thought of some means by which this may be effected, and many others may be devised; I request that you will take the matter into serious consideration.

so that Philosophy alone occupies the remaining Seven Books.

History is divided into Natural and Civil; the latter, however, comprehending Ecclesiastical and Literary in addition to what is commonly called Civil History. Natural History is of three sorts:—of nature in course, of nature erring or varying, and of nature altered or wrought; that is, History of Creatures (*Generationum*); History of Marvels (*Praeter-generationum*); and History of Arts. The first is declared to be moderately well cultivated; the second and third so slightly and to so little purpose that they may be classed among the desiderata. Natural History, in reference to its utility or application, is afterwards stated to be of two kinds; according as it supplies the knowledge of facts, or what Bacon calls the primitive matter (*materia prima*) of philosophy. The former he names Narrative; the latter, Inductive; and the Inductive he places among the desiderata.

In treating of the three divisions of Civil History, he begins with Literary History, or that of Learning and Arts. This also he declares to be deficient. Then, proceeding to Civil History properly so called, he divides it into three kinds, Memorials, Perfect Histories, and Antiquities; “not unfitly to be compared with the three kinds of pictures or images. For, of pictures or images; we see some are unfinished, some are perfect, and some are defaced; so . . . Memorials are History unfinished; or the first or rough draughts of History; and Antiquities are History defaced, or some remnants of History which have casually escaped the shipwreck of time.” Memorials, or preparations for history, again, are either commentaries or registers. And neither in these nor in Antiquities is any deficiency asserted, beyond what belongs to their nature.

Perfect History, or History Proper, is also divided into three kinds, “according to the object which it propoundeth, or pretendeth to represent; for it either representeth a time, a person, or an action.” The first our author calls Chronicles; the second, Lives; the third,

**Narrations or Relations.** It is in speaking of the first that he introduces the rapid review of the recent history of England, the first draught of which is found, as we have already had occasion to notice, in a letter written by him to Lord Ellesmere in April, 1606,\* a few months before the publication of the *Advancement of Learning*. The passage as it stands in that work is as follows; and it is pretty closely translated in the *De Augmentis*, except that the short eulogy on the government of Elizabeth is omitted:—

But for modern Histories, whereof there are some few very worthy, but the greater part beneath mediocrity (leaving the care of foreign stories to foreign states, because I will not be "curiosus in aliena republica"),† I cannot fail to represent to your majesty the unworthiness of the history of England in the main continuance thereof, and the partiality and obliquity of that of Scotland in the latest and largest author that I have seen: supposing that it would be honour for your majesty, and a work very memorable, if this island of Great Britain, as it is now joined in monarchy for the age to come, so were joined in one history for the times passed; after the manner of the sacred history, which draweth down the story of the ten tribes and of the two tribes, as twins, together. And if it shall seem that the greatness of this work may make it less exactly performed, there is an excellent period of a much smaller compass of time, as to the story of England; that is to say, from the uniting of the roses to the uniting of the kingdoms; a portion of time, wherein to my understanding, there hath been the rarest varieties that in like number of successions of any hereditary monarchy hath been known: for it beginneth with the mixed adoption of a crown by arms and title: an entry by battle, an establishment by marriage, and therefore times answerable, like waters after a tempest, full of working and swelling, though without extremity of storm; but well passed through by the wisdom of the pilot, being one of the most sufficient kings of all the number. Then followeth the reign of a king, whose actions, howsoever conducted, had much intermixture with the affairs of Europe, balancing and inclining them variably; in whose time also began that great alteration

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\* See vol. i. p. 214.

† Too inquisitive in the affairs of a foreign state.

in the state ecclesiastical, an action which seldom cometh upon the stage. Then the reign of a minor: then an offer of a usurpation, though it was but as "febris ephemera."\* Then the reign of a queen matched with a foreigner: then of a queen that lived solitary and unmarried, and yet her government so masculine, that it had greater impression and operation upon the states abroad than it any ways received from thence. And now last, this most happy and glorious event, that this island of Britain, divided from all the world, should be united in itself: and that oracle of rest, given to Æneas, "Antiquam exquirite matrem,"† should now be performed and fulfilled upon the nations of England and Scotland, being now reunited in the ancient mother name of Britain, as a full period of all instability and peregrinations: so that as it cometh to pass in massive bodies, that they have certain trepidations and waverings before they fix and settle; so it seemeth that by the providence of God, this monarchy, before it was to settle in your majesty and your generations, (in which, I hope, it is now established for ever,) had these prelusive changes and varieties.

The department of Lives is described as in modern times lying much waste; and, as for Narrations and Relations of particular actions, "there were also," it is observed, "to be wished a greater diligence therein." Other divisions of History Proper follow, into Universal and Particular, and into Annals and Journals (*Acta Diurna*); then a second division of Civil History into Pure and Mixed (such as Cosmography, which is compounded of Civil and Natural History); then of Ecclesiastical History, into the General History of the Church, the History of Prophecy, and the History of Providence, or the Divine Retribution (*Nemesis*). Lastly, there are the Appendices to History; namely, Orations, Letters, and Apophthegms, or brief sayings.

The remarkable passage which commences the disquisition on Poesy is nearly the same in the *De Augmentis* as in the *Advancement*:—

POESY is a part of learning in measure of words for the most

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\* A fever of brief duration.

† Seek your ancient mother (the land of your ancestors).

part restrained, but in all other points extremely licensed, and doth truly refer to the imagination; which, being not tied to the laws of matter, may at pleasure join that which nature hath severed, and sever that which nature hath joined; and so make unlawful matches and divorces of things; "Pictoribus atque poetis,"\* &c. It is taken in two senses in respect of words, or matter; in the first sense it is but a character of style, and belongeth to arts of speech, and is not pertinent for the present: in the latter, it is, as hath been said, one of the principal portions of learning, and is nothing else but feigned history, which may be styled as well in prose as in verse.

The use of this feigned history hath been to give some shadow of satisfaction to the mind of man in those points wherein the nature of things doth deny it, the world being in proportion inferior to the soul; by reason whereof there is agreeable to the spirit of man, a more ample greatness, a more exact goodness, and a more absolute variety, than can be found in the nature of things. Therefore, because the acts or events of true history have not that magnitude which satisfieth the mind of man, poesy feigneth acts and events greater and more heroical: because true history propoundeth the successes and issues of actions not so agreeable to the merits of virtue and vice, therefore poesy feigns them more just in retribution, and more according to revealed providence: because true history representeth actions and events more ordinary, and less interchanged, therefore poesy endueth them with more rareness, and more unexpected and alternative variations: so as it appeareth that, poesy serveth and conferreth to magnanimity, morality and to delectation. And therefore it was ever thought to have some participation of divineness, because it doth raise and erect the mind, by submitting the shows of things to the desires of the mind; whereas reason doth buckle and bow the mind unto the nature of things. And we see, that by these inauinations and congruities with man's nature and pleasure, joined also with the agreement and consort it hath with music, it hath had access and estimation in rude times and barbarous regions, where other learning stood excluded.

Poetry is divided into Narrative or Heroic, Representative or Dramatic, and Allusive or Parabolical. The account of Parabolical Poetry is greatly extended by the introduction from the treatise *De Sapientia Veterum* of

\* Painters and poets have equal privilege in fiction.

the explanations of the three fables of Pan, Perseus, and Bacchus, all of which we have given in the extracts from that treatise in our first volume.\* Considerable additions, however, are here made to each of them. In Poesy our author professes to be able to report no deficiency. "For," he observes, "being as a plant that cometh of the lust of the earth, without a formal seed, it hath sprung up and spread abroad more than any other kind. But, to ascribe unto it that which is due, for the expression of affections, passions, corruptions, and customs we are beholden to poets more than to the philosophers' works; and, for wit and eloquence, not much less than to orators' harangues." "But it is not good," he concludes, "to stay too long in the theatre. Let us now pass on to the judicial place or palace of the mind; which we are to approach and view with more reverence and attention."

The Third Book of the *De Augmentis*, which is divided into six chapters, also contains very nearly as much new matter as old. "All History, excellent King," it begins, to employ the old version of Wats, "treads upon the earth, and performs the office of a guide rather than of a light; and Poesy is, as it were, the dream of Knowledge; a sweet pleasing thing, full of variations, and would be thought to be somewhat inspired with divine rapture; which dreams likewise present. But now it is time for me to awake, and to raise myself from the earth, cutting the liquid air of Philosophy and Sciences." Knowledge, it is then remarked, is like the waters; of which some descend from above, and some spring from beneath. By the knowledge that descends from above Bacon means Theology; by that which springs from beneath, Philosophy. Theology, or Divinity, he leaves for the last place, "as the haven and sabbath of all man's contemplations;" he now proceeds to a survey of Philosophy, which, according as it is occupied with God, Nature, or Man, he

\* See vol. i. pp. 97-110.

designates Divine Philosophy, Natural Philosophy, and Human Philosophy or Humanity. "But," he adds, "because the distributions and partitions of knowledge are not like several lines that meet in one angle, and so touch but in a point; but are like branches of trees, that meet in a stem, which hath a dimension and quantity of entireness and continuance before it come to discontinue and break itself into arms and boughs; therefore it is good, before we enter into the former distribution, to erect and constitute one universal science by the name of *Philosophia Prima*, Primitive or Summary Philosophy, as the main and common way before we come where the ways part and divide themselves." His meaning, he afterwards says, touching this Original or Universal Philosophy, is, "in a plain and gross description by negative," this:—"That it be a receptacle for all such profitable observations and axioms as fall not within the compass of any of the special parts of philosophy or sciences, but are more common and of a higher stage." Thus far in the words of the *Advancement of Learning*: what follows is more extended in the *De Augmentis*; and, as the passage is material to the statement of Bacon's philosophical system, we will give it from the version of Dr. Shaw, who, although he has omitted some of the ornament, has preserved its substance:

Axioms of this kind are numerous: for example:—1. If equals are added to unequals, the wholes will be unequal. This is a rule in mathematics, which holds also in ethics, with regard to distributive justice. 2. Things agreeing to the same third, agree also with one another. This likewise is an axiom in mathematics; and at the same time so serviceable in logic, as to be the foundation of syllogism. 3. Nature shows herself best in her smallest works. This is a rule in philosophy that produced the atoms in Democritus; and was justly employed by Aristotle in politics, where he begins the consideration of a commonwealth in a family. 4. All things change, but nothing is lost. This is an axiom in physics, and holds in natural theology; for as the sum of matter neither diminishes nor increases, so it is equally the work of omnipotence to create, or to annihilate it. 5. Things are preserved from destruction by bringing them back to their principles. This is an axiom in



physics, but holds equally in politics; for the preservation of states, as is well observed by Machiavel, depends upon little more than reforming and bringing them back to their ancient customs. 6. A discord ending immediately in a concord sets off the harmony. This is a rule in music, that also holds true in morals. 7. A trembling sound in music gives the same pleasure to the ear, as the coruscation of water, or the sparkling of a diamond to the eye. 8. The organs of the senses resemble the organs of reflection, as we see in optics and acoustics; where a conclave glass resembles the eye, and a sounding cavity the ear. And of these axioms an infinite number might be collected. And thus the celebrated Persian magic was, in effect, no more than a notation of the correspondence in the structure and formation of things natural and civil. Nor let any one understand all this of mere similitudes, as they might at first appear; for they really are one and the same footsteps, and impressions of nature, made upon different matters and subjects. And in this light the thing has not hitherto been carefully treated. A few of these axioms may indeed be found in the writings of eminent men, here and there interspersed occasionally: but a collected body of them, which should have a primitive and summary tendency to the sciences, is not hitherto extant; though a thing of so great moment, as remarkable to shew nature to be one and the same: which is supposed the office of a primary philosophy.

The reader will form his own opinion from all this as to whether Bacon had any very distinct conception of this so-called *Prima Philosophia*. He goes on to state, that there is another part of it, which in so far as respects the terms, indeed, is ancient, but in the thing itself, as he understands it, is new. This is the inquisition concerning the adventitious conditions of entities (which may be called transcendental); such as paucity and multitude, similitude and diversity, the possible and impossible, even entity and nonentity, and the like. It is fit, he says, that this contemplation, as having no little both of dignity and utility, be not altogether deserted, but have at least some place in the partitions of the sciences. But it should be conducted in a manner very different from that which has been commonly followed. "For example," (to adopt Shaw's translation),

No writer who has treated of much and little, endeavours to assign the cause why some things in nature are so numerous and large, and others so rare and small; for, doubtless, it is impossible, in the nature of things, that there should be as great a quantity of gold as of iron, or roses as plenty as grass, &c.; so likewise nobody that treats of like and different has sufficiently explained why, betwixt particular species, there are almost constantly interposed some things that partake of both; as moss betwixt corruption and a plant; notionless fish betwixt a plant and an animal; bats betwixt birds and quadrupeds, &c. Nor has any one hitherto discovered why iron does not attract iron, as the loadstone does, and why gold does not attract gold, as quicksilver does, &c. But of these particulars we find no mention in the discourses of transcendentals: for men have rather pursued the quirks of words than the subtilities of things. And therefore we would introduce into primary philosophy, a real and solid inquiry into these transcendentals, or adventitious condition of beings, according to the laws of nature, not of speech.

Then follows a chapter on Divine Philosophy, or Natural Theology. After that we come to Natural Philosophy, which is in the first place divided into Speculative and Operative; or, the inquisition of Causes and the production of Effects; or, as they may be otherwise named, Natural Science and Natural Prudence. Speculative Philosophy, again, or Theory, is divided into Physic and Metaphysic. The term Metaphysic, however, Bacon warns us, he uses in a different sense from that commonly received. Then he proceeds, as we have the passage in his own English in the *Advancement*:—

And herein I cannot a little marvel at the philosopher Aristotle, that did proceed in such a spirit of difference and contradiction towards all antiquity, undertaking, not only to frame new words of science at pleasure, but to confound and extinguish all ancient wisdom; insomuch, as he never nameth or mentioneth an ancient author or opinion, but to confute and reprove; wherein for glory, and drawing followers and disciples, he took the right course. For certainly there cometh to pass, and hath place in human truth, that which was noted and pronounced in the highest truth: "Veni in nomine Patris, nec recipitis me; si quis venerit in nomine suo, eum reci-

pietis.”\* But in this divine aphorism (considering to whom it was applied, namely, to Antichrist, the highest deceiver) we may discern well that the coming in a man's own name, without regard of antiquity or paternity, is no good sign of truth, although it be joined with the fortune and success of an “Eum recipietis.”† But for this excellent person, Aristotle, I will think of him that he learned that humour of his scholar, with whom, it seemeth, he did emulate; the one to conquer all opinions, as the other to conquer all nations; wherein, nevertheless, it may be, he may at some men's hands, that are of a bitter disposition, get a like title as his scholar did :

Felix terrarum prædo, non utile mundo  
Editus exemplum, &c.‡

So,

Felix doctrinæ prædo.§

But to me, on the other side, that do desire as much as lieth in my pen to ground a sociable intercourse between antiquity and proficience, it seemeth best to keep way with antiquity, “usque ad aras;”|| and therefore to retain the ancient terms, though I sometimes alter the uses and definitions according to the moderate proceeding in civil government; where, although there be some alteration, yet that holdeth which Tacitus wisely noteth, “eadem magistratuum vocabula.”¶

To return, therefore, to the use and acceptation of the term metaphysic, as I do now understand the word; it appeareth, by that which hath been already said, that I intend, “philosophia prima,” Summary Philosophy and Metaphysic, which heretofore have been confounded as one, to be two distinct things. For the one I have made as a parent or common ancestor to all knowledge, and the other I have now brought in as a branch or descendant of natural science. It appeareth

\* I came in the name of my father, and ye will not receive me: if any one comes in his own name ye will receive him.

† Ye will receive him.

‡ A lucky plunderer of mankind; his name  
And vile example now are doomed to shame.

§ A lucky plunderer of learning.

|| To the altars, i. e., to the extreme.

¶ The judicial forms remain the same.

likewise that I have assigned to summary philosophy the common principles and axioms which are promiscuous and indifferent to several sciences: I have assigned unto it likewise the inquiry touching the operation of the relative and adventive characters of essences, as quantity, similitude, diversity, possibility, and the rest, with this distinction and provision, that they be handled as they have efficacy in nature, and not logically. It appeareth likewise that Natural Theology, which heretofore hath been handled confusedly with Metaphysic, I have enclosed and bounded by itself. It is, therefore, now a question what is left remaining for Metaphysic; wherein I may, without prejudice, preserve thus much of the conceit of antiquity, that Physic should contemplate that which is inherent in matter, and therefore transitory; and Metaphysic that which is abstracted and fixed. And, again, that Physic should handle that which supposeth in nature only a being and moving; and Metaphysic should handle that which supposeth further in nature a reason, understanding, and platform. But the difference, perspicuously expressed, is most familiar and sensible. For as we divided natural philosophy in general into the inquiry of causes and productions of effects, so that part which concerneth the inquiry of causes we do subdivide, according to the received and sound division of causes; the one part, which is Physic, inquireth and handleth the material and efficient causes; and the other, which is Metaphysic, handleth the formal and final causes.

Physic, taking it according to the derivation, and not according to our idiom for medicine, is situate in a middle term or distance between natural history and Metaphysic. For natural history describeth the variety of things; Physic, the causes, but variable or respective causes, and Metaphysic, the fixed and constant causes.

Limus ut hic durescit, et hæc ut cera liquescit,  
Uno eodemque igni :\*

Fire is the cause of induration, but respective to clay; fire is the cause of colliquation, but respective to wax; but fire is no constant cause either of induration or colliquation: so then the physical causes are but the efficient and the matter.

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\* The clay is hardened and the wax dissolved  
By the same changeless fire.

Physic is next divided into three doctrines or branches ; according as it relates to the principles of things, to the universe or fabric of things, or to things considered in their multiplicity and variety. This last again is subdivided into two branches ; the physic of Concretes and the Physic of Abstracts. Under the head of Concrete Physic, a long disquisition follows on the subject of astronomy and astrology, which is highly curious in some respects, but makes no part of the Baconian philosophy, and does not admit of abridgment. Astronomy, Bacon describes as having its foundations not ill laid in the phenomena, but as neither raised to any height nor even constructed with any solidity so far as it has been carried ; astrology he considers to be, for the most part, destitute of any foundation whatever. He suggests, however, some rules or precepts for the establishment of what he calls a sound astrology. Abstract Physic is divided into two parts : the doctrine of the Schemes of matter, and the doctrine of Appetites and Motions. The Schemes of matter are enumerated as being density, rarity ; gravity, levity ; heat, cold ; tangibility, pneumatic (or airy) ; volatility, fixity ; determinate, fluid ; humid, dry ; fat, lean ; hard, soft ; fragile, tensile ; porous, united ; spirituous, jejune ; simple, compound ; absolute, imperfectly mixed ; fibrous and venous ; of simple positions or equal ; similar, dissimilar ; specificate, non-specificate ; organic, inorganic ; animate, inanimate. Appetites and motions, again, are either Simple or Compound. Finally, there are two Appendages to Physic ; Natural Problems, and the Placets or opinions of the ancient philosophers ; both referring not so much to the matter as to the manner of inquiry ; the former an appendage to the physic of Nature multiplied or spread out, the latter to that of Nature united. In other words, the Problems comprehend doubts as to particulars ; the Placets, general questions as to the principles and fabric of the universe. Here is the paragraph, as it stands in the *Advancement* (from which it is very slightly altered in the *De Augmentis*) on the Placets, or differing opinions, of the ancient philosophers, Pythagoras, Philolaus, Xenophanes, Anaxa-

goras, Parmenides, Leucippus, Democritus, and others, "touching the principles of nature, and the fundamental points of the same, which have caused the diversity of sects, schools, and philosophers:"—

For, although Aristotle, as though he had been of the race of the Ottomans, thought he could not reign except the first thing he did he killed all his brethren, yet to those that seek truth and not magistrality, it cannot but seem a matter of great profit, to see before them the several opinions touching the foundations of nature; not for any exact truth that can be expected in those theories; for, as the same phenomena in astronomy are satisfied by the received astronomy of the diurnal motion, and the proper motions of the planets, with their eccentrics and epicycles, and likewise by the theory of Copernicus, who supposed the earth to move, (and the calculations are indifferently agreeable to both,) so the ordinary face and view of experience is many times satisfied by several theories and philosophies; whereas to find the real truth requireth another manner of severity and attention. For, as Aristotle saith, that children at the first will call every woman mother, but afterwards they come to distinguish according to truth, so experience, if it be in childhood, will call every philosophy mother, but, when it cometh to ripeness, it will discern the true mother. So, as in the mean time it is good to see the several glosses and opinions upon nature, whereof, it may be, every one in some one point hath seen clearer than his fellows, therefore, I wish some collection to be made, painfully and understandingly, "de antiquis philosophiis,"\* out of all the possible light which remaineth to us of them: which kind of work I find deficient. But here I must give warning, that it be done distinctly and severally; the philosophies of every one throughout by themselves, and not by titles packed and fagoted up together as hath been done by Plutarch. For it is the harmony of a philosophy in itself which giveth it light and credence; whereas, if it be singled and broken, it will seem more foreign and dissonant. For, as when I read in Tacitus, the actions of Nero, or Claudius, with circumstances of times, inducements, and occasions, I find them not so strange; but when I read them in Suetonius Tranquillus, gathered into titles

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\* On the ancient systems of philosophy.

and bundles, and not in order of time, they seem more monstrous and incredible: so is it of any philosophy reported entire, and dismembered by articles. Neither do I exclude opinions of latter times to be likewise represented in this calendar of sects of philosophy, as that of Theophrastus Paracelsus, eloquently reduced into a harmony by the pen of Severinus, the Dane; and that of Tilesius, and his scholar Donius, being as a pastoral philosophy, full of sense, but of no great depth; and that of Fracastorius, who, though he pretended not to make any new philosophy, yet did use the absoluteness of his own sense upon the old; and that of Gilbertus our countryman, who revived, with some alterations and demonstrations, the opinions of Xenophanes; and any other worthy to be admitted.

Proceeding now to Metaphysics, to which he has assigned the inquiry into formal and final causes, Bacon begins by combating "the received and inveterate opinion, that the inquisition of man is not competent to find out essential forms, or true differences." It is necessary that we should give in full what he says upon this matter, his views in regard to which colour much both of the language and the substance of his philosophy. The passage, though occupying a different position in the *Advancement*, is nearly the same there as in the *De Augmentis*. After remarking "that the invention of forms is of all other parts of knowledge the worthiest to be sought, if it be possible to be found," he goes on, in his own English, as follows:—

As for the possibility, they are ill discoverers that think there is no land, when they can see nothing but sea. But it is manifest that Plato in his opinion of ideas, as one that had a wit of elevation situate as upon a cliff, did descry, "That forms were the true object of knowledge;" but lost the real fruit of his opinion, by considering of forms as absolutely abstracted from matter, and not confined and determined by matter; and so turning his opinion upon theology, wherewith all his natural philosophy is infected. But if any man shall keep a continual watchful and severe eye upon action, operation, and the use of knowledge, he may advise and take notice what are the forms, the disclosures whereof are fruitful and important to the state of man. For as to the forms of substances,

man only except, of whom it is said, "Formavit hominem de limo terræ, et spiravit in faciem ejus spiraculum vitæ,"\* and not, as of all other creatures, "Producant aquæ, producat terra;"† the forms of substances, I say, as they are now by compounding and transplanting multiplied, are so perplexed, as they are not to be inquired; no more than it were either possible or to purpose to seek in gross the forms of those sounds which make words, which by composition and transposition of letters, are infinite. But, on the other side, to inquire the form of those sounds or voices which make simple letters, is easily comprehensible, and being known, induceth and manifesteth the forms of all words, which consist and are compounded of them. In the same manner to inquire the form of a lion, of an oak, of gold; nay, of water, of air, is a vain pursuit: but to inquire the forms of sense, of voluntary motion, of vegetation, of colours, of gravity and levity, of density, of tenuity, of heat, of cold, and all other natures and qualities, which, like an alphabet, are not many, and of which the essences, upheld by matter, of all creatures do consist; to inquire, I say, the true forms of these, is that part of Metaphysic which we now define of. Not but that physic doth make inquiry, and take consideration of the same natures: but how? Only as to the material and efficient causes of them, and not as to the forms. For example; if the cause of whiteness in snow or froth be inquired, and it be rendered thus, that the subtile intermixture of air and water is the cause, it is well rendered; but nevertheless, is this the form of whiteness? No; but it is the efficient, which is ever but "*vehiculum formæ.*"‡ This part of Metaphysic I do not find laboured and performed: whereat I marvel not: because I hold it not possible to be invented by that course of invention which hath been used; in regard that men, which is the root of all error, have made too untimely a departure and too remote a recess from particulars.

But the use of this part of Metaphysic, which I report as deficient, is of the rest the most excellent in two respects; the one, because it is the duty and virtue of all knowledge to abridge the infinity of individual experience, as much as the conception of truth will permit, and to remedy the complaint

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\* He formed man of the dust of the ground, and breathed into his nostrils the breath of life.

† Let the waters bring forth; let the earth bring forth.

‡ The vehicle or supporter of its form.



of "vita brevis, ars longa;"\* which is performed by uniting the notions and conceptions of science. For knowledges are as pyramids, whereof history is the basis. So of Natural Philosophy, the basis is natural history; the stage next the basis is Physic, the stage next the vertical point is Metaphysic. As for the vertical point, "Opus quod operatur Deus a principio usque ad finem,"† the summary law of nature, we know not whether man's inquiry can attain unto it. But these three be the true stages of knowledge, and are to them that are depraived no better than the giants' hills:

Ter sunt conati imponere Pelio Ossam,  
Scilicet, atque Ossæ frondosum involvere Olympum.‡

But to those which refer all things to the glory of God, they are as the three acclamations, "Sancte, sancte, sancte;"§ holy in the description or dilatation of his works; holy in the connexion or concatenation of them; and holy in the union of them in a perpetual and uniform law. And therefore the speculation was excellent in Parmenides and Plato, although but a speculation in them, that all things by scale did ascend to unity. So then always that knowledge is worthiest which is charged with least multiplicity; which appeareth to be Metaphysic; as that which considereth the simple forms or differences of things, which are few in number, and the degrees and co-ordinations whereof make all this variety.

The second respect, which valueth and commendeth this part of Metaphysic, is that it doth enfranchise the power of man unto the greatest liberty and possibility of works and effects. For Physic carrieth men in narrow and restrained ways, subject to many accidents of impediments, imitating the ordinary flexuous courses of nature; but "latæ undique sunt sapientibus viæ:"¶ to sapience, which was anciently defined to

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\* Life is short, art is long.

† The work which God worketh from the beginning to the end.

‡ Thrice they essayed in their gigantic might  
To heave up Ossa on mount Pelion's height,  
Then roll Olympus upon Ossa's crown  
With all its naked rocks and forests brown.

§ Holy, holy, holy.

¶ The paths of the wise are extended in every direction.

be "rerum divinarum et humanarum scientia,"\* there is ever choice of means: for physical causes give light to new invention "in simili materia."† But whosoever knoweth any form, knoweth the utmost possibility of superinducing that nature upon any variety of matter; and so is less restrained in operation, either to the basis of the matter, or the condition of the efficient: which kind of knowledge Solomon likewise, though in a more divine sense, elegantly describeth: "Non arctabuntur gressus tui, et currens non habebis offendiculum."‡ The ways of sapience are not much liable either to particularity or chance.

As for the Second Part of Metaphysic, the inquiry into Final Causes (that is, the ends or purposes of nature), Bacon complains that it has been usually assigned, not to Metaphysic, but to Physic. And "this misplacing," he adds, "hath caused a deficiencie, or at least a great improficiencie, in the sciences themselves. For the handling of Final Causes, mixed with the rest, in physical inquiries hath intercepted the severe and diligent inquiry of all real and physical causes, and given men the occasion to stay upon these satisfactory§ and specious causes, to the great arrest and prejudice of further discovery. For this I find done not only by Plato, who ever anchoreth upon that shore, but by Aristotle, Galen, and others, which do usually likewise fall upon those

\* The knowledge of divine and human things.

† In similar materials.

‡ Thy ways shall not be straitened, and thou shalt not have a stumbling-block in thy course.

§ That is, causes that satisfy although they ought not. In the *De Augmentis*, the phrase is "speciosus et umbratilibus causis." The supposed final causes may be said to satisfy as a shadow satisfies. They satisfy the discernment that cannot distinguish between the shadow and the substance. So, lower down, we shall find the syllogism, although stated to be powerless for the establishment of principles in natural philosophy, yet admitted to be even there of use "by way of argument or satisfactory reason." And it is evident that the mind may often be satisfied by an argument which is not absolutely conclusive.

flats of discoursing causes. For to say that the hairs of the eyelids are for a quickset and fence about the sight ; or, that the firmness of the skins and hides of living creatures is to defend them from the extremities of heat or cold ; or, that the bones are for the columns or beams whereupon the frames of the bodies of living creatures are built ; or, that the leaves of trees are for the protecting of the fruit ; or, that the clouds are for watering of the earth ; or, that the solidness of the earth is for the station and mansion of living creatures ; and the like ; is well inquired and collected in Metaphysic ; but in Physic they are impertinent. Nay, they are indeed but resources and hinderances to stay and slug the ship from farther sailing, and have brought this to pass, that the search of the physical causes hath been neglected and passed in silence." He professes, however, not to speak thus as holding either that those final causes are not true, or that they are not worthy to be inquired into. He would only have them kept within their own province, and out of that of physical causes. Men, he observes, are extremely deceived if they think that there is any enmity or repugnancy at all between the two. " For the cause rendered, that the hairs about the eyelids are for the safeguard of the sight, doth not impugn the cause rendered, that pilosity is incident to orifices of moisture. . . . Nor the cause rendered, that the firmness of hides is for the armour of the body against extremities of heat or cold, doth not impugn the cause rendered, that contraction of pores is incident to the outwardest parts in regard of their adjacence to foreign or unlike bodies. And so of the rest ; both causes being true and compatible ; the one declaring an intention, the other a consequence only."

What remains of this Third Book need only be very briefly noticed. Operative Philosophy is divided, like Speculative, into two parts ; Mechanic, corresponding to Physic ; and Magic, corresponding to Metaphysic. But by Magic Bacon understands nothing more than that science which, as he defines it, deduces the knowledge of hidden forms for the production of wonderful effects.

and by conjoining, as we are wont to say, the active with the passive (that is, the energy of the living experimenter with the powers and capabilities of dead matter) reveals or brings forth the miracles of nature. Lastly, he comes to Mathematics; which, he observes, is commonly arranged as a third principal part along with Physic and Metaphysic, but which he conceives ought properly to be considered only as an Appendix to the latter. "But," he afterwards adds (to adopt Shaw's translation), "as we regard not only truth and order, but also the benefits and advantages of mankind, it seems best, since Mathematics is of great use in Physics, Metaphysics, Mechanics, and Magics, to make it an appendage or auxiliary to them all. And this we are in some measure obliged to do, from the fondness and towering notions of mathematicians, who would have their science preside over Physics. It is a strange fatality that Mathematics and Logics, which ought to be but handmaids to Physics, should boast their certainty before it, and even exercise dominion against it." The Mathematics are stated to be either Pure or Mixed. And then comes in the *Advancement* the following concluding paragraph, which is omitted in the *De Augmentis* :—

In the mathematics I can report no deficiency, except it be that men do not sufficiently understand the excellent use of the pure mathematics, in that they do remedy and cure many defects in the wit and faculties intellectual. For, if the wit be dull, they sharpen it; if too wandering, they fix it; if too inherent in the sense, they abstract it. So that, as tennis is a game of no use in itself, but of great use in respect it maketh a quick eye and a body ready to put itself into all postures; so, in the mathematics, that use which is collateral and intervenient is no less worthy than that which is principal and intended.

The Fourth Book of the *De Augmentis* contains three Chapters; and the new matter is of considerably greater amount than the old. After a brief exordium, it proceeds :—

We come, therefore, now to that knowledge whereunto the ancient oracle directeth us, which is the knowledge of our-

selves; which deserveth the more acute handling, by how much it toucheth us more nearly. This knowledge, as it is the end and term of natural philosophy in the intention of man, so notwithstanding, it is but a portion of natural philosophy in the continent of nature; and generally let this be a rule, that all partitions of knowledges be accepted rather for lines and veins, than for sections and separations; and that the continuance and entireness of knowledge be preserved. For the contrary hereof hath made particular sciences to become barren, shallow, and erroneous, while they have not been nourished and maintained from the common fountain. So we see Cicero the orator complained of Socrates and his school, that he was the first that separated philosophy and rhetoric; whereupon rhetoric became an empty and verbal art. So we may see that the opinion of Copernicus touching the rotation of the earth, which astronomy itself cannot correct, because it is not repugnant to any of the phænomena, yet natural philosophy may correct. So we see also that the science of medicine, if it be destituted and forsaken by natural philosophy, it is not much better than an empirical practice.

In the *De Augmentis* the condemnation of the Copernican doctrine of the rotation of the earth is retained without further alteration than the insertion of the parenthesis, "quæ nunc quoque invaluit" (which now also hath come to be prevalent).

The Science of Man is in the first place divided by Bacon into the Philosophy of Humanity properly so called, being that which regards man segregated, or as an individual; and Civil Philosophy, or that which regards men congregated in society. And the former is subdivided into the knowledge which concerns the Body, and the knowledge which concerns the Mind. But, besides these, there is also the General Science of the Nature and State of Man, comprehending those things which are common both to the body and the mind; and it likewise is divisible into two branches; the one occupying itself with the undivided nature of man, the other with the connexion between the mind and the body. The former, therefore, may be called the doctrine of the Person of man; the latter, the doctrine of the Confederacy. Further, the doctrine of the Person comprehends first, contemplations respecting the Miseries of the Hum

race ; secondly, contemplations respecting the Prerogatives and Excellencies. So also, "as all leagues and amities consist of mutual intelligence and mutual offices," the knowledge of the Confederacy between the body and the mind may be divided into two parts ; the first teaching how the one discloseth the other, the second, how the one worketh upon the other ; the former the doctrine of Discovery or Indication, the latter that of Impression. From the doctrine or science of Discovery have sprung the two arts of Physiognomy and the Exposition of Dreams ; both arts of prediction or prenotion, "whereof the one is honoured with the inquiry of Aristotle, and the other of Hippocrates." "And," adds Bacon, "although they have of later time been used to be coupled with superstitious and fantastical arts, yet, being purged and restored to their true state, they have both of them a solid ground in nature, and a profitable use in life." The doctrine of Impression, again, hath the same antistrophe with that of Discovery ; "for the consideration is double ; either how and how far the humours and effects of the body do alter or work upon the mind ; or, again, how and how far the passions or apprehensions of the mind do alter or work upon the body." The former subdivision may be considered as answering to Physiognomy ; the latter to the philosophy of Dreams.

The reader may perceive, from this specimen, how much Bacon retained of the manner of thinking characteristic of the schoolmen, whom he held in such contempt ; and also, perhaps, how insufficient this method of distinctions is to exhaust or completely expound the subject to which it is applied. The truth is, that the principle of subdivision upon which it proceeds may in all cases be carried on *ad infinitum* ; and, with all its parade of thorough investigation, stop where it may, it is never really at the end of its work. Logically at least, that is, in thought, if not in the actual state of things, the last subdivision will always be further divisible : it must always contain a positive and a negative in reference to any new consideration with which the mind may choose to connect it.

Proceeding now, in the Second Chapter, to the Science

of the Body of man, our author divides that into four kinds:—the art of Medicine, which regards health; the Cosmetic art, or art of decoration, which regards beauty; the Athletic art, or art of activity, which regards strength; and the Voluptuary art, which regards pleasure. Here is a part of what follows on the art of Medicine, as it stands in the *Advancement*, from which it is almost literally translated in the *De Augmentis*:—

The ancient opinion that man was microcosmus, an abstract or model of the world, hath been fantastically strained by Paracelsus and the alchemists, as if there were to be found in man's body certain correspondences and parallels, which should have respect to all varieties of things, as stars, planets, minerals, which are extant in the great world. But thus much is evidently true, that of all substances which nature hath produced, man's body is the most extremely compounded: for we see herbs and plants are nourished by earth and water; beasts for the most part by herbs and fruits; man by the flesh of beasts, birds, fishes, herbs, grains, fruits, water, and the manifold alterations, dressings, and preparations of these several bodies, before they come to be his food and aliment. Add hereunto, that beasts have a more simple order of life, and less change of affections, to work upon their bodies: whereas man in his mansion, sleep, exercise, passions, hath infinite variations: and it cannot be denied but that the body of man of all other things is of the most compounded mass. The soul on the other side is the simplest of substances, as is well expressed:

— Purumque reliquit

*Æthereum sensum atque auræ simplicis ignem.\**

So that it is no marvel though the soul so placed enjoy no rest, if that principle be true, that "Motus rerum est rapidus extra locum, placidus in loco."† But to the purpose: this variable composition of man's body hath made it as an instrument easy to distemper; and therefore the poets did well to conjoin music and medicine in Apollo: because the office of medicine is but to tune this curious harp of man's body and to reduce it to harmony. So then the subject being so variable, hath made

\* But incorrupt he left our heavenly part,  
And the pure flame God kindles in the heart.

† The motion of things is rapid when out of place, placid when in place.

the art by consequence more conjectural; and the art being conjectural hath made so much the more place to be left for imposture. . . .

And therefore I cannot much blame physicians, that they use commonly to intend some other art or practice, which they fancy more than their profession. For you shall have of them antiquaries, poets, humanists, statesmen, merchants, divines, and in every of these better seen than in their profession; and no doubt upon this ground, that they find that mediocrity and excellency in their art maketh no difference in profit or reputation towards their fortune; for the weakness of patients, and sweetness of life, and nature of hope, maketh men depend on physicians with all their defects. But, nevertheless, these things which we have spoken of, are courses begotten between a little occasion, and a great deal of sloth and default; for if we will excite and awake our observation, we shall see in familiar instances what a predominant faculty the subtilty of spirit hath over the variety of matter or form. Nothing more variable than faces and countenances; yet men can bear in memory the infinite distinctions of them; nay, a painter with a few shells of colours, and the benefit of his eye and habit of his imagination, can imitate them all that ever have been, are, or may be, if they were brought before him. Nothing more variable than voices; yet men can likewise discern them personally: nay, you shall have a buffoon or pantomimus will express as many as he pleaseth. Nothing more variable than the differing sounds of words; yet men have found the way to reduce them to a few simple letters. So that it is not the insufficiency or incapacity of man's mind, but it is the remote standing or placing thereof, that breedeth these mazes and incomprehensions; for as the sense afar off is full of mistaking, but is exact at hand, so is it of the understanding; the remedy whereof is, not to quicken or strengthen the organ, but to go nearer to the object; and therefore there is no doubt but if the physicians will learn and use the true approaches and avenues of nature, they may assume as much as the poet saith:

Et quoniam variant morbi, variabimus artes;  
Mille mali species, mille salutis erunt.\*

Which that they should do, the nobleness of their art doth deserve: well shadowed by the poets, in that they made *Æscu-*

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\* Diseases vary, we must vary art,  
And thousand cures to thousand pains impart.



lapius to be the son of the Sun, the one being the fountain of life, the other as the second stream: but infinitely more honoured by the example of our Saviour, who made the body of man the object of his miracles, as the soul was the object of his doctrine. For we read not that ever he vouchsafed to do any miracle about honour or money, except that one for giving tribute to Cæsar; but only about the preserving, sustaining, and healing the body of man.

In the *De Augmentis*, what follows the two Latin lines (from Ovid) is transferred to the commencement of the passage.

Medicine is divided into three kinds, according as its object is the preservation of health, the cure of diseases, or the prolongation of life; and much more is added on each of these heads, which our limits compel us to pass over. A few observations on the Cosmetic, Athletic, and Voluptuary arts close the chapter.

In Chapter Third that portion of Human Philosophy which concerns the Mind or Soul is first divided into two parts; that which treats of the rational soul, and that which treats of the irrational; and then into other two; "the one, that inquireth of the substance or nature of the soul or mind; the other, that inquireth of the faculties or functions thereof." The science of Divination and the science of Fascination are considered as appendices to the science of the Faculties. Fascination is defined to be the power and action of the imagination making itself to be felt upon other bodies than the body of the imaginant. "Wherein," our author proceeds, "the school of Paracelsus, and the disciples of pretended natural magic, have been intemperate, as they have exalted the power of the imagination to be much one with the power of miracle-working faith. Others, that draw nearer to probability, calling to their view the secret passages of things, and especially of the contagion that passeth from body to body, do conceive it should likewise be agreeable to nature that there should be some transmissions and operations from spirit to spirit without the mediation of the senses; whence the conceits have grown, now almost made civil [popularly believed], of

the mastering spirit, and the force of confidence; and the like." In the *De Augmentis* are added, as other examples, men accounted unlucky and ominous, and strokes of love and of envy. The passage in the *Advancement* goes on:—

Incident unto this is the inquiry how to raise and fortify the imagination: for if the imagination fortified have power, then it is material to know how to fortify and exalt it. And herein comes in crookedly and dangerously a palliation of a great part of ceremonial magic. For it may be pretended that ceremonies, characters, and charms, do work, not by any tacit or sacramental contract with evil spirits, but serve only to strengthen the imagination of him that useth it; as images are said by the Roman church to fix the cogitations, and raise the devotions of them that pray before them. But for mine own judgment, if it be admitted that imagination hath power, and that ceremonies fortify imagination. and that they be used sincerely and intentionally for that purpose; yet I should hold them unlawful, as opposing to that first edict which God gave unto man, "In sudore vultus comedes panem tuum."\* For they propound those noble effects, which God hath sent forth unto man to be brought at the price of labour, to be attained by a few easy and slothful observances.

Bacon's belief in the power of imagination, which he here describes, and which may be regarded as of the same nature with the modern Mesmerism, is still more evident from other parts of his writings, and especially from the Tenth Century of the *Sylva Sylvarum*. And there, it may be remarked, he expresses no scrupulosity about the lawfulness of employing the power; on the contrary, he throws out various suggestions for strengthening and exalting it.

This Third Chapter is concluded by some observations, which are not in the *Advancement*, on two branches of knowledge described as having a reference principally to the faculties of the inferior or sensible soul (or that which man has in common with the brutes); namely, the doctrine of Voluntary Motion and the doctrine of Sense and Sensibility. In the treatment of the latter, there are two very important matters, Bacon con-

\* In the sweat of thy brow shalt thou eat thy bread.

ceives, that have been neglected ; the difference between sense and perception, and the form of light. By perception, which he says resides in almost all natural bodies, he seems to mean nearly the same thing that in modern chemistry is called elective affinity ; although he also confounds with that some of the effects of gravitation, of heat, and even of the principle of vegetable and animal life. In regard to light, he complains that its radiations have been treated of, but not their origin ; and this and other defects he traces to the treatment of perspective as simply a branch of the mathematics. By the *form* of light Bacon must be understood to mean here nearly what would in common parlance be called its nature. He wishes the inquiry to be extended from the mere effects of light to its constitution or substance—to the examination, as he puts it, of what it is that is common to the emanations perceived by the eye to proceed from the sun and those perceived to proceed from rotten wood or the putrid scales of fish. Modern philosophy has turned very little of its attention to investigations of this latter description ; and those who are fondest of proclaiming Bacon as the father of modern physics are not usually anxious to exhibit him as patronising such speculations. But they enter largely into his system of philosophy as he has himself expounded it.

The Fifth Book of the *De Augmentis* is also extended to more than double the space occupied by the same portion of the subject in the *Advancement of Learning*. It consists of five chapters. This Fifth Book makes an especially important part of Bacon's exposition both of his own system and of his views of the old logic.

He begins by observing that the doctrine of the Intellect of man and that of his Will are as it were twins by birth. For purity of intellectual light and freedom of will began together and perished together. Nor is there in the whole universe of nature so intimate a sympathy as that between truth and goodness. The more shame therefore to learned men, if for knowledge they be like winged angels, but in their desires like serpents crawl-

ing in the dust; bearing about with them minds resembling, indeed, a mirror, but a mirror foully stained. Of the two parts into which the Science of the Human Mind is commonly divided, one, Logic, is concerned with the understanding and the reason; the other, Ethics, with the will, appetites, and affections. The passage in the *De Augmentis* then proceeds nearly as in the *Advancement*:—

It is true that the imagination is an agent or "nuncius,"\* in both provinces, both the judicial and the ministerial. For sense sendeth over to imagination before reason have judged: and reason sendeth over to imagination before the decree can be acted: for imagination ever precedeth voluntary motion. Saving that this Janus of imagination hath differing faces: for the face towards reason hath the print of truth, but the face towards action hath the print of good; which nevertheless are faces,

Quales decet esse sororum.†

Neither is the imagination simply and only a messenger; but is invested with or at leastwise usurpeth no small authority in itself, besides the duty of the message. For it was well said by Aristotle, "That the mind hath over the body that commandment, which the lord hath over a bondman; but that reason hath over the imagination that commandment which a magistrate hath over a free citizen;" who may come also to rule in his turn. For we see that, in matters of faith and religion, we raise our imagination above our reason; which is the cause why religion sought ever access to the mind by similitudes, types, parables, visions, dreams. And again, in all persuasions that are wrought by eloquence, and other impressions of like nature, which do paint and disguise the true appearance of things, the chief recommendation unto reason is from the imagination.

The part of Human Philosophy, which is rational, is of all knowledges, to the most wits, the least delightful, and seemeth but a net of subtilty and spinosity. For as it was truly said, that knowledge is "pabulum animi;"‡ so in the nature of

\* Messenger.

† As the faces of sisters should be.

‡ Food of the mind.

men's appetite to this food, most men are of the taste and stomach of the Israelites in the desert, that would fain have returned "ad ollas carniū,"\* and were weary of manna; which, though it were celestial, yet seemed less nutritive and comfortable. So generally men taste well knowledges that are drenched in flesh and blood, civil history, morality, policy, about the which men's affections, praises, fortunes, do turn and are conversant; but this same "lumen siccum"† doth parch and offend most men's watery and soft natures. But, to speak truly of things as they are in worth, rational knowledges are the keys of all other arts: for as Aristotle saith aptly and elegantly, "that the hand is the instrument of instruments, and the mind is the form of forms:" so these be truly said to be the art of arts: neither do they only direct, but likewise confirm and strengthen; even as the habit of shooting doth not only enable to shoot a nearer shoot, but also to draw a stronger bow.

The Logical Arts, or, as they are called in the *Advancement*, the Arts Intellectual, are declared to be four in number; "divided according to the ends whereunto they are referred. For man's labour is to invent that which is sought or propounded; or to judge that which is invented; or to retain that which is judged; or to deliver over that which is retained. So as the arts must be four: art of Inquiry or Invention; art of Examination or Judgment; art of Custody or Memory; and art of Elocution or Tradition." In the *De Augmentis* the expression in this last sentence is *Artes Rationales* (the Rational Arts); and it must be borne in mind that by Logic Bacon understands the whole science of the operations of the Reason and the Understanding.

It is in the Second Chapter, which treats of the art of Invention, that the additions made in the Latin work are the most considerable. The commencing portion of the disquisition, however, is translated with little alteration from the *Advancement*:—

Invention is of two kinds, much differing: the one of arts and sciences; and the other, of speech and arguments. The former of these I do report deficient; which seemeth to me to be such a deficiency as if, in the making of an inventory touch-

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\* To the flesh-pots.

† Dry light.

ing the estate of a defunct, it should be set down, that there is no ready money. For as money will fetch all other commodities, so this knowledge is that which should purchase all the rest. And like as the West Indies had never been discovered if the use of the mariner's needle had not been first discovered, though the one be vast regions, and the other a small motion; so it cannot be found strange if sciences be no farther discovered, if the art itself of invention and discovery hath been passed over.

That this part of knowledge is wanting, to my judgment standeth plainly confessed; for first, logic doth not pretend to invent sciences, or the axioms of sciences, but passeth it over with a "cuique in sua arte credendum."\* And Celsus acknowledgeth it gravely, speaking of the empirical and dogmatical sects of physicians, "That medicines and cures were first found out, and then after the reasons and causes were discoursed; and not the causes first found out, and by light from them the medicines and cures discovered." And Plato, in his *Theætetus*, noteth well, "That particulars are infinite, and the higher generalities give no sufficient direction; and that the pith of all sciences, which maketh the artsman differ from the inexpert, is in the middle propositions, which in every particular knowledge are taken from tradition and experience." And therefore we see, that they which discourse of the inventions and originals of things, refer them rather to chance than to art, and rather to beasts, birds, fishes, serpents, than to men.

Dictamnum genetrix Cretæa carpit ab Ida,  
 Puberibus caulem foliis et flore comantem  
 Purpureo: non illa feris incognita capris  
 Gramina, cum tergo volucres hæere sagittæ.†

So that it was no marvel, the manner of antiquity being to consecrate inventors, that the Ægyptians had so few human idols in their temples, but almost all brute.

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\* Every man is to be believed in his own art.

† But now the goddess mother, moved with grief  
 And pierced with pity, hastens her relief;  
 A branch of healing dittany she brought,  
 Which in the Cretan fields with care she sought:  
 Rough is the stem, which woolly leaves surround;  
 The leaves with flowers, the flowers with purple crowned;  
 Well known to wounded goats: a sure relief  
 To draw the pointed steel, and ease the grief.

Omnigenumque Deum monstra, et latrator Anubis,  
Contra Neptunum, et Venerem, contraque Minervam, &c.\*

And, if you like better the tradition of the Grecians, and ascribe the first inventions to men, yet you will rather believe that Prometheus first struck the flints, and marvelled at the spark, than that when he first struck the flints he expected the spark, and therefore we see the West Indian Prometheus had no intelligence with the European, because of the rareness with them of flint that gave the first occasion. So as it should seem that hitherto men are rather beholden to a wild goat for surgery, or to a nightingale for music, or to the ibis for some part of physic, or to the pot-lid that flew open for artillery, or generally to chance or anything else, than to logic, for the invention of arts and sciences. Neither is the form of invention which Virgil describeth much other :

Ut varias usus meditando extunderet artes  
Paulatim.†

For if you observe the words well, it is no other method than that which brute beasts are capable of, and do put in use ; which is a perpetual intending or practising some one thing, urged and imposed by an absolute necessity of conservation of being : for so Cicero saith very truly, “ Usus uni rei deditus et naturam et artem sæpe vincit.”‡ And therefore if it be said of men,

— Labor omnia vincit  
Improbis, et duris urgens in rebus egestas!§

\* They worship Gods of every monstrous shape,  
• The bull, the dog, the ibis, and the ape ;  
And set these horrid deities above  
The lovely progeny of mighty Jove.

† That old Experience pondering on its store  
And turning all its treasures o'er and o'er,  
By slow degrees should gain Invention's part  
And work its way to new and wondrous art.

‡ Experience and practice, devoted to one subject, often overcome both nature and art.

§ O'er all things labour triumphs in the end ;  
To urgent need all difficulties bend.

It is likewise said of beasts, "Quis psittaco docuit summa  $\chi\alpha\iota\pi\sigma$ ?"\* Who taught the raven in a drought to throw pebbles into a hollow tree, where she espied water, that the water might rise so as she might come to it? Who taught the bee to sail through such a vast sea of air, and to find the way from a field in flower a great way off, to her hive? Who taught the ant to bite every grain of corn that she burieth in her hill, lest it should take root and grow? Add then the word "extundere,"† which importeth the extreme difficulty, and the word "paulatim,"‡ which importeth the extreme slowness, and we are where we were, even amongst the Ægyptians' gods; there being little left to the faculty of reason, and nothing to the duty of art, for matter of invention.

Secondly, it is argued, the same thing is completely demonstrated by that form of induction which the old logic propounds, "and," it is added in the *Advancement*, "which seemeth familiar with Plato." This form of Induction, "whereby the principles of sciences may be pretended to be invented, and so the middle propositions by derivations from the principles," is declared to be "utterly vicious and incompetent." "For," it is added, "to conclude upon an enumeration of particulars, without instance contradictory, is no conclusion, but a conjecture; for who can assure, in many subjects, upon those particulars which appear of a side, that there are not other on the contrary side which appear not?" As has been already explained, Bacon entirely mistook the nature of the old logical deduction, in which (as in every other form of syllogism) the conclusion was perfectly commensurate with the premisses, and in which the enumeration of particulars, being complete for its purpose, neither required nor could admit the introduction of contradictory instances. It is only in his own so called Induction that the conclusion is of the nature of a conjecture. Exactly the reverse of what he asserts of the two is the truth: it is the Baconian Induction that concludes pre-

\* Who taught its "good-morrow" to the parrot? Persius answers, "Hunger, the master of art and bestower of genius."

† To work out.

‡ By slow degrees.



cariously (*concludit precario*); the Aristotelian always concludes necessarily (*concludit necessario*).

In the third place, Bacon contends that, even if some general principles may be rightly established by the induction of the old logic, yet inferior axioms cannot be correctly and safely deduced from them by the syllogism, at least in the physical sciences. "It is true," he goes on, "that in sciences popular, as moralities, laws, and the like,—yea, and divinity, because it pleaseth God to apply himself to the capacity of the simplest,—that form may have use; and in natural philosophy likewise, by way of argument or satisfactory reason—*quae assensum parit, operis effoeta est* [which wins assent, but works no effect out of the mind]; but the subtilty of nature and operations will not be enchained in those bonds." So that, he adds in the *De Augmentis*, the syllogism entirely failing here, nothing will serve except the true and reformed induction, for establishing either general principles or inferior propositions. Then he repeats, nearly in the same words, what we have already had occasion to quote from the *Distributio*, or Plan, of the *Instauration*, about propositions consisting of words, and words being but the counters or marks of popular notions of things. And he winds up the paragraph with a favourite illustration: referring to the denial by many of the ancient philosophers of any certainty of knowledge or comprehension, and the opinion held by them "that the knowledge of man extended only to appearances and probabilities," he observes, that, instead of charging the deceit upon the senses, as they were wont to do, they ought to have charged it upon the manner of collecting and concluding upon the reports of the senses: "this," he says, "I speak not to disable [that is, to depreciate] the mind of man, but to stir it up to seek help; for no man, be he never so cunning or practised, can make a straight line or perfect circle by steadiness of hand, which may be easily done by help of a ruler or compass."

In the *Advancement of Learning*, the subject is now dropped in these words:—"This part of Invention concerning the Invention of Sciences, I purpose, if God

give me leave, hereafter to propound, having digested it into two parts; whereof the one I term *Experientia Literata*, and the other *Interpretatio Naturae*; the former being but a degree and rudiment of the latter. But I will not dwell too long, nor speak too great upon a promise." In the *De Augmentis*, written, or at least published, seventeen years later, and after the *Novum Organum* had appeared, we have instead, immediately after the sentence about the ruler and compass, a statement to the following effect:—"This is that very thing which we are engaged with, and endeavouring with all possible pains to bring about; namely that the mind may by art be made equal to nature; and that there may be found some art of discovery and direction, which may disclose other arts, with their axioms and operations, and place them before our eyes." This Art of Discovery, or Indication, we are further informed, has two parts; for Discovery proceeds either from experiments to experiments, or from experiments to axioms, which may again point out new experiments. It is the former of these two kinds of Discovery or Invention that Bacon calls *Experientia Literata*, that is, Experience learnedly or scientifically conducted: the latter he calls *Interpretatio Naturae, sive Novum Organum* (the Interpretation of Nature, or New Instrument). The former, moreover, he considers to be not so much an art, properly so called, or part of philosophy, as a certain species of sagacity; whence he sometimes designates it the Chace of Pan (*Venatio Panis*), in allusion to the notion of that divinity being the representative of universal nature.\* And, he goes on, as there are three ways in which a man may walk; by groping in the dark; or by being led by another person, when he can see but imperfectly; † or

\* See vol. I. pp. 97—140.

† Not, however, necessarily or probably, from being "weak-sighted" (as Wats has it), or "dim-sighted" (as it is given by Shaw). The Latin is "*ipse parum videns*" (*he himself seeing little*) it may be from the obscurity of the place. His eyes may be as good as those of his guide; but the latter is familiar with the road, which he is not.

by directing his steps for himself with the assistance of a light; so may experiments be made either without any method at all; or according to a certain direction and order; or finally, in the full light of philosophy. The direction and order is what is to be understood by the *Experientia Literata*; the light must be sought from the *Novum Organum*.

The rest of the Chapter is occupied with the exemplification and illustration of this art of Scientific Experimenting; which is stated to proceed principally either by variation of the experiment; or by its production (that is, its repetition or continuation); or by its translation or transference (from nature or accident to art, or from one art to another, or from a part of an art to a different part of the same art); or by its inversion; or by its compulsion (that is, its being carried out to the annihilation or privation of the natural virtue or power which it is its purpose to test); or by its application; or by its copulation or conjunction with other experiments; or, finally, by chance experimenting (*per sortes experimenti*). As a specimen we will give what is said upon the Variation of experiments, adopting Shaw's translation, which is here sufficiently accurate:—

Experiments are varied first in the subject; as when a well known experiment, having rested in one certain substance, is tried in another of the like kind: thus the making of paper is hitherto confined to linen, and not applied to silk, unless among the Chinese; nor to hair-stuffs and camblents; nor to cotton and skins: though these three seem to be more unfit for the purpose, and so should be tried in mixture, rather than separate. Again, engrafting is practised in fruit trees, but rarely in wild ones; yet an elm grafted upon an elm, is said to produce great foliage for shade. Inscition likewise in flowers is very rare, though now the experiment begins to be made upon musk-roses; which are successfully inoculated upon common ones. We also place the variations on the side of the thing, among the variations in the matter. Thus we see a scion grafted upon the trunk of a tree, thrives better than if set in earth: and why should not onion seed, set in a green onion, grow better, than when sown in the ground by itself; a root

being here substituted for the trunk, so as to make a kind of insition in the root ?

An experiment may be varied in the efficient. Thus, as the sun's rays are so contracted by a burning-glass, and heightened to such a degree, as to fire any combustible matter: may not the rays of the moon, by the same means, be actuated to some small degree of warmth; so as to show whether all the heavenly bodies are potentially hot? and as luminous heats are thus increased by glasses: may not opaque heats, as of stones and metals, before ignition, be increased likewise? or is there not some proportion of light here also? amber and jet, chafed, attract straws; whence query if they will not do the same when warmed at the fire?

An experiment may be varied in quantity; wherein very great care is required, as being subject to various errors. For men imagine, that upon increasing the quantity, the virtue should increase proportionably: and this they commonly postulate as a mathematical certainty, and yet it is utterly false. Suppose a leaden ball, of a pound weight, let fall from a steeple, reaches the earth in ten seconds; will a ball of two pounds, where the power of natural motion, as they call it, should be double, reaches it in five? No: they will fall almost in equal times; and not be accelerated according to quantity. Suppose a drachm of sulphur would flux half a pound of steel; will therefore an ounce of sulphur flux four pounds of steel? It is no consequence; for the stubbornness of the matter in the patient is more increased by quantity than the activity of the agent. Besides, too much, as well as too little, may frustrate the effect: thus in smelting and refining of metals, it is a common error to increase the heat of the furnace, or the quantity of the flux; but, if these exceed a due proportion, they prejudice the operation: because by their force and corrosiveness they turn much of the pure metal into fumes, and carry it off; whence there ensues, not only a loss in the metal, but the remaining mass becomes more sluggish and intractable. Men should therefore remember how Æsop's house-wife was deceived, who expected that by doubling her feed, her hen should lay two eggs a day; but the hen grew fat, and laid none. It is absolutely unsafe to rely upon any natural experiment, before proof be made of it, both in a less and a larger quantity.

The Chapter concludes thus, as if the *Novum Organum* had been yet to be written:—"Respecting the

*Novum Organum* we say nothing, nor do we here give any foretaste thereof; inasmuch as, seeing that it is of all the things we have taken in hand the greatest, it is our intention to make it the subject of an entire work, if the Divine favour shall permit."

The Third Chapter enters upon the subject of the Invention of Arguments; which, however, it is remarked, "is not properly an invention; for to invent is to discover that we know not, and not to recover or resummon that which we already know; and the use of this invention is no other, but, out of the knowledge whereof our mind is already possessed, to draw forth or call before us that which may be pertinent to the purpose which we take into our consideration. So as, to speak truly, it is no invention, but a remembrance or suggestion, with an application." Its parts are stated to be two; Promptuary and Topic; the latter of which is divided into General and Particular; and an example is given of Topic Particular in an enumeration of articles or heads of Inquiry on the subject of Gravity and Levity in natural philosophy.

Chapter Fourth is devoted to the Art of Judging. It is considerably altered in the *De Augmentis*. Conclusions are stated to be come to either by Induction or by Syllogism. As for the Old Induction, it is rejected as vicious; and the subject of Legitimate Induction, as it is designated, is remitted to the *Novum Organum*. The art of Judging by Syllogism, again, is declared to be nothing but the reduction of propositions to principles by middle terms; the principles being understood to be universally assented to and therefore to be exempted from question. The Art of Judgment is then divided into Analytics and the doctrine of Elenchs or Redargutions (that is, refutations). Of these last there are enumerated three species;—Elenchs of Sophisms, Elenchs of Interpretation (*Ermeniae*), and Elenchs of Images or Idols. The last only, as connected with the profoundest fallacies, are treated of at length; and a sketch is given of the doctrine of the *Idola Tribus* (Images of the Race), arising from the nature of the

general human mind ; the *Idola Specus* (Images of the Den) arising from the peculiar mental character of the individual ; and *Idola Fori* (Images of the Market-place), arising out of words and names ; which is more fully detailed in the *Novum Organum*. The *Idola Theatri* (Images of the Theatre), springing from erroneous theories and philosophies, are merely mentioned, as admitting of being objected to. The substance of all this is also in the *Advancement of Learning*, although the different classes of *Idola* have not there the quaint names by which they are distinguished here and in the *Novum Organum*. Even in the *Advancement*, however, what are called "false appearances" in the text, are called "idola animi" in the margin.

The Fifth and last Chapter of this Fifth Book relates to the art of Preserving or Retaining Knowledge, and is nearly to the same effect in the *De Augmentis* as in the *Advancement*, though somewhat extended. The Art of Retention is divided into the doctrine of the Aids to Memory and the doctrine of the Memory itself. A few observations are made upon collections or digests of common-places, and upon systems of artificial memory.

The subject of the Sixth Book is what the author calls the Art of Tradition, or the Traditive Art, being that by which we express or transfer our knowledge to others. The discussion is lengthened in the *De Augmentis* to about four times its extent in the *Advancement*—partly, as we shall find, by the incorporation of a tract which had been written and published some years before the last-mentioned work. It is divided into four Chapters.

In the First, the Traditive Art is distributed into the doctrines or sciences of the Organ of discourse, of the Method of discourse, and of the Illustration or Adornment of discourse. The first comprehends the doctrine of the Notes or Marks of things, and the doctrine of Grammar, as regards both speaking and writing. Notes or Marks are either naturally suitable and significant, or arbitrary. Of the former kind are hieroglyphics and pictures ; of

the latter, what Bacon calls real characters, which he defines as being characters which express, not letters or words, but things and notions, but yet as distinguished from hieroglyphics by having in them nothing emblematical, and being in themselves altogether surd or inexpressive, as much as the letters of the alphabet, the meaning attached to them being simply the arbitrary imposition of custom or tacit agreement. Grammar, again,—“whereof,” he says, “the use in a mother tongue is small, in a foreign tongue more, but most in such foreign tongues as have ceased to be vulgar tongues, and are turned only to learned tongues,”—he divides into Literary and Philosophical; meaning by the former the Grammar of particular languages; by the latter, the doctrine of the analogy, not of words to one another, but of words to things, or to reason. Bacon’s Philosophical Grammar, however, would scarcely appear to be the same thing that is now understood by Philosophical or General Grammar, which aims at investigating the rationale of expressions and grammatical forms by the reduction of their diversities to certain common principles. He seems, as far as can be gathered from his somewhat imperfect and unsatisfactory exposition, to have contemplated rather the tracing of the peculiarities of different languages to corresponding peculiarities of national character. To Grammar is considered to belong every thing relating to the sound, the measure, and the accent of words, and to so much of poetry as lies in the verse. Lastly under the head of writing is noticed the subject of Ciphers, or secret writing; and here Bacon gives an account of a cipher of his own invention; devised by him, he says, when he was a young man at Paris; and still, he adds, appearing to him worthy of being preserved, seeing that it possesses the quality of the cipher in the highest degree, namely that all things may with it be signified in all forms (*omnia per omnia*), subject to no other disadvantage except that the writing involved is only one-fifth of that in which it is involved—in other words, that the cipher is five times as cumbrous as the

plain writing would be. The details must be sought in his own pages. They are given only in the *De Augmentis*.

In the Second Chapter, which is occupied with the doctrine of Method, there is not much added to the original disquisition in the *Advancement*. Method, it is observed, is commonly treated of as a part of Logic; and also as a part of Rhetoric, under the name of Disposition (or Arrangement); but it seems to deserve to be made a doctrine by itself, which may be designated the Wisdom, or Prudential Part, of the Traditive Art (*Prudentiam Traditivae*). The following passage in the *Advancement* is somewhat extended in the *De Augmentis*:—

Neither is the method or the nature of the tradition material only to the use of knowledge, but likewise to the progression of knowledge: for since the labour and life of one man cannot attain to perfection of knowledge, the wisdom of the tradition is that which inspireth the felicity of continuance and proceeding. And therefore the most real diversity of method is of method referred to use, and method referred to progression: whereof the one may be termed magistral, and the other of probation.

The latter whereof seemeth to be "*via deserta et interclusa*."\* For, as knowledges are now delivered, there is a kind of contract of error between the deliverer and the receiver: for he that delivereth knowledge desireth to deliver it in such form as may be best believed, and not as may be best examined; and he that receiveth knowledge desireth rather present satisfaction than expectant inquiry; and so rather not to doubt than not to err: glory making the author not to lay open his weakness, and sloth making the disciple not to know his strength.

But knowledge that is delivered as a thread to be spun on ought to be delivered and intimated, if it were possible, in the same method wherein it was invented; and so is it possible of knowledge induced. But in this same anticipated and prevented knowledge no man knoweth how he came to the knowledge which he hath obtained. But yet, nevertheless, "*secundum majus et minus*,"† a man may revisit and descend

\* A desert and secluded way.

† According to its being greater or less.



unto the foundations of his knowledge and consent; and so transplant it into another, as it grew in his own mind. For it is in knowledges as it is in plants: if you mean to use the plant, it is no matter for the roots; but if you mean to remove it to grow, then it is more assured to rest upon roots than slips; so the delivery of knowledges, as it is now used, is as of fair bodies of trees without the roots—good for the carpenter, but not for the planter. But if you will have sciences grow, it is less matter for the shaft or body of the tree, so you look well to the taking up of the roots: of which kind of delivery the method of the mathematics, in that subject, hath some shadow.

This genuine method, Bacon adds, he does not find to be generally either in use, or sought after. In the *Advancement* he calls it, in a marginal note, *Methodus Sincera, sive ad Filios Scientiarum* (the True Method, or that for the Sons of Science); in the *De Augmentis* it is more quaintly termed the Tradition of the Lamp, or the Method for the Sons (*Traditio Lampadis, sive Methodus ad Filios*).

From the observations that follow upon other diversities of method, it will be sufficient to select a paragraph or two. The following is nearly the same in the Latin as in the English:—

Another diversity of method, whereof the consequence is great, is the delivery of knowledge in aphorisms, or in methods; wherein we may observe that it hath been too much taken into custom, out of a few axioms or observations upon any subject to make a solemn and formal art, filling it with some discourses, and illustrating it with examples, and digesting it into a sensible method: but the writing in aphorisms hath many excellent virtues, whereto the writing in method doth not approach.

For first, it trieth the writer, whether he be superficial or solid; for aphorisms, except they should be ridiculous, cannot be made but of the pith and heart of sciences; for discourse of illustration is cut off; recitals of examples are cut off; discourse of connexion and order is cut off; descriptions of practice are cut off; so there remaineth nothing to fill the aphorisms but some good quantity of observation: and therefore no man can suffice, nor in reason will attempt to write aphorisms, but he that is sound and grounded. But in methods,

Tantum series juncturaque pollet,  
Tantum de medio sumptis accedit honoris ;\*

as a man shall make a great show of an art which, if it were disjointed, would come to little. Secondly, methods are more fit to win consent or belief, but less fit to point to action : for they carry a kind of demonstration in orb or circle, one part illuminating another, and therefore satisfy ; but particulars, being dispersed, do best agree with dispersed directions. And lastly, aphorisms, representing a knowledge broken, do invite men to inquire farther ; whereas methods, carrying the show of a total, do secure men, as if they were at farthest.

This last view was a favourite with Bacon. "I have heard his lordship say also," writes Rawley, in his Preface to the *Sylva Sylvarum*, "that one great reason why he would not put these particulars [the facts collected in that work] into any exact method (though he that looketh attentively into them shall find that they have a secret order) was because he conceived that other men would now think that they could do the like, and so go on with a further collection ; which, if the method had been exact, many would have despaired to attain by imitation."

The Third Chapter is devoted to the subject of Rhetoric, or the doctrine of the Illustration and Adornment of Discourse ; and the additions in the *De Augmentis* extend it to nearly ten times its length in the original English treatise. The beginning, however, is nearly the same as in the *Advancement* :—

Now we descend to that part which concerneth the illustration of tradition, comprehended in that science which we call Rhetoric, or art of eloquence ; a science excellent, and excellently well laboured. For although in true value it is inferior to wisdom, (as it is said by God to Moses, when he disabled himself for want of this faculty, "Aaron shall be thy speaker, and thou shalt be to him as God,") yet with people it is the more mighty : for so Solomon saith, "Sapiens corde appella-

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\* Skill and arrangement can such charms bestow  
That commonplaces make a glorious show.

bitur prudens, sed dulcis eloquio majora reperiet;”\* signifying that profoundness of wisdom will help a man to a name or admiration, but that it is eloquence that prevaileth in an active life. And so as to the labouring of it, the emulation of Aristotle with the rhetoricians of his time, and the experience of Cicero, hath made them in their works of rhetorics exceed themselves. Again the excellency of examples of eloquence in the orations of Demosthenes and Cicero, added to the perfection of the precepts of eloquence, hath doubled the progression in this art; and therefore the deficiencies which I shall note will rather be in some collections, which may as handmaids attend the art, than in the rules or use of the art itself.

Notwithstanding, to stir the earth a little about the roots of this science, as we have done of the rest; the duty and office of Rhetoric is to apply reason to imagination for the better moving of the will. For we see reason is disturbed in the administration thereof by three means: by illaqueation or sophism, which pertains to logic; by imagination or impression, which pertains to rhetoric; and by passion or affection, which pertains to morality. And as, in negotiation with others, men are wrought by cunning, by importunity, and by vehemency; so, in this negotiation within ourselves, men are undermined by inconsequences, solicited and importuned by impressions or observations, and transported by passions. Neither is the nature of man so unfortunately built as that those powers and arts should have force to disturb reason, and not to establish and advance it: for the end of logic is to teach a form of argument to secure reason and not to entrap it; the end of morality is to procure the affections to obey reason, and not to invade it; the end of Rhetoric is to fill the imagination, to second reason, and not to oppress it: for these abuses of arts come in but “*ex obliquo,*”† for caution.

And therefore it was great injustice in Plato, though springing out of a just hatred of the rhetoricians of his time, to esteem of Rhetoric but as a voluptuary art, resembling it to cookery that did mar wholesome meats, and help unwholesome by variety of sauces to the pleasure of the taste. For we see that speech is much more couversant in adorning that which is good than in colouring that which is evil; for there is no man

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\* The wise in heart shall be called prudent; but the sweet in speech shall attain greater things.

† Incidentally.

but speaketh more honestly than he can do or think: and it was excellently noted by Thucydides in Cleon, that because he used to hold on the bad side in causes of estate, therefore he was ever inveighing against eloquence and good speech; knowing that no man can speak fair of courses sordid and base. And therefore, as Plato said elegantly, "That Virtue, if she could be seen, would move great love and affection;" so, seeing that she cannot be showed to the sense by corporal shape, the next degree is to show her to the imagination in lively representation: for to show her to reason only in subtilty of argument was a thing ever derided in Chrysippus and many of the Stoics; who thought to thrust virtue upon men by sharp disputations and conclusions which have no synapathy with the will of man.

Again, if the affections in themselves were pliant and obedient to reason, it were true there should be no great use of persuasions and insinuations to the will, more than of naked proposition and proofs; but in regard of the continual mutinies and seditions of the affections,

*Video meliora, proboque;  
Deteriora sequor:\**

reason would become captive and servile, if eloquence of persuasions did not practise and win the imagination from the affections' part, and contract a confederacy between the reason and imagination against the affections: for the affections themselves carry ever an appetite to good, as reason doth. The difference is, that the affection beholdeth merely the present; reason beholdeth the future and sum of time. And therefore, the present filling the imagination more, reason is commonly vanquished; but after that force of eloquence and persuasion hath made things future and remote appear as present, then upon the revolt of the imagination reason prevaileth.

We conclude, therefore, that Rhetoric can be no more charged with the colouring of the worst part, than logic with sophistry, or morality with vice. For we know the doctrines of contraries are the same, though the use be opposite. It appeareth also that logic differeth from Rhetoric, not only as the fist from the palm, the one close, the other at large; but much more in this, that logic handleth reason exact and in truth, and Rhetoric handleth it as it is planted in popular

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\* I see the best, and still the worst pursue.

opinions and manners. And therefore Aristotle doth wisely place Rhetoric as between logic on the one side, and moral or civil knowledge on the other, as participating of both : for the proofs and demonstrations of logic are toward all men indifferent and the same ; but the proofs and persuasions of Rhetoric ought to differ according to the auditors :—

Orpheus in sylvia, inter delphinus Arion :\*

which application, in perfection of idea, ought to extend so far that, if a man should speak of the same thing to several persons, he should speak to them all respectively in several ways : though this politic part of eloquence in private speech it is easy for the greatest orators to want ; whilst, by the observing their well-graced forms of speech, they lose the volubility of application : and therefore it shall not be amiss to recommend this to better inquiry, not being curious whether we place it here or in that part which concerneth policy.

In the *Advancement* only a single example is given of each of three kinds of desiderata or deficiencies which are noticed ; in the *De Augmentis* the first and second kinds are illustrated by numerous examples. “ First,” Bacon begins (in both treatises), “ I do not find the wisdom and diligence of Aristotle well pursued, who began to make a collection of the popular signs and colours of good and evil, both simple and comparative, which are as the Sophisms of Rhetoric. . . . The defects in the labour of Aristotle are three : one, that there be but a few o<sup>r</sup> many ; another that their elenchuses are not annexed<sup>f</sup> and the third, that he conceived but a part of the use of them. For their use is not only in probation, but much more in impression. For many forms are equal in signification which are differing in impression ; as the difference is great in the piercing of that which is sharp and that which is flat, though the strength of the percussion be the same.” And then we have in the *De Augmentis* a translation, with additions, of the English tract published with the first and Second Editions of the *Essays* (1597 and 1598) entitled ‘ Of the Colours of Good and

\* Equal to Orpheus in the listening woods,  
And riding like Arion o’er the floods.

Evil, a Fragment ;' or otherwise, ' Places of Persuasion and Dissuasion.'\*

This little tract, as printed in the modern editions of Bacon's works, is commonly headed by the following Letter to the Lord Mountjoy, which was first published in what is called Stephens's Second Collection (Letters, Memoirs, &c., 4to, Lond. 1734), and is curious as containing perhaps the freest expression that Bacon has any where ventured upon of his opinion of Aristotle:—

I send you the last part of the best book of Aristotle of Stagira, who, as your lordship knoweth, goeth for the best author. But saving the civil respect which is due to a received estimation, the man being a Grecian, and of a hasty wit, having hardly a discerning patience, much less a teaching patience, hath so delivered the matter, as I am glad to do the part of a good house-hen, which, without any strangeness, will sit upon pheasants' eggs. And yet perchance some that shall compare my lines with Aristotle's lines, will muse by what art, or rather by what revelation, I could draw these conceits out of that place. But I, that should know best, do freely acknowledge, that I had my light from him; for where he gave me not matter to perfect, at the least he gave me occasion to invent. Wherein as I do him right, being myself a man that am as free from envying the dead in contemplation, as from envying the living in action or fortune: so yet nevertheless still I say, and I speak it more largely than before, that in perusing the writings of this person so much celebrated, whether it were the impediment of his wit, or that he did it upon glory and affectation to be subtile, as one that if he had seen his own conceits clearly and perspicuously delivered, perhaps would have been out of love with them himself; or else upon policy, to keep himself close, as one that had been a challenger of all the world, and had raised infinite contradiction: to what cause soever it is to be ascribed, I do not find him to deliver and unwrap himself well of that he seemeth to conceive; nor be a master of his own knowledge. Neither do I for my part also, though I have brought in a new manner of handling this argument, to make it pleasant and lightsome, pretend so to have overcome the nature of the subject, but that the full understanding and use of it will be somewhat dark, and best pleasing

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\* See vol. i. pp. 17, &c.

the tastes of such wits as are patient to stay the digesting and soluting unto themselves of that which is sharp and subtile. Which was the cause, joined with the love and honour I bear to your lordship, as the person I know to have many virtues, and an excellent order of them, which moved me to dedicate this writing to your lordship after the ancient manner: choosing both a friend, and one to whom I conceived the argument was agreeable.

The following introduction to the *Colours* in the original edition is omitted in the *De Augmentis* :—

In deliberatives, the point is what is good and what is evil; and of good what is greater, and of evil what is less.

So that the persuader's labour is to make things appear good or evil, and that in higher or lower degree; which as it may be performed by true and solid reasons, so it may be represented also by colours, popularities, and circumstances, which are of such force as they sway the ordinary judgment either of a weak man, or of a wise man, not fully and considerably attending and pondering the matter. Besides their power to alter the nature of the subject in appearance, and so to lead to error, they are of no less use to quicken and strengthen the opinions and persuasions which are true: for reasons plainly delivered, and always after one manner, especially with fine and fastidious minds, enter but heavily and dully; whereas, if they be varied, and have more life and vigour put into them by these forms and insinuations, they cause a stronger apprehension, and many times suddenly win the mind to a resolution. Lastly, to make a true and safe judgment, nothing can be of greater use and defence to the mind than the discovering and reprehension of these colours, showing in what cases they hold, and in what they deceive; which, as it cannot be done but out of a very universal knowledge of the nature of things, so being performed, it so cleareth man's judgment and election, as it is the less apt to slide into any error.

The original *Colours* are ten in number; in the *De Augmentis*, besides other alterations, they are arranged in a new order; and two are added.

The following stands Fifth in the *De Augmentis*, and First in the original publication :—

Since all parties or sects challenge the pre-eminence of the first place to themselves, that to which all the rest with one consent give the second place, seems to be better than the

others. For every one seems to take the first place out of zeal to itself, but to give the second where it is really due.

So Cicero went about to prove the sect of Academics, which suspended all asseveration, for to be the best. "For," saith he, "ask a Stoic which philosophy is true, he will prefer his own: then ask him which approacheth (next) the truth, he will confess the Academics. So deal with the epicure that will scant endure the Stoic to be in sight of him: so soon as he hath placed himself he will place the Academics next him."

So if a prince took divers competitors to a place, and examined them severally whom next themselves they would rarest commend, it were like the ablest man should have the most second voices.

The fallax of this colour happeneth oft in respect of envy: for men are accustomed, after themselves, and their own fashion, to incline unto them which are softest and are least in their way, in despite and derogation of them that hold them hardest to it. So that this colour of meliority and pre-eminence is a sign of enervation and weakness.

Here is the Seventh of the *De Augmentis*, and the Fourth of the original edition:—

That which keeps a matter safe and entire is good: but what is destitute and unprovided of a retreat is bad. For, whereas, all ability of acting is good, not to be able to withdraw one's self is a kind of impotency.

Hereof Æsop framed the fable of the two frogs that consulted together in the time of drought (when many plashes that they had repaired to were dry) what was to be done; and the one propounded to go down into a deep well, because it was like the water would not fail there; but the other answered, "Yea, but if it do fail, how shall we get up again?" And the reason is, that human actions are so uncertain and subject to perils, as that seemeth the best course which hath most passages out of it. Appertaining to this persuasion the forms are, you shall engage yourself; on the other side, "tantum, quantum voles, sumes ex fortuna;" i. e. take what lot you will; or, you shall keep the matter on your own hand. The reprehension of it is, that proceeding and resolving in all actions is necessary. For, as he saith well, not to resolve is to resolve, and many times it breeds as many necessities, and engageth as far in some other sort as to resolve. So it is but the covetous man's disease translated in power; for the covetous man will enjoy nothing, be-



cause he will have his full store and possibility to enjoy the more; so, by this reason, a man should execute nothing, because he should be still indifferent and at liberty to execute any thing. Besides necessity, and this same "jacta est alea," or once having cast the dice, hath many times an advantage, because it awaketh the powers of the mind and strengtheneth endeavour, "ceteris pares, necessitate certe superiores istis," (which are able to deal with any others, but master these upon necessity).

The following is the Eighth in both publications :—

That which a man hath procured by his own default is a greater mischief (or evil); that which is laid on him by others is a lesser evil.

The reason is, because the sting and remorse of the mind accusing itself doubleth all adversity; contrariwise, the considering and recording inwardly that a man is clear and free from fault, and just imputation doth attemper outward calamities. For if the will be in the sense and in the conscience both, there is a germination of it; but if evil be in the one and comfort in the other, it is a kind of compensation. So the poets in tragedies do make the most passionate lamentation, and those that forerun final despair, to be accusing, questioning, and torturing of a man's self.

*Seque unam clamat causamque caputque malorum :*

She railing doth confess herself to be

The cause and source of her own misery.

And contrariwise the extremities of worthy persons have been annihilated in the consideration of their own good deserving. Besides, when the evil cometh from without, there is left a kind of evaporation of grief if it come by human injury, either by indignation and meditating of revenge from ourselves, or by expecting or fore-conceiving that Nemesis and retribution will take hold of the authors of our hurt; or if it be by fortune or accident, yet there is left a kind of expostulation against the divine powers :—

*Atque Deos atque astra vocat crudelia mater :*

The Gods and cruel stars the mother chargeth.

But where the evil is derived from a man's own fault, there all strikes deadly inwards and suffocateth.

The reprehension of this colour is :—

First, in respect of hope; for reformation of our fault is in

*nostra potestate*, our own power; but amendment of our fortune simply is not. Therefore Demosthenes in many of his orations saith thus to the people of Athens:—"That which having regard to the time past is the worse point and circumstance of all the rest; that as to the time to come is the best. What is that, even this, that by your sloth, irresolution, and misgovernment, your affairs are grown to this declination and decay. For had you used and ordered your means and forces to the best, and done your parts every way to the full, and, notwithstanding, your matters should have gone backward in this manner as they do, there had been no hope left of recovery or reputation. But since it hath been only by your own errors, &c." So Epictetus in his degrees saith, "The worst state of man is to excuse extern things, better than that to accuse any man's self, and best of all to accuse neither."

Another reprehension of this colour is in respect of the well-bearing of evils, wherewith a man can charge no body but himself, which maketh them the less:—

————— *Leve fit, quod bene fertur onus :*

That burden's light, that's on discreetly laid.

And therefore many natures that are either extremely proud and will take no fault to themselves, or else very true and cleaving to themselves (when they see the blame of anything that falls out ill must light upon themselves), have no other shift but to bear it out well, and to make the least of it; for, as we see, when sometimes a fault is committed, and before it be known who is to blame, much ado is made of it, but after, if it appear to be done by a son, or by a wife, or by a near friend, then it is light made of it: so much more when a man must take it upon himself. And therefore it is commonly seen that women which marry husbands of their own choosing, against their friends' consents, if they be never so ill-used yet you shall seldom see them complain, but set a good face on it.

In the *De Augmentis* Bacon adds, that he has a great number more of such Colours, which he had collected in his youth, but without their illustrations and *elenchi*, or refutations; which at the present time he has no leisure to draw up. He thinks it best, therefore, not to produce them in their unclothed condition.

The collection of *Colours*, or *Sophisms*, as they are called in the *De Augmentis*, is followed by a second col-

lection of what are called *Antitheta Rerum* (antithetical statements of things), which is described as pertaining to the promptuary part of Rhetoric. "Our meaning is," says Bacon (to quote Shaw's translation), "that all the places of common use, whether for proof, confutation, persuasion, dissuasion, praise, or dispraise, should be ready studied, and either exaggerated or degraded with the utmost effort of genius, or, as it were, perverse resolution, beyond all measure of truth. And the best way of forming this collection, both for conciseness and use, we judge to be that of contracting and winding up these places into certain acute and short sentences, as into so many clues, which may occasionally be wound off into larger discourses." "Brief and acute sentences," is Bacon's own description in the *Advancement*, "not to be cited, but to be as skeins or bottoms of thread, to be unwinded at large when they come to be used; supplying authorities and examples by reference."

There are forty-seven of these *Antitheta* in all. In the following specimens Shaw's translation is adopted:—

#### NOBILITY.

##### *For.*

Where virtue is deeply implanted from the stock, there can be no vice.

Nobility is a laurel conferred by time.

If we reverence antiquity in dead monuments; we should do it much more in living ones.

If we despise nobility in families, what difference is there betwixt men and brutes?

Nobility shelters virtue from envy, and recommends it to favour.

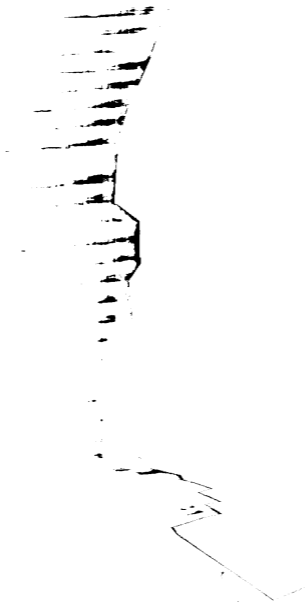
##### *Against.*

Nobility seldom springs from virtue; and virtue seldomer from nobility.

Nobles oftener plead their ancestors for pardon than promotion.

New rising men are so industrious, as to make nobles seem like statues.

Nobles, like bad racers, look back too often in the course.



## LEARNING.

*For.*

To write books upon minute particulars, were to render experience almost useless.

Reading is conversing with the wise ; but acting is generally conversing with fools.

Sciences, of little significance in themselves, may sharpen the wit, and marshal the thoughts.

*Against.*

Men in universities are taught to believe.

What art ever taught the reasonable use of art ?

To be wise by precept, and wise by experience, are contrary habits ; the one sorts not with the other.

A vain use is made of art, lest it should otherwise be unemployed.

It is the way of scholars to show all they know ; and oppose further information.

## CEREMONIES.

*For.*

A graceful deportment is the true ornament of virtue.

If we follow the vulgar in the use of words, why not in habit and gesture ?

He who observes not decorum in smaller matters, may be a great man, but is unwise at times.

Virtue and wisdom, without all respect and ceremony, are like foreign languages, unintelligible to the vulgar.

He who knows not the sense of the people, neither by congruity nor observation, is senseless.

Ceremonies are the translation of virtue into our own language.

*Against.*

What can be more disagreeable than in common life to copy the stage ?

Ingenuous behaviour procures esteem ; but affectation and cunning, hatred.

Better a painted face and curled hair, than a painted and curled behaviour.

He is incapable of great matters, who breaks his mind with trifling observations.

Affectation is the glossy corruption of ingenuity.

## INNOVATION.

*For.*

Every remedy is an innovation.

He who will not apply new remedies, must expect new diseases.

Time is the greatest innovator; and why may we not imitate time?

Ancient precedents are unsuitable, and late ones corrupt and degenerate.

Let the ignorant square their actions by example.

As they who first derive honour to their family, are commonly more worthy than those who succeed them, so innovations generally excel imitations.

An obstinate adherence to customs is as turbulent a thing as innovation.

Since things of their own course change for the worse, if they are not by prudence altered for the better, what end can there be of the ill?

The slaves of custom are the sport of time.

*Against.*

New births are deformed things.

No author is accepted till time has authorized him.

All novelty is injury, for it defaces the present state of things.

Things authorized by custom, if not excellent, are yet comfortable, and sort well together.

What innovator follows the example of time, which insinuates new things so quietly as to be almost imperceptible?

Things that happen unexpected, are less agreeable to those they benefit, and more afflicting to those they injure.

“The examples of Antithets here laid down,” says Bacon, “may not perhaps deserve the place assigned them; but, as they were collected in my youth, and are really seeds, not flowers, I was unwilling they should be lost. In this they plainly show a juvenile warmth; that they abound in the moral and demonstrative kind, but touch sparingly upon the deliberative and judicial.” Many of the thoughts thus early stored up by him are inserted in the same, or nearly in the same, form in his *Essays* and other writings; we may perceive how others, like seeds, as he calls them, had germinated in his mind. In the *Advancement* he compares the collection to “a

shop of pieces unmade up," and another collection of what he calls *Formulae* to "a shop of things ready made up." "*Formulae*," it is added, "are but decent and apt passages or conveyances of speech, which may serve indifferently for differing subjects; as of preface, conclusion, digression, transition, excusation, &c. For, as in buildings there is great pleasure and use in the well-casting of the staircases, entries, doors, windows, and the like; so in speech the conveyances and passages are of special ornament and effect." Only one example of a Formula is subjoined, under the title of *A conclusion in a deliberative*:—"So may we redeem the faults past, and prevent the inconveniences future." Two or three more examples are added in the Latin treatise.

Chapter Four is occupied with the consideration of two Appendices of the Traditive Art; the one Critical, the other Pedagogic or Pedantical. The Critical is concerned with the right editing, expounding, and judging of books; the Pedagogic with the right method of reading and studying books. In the *De Augmentis*, under the head of Pedagogic, we are told at setting out that the shortest precept that could be given would be, Consult the schools of the Jesuits; for nothing better hath ever come into use. A public and collegiate education of youth is also emphatically recommended, in preference to either a domestic one or one under private tutors. With regard to the manner and order of teaching, also, youth are especially warned to beware of compends, and of that precocity of learning, which begets only intellectual confidence, and produces rather the show than the substance of great proficiency. What follows may be given as it stands in the *Advancement*, from which the Latin is translated with little alteration:—

For pedantical knowledge, it containeth that difference of tradition which is proper for youth; whereunto appertain divers considerations of great fruit.

As first, the timing and seasoning of knowledges; as with what to initiate them, and from what for a time to refrain them.

Secondly, the consideration where to begin with the easiest, and so proceed to the more difficult ; and in what courses to press the more difficult, and then to turn them to the more easy : for it is one method to practise swimming with bladders, and another to practise dancing with heavy shoes.

A third is, the application of learning according unto the propriety of the wits ; for there is no defect in the faculties intellectual but seemeth to have a proper cure contained in some studies ; as for example, if a child be bird-witted, that is, hath not the faculty of attention, the mathematics giveth a remedy thereunto ; for in them, if the wit be caught away but a moment, one is to begin anew. And as sciences have a propriety towards faculties for cure and help, so faculties or powers have a sympathy towards sciences for excellency or speedy profiting ; and therefore it is an inquiry of great wisdom, what kinds of wits and natures are most proper for what sciences.

Fourthly, the ordering of exercises is matter of great consequence to hurt or help : for, as is well observed by Cicero, men in exercising their faculties, if they be not well advised, do exercise their faults and get ill habits as well as good ; so there is a great judgment to be had in the continuance and intermission of exercises. It were too long to particularize a number of other considerations of this nature, things but of mean appearance, but of singular efficacy. For as the wronging or cherishing of seeds or young plants is that that is most important to their thriving (and as it was noted that the first six kings being in truth as tutors of the state of Rome in the infancy thereof, was the principal cause of the immense greatness of that state which followed), so the culture and manurance of minds in youth hath such a forcible, though unseen operation, as hardly any length of time or contention of labour can countervail it afterwards. And it is not amiss to observe also how small and mean faculties gotten by education, yet, when they fall into great men or great matters, do work great and important effects ; whereof we see a notable example in Tacitus of two stage-players, Percennius and Vibulenus, who by their faculty of playing put the Pannonian armies into an extreme tumult and combustion : for, there arising a mutiny amongst them upon the death of Augustus Cæsar, Blæsus the lieutenant had committed some of the mutineers, which were suddenly rescued ; whereupon Vibulenus got to be heard speak, which he did in this manner :—“These poor innocent wretches, appointed to cruel death, you have restored to behold



the light ; but who shall restore my brother to me, or life unto my brother, that was sent hither in message from the legions of Germany, to treat of the common cause ? and he hath murdered him this last night by some of his fencers and ruffians, that he hath about him for his executioners upon soldiers. Answer, Blæsus, what is done with his body ? The mortalest enemies do not deny burial. When I have performed my last duties to the corpse with kisses, with tears, command me to be slain beside him ; so that these my fellows for our good meaning and our true hearts to the legions, may have leave to bury us." With which speech he put the army into an infinite fury and uproar : whereas truth was he had no brother, neither was there any such matter ; but he played it merely as if he had been upon the stage.

With these first six Books finishes the portion of the *De Augmentis* relating to the logical sciences, or to what is properly to be called the Baconian system of philosophy. For the remainder of the work a more summary account will suffice.

The Seventh Book is nearly the same in the Latin as in the original English. It consists of three Chapters ; and takes a survey of Ethics as divided into the doctrine touching the Exemplar or Platform (that is, the essential nature) of the Good, and the doctrine of the Cultivation and Practice of the Good, called by Bacon, after his manner, the Georgics of the Mind. The Good, in its general nature, is divided into Good Simple and Good Compared ; or the Good in its Kinds and in its Degrees. Good Simple, again, is either Private and Particular, or of Communion. Individual Good is divided into Active and Passive Good ; and Passive Good is further subdivided into Conservative and Perfective. Good of Communion, or that which has a reference to others, regards either common duties, or duties respective or special. The doctrine of the Practice of the Good is made to include the doctrines of the General Dispositions or Characteristic Qualities of Minds ; of their Affections and Passions ; and of the Remedies suited for all mental defects and errors. Finally, as an Appendix to this last

doctrine comes that of the agreement between Good of the Mind and Good of the Body.

We subjoin one or two of the more remarkable passages as they stand in the *Advancement* :—

To resume the good of conservation or comfort, which consisteth in the fruition of that which is agreeable to our natures; it seemeth to be the most pure and natural of pleasures, but yet the softest and the lowest. And this also receiveth a difference, which hath neither been well judged of, nor well inquired: for the good of fruition or contentment is placed either in the sincereness of the fruition, or in the quickness and vigour of it: the one superinduced by the equality, the other by vicissitude; the one having less mixture of evil, the other more impression of good. Whether of these is the greater good, is a question controverted; but whether man's nature may not be capable of both, is a question not inquired.

The former question being debated between Socrates and a sophist, Socrates placing felicity in an equal and constant peace of mind, and the sophist in much desiring and much enjoying, they fell from argument to ill words: the sophist saying that Socrates's felicity was the felicity of a block or stone; and Socrates saying that the sophist's felicity was the felicity of one that had the itch, who did nothing but itch and scratch. And both these opinions do not want their supports: for the opinion of Socrates is much upheld by the general consent even of the Epicures themselves, that virtue beareth a great part in felicity; and if so, certain it is, that virtue hath more use in clearing perturbations than in compassing desires. The sophist's opinion is much favoured by the assertion we last spake of, that good of advancement is greater than good of simple preservation; because every obtaining a desire hath a show of advancement, as motion, though in a circle, hath a show of progression.

But the second question, decided the true way, maketh the former superfluous. For can it be doubted, but that there are some who take more pleasure in enjoying pleasures than some other, and yet nevertheless are less troubled with the loss or leaving of them? so as this same, "Non uti ut non appetas, non appetere ut non metuas, sunt animi pusilli et diffidentis."\*

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\* Not to use without desire, not to desire without fear, are the marks of a weak and distrusting mind.

And it seemeth to me, that most of the doctrines of the philosophers are more fearful and cautionary than the nature of things requireth. So have they increased the fear of death in offering to cure it: for when they would have a man's whole life to be but a discipline or preparation to die, they must needs make men think that it is a terrible enemy, against whom there is no end of preparing. Better, saith the poet:

Qui finem vitæ extremum inter munera ponat  
Naturæ.\*

So have they sought to make men's minds too uniform and harmonical, by not breaking them sufficiently to contrary motions: the reason whereof I suppose to be, because they themselves were men dedicated to a private, free, and unapplied course of life. For as we see, upon the lute or like instrument, a ground, though it be sweet and have show of many changes, yet breaketh not the hand to such strange and hard stops and passages, as a set song or voluntary; much after the same manner was the diversity between a philosophical and a civil life. And therefore men are to imitate the wisdom of jewellers; who, if there be a grain, or a cloud, or an ice which may be ground forth without taking too much of the stone, they help it; but if it should lessen and abate the stone too much, they will not meddle with it: so ought men so to procure serenity as they destroy not magnanimity.

The following is from the latter part of the Book:—

The opinion of Aristotle seemeth to me a negligent opinion, that of those things which consist by nature, nothing can be changed by custom; using for example, that if a stone be thrown ten thousand times up, it will not learn to ascend; and that by often seeing or hearing, we do not learn to see or hear the better. For though this principle be true in things wherein nature is peremptory, (the reason whereof we cannot now stand to discuss,) yet it is otherwise in things wherein nature admitteth a latitude. For he might see that a strait glove will come more easily on with use; and that a wand will by use bend otherwise than it grew; and that by use of the voice we speak louder and stronger; and that by use of enduring heat or cold, we endure it the better, and the like:

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\* Who looks on death as Nature's latest gift.

which latter sort have a nearer resemblance unto that subject of manners he handleth, than those instances which he allegeth. But allowing his conclusion, that virtues and vices consist in habit, he ought so much the more to have taught the manner of superinducing that habit: for there be many precepts of the wise ordering the exercises of the mind, as there is of ordering the exercises of the body; whereof we will recite a few.

The first shall be, that we beware we take not at the first either too high a strain, or too weak. For if too high, in a diffident nature you discourage; in a confident nature you breed an opinion of facility, and so a sloth; and in all natures you breed a further expectation than can hold out, and so an insatisfaction on the end. If too weak, of the other side, you may not look to perform and overcome any great task.

Another precept is, to practise all things chiefly at two several times, the one when the mind is best disposed, the other when it is worst disposed; that by the one you may give a great step, by the other you may work out the knots and stonds of the mind, and make the middle times the more easy and pleasant.

Another precept is, that which Aristotle mentioneth by the way, which is to bear ever towards the contrary extreme of that whereunto we are by nature inclined; like unto the rowing against the stream, or making a wand straight by bending him contrary to his natural crookedness.

Another precept is, that the mind is brought to anything better, and with more sweetness and happiness, if that whereunto you pretend be not first in the intention, but "tanquam aliud agendo,"\* because of the natural hatred of the mind against necessity and constraint. Many other axioms there are touching the managing of exercise and custom; which being so conducted, doth prove indeed another nature; but being governed by chance, doth commonly prove but an ape of nature, and bringeth forth that which is lame and counterfeit.

Wherefore we will conclude with that last point, which is of all other means the most compendious and summary, and again, the most noble and effectual to the reducing of the mind unto virtue and good estate; which is the electing and propounding unto a man's self good and virtuous ends of his life,

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\* As if intent on business with which we had no concern.

such as may be in a reasonable sort within his compass to attain. For if these two things be supposed, that a man set before him honest and good ends, and again, that he be resolute, constant, and true unto them; it will follow that he shall mould himself into all virtue at once. And this indeed is like the works of nature, whereas the other course is like the work of the hand. For as when a carver makes an image, he shapes only that part whereupon he worketh (as if he be upon the face, that part which shall be the body is but a rude stone still, till such time as he comes to it); but, contrariwise, when nature makes a flower or living creature, she formeth rudiments of all the parts at one time: so in obtaining virtue by habit, while a man practiseth temperance, he doth not profit much to fortitude nor the like; but when he dedicateth and applieth himself to good ends, look, what virtue soever the pursuit and passage towards those ends doth commend unto him, he is invested of a precedent disposition to conform himself thereunto. Which state of mind Aristotle doth excellently express himself, that it ought not to be called virtuous, but divine: his words are these—*“Immanitati autem consentaneum est opponere eam, quæ supra humanitatem est, heroicam sive divinam virtutem;”*\* and a little after, *“Nam ut feræ neque vitium neque virtus est, sic neque Dei: sed hic quidem status altius quiddam virtute est, ille aliud quiddam a vitio.”*† And therefore we may see what celsitude of honour Plinius Secundus attributeth to Trajan in his funeral oration, where he said, “That men needed to make no other prayers to the gods, but that they would continue as good lords to them as Trajan had been;” as if he had not been only an imitation of divine nature, but a pattern of it. But these be heathen and profane passages, having but a shadow of that divine state of mind which religion and the holy faith do conduct men unto by imprinting upon their souls charity, which is excellently called the bond of perfection, because it comprehendeth and fasteneth all virtues together. And as it is elegantly said by Menander of vain love, which is but

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\* It is the characteristic of a ferocious disposition to oppose that heroic or rather divine virtue which transcends humanity.

† As beasts cannot be said to have vice or virtue, so neither can the gods; for as the condition of the latter is something more exalted than virtue, so that of the former is something different from vice.

a false imitation of divine love—"Amor melior sophista lævo ad humanam vitam,"\* that love teacheth a man to carry himself better than the sophist or preceptor, which he calleth left-handed, because, with all his rules and precepts, he cannot form a man so dexterously, nor with that facility to prize himself and govern himself as love can do; so certainly, if a man's mind be truly inflamed with charity, it doth work him suddenly into greater perfection than all the doctrine of morality can do, which is but a sophist in comparison of the other. Nay further, as Xenophon observed truly, that all other affections, though they raise the mind, yet they do it by distorting and uncomeliness of extacies or excesses; but only love doth exalt the mind, and nevertheless at the same instant doth settle and compose it: so in all other excellencies, though they advance nature, yet they are subject to excess; only charity admitteth no excess. For so we see, by aspiring to be like God in power, the angels transgressed and fell—"Ascendam, et ero similis altissimo:"† by aspiring to be like God in knowledge, man transgressed and fell—"Eritis sicut Dii, scientes bonum et malum:"‡ but by aspiring to a similitude of God in goodness or love, neither man nor angel ever transgressed, or shall transgress. For unto that imitation we are called—"Diligite inimicos vestros, benefacite eis qui oderunt vos, et orate pro persequentibus et calumniantibus vos, ut sitis filii Patris vestri qui in cœlis est, qui solem suum oriri facit super bonos et malos, et pluit super justos et injustos."§ So in the first platform of the divine nature itself, the heathen religion speaketh thus, "Optimus Maximus;"|| and the sacred Scriptures thus, "Misericordia ejus super omnia opera ejus."¶

Wherefore I do conclude this part of moral knowledge, concerning the culture and regimen of the mind; wherein if any man, considering the parts thereof which I have enumerated,

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\* Love is better than any tutor as a guide to human life.

† I will mount and be like unto the Most High.

‡ Ye shall be like gods, knowing good and evil.

§ Love your enemies, do good to them who hate you, and pray for them who despitefully use you and persecute you, that you may be the children of your Father in heaven, who maketh his sun to rise upon the evil and the good, and sendeth his rain upon the just and upon the unjust.

|| Best and greatest.

¶ His tender mercy is over all his works.

do judge that my labour is but to collect into an art or science that which hath been pretermitted by others, as matters of common sense and experience, he judgeth well. But as Philocrates sported with Demosthenes—"You may not marvel, Athenians, that Demosthenes and I do differ; for he drinketh water, and I drink wine," and like as we read of an ancient parable of the two gates of sleep—

Sunt geminæ somni portæ; quarum altera fertur  
 Cornea, qua veris facilis datur exitus umbris;  
 Altera candenti perfecta nitens elephanto,  
 Sed falsa ad cœlum mittunt insomnia manes:”\*

so if we put on sobriety and attention, we shall find it a sure maxim in knowledge, that the more pleasant liquor of wine is the more vaporous, and the braver gate of ivory sendeth forth the falsest dreams.

The subject of the Eighth Book is Civil Knowledge, or the Ethics of Statesmanship; “a subject,” says Bacon, “which of all others (we must understand him to mean, in ethical science) is most immersed in matter, and hardliest reduced to axiom.” The Book is about three times the length of the corresponding portion of the *Advancement*; and it is much the longest of the nine Books of the *De Augmentis*. It is divided into three Chapters; the principal additions consisting of illustrative examples inserted in the second and third. Civil Knowledge is distributed into the doctrine of Conversation, the doctrine of Negotiation or Business, and the doctrine of Government; the First Chapter contains a few observations on the first; the two remaining Chapters are devoted respectively to the second and third.

The passage on Conversation in the *Advancement* is as follows; it is slightly extended in the Latin:—

The wisdom of conversation ought not to be overmuch affected, but much less despised; for it hath not only an honour

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\* Thus rendered by Dryden:—

Two gates the silent house of sleep adorn;  
 Of polished ivory this, that of transparent horn;  
 True visions through transparent horn arise,  
 Through polished ivory pass deluding lies.

in itself, but an influence also into business and government. The poet saith—

Nec vultu destrue verba tuo :\*

a man may destroy the force of his words with his countenance : so may be of his deeds, saith Cicero, recommending to his brother affability and easy access—" Nil interest habere ostium apertum, vultum clausum ;"† it is nothing won to admit men with an open door, and to receive them with a shut and reserved countenance. So, we see, Atticus, before the first interview between Cæsar and Cicero, the war depending, did seriously advise Cicero touching the composing and ordering of his countenance and gesture. And if the government of the countenance be of such effect, much more is that of the speech, and other carriage appertaining to conversation ; the true model whereof seemeth to me well expressed by Livy, though not meant for this purpose—" Ne aut arrogans videar, aut obnoxius ; quorum alterum est alienæ libertatis obliti, alterum suæ :"‡ the sum of behaviour is to retain a man's own dignity, without intruding upon the liberty of others. On the other side, if behaviour and outward carriage be intended too much, first it may pass into affectation, and then " quid deformius quam scenam in vitam transferre "§ to act a man's life ? But although it proceed not to that extreme, yet it consumeth time, and employeth the mind too much. And therefore as we use to advise young students from company keeping, by saying, " Amici fures temporis,"|| so certainly the intending of the discretion of behaviour is a great thief of meditation. Again, such as are accomplished in that form of urbanity please themselves in it, and seldom aspire to higher virtue ; whereas those that have defect in it do seek comeliness by reputation ; for where reputation is, almost everything becometh ; but where that is not, it must be supplied by puntos and compliments. Again, there is no greater impediment of action than an over-

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\* Let not harsh looks your soothing words belie.

† It is not enough to keep your door open, if your looks forbid entrance.

‡ Lest I should seem arrogant or subservient ; the former of which argues forgetfulness of the freedom of others, the latter of our own.

§ What is worse than to transfer the stage to real life ?

|| Friends are thieves of time.



curious observance of decency, and the guide of decency, which is time and season. For as Solomon saith, "Qui respicit ad ventos, non seminat; et qui respicit ad nubes, non metit:"\* a man must make his opportunity, as oft as find it. To conclude; behaviour seemeth to me as a garment of the mind, and to have the conditions of a garment. For it ought to be made in fashion; it ought not to be too curious; it ought to be shaped so as to set forth any good making of the mind, and hide any deformity; and above all, it ought not to be too strait or restrained for exercise or motion.

The following short paragraph from the beginning of the Second Chapter is nearly the same in both treatises:—

The wisdom touching Negotiation or Business hath not been hitherto collected into writing, to the great derogation of learning, and the professors of learning. For from this root springeth chiefly that note or opinion, which by us is expressed in adage to this effect—"that there is no great concurrence between learning and wisdom." For of the three wisdoms which we have set down to pertain to civil life, for wisdom of behaviour, it is by learned men for the most part despised, as an inferior to virtue, and an enemy to meditation; for wisdom of government, they acquit themselves well when they are called to it, but that happeneth to few; but for the wisdom of business, wherein man's life is most conversant, there be no books of it, except some few scattered advertisements, that have no proportion to the magnitude of this subject. For if books were written of this, as the other, I doubt not but learned men with mean experience, would far excel men of long experience without learning, and outshoot them in their own bow.

After this we have a collection of aphorisms gathered from the Parables (or Proverbs) of Solomon, accompanied with short explanations or commentaries, by way of examples of what is called the Doctrine or Knowledge of Scattered Occasions (*Doctrina de Sparsis Occasionibus*), which is made the First Part of the Doctrine of Business; the Knowledge of Rising in the World (*Am-*

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\* He that observeth the wind shall not sow; and he that regardeth the clouds shall not reap.

*bitus Vitae*) being the Second. The number of these aphorisms, which was twenty-four in the *Advancement of Learning*, is increased to thirty-four in the *De Augmentis*; two, besides, are omitted, so that the number of the new aphorisms is twelve; and the explanations, which are in general strikingly ingenious, are also for the most part much extended. Adopting Shaw's English (though not very good), we will give first a few of those to be found, though in a shorter form, in the *Advancement*:—

*A soft answer turneth away wrath.*—If the anger of a prince, or superior, be kindled against you; and it be now your turn to speak; Solomon directs; 1. that an answer be made; and 2. that it be soft. The first rule contains three precepts; viz. 1. to guard against a melancholy and stubborn silence; for this either turns the fault wholly upon you, as if you could make no answer; or secretly impeaches your superior, as if his ears were not open to a just defence. 2. To beware of delaying the thing; and requiring a longer day for your defence: which either accuses your superior of passion; or signifies that you are preparing some artificial turn or colour. So that it is always best directly to say something for the present, in your own excuse, as the occasion requires. And 3. to make a real answer; an answer not a mere confession or bare submission; but a mixture of apology and excuse. For it is unsafe to do otherwise; unless with very generous and noble spirits, which are extremely rare. Then follows the second rule: that the answer be mild and soft, not stiff and irritating.

*A wise man contending with a fool, whether he gets angry or smiles, will not find rest.*—We are frequently admonished to avoid unequal conflicts, that is, not to strive with the stronger. But the admonition of Solomon is no less useful; that we should not strive with the worthless, for here the match is very unequal; where it is no victory to conquer, and a great disgrace to be conquered. Nor does it signify if, in such a contest, we should sometimes deal as in jest; and sometimes in the way of disdain and contempt. For what course soever we take, we are losers, and can never come handsomely off. But the worst case of all is, if our antagonist have something of the fool in him; that is, if he be confident and headstrong.

*The end of a speech is better than the beginning.*—This

aphorism corrects a common error, prevailing not only among such as principally study words, but also the more prudent; viz., that men are more solicitous about the beginnings and entrances of their discourses, than about the conclusions; and more exactly labour their prefaces and introductions than their closes. Whereas they ought not to neglect the former; but should have the latter, as being things of far greater consequence, ready prepared beforehand: casting about with themselves, as much as possible, what may be the last issue of the discourse; and how business may be thence forwarded and ripened. They ought further, not only to consider the windings up of discourses relating to business; but to regard also such turns as may be advantageously and gracefully given upon departure; even though they should be quite foreign to the matter in hand. It was the constant practice of two great and prudent privy-counsellors, on whom the weight of the kingdom chiefly rested, as often as they discoursed with their princes upon matters of state, never to end the conversation with what regarded the principal subject; but always to go off with a jest, or some pleasant device; and, as the proverb runs, "Washing off their salt-water discourses with fresh, at the conclusion." And this was one of the principal arts they had.

*Have you seen a man quick at his work? He shall stand before kings, and shall not be neglected.*—Of all the virtues which kings chiefly regard and require, in the choice of servants, that of expedition and resolution, in the dispatch of business, is the most acceptable. Men of depth are held suspected by princes; as inspecting them too close; and being able, by their strength of capacity, as by a machine, to turn and wind them against their will, and without their knowledge. Popular men are hated; as standing in the light of kings; and drawing the eyes of the multitude upon themselves. Men of courage are generally esteemed turbulent, and too enterprising. Honest and just men are accounted morose: and not pliable enough to the will of their masters. Lastly, there is no virtue but has its shade, wherewith the minds of men are offended; but dispatch alone in executing their commands has nothing displeasing to them. Besides, the motions of the minds of kings are swift, and impatient of delay: for they think themselves able to effect anything, and imagine that nothing more is wanting but to have it done instantly. Whence dispatch is to them the most grateful of all things.

The following are from those added in the *De Augmentis* :—

*As dead flies cause the best ointment to send forth an ill odour, so doth a little folly him that is in reputation for wisdom and honour.*—The condition of men eminent for virtue is, as this aphorism excellently observes, exceeding hard and miserable; because their errors, though ever so small, are not overlooked. But, as in a clear diamond every little grain, or speck, strikes the eye disagreeably, though it would scarce be observed in a duller stone; so in men of eminent virtue, their smallest vices are readily spied, talked of, and severely censured; whilst in an ordinary man, they would either have lain concealed, or been easily excused. Whence a little folly in a very wise man; a small slip in a very good man; and a little indecency in a polite and elegant man; greatly diminish their characters and reputations. It might, therefore, be no bad policy, for men of uncommon excellencies, to intermix with their actions a few absurdities, that may be committed without vice; in order to reserve a liberty, and confound the observation of little defects.

*A prudent man looks well to his steps; but a fool turns aside to deceit.*—There are two kinds of prudence; the one true and sound; the other degenerate and false: the latter Solomon calls by the name of folly. The candidate for the former has an eye to his footings, looking out for dangers, contriving remedies, and by the assistance of good men, defending himself against the bad: he is wary in entering upon business, and not unprovided of a retreat; watchful for opportunities; powerful against opposition, &c. But the follower of the other is wholly patched up of fallacy and cunning; placing all his hope in the circumventing of others, and forming them to his fancy. And this the aphorism justly rejects as a vicious, and even a weak kind of prudence. For 1. it is by no means a thing in our own power; nor depending upon any constant rule: but is daily inventing of new stratagems, as the old ones fail and grow useless. 2. He who has once the character of a crafty, tricking man, is entirely deprived of a principal instrument of business, trust: whence he will find nothing succeed to his wish. 3. Lastly, however specious and pleasing these arts may seem, yet they are often frustrated; as well observed by Tacitus, when he said, that crafty and bold counsels, though pleasant in the expectation, are hard to execute, and unhappy in the event.

He has stayed the longer, Bacon adds, upon these politic sentences of Solomon, from his desire to give authority to this part of knowledge by so excellent a precedent ; and then he proceeds :—

Neither was this in use only with the Hebrews, but it is generally to be found in the wisdom of the more ancient times ; that as men found out any observation that they thought was good for life, they would gather it, and express it in parable, or aphorism, or fable. But for fables, they were vicegerents and supplies where examples failed : now that the times abound with history, the aim is better when the mark is alive. And therefore the form of writing which of all others is fittest for this variable argument of negotiation and occasion is that which Machiavel chose wisely and aptly for government ; namely, discourse upon histories or examples : for knowledge drawn freshly, and in our view, out of particulars knoweth the way best to particulars again ; and it hath much greater life for practice when the discourse attendeth upon the example, than when the example attendeth upon the discourse. For this is no point of order, as it seemeth at first, but of substance : for when the example is the ground, being set down in a history at large, it is set down with all circumstances, which may sometimes control the discourse thereupon made, and sometimes supply it as a very pattern for action ; whereas the examples alleged for the discourse's sake are cited succinctly, and without particularity, and carry a servile aspect toward the discourse which they are brought in to make good.

But this difference is not amiss to be remembered, that as history of times is the best ground for discourse of government, such as Machiavel handleth, so history of lives is the most proper for discourse of business, because it is most conversant in private actions. Nay, there is a ground of discourse for this purpose fitter than them both, which is discourse upon letters such as are wise and weighty, as many are of Cicero ad Atticum, and others. For letters have a great and more particular representation of business than either chronicles or lives.

The arrangement of the remaining portion of the Chapter is somewhat changed in the *De Augmentis* ; but the additions are not very considerable. The following paragraphs are nearly the same in the Latin as in the English :—

But the covering of defects is of no less importance than the valuing of good parts; which may be done likewise in three manners, by caution, by colour, and by confidence. Caution is when men do ingeniously and discreetly avoid to be put into those things for which they are not proper: whereas, contrariwise, bold and unquiet spirits will thrust themselves into matters without difference, and so publish and proclaim all their wants: colour is, when men make a way for themselves, to have a construction made of their faults or wants, as proceeding from a better cause, or intended for some other purpose: for of the one it is well said, "*Sæpe latet vitium proximitate boni*,"\* and therefore, whatsoever want a man hath, he must see that he pretend the virtue that shadoweth it; as, if he be dull, he must affect gravity; if a coward, mildness; and so the rest: for the second, a man must frame some probable cause why he should not do his best, and why he should dissemble his abilities; and for that purpose must use to dissemble those abilities which are notorious in him, to give colour that his true wants are but industries and dissimulations. For confidence, it is the last but surest remedy; namely, to depress: and seem to despise whatsoever a man cannot attain; observing the good principle of the merchants, who endeavour to raise the price of their own commodities, and to beat down the price of others. But there is a confidence that passeth this other; which is, to face out a man's own defects, in seeming to conceive that he is best in those things wherein he is failing: and, to help that again, to seem on the other side that he hath least opinion of himself in those things wherein he is best: like as we shall see it commonly in poets, that if they show their verses, and you except to any, they will say that that line cost them more labour than any of the rest; and presently will seem to disable and suspect rather some other line, which they know well enough to be the best in the number. But above all, in this righting and helping of a man's self in his own carriage, he must take heed he show not himself dismantled, and exposed to scorn and injury, by too much dulceness, goodness, and facility of nature; but show some sparkles of liberty, spirit, and edge: which kind of fortified carriage, with a ready rescuing of a man's self from scorns, is sometimes of necessity imposed upon men by somewhat in their person or fortune; but it ever succeedeth with good felicity. . . . .

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\* Vice often lurks close to virtue.

Although depth of secrecy and making way, "qualis est via navis in mari,"\* (which the French calleth "sourdes menées," when men set things in work without opening themselves at all,) be sometimes both prosperous and admirable; yet many times "Dissimulatio errores parit, qui dissimulatorem ipsum illaqueant;"† and, therefore, we see the greatest politicians have in a natural and free manner professed their desires, rather than been reserved and disguised in them: for so we see that Lucius Sylla made a kind of profession "that he wished all men happy or unhappy as they stood his friends or enemies." So Cæsar, when he went first into Gaul, made no scruple to profess "that he had rather be first in a village than second at Rome." So again, as soon as he had begun the war, we see what Cicero saith of him, "Alter (meaning of Cæsar) non recusat, sed quodammodo postulat, ut, ut est, sic appelletur tyrannus."‡ So we may see, in a letter of Cicero to Atticus, that Augustus Cæsar, in his very entrance into affairs, when he was a darling of the senate, yet in his harangues to the people would swear, "Ita parentis honores consequi liceat,"§ which was no less than the tyranny; save that, to help it, he would stretch forth his hand towards a statue of Cæsar's that was erected in the same place: and men laughed, and wondered, and said, "Is it possible?" or, "Did you ever hear the like?" and yet thought he meant no hurt; he did it so handsomely and ingeniously. And all these were prosperous: whereas Pompey, who tended to the same ends, but in a more dark and dissembling manner, as Tacitus saith of him, "Occultior, non melior,"|| wherein Sallust concurrereth, "ore probo, animo inverecundo,"¶ made it his design, by infinite secret engines, to cast the state into an absolute anarchy and confusion, that the state might cast itself into his arms for necessity and protection, and so the sovereign power be put upon him, and he never seen in it: and when he had brought it, as he thought, to that point, when he was chosen consul alone, as

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\* Like the way of a ship in the sea.

† Deceit begets errors which entrap the deceiver.

‡ The other does not refuse, but rather demands to be called the tyrant that he is.

§ So may I obtain the honours of my illustrious relative.

|| More cautious, but not better.

¶ With probity on his lips and depravity in his soul.

never any was, yet he could make no great matter of it, because men understood him not; but was fain, in the end, to go the beaten track of getting arms into his hands, by colour of the doubt of Cæsar's designs. So tedious, casual, and unfortunate are these deep dissimulations: whereof, it seemeth, Tacitus made this judgment, that they were a cunning of an inferior form in regard of true policy; attributing the one to Augustus, the other to Tiberius; where, speaking of Livia, he saith, "*Et cum artibus mariti simulatione filii bene composita:*"\* for surely the continual habit of dissimulation is but a weak and sluggish cunning, and not greatly politic. . . .

But men, if they be in their own power, and do bear and sustain themselves, and be not carried away with a whirlwind or tempest of ambition, ought, in the pursuit of their own fortune, to set before their eyes not only that general map of the world, that "all things are vanity and vexation of spirit," but many other more particular cards and directions: chiefly that, that being, without well-being, is a curse, and the greater being the greater curse; and that all virtue is most rewarded, and all wickedness most punished in itself: according as the poet saith excellently:

*Quæ vobis, quæ digna, viri, pro laudibus istis  
Præmia posse rear solvi? pulcherrima primum  
Divi moresque dabunt vestri.†*

And so of the contrary. And, secondly, they ought to look up to the eternal providence and divine judgment, which often subverteth the wisdom of evil plots and imaginations, according to the Scripture, "He hath conceived mischief, and shall bring forth a vain thing." And although men should refrain themselves from injury and evil arts, yet this incessant and sabbathless pursuit of a man's fortune leaveth not that tribute which we owe to God of our time; who we see demandeth a tenth of our substance, and a seventh, which is more strict, of our time: and it is to small purpose to have an erected face towards heaven, and a perpetual grovelling spirit upon earth,

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\* Compounded with the cleverness of her husband and the cunning of her son.

† Your lavish praise and kindness, O my friends!  
All power of worthy payment far transcends;  
But, while such noble sentiments you guard,  
God and your conscience give you best reward.



eating dust, as doth the serpent, "Atque affigit humo divinæ particulam auræ."\* And if any man flatter himself that he will employ his fortune well, though he should obtain it ill, as was said concerning Augustus Cæsar, and after of Septimius Severus, "that they should never have been born, or else they should never have died," they did so much mischief in the pursuit and ascent of their greatness, and so much good when they were established; yet these compensations and satisfactions are good to be used, but never good to be purposed. And lastly, it is not amiss for men, in their race toward their fortune, to cool themselves a little with that conceit which is elegantly expressed by the emperor Charles the Fifth, in his instructions to the king his son, "That fortune hath somewhat of the nature of a woman, that if she be too much wooed she is the farther off." But this last is but a remedy for those whose tastes are corrupted: let men rather build upon that foundation which is as a corner-stone of divinity and philosophy, wherein they join close, namely, that same "Primum quærite."† For Divinity saith, "Primum quærite regnum Dei, et ista omnia adjicientur vobis:"‡ and philosophy saith, "Primum quærite bona animi, cætera aut aderunt, aut non oberunt."§ And although the human foundation hath somewhat of the sands, as we see in M. Brutus, when he brake forth into that speech,—

Te colui, virtus, ut rem; at tu nomen inane es;|| \

yet the divine foundation is upon the rock.

What is said upon the doctrine of Government and Legislation in the *Advancement* is very short; and the Third Chapter of this Eighth Book of the *De Augmentis* is nearly all new. In the earlier treatise Bacon writes:—

Concerning Government, it is a part of knowledge secret

\* And with its fetters binds to earth  
The sacred spark of heavenly birth.

† Seek first.

‡ Seek ye first the kingdom of God, and all these things shall be added unto you.

§ Seek first the advantages of the mind, other things will either not be wanting or will not oppose you.

|| I deemed thee, Virtue, a substantial form,  
And now I find thee but an empty name

and retired, in both those respects in which things are deemed secret; for some things are secret because they are hard to know, and some because they are not fit to utter. We see all governments are obscure and invisible :

Totamque infusa per artus  
Mens agitat molem, et magno se corpore miscet.\*

Such is the description of governments. We see the government of God over the world is hidden, insomuch as it seemeth to participate of much irregularity and confusion : the government of the soul in moving the body is inward and profound, and the passages thereof hardly to be reduced to demonstration. Again, the wisdom of antiquity, the shadows whereof are in the poets, in the description of torments and pains, next unto the crime of rebellion, which was the giants' offence, doth detest the crime of futility, as in Sisyphus and Tantalus. But this was meant of particulars; nevertheless even unto the general rules and discourses of policy and government there is due a reverent and reserved handling.

But contrariwise, in the governors towards the governed, all things ought, as far as the frailty of man permitteth, to be manifest and revealed. For so it is expressed in the Scriptures touching the government of God, that this globe, which seemeth to us a dark and shady body, is in the view of God as crystal : "Et in conspectu sedis tanquam mare vitreum simile crystallo."† So unto princes and states, especially towards wise senates and councils, the natures and dispositions of the people, their conditions and necessities, their factions and combinations, their animosities and discontents, ought to be, in regard of the variety of their intelligences, the wisdom of their observations, and the height of their station where they keep sentinel, in great part clear and transparent. Wherefore, considering that I write to a king that is a master of this science, and is so well assisted, I think it decent to pass over this part in silence, as willing to obtain the certificate which one of the ancient philosophers aspired unto; who, being silent, when others contended to make demonstration of their abilities by speech, desired it might be certified for his part, "that there was one that knew how to hold his peace."

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\* Throughout the universe, one common soul  
Inspires, and feeds, and animates the whole.

† And in sight of the throne a sea of glass like unto crystal.

Notwithstanding, for the more public part of government, which is Laws, I think good to note only one deficiency; which is, that all those which have written of laws have written either as philosophers or as lawyers, and none as statesmen. As for the philosophers, they make imaginary laws for imaginary commonwealths; and their discourses are as the stars, which give little light, because they are so high. For the lawyers, they write according to the states where they live, what is received law, and not what ought to be law: for the wisdom of a lawmaker is one, and of a lawyer is another. For there are in nature certain fountains of justice, whence all civil laws are derived but as streams: and like as waters do take tinctures and tastes from the soils through which they run, so do civil laws vary according to the regions and governments where they are planted, though they proceed from the same fountains. Again, the wisdom of a lawmaker consisteth not only in a platform of justice, but in the application thereof; taking into consideration by what means laws may be made certain, and what are the causes and remedies of the doubtfulness and uncertainty of law; by what means laws may be made apt and easy to be executed, and what are the impediments and remedies in the execution of laws; what influence laws touching private right of meum and tuum have into the public state, and how they may be made apt and agreeable: how laws are to be penned and delivered, whether in texts or in acts, brief or large, with preambles or without; how they are to be pruned and reformed from time to time, and what is the best means to keep them from being too vast in volumes, or too full of multiplicity and crossness: how they are to be expounded, when upon causes emergent and judicially discussed, and when upon responses and conferences touching general points or questions; how they are to be pressed, rigorously or tenderly; how they are to be mitigated by equity and good conscience, and whether discretion and strict law are to be mingled in the same courts, or kept apart in several courts; again, how the practice, profession, and erudition of law is to be censured and governed; and many other points touching the administration, and, as I may term it, animation of laws. Upon which I insist the less, because I purpose, if God give me leave, having begun a work of this nature in aphorisms, to propound it hereafter, noting it in the mean time for deficient.

In the *De Augmentis* he begins (as the passage is translated by Wats):—"I come now to the Art

of Empire, or the Knowledge of Civil Government; and in which Household Government is comprehended, as a family is under a city. In this part, as I said before, I have commanded myself silence: yet, notwithstanding, I may not so disable myself, but that I could discourse of this part also, perchance not impertinently nor unprofitably; as one practised by long experience, and by your majesty's most indulgent favours, and no merit of mine own, raised by the degrees of office and honours to the highest dignity in the state; and have borne that office for four years; and, which is more, have been accustomed to your majesty's commands and conferences for the continued space of eighteen years together (which even of the dullest mould might fashion and produce a statesman); and who have spent much time, amongst other knowledges, in histories and laws. All which I report to posterity; not out of any arrogant ostentation; but because I presume it makes something to the honour and dignity of learning, that a man born for letters more than anything else, and forcibly carried away, I know not by what fate, against the bent of his own genius, to a civil active course of life, should yet be advanced to so high and honourable charges in the state, and that under so wise a king. But, if my times of leisure shall bring forth hereafter anything touching the wisdom of government and state matters, it will be, perchance, an abortive or an after birth." [“Either abortive or posthumous” are Bacon's words.] For the present he proceeds to say that he will merely append two summary treatises:—the first, on the doctrine of Extending the Bounds of Empire, or what he calls *Consul Paludatus* (the Consul attired in his military robes); the other, on Universal Justice, or the Fountains of Law. These two treatises make up the remainder of the Chapter. The first is merely the Twenty-Ninth *Essay*, entitled in the English “Of the True Greatness of Kingdoms and Estates.”\* The Latin is the same as in the Latin translation of the *Essays* executed under

\* See vol. i. pp. 57-60.

Bacon's own inspection, though not published till some years after his death;\* and it is worth noticing, that this Essay in particular is recorded to have been turned into Latin by Hobbes; for it can be no other which Hobbes's friend Aubrey means by what he calls the one entitled "Of the Greatness of Cities," which he says was one of three translated by Hobbes: the titles of the other two Aubrey had forgotten. It is more probable, perhaps, that the translation was made by Hobbes for the *De Augmentis* than for the projected Latin edition of the Essays. The other treatise, on Universal Justice, or the Fountains or General Principles of Law, is delivered in a succession of Aphorisms, extending to ninety-seven in all. It does not admit of abridgment. Only the first Title, or Division, On the Certainty of Laws, is given, as a specimen of a complete digest of the subject, which the noble author intimates that he entertains the hope of executing. The following striking paragraph, which is the same in the Latin as in the English, winds up the Chapter and the Book:—

Thus have I concluded this portion of learning touching civil knowledge; and with civil knowledge have concluded human philosophy; and with human philosophy, philosophy in general. And being now at some pause, looking back into that I have passed through, this writing seemeth to me, "*si nunquam fallit imago*"† as far as a man can judge of his own work, not much better than that noise or sound which musicians make while they are tuning their instruments; which is nothing pleasant to bear, but yet is a cause why the music is sweeter afterwards: so have I been content to tune the instruments of the muses, that they may play that have better hands. And surely, when I set before me the condition of these times, in which learning hath made her third visitation or circuit in all the qualities thereof; as the excellency and vivacity of the wits of this age; the noble helps and lights which we have by the travails of ancient writers; the art of printing, which communicateth books to men of all fortunes; the openness of the world by navigation, which hath disclosed multitudes of experiments and a mass of natural history; the leisure where-

\* See vol. i. p. 23.

† If fancy does not deceive.

with these times abound, not employing men so generally in civil business as the states of Græcia did in respect of their popularity, and the state of Rome in respect of the greatness of their monarchy; the present disposition of these times at this instant to peace; the consumption of all that ever can be said in controversies of religion, which have so much diverted men from other sciences; the perfection of your majesty's learning, which as a phoenix may call whole volleys of wits to follow you; and the inseparable propriety of time, which is ever more and more to disclose truth—I cannot but be raised to this persuasion that this third period of time will far surpass that of the Græcian and Roman learning; only if men will know their own strength, and their own weakness both; and take one from the other, light of invention, and not fire of contradiction; and esteem of the inquisition of truth as an enterprise, and not as of a quality or ornament; and employ wit and magnificence to things of worth and excellency, and not to things vulgar and of popular estimation. As for my labours, if any man shall please himself or others in the reprehension of them, they shall make that ancient and patient request, "*Verbera, sed audi;*"\* let men reprehend them, so they observe and weigh them: for the appeal is lawful, though it may be it shall not be needful, from the first cogitations of men to their second, and from the nearer times to the times farther off. Now let us come to that learning which both the former times were not so blessed as to know, sacred and inspired Divinity, the sabbath and port of all men's labours and peregrinations.

The Ninth and last Book of the *De Augmentis* is comprised in a single short Chapter. A different plan being followed in the treatment of the subject, a good many things in the corresponding portion of the *Advancement* are here left out. The beginning, however, is nearly the same in both treatises:—

The prerogative of God extendeth as well to the reason as to the will of man; so that, as we are to obey his law though we find a reluctance in our will, so we are to believe his word though we find a reluctance in our reason. For if we believe only that which is agreeable to our sense, we give consent to the matter, and not to the author; which is no more than we

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\* Strike, but hear.

would do towards a suspected and discredited witness; but that faith which was accounted to Abraham for righteousness was of such a point as whereat Sarah laughed, who therein was an image of natural reason.

Howbeit, if we will truly consider it, more worthy it is to believe than to know as we now know. For in knowledge man's mind suffereth from sense; but in belief it suffereth from spirit, such one as it holdeth for more authorised than itself, and so suffereth from the worthier agent. Otherwise it is of the state of man glorified; for then faith shall cease, and we shall know as we are known.\*

Wherefore we conclude that sacred Theology (which in our idiom we call Divinity) is grounded only upon the word and oracle of God, and not upon the light of nature: for it is written, "Cœli enarrant gloriam Dei;"† but it is not written, "Cœli enarrant voluntatem Dei."‡ But of that it is said, "Ad legem et testimonium: si non fecerint secundum verbum istud,"§ &c. This holdeth not only in those points of faith which concern the great mysteries of the Deity, of the creation, of the redemption, but likewise those which concern the law moral truly interpreted: "Love your enemies; do good to them that hate you; be like to your heavenly Father, that suffereth his rain to fall upon the just and unjust." To this it ought to be applauded, "Nec vox hominem sonat:"|| It is a voice beyond the light of nature. So we see the heathen poets, when they fall upon a libertine passion, do still expostulate with laws and moralities, as if they were opposite and malignant to nature; "Et quod natura remittit, invida jura negant."¶ So said Dendamis, the Indian, unto Alexander's messengers; "That he had heard somewhat of Pythagoras, and some other of the wise men of Græcia, and that he held them for excellent men: but that they had a fault, which was, that they had in too great reverence and veneration a thing they called law and

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\* A translation of the greater part of the passage in the *De Augmentis*, corresponding to this, has been already given in vol. i. pp. 162, 163.

† The heavens declare the glory of God.

‡ The heavens declare the will of God.

§ To the law and to the testimony: if they speak not according to this word, it is because there is no light in them

|| Nor does the voice sound like that of a mere mortal.

¶ What nature grants us, envious laws deny.

manner." So it must be confessed that a great part of the law moral is of that perfection whereunto the light of nature cannot aspire: how then is it that man is said to have, by the light and law of nature, some notions and conceits of virtue and vice, justice and wrong, good and evil? Thus, because the light of nature is used in two several senses; the one, that which springeth from reason, sense, induction, argument, according to the laws of heaven and earth; the other, that which is imprinted upon the spirit of man by an inward instinct, according to the law of conscience, which is a sparkle of the purity of his first estate: in which latter sense only he is participant of some light and discerning touching the perfection of the moral law. But how? sufficient to check the vice, but not to inform the duty. So then the doctrine of religion, as well moral as mystical, is not to be attained but by inspiration and revelation from God.

The use, notwithstanding, of reason in spiritual things, and the latitude thereof, is very great and general: for it is not for nothing that the apostle calleth religion our reasonable service of God; insomuch as the very ceremonies and figures of the old law were full of reason and signification, much more than the ceremonies of idolatry and magic, that are full of non-significants and surd characters. But most especially the Christian faith, as in all things, so in this, deserveth to be highly magnified; holding and preserving the golden mediocrity in this point between the law of the heathen and the law of Mahomet, which have embraced the two extremes. For the religion of the heathen had no constant belief or confession, but left all to the liberty of argument; and the religion of Mahomet, on the other side, interdicteth argument altogether: the one having the very face of error, and the other of imposture; whereas the faith doth both admit and reject disputation with difference.

In the *Advancement*, Bacon considers the Subject of Divinity in both its parts; "the matter informed or revealed, and the nature of the information or revelation." In the *De Augmentis* he writes (as the passage is rendered by Wats:)—"And now, most excellent king, we have with a small bark, such as we were able to set out, sailed about the universal circumference, as well of the old as the new world of sciences; with how prosperous winds and course we leave to posterity to judge. What



remains, but that, having accomplished our design, we should pay our vows? But there rests yet behind Sacred Inspired Divinity. Whereof, if we should proceed to entreat, we should [have to] depart out of the pinnacle of human reason, and go into the ship of the Church; which must alone be governed by a divine sea needle [only when governed by a divine compass is able] to direct her course aright. For the stars of Philosophy, which [have] hitherto shined forth unto us, and were our chief guide, here fail us: it were then meet we kept silence in this sacred subject. Whereupon we shall omit the just Partitions of this Knowledge; yet, notwithstanding, somewhat we will cast into this treasury, by way of good wishes, according to the proportion of our slender ability. This we do the rather, because we find no coast or space of ground in the whole body of Divinity lying vacant and untilled; so diligent have men been, either in sowing of good seed or sowing of tares." And he goes on to state, that he will therefore confine himself to the propounding of three Appendices of Theology, treating not of the subject matter of the science, but only of the manner in which it is conveyed to the mind. Neither, he adds, will he here subjoin treatises or examples, or lay down precepts, as he has done in other cases—that he will leave to theologians; all, he repeats, that he professes to offer are merely vows.

The three Appendices are,—the doctrine of the right use of Reason in religion; the doctrine of what he calls the degrees of Unity in the City of God; that is, of the principle of agreement which pervades the Scriptures, even when there seems to be a diversity between one part and another; and a succinct, sound, and judicious collection of annotations and observations on particular passages of Scripture, neither running into common-places nor digested into any methodical form, but retaining both the variety and the flavour belonging to the texts in their original position, which he would call Emanations of the Scriptures.

A considerable part, both of what is discarded from this portion of the *De Augmentis* and of what is retained,

is nearly the same with what is found in the "Advertisement" and the "Considerations," touching the Church of England,\* and other theological writings of Bacon's. It will be enough that we transcribe another short passage from the *Advancement*, the substance of which, though somewhat differently arranged, is also found in the Latin. Two modes of expounding or interpreting Scripture have been mentioned, "which had need be contained within the bounds of sobriety;" the anagogical (or that which is inquisitive after mysteries), and the philosophical.

For the latter, it hath been extremely set on foot of late time by the school of Paracelsus, and some others, that have pretended to find the truth of all natural philosophy in the Scriptures; scandalizing and traducing all other philosophy as heathenish and profane. But there is no such enmity between God's word and his works; neither do they give honour to the Scriptures, as they suppose, but much imbase them. For to seek heaven and earth in the word of God (whereof it is said, "Heaven and earth shall pass, but my word shall not pass") is to seek temporary things amongst eternal: and as to seek divinity in philosophy is to seek the living amongst the dead, so to seek philosophy in divinity is to seek the dead amongst the living: neither are the pots or lavers, whose place was in the outward part of the temple, to be sought in the holiest place of all, where the ark of the testimony was seated. And again, the scope or purpose of the Spirit of God is not to express matters of nature in the Scriptures, otherwise than in passage, and for application to man's capacity, and to matters moral or divine. And it is a true rule, "Auctoris aliud agentis parva auctoritas;"† for it were a strange conclusion, if a man should use a similitude for ornament or illustration sake, borrowed from nature or history according to vulgar conceit, as of a basilisk, an unicorn, a centaur, a Briareus, an Hydra, or the like, that therefore he must needs be thought to affirm the matter thereof positively to be true.

The Scriptures, being given by inspiration, and not by human reason, do differ from all other books in the author: which, by consequence, doth draw on some difference to be

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\* See vol. i., pp. 138-159.

† The authority of an author travelling out of his subject is small.

used by the expositor. For the inditer of them did know four things which no man attains to know; which are, the mysteries of the kingdom of glory, the perfection of the laws of nature, the secrets of the heart of man, and the future succession of all ages. For, as to the first, it is said, "He that presseth into the light shall be oppressed of the glory." And again, "No man shall see my face and live." To the second, "When he prepared the heavens I was present, when by law and compass he enclosed the deep." To the third, "Neither was it needful that any should bear witness to him of man, for he knew well what was in man." And to the last, "From the beginning are known to the Lord all his works." . . .

It is an excellent observation which hath been made upon the answers of our Saviour Christ to many of the questions which were propounded to him, how that they are impertinent to the state of the question demanded; the reason whereof is, because not being like man, which knows man's thoughts by his words, but, knowing man's thoughts immediately, he never answered their words, but their thoughts: much in the like manner it is with the Scriptures, which, being written to the thoughts of men, and to the succession of all ages, with a foresight of all heresies, contradictions, differing estates of the church, yea and particularly of the elect, are not to be interpreted only according to the latitude of the proper sense of the place, and respectively towards that present occasion whereupon the words were uttered, or in precise congruity or contexture with the words before or after, or in contemplation of the principal scope of the place; but have in themselves, not only totally or collectively, but distributively in clauses and words, infinite springs and streams of doctrine to water the church in every part. And, therefore, as the literal sense is, as it were, the main stream or river; so the moral sense chiefly, and sometimes the allegorical or typical, are they whereof the church hath most use. Not that I wish men to be bold in allegories, or indulgent or light in allusions: but that I do much condemn that interpretation of the Scripture which is only after the manner as men use to interpret a profane book.

The conclusion of the *Advancement* is as follows:—

Thus have I made as it were a small globe of the intellectual world, as truly and faithfully as I could discover; with a note and description of those parts which seem to me not constantly occupate, or not well converted by the labour of man. In which, if I have in any point receded from that which is

commonly received, it hath been with a purpose of proceeding in "melius,"\* and not in "aliud;"† a mind of amendment and proficience, and not of change and difference. For I could not be true and constant to the argument I handle, if I were not willing to go beyond others; but yet not more willing than to have others go beyond me again: which may the better appear by this, that I have propounded my opinions naked and unarmed, not seeking to preoccupate the liberty of men's judgments by confutations. For in anything which is well set down I am in good hope that, if the first reading move an objection, the second reading will make an answer. And in those things wherein I have erred, I am sure I have not prejudiced the right by litigious arguments; which certainly have this contrary effect and operation, that they add authority to error, and destroy the authority of that which is well invented: for question is an honour and preferment to falsehood, as on the other side it is a repulse to truth. But the errors I claim and challenge to myself as my own: the good, if any be, is due "tanquam adeps sacrificii,"‡ to be incensed to the honour, first of the Divine Majesty, and next of your majesty, to whom on earth I am most bounden.

In the *De Augmentis*, for the two last sentences, others to the following effect are substituted:—"Meanwhile there cometh into my mind that answer of Themistocles, who, when an ambassador from an inconsiderable town had made him a speech full of lofty expressions, checked him with the reply: 'Friend, thy words would require a city.' Assuredly I conceive that it may be most reasonably objected to me, that my words would require an age; a whole age, perhaps, to prove their truth, and many more to bring about their accomplishment. Nevertheless, seeing that even the greatest things are owing to their beginnings, it will be enough for me to have sown to posterity and to the everlasting God, whose divine Majesty I humbly implore through his Son and our Saviour, that these sacrifices of the human understanding, and other such as these, sprinkled with religion as with salt, and offered to his glory, he would graciously vouchsafe to accept."

\* To a better object.

† To a different object.

‡ As the fat of the sacrifice.

Appended to the work is an enumeration, under the title of *Novus Orbis Scientiarum, sive Desiderata* (The New World of Sciences, or Things Desiderated), of the several branches of knowledge that have in the course of it been declared to be deficient, that is to say, imperfectly cultivated or not at all. This list may be regarded as a summary of the conclusions which it has been the object of the work to establish, and it is further interesting from several new Baconian designations which it contains. The following are enumerated as the *Desiderata* that have been noticed in Book II. ;—The Errors of Nature (*Errores Naturae*), or the History of Monsters (*Praeter-generationum*); the Fetters of Nature (*Vincula Naturae*), or Mechanical History; Inductive History, or Natural History arranged for the building up of Philosophy; the Eye of Polyphemus (*Oculus Polyphemi*), or the History of Learning; History for the illustration of Prophecy (*Historia ad Prophetias*); Philosophy according to ancient Parables. Those in Book III. :—Primary Philosophy (*Philosophia Prima*), or the axioms common to all the sciences; Living Astronomy (*Astronomia Viva*); Sound Astrology (*Astrologia Sana*); Continuation of Natural Problems; Opinions (*Placita*) of the Ancient Philosophers; the Part of Metaphysic which relates to the Forms of things; Natural Magic, or deduction of Forms to Effects; Inventory of Human Works; Catalogue of things of Multifarious Use (*Polychrestorum*). Those in Book IV. :—The Triumphs of Man, or the doctrine of the Highest Flights (*de Summitatibus*) of Human Nature; the Physiognomy of the Body in motion; Medical Narrations; Comparative Anatomy; the Science of the Cure of Diseases held to be incurable; Of Exterior Euthanasia (that is, the means of procuring an easy death so far as regards bodily sensation); Of Medicines of proved virtue (*de Medicinis Authenticis*); the Imitation of Natural Hot-springs; the Medical Clue (*Filum Medicinale*, that is, a rule for the guidance of medical practice); the Prolongation of Life; Of the Substance, or Essence, of the sensitive Soul; Of the Efforts of the Spirit in Voluntary Motion; Of the Difference between Perception and Sense; the Root, or

Origin, of Perspective (*Radix Perspectivæ*), or the doctrine of the Form of Light. Those in Book V. :— Learned Experience, or the Chase of Pan (that is, of Nature); the New Instrument (*Novum Organum*); Particular Topics; Refutations of False Imaginations, or Sophisms (*Elenchi Idolorum*); Of the Analogy of Demonstrations. Those in Book VI. :—Of the Marks of Things; Philosophical Grammar (*Grammatica Philosophans*); the Transmission of the Light, or Method of handing down Knowledge to posterity (*Traditio Lampadis, sive Methodus ad Filios*); Of the Wisdom (*Prudentia*) of Private Discourse; the Colours of apparent Good and Evil, both simple and comparative; Antithetical Statements of Truths (*Antitheta Rerum*); the Minor Formulæ of Oratory. Those in Book VII. :—Serious Satire, or the doctrine of the insides of things (*Satira Seria, sive de Interioribus rerum*); the Georgics of the Mind, or the Culture of the Moral nature. Those in Book VIII. :—The Amanuensis of Life, or the doctrine of Dispersed Occasions (*De Occasionibus Sparsis*); the Architect of Fortune, or the doctrine of Rising in Life (*Faber Fortunæ, sive de Ambitu Vitæ*); the Military Statesman (*Consul Paludatus*), or of Extending the bounds of Empire; the Idea of Universal Justice, or the doctrine of the Fountains of Law. Those in Book IX. :—Sophron, or the doctrine of the Right Use of Human Reason in Divinity; Irenæus, or the doctrine of the degrees of Unity in the City of God; the Celestial Wine-skins (*Utres Coelestes*), or the Emanations of the Scriptures.

Such is the survey of human knowledge, and of the world of possible speculation, which Bacon takes in the "Two Books of the Proficiency and Advancement of Learning," and the Nine Books of the treatise "De Dignitate et Augmentis Scientiarum," into which they were afterwards expanded. It is remarkable that the second work, published after so long an interval, should exhibit so little deviation from the first, except only in the way of extension, and here and there of somewhat or precision of statement. Scarcely any thing to be

found in the *Advancement* is either contradicted or even by implication retracted or abandoned in the *De Augmentis*; the few omissions are of passages, which, on whatever account their retention may have been thought objectionable, make no part of the exposition of the author's philosophical views, and seem to have been discarded only on the principle indicated in his letter, already quoted, to the King, in which he says that he had been his own *index expurgatorius*, in order that the work might be read in all places.\* The substance, too, of the *Advancement*, there is reason to believe, had been for the greater part excogitated, and to some extent even reduced to the shape in which we actually have it, a considerable time before it was published. In a letter sent to his friend Matthew with the printed volume, Bacon, as we have seen, speaks of the First Book as having been seen by Matthew in a completed state, it may have been years before. But, however this may be, there is at any rate a perfect or nearly perfect consistency throughout the whole course of Bacon's writings, in so far as they relate to what is commonly understood by his system of philosophy, whether they may have come from his pen in the earlier portion, in the middle, or towards the close of his life. His views are of course more fully developed in those of them that are of later date; but even in the earliest, if we do not find the seeds of all his subsequent speculations, we can detect nothing which entitles us to infer that his opinions had ever undergone any change. There is every reason to believe that his chaplain Rawley only states the fact when he tells us that it was while he was still at the University, and as yet only in his sixteenth year, that he fell into that dislike of the philosophy of Aristotle, in which he continued to his dying day.† It may be reasonably supposed, however, to have been not till a somewhat later date that he arrived at those other views which are regarded as constituting his own philosophy. He has himself, indeed, noted when it was that these new views first assumed any thing of distinctness

\* See ante, page 39.

† See vol. i. p. 11.

and consistency in his mind. In his letter to Father Fulgentio, written in 1623 or 1624, after speaking of the zeal and constancy with which he had cherished the scheme of his *Instauratio Magna* through so many years, he proceeds (to adopt the translation in the *Biographia Britannica*):—"For well I remember that forty years ago I composed a juvenile work about these things, which, with great confidence I graced with the swelling title of *The Greatest Birth of Time* (*Temporis Partus Maximus*)." This would be when he was in his twenty-third or twenty-fourth year.

The great principle of the Baconian philosophy, however, the investigation of nature by experiment, is only generally indicated either in the *Advancement of Learning*, or even in the *De Augmentis*. Its complete explanation, and the method of applying it, form the subject of the Second Part of the *Instauratio Magna*, the *Novum Organum*, to which we now proceed.



## SECTION III.

THE NOVUM ORGANUM, FORMING THE SECOND PART OF  
THE INSTAURATIO MAGNA.

THIS Second Part of the *Instauration*, it is to be recollected, was the portion of the work that was first published. It appeared in a folio volume in October, 1620, with the title of 'Novum Organum Scientiarum, sive Instaurationis Magnae Pars Secunda.' The First Part of the *Instauration*, the treatise 'De Dignitate et Augmentis Scientiarum,' which we have just reviewed, was not given to the world till 1623, with the exception of so much of it as is contained in the 'Two Books of the Proficiency and Advancement of Learning,' which had been published in 1605.

The amplification of the Two Books of the *Advancement* into the Nine Books of the *De Augmentis*, and the adaptation of the extended treatise to form the First Part of the *Instauration*, would appear not to have been contemplated in the original design of that work, nor even when the Second Part of it, the *Novum Organum*, was first published. At the head of the latter, as has been already mentioned, was given an intimation to the effect that the First Part of the *Instauration*, containing the Partitions of the Sciences, was wanting; but that the said Partitions might in part be sought from the Second Book of the 'Proficiency and Advancement of Learning.' The two treatises, the *De Augmentis* and the *Novum Organum*, were afterwards distinctly connected by the publication along with the former both of the short prefatory advertisement by Rawley, and of a note at the end stating that after the *De Augmentis* followed in order the Second Part of the *Instauration*, explaining

the art of interpreting nature, and of the true application (*adoperationis*) of the intellect; not however in the form of a finished treatise, but only digested, according to the heads of the subject, into aphorisms. The subordinate title of the *Novum Organum* is 'Indicia de Interpretatione Naturæ, sive de Regno Hominis' (Indications respecting the Interpretation of Nature, or respecting the Kingdom of Man).

The reader has already been informed that to the *Novum Organum* were prefixed various prolegomena which are properly to be regarded as introductory to the entire body of the *Instauratio Magna*. The *Novum Organum*, however, has also its own Preface, specially explaining its nature and design.

In this discourse Bacon begins by observing that they who have pronounced of nature as of a thing already explored have done the highest detriment to philosophy and the sciences, by extinguishing inquiry exactly in proportion as they have gained credit; while they who, on the other hand, have asserted that nothing can be certainly known, although they have adduced reasons for their opinion not to be despised, have yet also altogether exceeded the bounds of truth. The more ancient of the Greek philosophers, whose writings have perished, appear to him to have taken a wiser course than any of their successors; keeping a middle way between dogmatism and scepticism, and moreover being accustomed to test and judge of nature rather by experiment than by disputation: yet even they followed no rule or system in their experiments, but employed only the unregulated force of the intellect, and placed all their dependence upon intense meditation and perpetual revolution and agitation of mind. He then proceeds to describe generally his own method, as consisting in guarding the sense by what he calls a certain reduction (*per reductionem quandam*), by which he perhaps means a drawing of it back to its proper function; in rejecting for the most part the mental operation which follows the sense—that is, apparently, the conclusion to which the under-

standing is naturally inclined to come at once on receiving the intimation of the sense;\* and in laying open and fortifying for the mind a new and certain road from the very perceptions of the senses. That the mind requires some props or helps he holds to have been without doubt perceived by those who assigned so great a part to Logic; but that art, from the manner in which it was employed, was rather efficacious in rivetting errors than in disclosing truth; so that nothing, he conceives, remains but that the whole work of the mind be begun afresh; that from the very commencement the mind be in nowise left to itself, but always forced to proceed according to rule; and that the business be finished as if by means of machinery. The necessity of mechanical aid for the production of all great effects in works of the hand is insisted upon as an illustration and proof of a similar necessity in works of the mind. Two special admonitions are then propounded; the first relating to persons, the second to things. The honour and reverence due to the ancients Bacon professes to be desirous of allowing to remain undiminished and untouched; with them he comes into no opposition or rivalry; the intellectual road or method by which he proposes to pursue his end is one which was to them wholly untried and unknown. Nor is it any part of his purpose to attempt to throw down either the actually received philosophy, or any other system, more correct or more comprehensive, which may exist or may arise. He does not deny but that the received philosophy and other systems of the like kind may be employed pro-

\* This obscure passage is rendered by Shaw,—“to guard the sense by a kind of reduction” (explained in a foot-note as meaning, “by contriving ways of transmitting things, in a proper manner, to the senses, that a true judgment may be formed of them when thus again brought under view”); “generally to reject that work of the mind which is consequent to sense.” Mr. Wood’s translation is,—“We, as it were, restore the senses to their former rank, but generally reject that operation of the mind which follows close upon the senses.”

perly and with good effect in promoting discussion, in embellishing oratory, in the professorial office, in the business of civil life. Nay, he adds, we openly intimate and declare that the philosophy which we bring forward will not be very useful for such purposes. It is not ready at hand ; it is not to be caught hold of in passing ; it does not flatter the understanding through its pre-conceived notions ; it does not descend to the apprehension of the multitude, excepting only in its utility and its effects. Let there be, then, he continues, and well and happy may it prove for both, two emanations and also two dispensations of learning ; two tribes and, as it were, kindreds of contemplators or philosophers ; and they not enemies or aliens the one to the other, but confederated and bound together by assistance mutually rendered : in a word, let there be one method of cultivating the sciences, and another of discovering them. The former he afterwards proposes to call the Anticipation of the Mind ; the latter, the Interpretation of Nature. He concludes by requesting that the reader, notwithstanding all the pains he has taken to make his statements not only true but perspicuous, will not expect to acquire a full understanding and conviction of what the work sets before him by a cursory or inattentive perusal of it, but that whoever would really comprehend the new system of philosophy will try the method for himself, will accustom his mind to that subtilty of things which experiment alone discovers, will finally correct the depraved and deeply inherent habits of his mind by a temperate and as it were legitimate hesitation, and will then only (if it should so please him) make use of his judgment after he has begun to be master of himself.

The First Book of the *Novum Organum* is, not perhaps in respect of its pure Latinity, but yet in all such essential qualities of writing as do not depend upon the usages of a particular language, one of the most perfect of human compositions. Every sentence has evidently been elaborated with the greatest care ; and yet the easy unforced vigour and animation of the expression are as remarkable as its economy, compactness, and perspicuity. Nothing

is redundant, and yet nothing is harsh or cramped: it would be difficult to mention any other writing in which aphoristic concentration and energy are so admirably blended with all the highest qualities of illustrative and frequently even decorative eloquence. No where else, probably, is there to be found either so crowded a succession of brilliant sentences, or yet a splendour more mild and grateful.

Much of this power and beauty must be lost in the best translation; some of it is perhaps due to qualities in the Latin language which the English does not possess, and might have been wanting if the work had been written by Bacon himself in his mother tongue—although in that case its place would probably have been supplied by something as good of a different kind. The first English translation of the *Novum Organum* professing to be complete was that given by Shaw in his edition of Bacon's Philosophical Works, 3 vols., 4to, London, 1733. The next is that published in the 14th volume of Mr. Montagu's edition of Bacon's Works, 8vo., London, 1831, which was executed by Mr. William Wood. And there is a third translation, of which, however, we have seen only the First Book, by the late James Glassford, Esq., 8vo., Edinburgh, 1844.

The first four aphorisms of Book First may be regarded as enunciating the principles or ideas that form the basis of the work. They may be thus literally translated:—

1. Man, the servant and interpreter of nature, does and understands so far as he may have observed, respecting the order of nature, in things or in his mind;\* and further he has neither knowledge nor power.

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\* That is, by simple observation of facts, or by meditation upon them. The original is "quantum, de naturae ordine, re vel mente observaverit." In the *Distributio Operis*, where the aphorism is given in the same terms with the exception of this one phrase, we have "opere vel mente observaverit." In either case the distinction that is intended to be marked is between things, facts, effects, and the inferences which the

facts of most common occurrence: if any instances presented themselves which had not been before observed or known, the axiom, instead of being properly corrected, was wont to be saved, or maintained unaltered, by means of some frivolous distinction.

The Twenty-sixth Aphorism repeats the intimation already given in the Preface, that the investigation of nature by human reason alone will be called the Anticipation of Nature, as being a method both rash and premature; and that the name of the Interpretation of Nature will be reserved for that method which is in a proper manner elicited from things. In subsequent aphorisms we have an amplification of what has been further stated in the Preface as to the advantage that anticipations have in producing unanimity—for if all men were even to become insane in one way, and with conforming notions, they might agree very well among themselves; while, on the contrary, interpretations have no power of suddenly striking the understanding, so that, in so far as regards conclusions hard to be believed and at variance with common opinions, they must seem almost like mysteries of faith. Yet, while anticipations and logic may be properly employed in sciences which are founded upon opinion, where the object is to subjugate not the realities of nature but the assent of men's minds, no progress could ever be made by that method in true science, even if all the capacities of all ages should unite, and combine and transmit their labours.

The Thirty-eighth Aphorism introduces us to the doctrine of the *Idola* and false notions occupying the human understanding, of which a sketch has also been given in the Fifth Book of the *De Augmentis*. The Latin, or rather Greek, word, *Idola*, it is to be observed, does not mean what we call idols or false divinities; nor does Bacon anywhere so express himself as to lead us to suppose that he intended it to suggest such a notion, although he has been commonly so understood. The English word that answers best to both the classical and the Baconian *idola* (which are the same) is *spectres*.\*

\* Cicero, in a letter to his friend Caius Cassius (*Fam.*, xv.

The *Idola* and false notions, it is declared in this Thirty-eighth Aphorism, which have taken possession of the human understanding, do not only oppose the entrance of truth, but, even after it has obtained admission, will meet and molest us in the restoration of the sciences, unless men, forewarned, shall, as far as it can be done, guard themselves against them.

The *Idola* which beset the human mind are declared to be of four kinds:—the *Idola Tribus* (Spectres of the Tribe or Species); the *Idola Specus* (Spectres of the Cave or Den); the *Idola Fori* (Spectres of the Market-place); and the *Idola Theatri* (Spectres of the Theatre). The Spectres of the Tribe are such deceiving or blinding opinions and tendencies as are inherent in the very nature of man, and arise from the distorted views of things which are occasioned by the imperfection both of our senses and of our minds. The Spectres of the Den are the false notions peculiar to each individual. For every man, we are told, beside the aberrations belonging to human nature in general, has a certain den or cavern of his own, which breaks and corrupts the light of nature; and this comes either of his proper and distinctive disposition or character, or of his education and his intercourse with other men, or of his reading of books and the authority of the persons whom he respects and admires, or of the different impressions that the same things and considerations make according as they present themselves to a mind preoccupied and predisposed, or to one in an equable and calm state, or of other like causes. The Spectres of the Market-place are those prevalent misconceptions that are begotten of the intercourse of men with one another; which is necessarily carried on by words; and words are imposed according to the apprehension of the multitude, and are consequently full of folly and mischief. Finally, the Spectres of the Theatre are those that have been raised in the minds of men by the diverse dogmas of the

16), observes that Catus, the Epicurean, who had lately died, had given the name of *Spectra* to what Epicurus himself, and, before him, Democritus, had called *ἰδῶλα*.

several philosophical systems, and even by the perverted rules laid down for demonstration ; and they are so called because, says Bacon, all the philosophies that have been received or invented we regard as only so many plays produced and acted, which have created fictitious and theatrical worlds. He then proceeds to consider each description of spectres more at length by itself.

First, as to the Spectres of the Tribe. Their causes, or sources, are the following:—1. The human understanding is so constituted that it is apt to assume a greater order and equality in nature than is found actually to exist. 2. The human understanding, when it has once got hold of any notion, or supposed principle, is given to make all the facts it afterwards meets with accord with that, and lend it their support. It is also much more easily moved and excited by affirmatives than by negatives ; that is, by instances that seem to support its pre-conceived notions, than by such as seem to be opposed to them. 3. The human understanding is most stirred by those things that strike and enter the mind at once and suddenly, and by which the fancy is wont to be filled and inflated : hence it conceives to itself all other things as of the same kind with those few by which it is beset and possessed, and is slow in making its way to those remote and heterogeneous instances by which axioms are proved as by fire. 4. The human understanding is incapable of standing still or resting in any conclusions, but will still be pressing forward, with however vain an effort. It cannot conceive any extreme boundary of the universe ; nor, on the other hand, can it find for itself any firm footing either upon the idea of infinity in duration, or upon that of the infinite divisibility of lines. But this impotency of the mind chiefly proves pernicious in the discovery of causes ; incapable of resting satisfied with those of greatest generality, beyond which nevertheless it is impossible to go, in searching for others farther away it falls upon such as are in fact nearer, namely, what are called final causes, that is, the mere purposes or designs with which things are supposed to have been created, a class of considerations which plainly belongs rather to



the nature of man than to that of the universe. Hence a wonderful corruption of philosophy. 5. The human understanding does not consist of a dry light, but receives an infusion from the will and the affections; so that what a man would most wish to be true, that he most readily believes. And thus he rejects what is difficult, from impatience of inquiry; what is sober, because it narrows his hopes; the deeper things of nature, from superstition; the light of experience, from arrogance and pride, lest the mind should seem to be occupied with things low and fluctuating; paradoxes, on account of the opinion of the multitude: in fine, passion imbues and infects the understanding in innumerable ways, and in such as are sometimes imperceptible. 6. But by far the greatest impediment and source of error in the human understanding comes from the dulness, incompetency, and deceiving nature of the senses. Those things that strike the sense always preponderate over those that do not. Thus contemplation almost ends with sight; so that things that are not discerned by the eye are hardly observed at all. But the senses by themselves are weak and erring; nor can even instruments avail much to amplify or sharpen them; all truer interpretation of nature is accomplished by instances, and fit and apposite experiments; where the senses judge only of the experiment, the experiment of nature and of the thing itself. 7. Moreover, the human understanding is by its very nature carried towards the abstract, and things which are really fluctuating it will assume to be constant. But it is better to dissect nature than to abstract it; as was the practice of the school of Democritus, which penetrated farther into nature than the rest. Such, then, are the Spectres of the Tribe; which have their origin either in the equality of the substance of the human mind, or in its preoccupation, or in its limited powers, or in its unquiet motion, or in the infusion of the affections, or in the incompetency of the senses, or in the mode in which impressions are made.

The Spectres of the Den are the subject of the six aphorisms from the 53rd to the 58th inclusive. They

been for many ages so much occupied with religious and theological questions. False philosophy he divides into three kinds; sophistical, empirical, and superstitious. The following is the 63rd Aphorism, as translated by Mr. Wood:—

Aristotle affords the most eminent instance of the first, for he corrupted natural philosophy by logic:—thus he formed the world of categories, assigned to the human soul, the noblest of substances, a genus determined by words of secondary operation, treated of density and rarity (by which bodies occupy a greater or lesser space) by the frigid distinctions of action and power, asserted that there was a peculiar and proper motion in all bodies, and that, if they shared in any other motion, it was owing to an external moving cause, and improved innumerable arbitrary distinctions upon the nature of things; being everywhere more anxious as to definitions in teaching, and the accuracy of the wording of his propositions, than the internal truth of things. And this is best shown by a comparison of his philosophy with the others of greatest repute among the Greeks. For the similar parts of Anaxagoras, the atoms of Leucippus and Democritus, the heaven and earth of Parmenides, the discord and concord of Empedocles, the resolution of bodies into the common nature of fire and their condensation according to Heraclitus, exhibit some sprinkling of natural philosophy, the nature of things, and experiment, whilst Aristotle's *Physics* are mere logical terms; and he remodelled the same subject in his *Metaphysics* under a more imposing title, and more as a realist than a nominalist. Nor is much stress to be laid on his frequent recourse to experiment in his books on *Animals*, his *Problems*, and other treatises; for he had already decided, without having properly consulted experience as the basis of his decisions and axioms, and, after having so decided, he drags experiment along as a captive constrained to accommodate herself to his decisions: so that he is even more to be blamed than his modern followers (of the scholastic school) who have deserted her altogether.

The *Empiric* philosophy produces conclusions more deformed and monstrous than the *Sophistic*, or that which proceeds merely upon reasoning (*rationale genus*); because it is founded not upon the light of vulgar notions (which, although weak and superficial, yet is in a sort universal and pertinent to many things), but upon the *rowness and obscurity of a few experiments*. The

philosophy of the alchemists and that of Gilbert are again referred to as instances. There is considerable danger, Bacon thinks, that even his own method, of which experiment makes so important a part, may in after times give birth to much erroneous philosophizing of the empiric kind.

This is Mr. Wood's translation of the 65th Aphorism :—

The corruption of philosophy by the mixing of it up with superstition and theology is of a much wider extent, and is most injurious to it both as a whole and in parts. For the human understanding is no less exposed to the impressions of fancy, than to those of vulgar notions. The disputations and sophistic school entraps the understanding, whilst the fanciful, bombastic, and, as it were, poetical school, rather flatters it. [Mr. Wood has omitted the next sentence :—For there is inherent in man a certain ambition of the intellect, not less strong than that of the will; especially in high and soaring wits.] There is a clear example of this among the Greeks, especially in Pythagoras, where, however, the superstition is coarse and overcharged; but it is more dangerous and refined in Plato and his school. This evil is found also in some branches of other systems of philosophy, where it introduces abstracted forms, final and first causes, omitting frequently the intermediate, and the like. Against it we must use the greatest caution; for the apotheosis of error is the greatest evil of all, and where folly is worshipped, it is, as it were, a plague-spot upon the understanding. Yet some of the moderns have indulged this folly with such consummate inconsiderateness, that they have endeavoured to build a system of natural philosophy on the First Chapter of Genesis, the Book of Job, and other parts of Scripture; seeking thus the dead amongst the living. And this folly is the more to be prevented and restrained, because not only fantastical philosophy but heretical religion spring from the absurd mixture of things divine and human. It is therefore most wise soberly to render unto faith the things that are faith's.

So much for the erroneous manner of viewing nature; the vicious or wrong matter of contemplation is next discussed. It is observed that the human understanding, infected by the inspection of the processes of the mechanical arts, in which bodies are so much changed by compositions and separations, is apt to assume that something

of the same kind takes place in universal nature. Hence the fiction of elements, and their concurrence, for the production of natural bodies. Again, we find in nature different species of things, such as animals, plants, minerals; whence we are prone to fall into the imagination that there are certain primary forms which nature always strives to produce, and that the remaining variety comes of the impediments and aberrations experienced by nature in the accomplishment of her work, or of the conflict of different species, and the transformation of one into another. Hence the doctrine of elementary qualities, and that of occult qualities and specific virtues. But it is a much greater evil that men are given to contemplate and inquire into rather the quiescent principles *out of which* than the moving principles *by which* things are made. For the former all look to the purposes of discourse; only the latter to actual effects. As examples of the latter, and as principles worthy of observation, Bacon mentions the mutual appetite or inclination for contact which he says there is in bodies, so that they will not permit the unity of nature to be ever entirely destroyed or cut asunder and a vacuum to be formed; the disposition of bodies to return to their natural dimension and degree of tension, so that, if they be either compressed within it or drawn out beyond it, they will strive to recover and restore themselves into their former sphere and extent; and the other disposition which he conceives bodies to have of congregating towards masses of those of the same nature, the dense, namely, towards the globe of the earth, the weak and rare towards the concavity of heaven. These assumptions may serve as specimens of Bacon's principles or general notions of natural philosophy. He adds that another evil not less considerable is the habit or tendency men have, in their philosophies and contemplations, of bestowing their labours in investigating and discussing the principles or beginnings of things, and what he calls the ultimities (*ultimitatibus*), meaning, apparently, the extreme possibilities, of nature; whereas all utility and operative power consists in what is intermediate.

The subject of the Spectres of the Theatre, and of these

mental spectres of all kinds, is concluded by a caution against the intemperate tendency of one class of philosophical theories to yield assent, and of another to withhold it; of the positive or dogmatic schools on the one hand, and of the sceptical on the other. Both tendencies, it is remarked, have the effect of fixing and in a manner perpetuating spectres, or false notions, by shutting out the light that would remove them. The first depresses, the second enervates the understanding. The former marked the philosophy of Aristotle: the latter, that of Plato, and still more that of the New Academy, which dogmatized scepticism and distinctly professed it as a tenet. Bacon admits the sceptical spirit to be more honest (as his word, *honestior*, seems here to mean) than the dogmatic; but yet, he observes, when the human mind has once despaired of discovering truth, all its operations become languid, and men rather turn aside to pleasant disputations and discourses (*discursus*), and to a sort of wandering over things, than persist firmly in severity of investigation. But, he adds, what we have said from the first, and what we constantly keep in view, is, not that the senses and the human understanding, with all their weakness, are to be denied all authority, but only that they are to be furnished with assistance. Finally he declares that all these Spectres of all kinds, must be by a solemn determination abjured and renounced,\* and the understanding wholly liberated and cleansed from them, so that there shall be no other

\* The words here used by Bacon—"abneganda et renuncianda," might at first seem to give some countenance to the supposition that he used the Latin word *Idola* in the sense in which it is found in the ecclesiastical writers, or for what we now call *idols*. And he may have been betrayed for a moment into such a conception of the term. But even this passage, looked at in the whole, scarcely admits of such an interpretation: the *idola* become again immediately mere shadows, blinding or perverting the mental vision—false notions and prejudices from which the mind must be delivered and cleansed, so that the student of philosophy may become like a little child. One does not become such by renouncing idols. Digitized by Google

greatly towards the more easy and mild extirpation of *spectres*\* from the intellect.

71. The learning which we have has flowed principally from the Greeks. For what things the Roman writers, or the Arabic, or the more recent have added, are† not much, nor of great weight; and, whatsoever they be, are grounded on the platform of what was discovered by the Greeks. But the wisdom of the Greeks was showy, and wasted on disputations, which kind is most adverse to the inquisition of truth. And, therefore, that name of Sophists, which by those who would have themselves be accounted the philosophers, was in way of contempt referred back, and turned against the ancient rhetoricians, Gorgias, Protagoras, Hippias, and Polus, is truly proper to the whole kind; to Plato, Aristotle, Zeno, Epicurus, Theophrastus, and their successors, Chrysippus, Carneades, and the rest. There was but this difference, that the former kind was unsettled and mercenary, strolling round countries, and making show of their wisdom, and exacting a price, but the other, more stated and generous, being such as had their fixed seats, and opened their schools, and philosophized gratis. However, both kinds (though otherwise unlike) were professory, and carried the matter to controversies, and established and fought for certain sects and heresies of philosophy; so that this learning was nearly (what Dionysius not ill scoffed upon Plato) “the talk of idle old men to ignorant young ones.” But those more ancient of the Greeks, Empedocles, Anaxagoras, Leucippus Democritus, Parmenides, Heraclitus, Xenophanes, Philolaus, and the rest, (for Pythagoras we pass over as superstitious,) opened not schools, (that we know,) but betook themselves to the inquiry of truth with greater silence, and more severely and simply; that is, with a lesser affectation and ostentation. And herein was their carriage, too, in our judgment, more commendable, if their works had not, through tract of time, been put out by those lighter, which are more answering and agreeable to the vulgar apprehension and liking; time (like a river) carrying down to us what things are lighter and more blown, and drowning the weightier and solid. Yet neither were they altogether exempt from the vice of the nation and the country; for they leaned too much towards the ambition and vanity of building a sect, and catching the popular breath. But the inquiry of truth is to be set down for desperate when it turns aside to so worthless

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\* Mr. Glassford has *idols*.

† Mr. Glassford has “what the Roman—is not much.”

trifles. Neither is that sentence to be forgotten, or presage rather of the Egyptian priest concerning the Greeks, "that they were ever children, without either antiquity of knowledge, or knowledge of antiquity." And certainly they have that property of children, that they are ready to prate, but unable to generate; for their wisdom seems wordy, and barren of works. The signs, then, taken from the rise and family of the philosophy in use, are not good.

72. Nor are the signs much better which may be taken from the nature of the time and age, than those other from the nature of the place and nation. For the information during that age, whether in regard of time or of the globe, was confined and slender; which is by far the greatest evil, especially for those who rest all upon experience. For neither had they history of a thousand years, which was deserving the name of history, but fables and rumours of antiquity. And of the regions and tracts of the world they had acquaintance with a very little part; calling, without distinction, all the northerus, Scythians; all the westerns, Celts: knew nothing in Africa beyond the hithermost part of Ethiopia; nothing in Asia beyond the Ganges; much less had knowledge of the provinces of the New World even by report, or any certain and constant fame: nay, more, very many climates and zones, where infinite peoples breathe and live, were\* by them pronounced for uninhabitable; yea, further, the peregrinations of Democritus, Plato, and Pythagoras, not distant assuredly, but rather suburban, were\* voiced as something great. But in our times, both very many parts of the New World, and the extremes on every side of the Old, are come to be well known, and the pile of experiments infinitely grown. Wherefore, if signs are to be taken (after the manner of astrologers) from the time of nativity or birth, nothing great seems to be signified concerning these philosophies.

73. Among signs, none is more certain or noble than that from fruits. For fruits and invented works are, as it were, sponsors and sureties for the truth of philosophy. Now, from those philosophies of the Greeks, and their derivations through particular sciences, for periods now of so many years, hardly one experiment can be adduced which tends to the relief and benefit of man's estate, and may truly be reported as due to the speculations and opinions of philosophy. And Celsus ingenuously and wisely confesses it; namely, that experiments of medicine were found in the first place, and afterwards men

\* Mr. Glassford has "are" in both these cases.

philosophized about them, and hunted out and assigned their causes; not falling out by the inverse order, that from philosophy, and a knowledge of causes, the experiments themselves were discovered or fetched. Accordingly, it is not to be wondered, that among the Egyptians (who allowed to the inventors of things divinity and consecration) were more images of brute animals than of men; seeing that brute animals, by natural instincts, have given birth to many discoveries, where men by discourses and conclusions of reason, have exhibited few or none.

The industry of the chemists, indeed, has brought forth some, but, as it were, casually, and in passage; or by somewhat varying their experiments, (as the mechanicians are wont,) not out of any art or theory; for that which they have framed disturbs experiment more than assists. Of those, again, who have been occupied in natural magic, (as they call it), few inventions are found, and these trivial, and nearer to imposture. Wherefore, as it is a caution given\* in religion, that faith be shown by works, the same is excellently transferred, likewise, to philosophy; that it be judged by its fruits, and the sterile be counted vain; and the more so if, in place of fruits of the grape and olive, it produces but thistles and thorns of disputations and strife.

Other signs are mentioned in subsequent aphorisms; the want of growth or increase from the received systems of philosophy, the confession of their insufficiency or unproductiveness by their authors and teachers themselves, the great disagreement and dissension among philosophers. Even the supposed unanimous accordance of men with the philosophy of Aristotle Bacon maintains to be fallacious; inasmuch as, first, for ages after Aristotle other systems still had their adherents, till, when all human learning suffered shipwreck in the inundation of the barbarians upon the Roman Empire, only the philosophies of Aristotle and Plato were preserved upon the waves of time, like planks made of a lighter and less solid material; secondly, such general acquiescence as there was, being founded not upon investigation and the convictions of the reason, but upon prejudice and the authority of others, was mere obsequiousness and concurrence rather than unanimity.

\* Mr. Glassford has "as it is cautioned."



The subject of the causes of errors in philosophy, and of man's continuance in them for so many ages, is now taken up, and is considered in the fifteen aphorisms from the 78th to the 92nd inclusive. First, out of twenty-five centuries which might be reckoned to have elapsed since the commencement of civilization, scarcely six could be selected as having been times in which learning flourished. Secondly, even in those times, natural philosophy, which must be accounted the great mother of the sciences, had obtained a very small part of the attention and the labours of men. In modern times theology, in the Greek and Roman times ethics and politics, had been the chief subjects of study. Those, besides, who did apply themselves to natural philosophy had seldom given themselves up to it exclusively, or made it a principal object. It had been rather made a passage and bridge to other things; and that great mother of the sciences, by an amazing indignity, had been thrust down to the offices of a hand-maid, to attend upon the operations of medicine or mathematics. Another powerful cause had been that the true goal or ultimate object of science had never been properly fixed. That goal is nothing else than that human life may be endowed with new inventions and riches; but the use commonly made of philosophy had hitherto been merely to convert it to a professorial purpose (to the embellishment of a lecture), or to the gain or reputation of the individual cultivator. And, if men had not rightly fixed their goal, still less had they rightly chosen their way or method of scientific investigation. The method commonly followed had been for any one who applied himself to the work of discovery first to inquire and find out whatever had been said about the matter by others; then to add his own meditation upon it, and by much mental agitation to solicit and, as it were, invoke his own spirit to declare to him its oracles; all which was a proceeding entirely without foundation, and turning only upon opinions. Another perhaps might call in logic to his assistance; but what is called invention in logic is not of principles and leading axioms, upon which the arts are established, but only of things that seem agreeable to such principles

or axioms. And as for the experience of which some had availed themselves—denominated chance when merely fallen in with, experiment when sought out—it had been nothing but a loose broom (*scopae dissolutae*), so to speak, and a mere groping such as men take to in the night, trying everything if perchance they may discover the right road; whereas it would be much better and wiser either to wait for day, or to kindle a light and then to proceed on their way. The true order of experience first kindles a light, and then by that light shows the way, beginning with an orderly and well digested, not a preposterous or erratic course of experimenting, and thence educing axioms, and again from the established axioms new experiments, seeing that not even the divine word operated upon the mass of things without order.

Another source of mischief had been the opinion, or inveterate, though empty and pernicious, imagination, that the dignity of the human mind is lowered by its being long and much engaged with experiments and particular facts, which are subjected to the senses and confined to matter. And then follow the 84th and 85th Aphorisms, which Mr. Glassford thus translates:—

84. Again, men have been stayed and almost enchanted from a progress in knowledge by a reverence of antiquity, and the authority of men who are of great account in philosophy, and in consequent consent with them. And of consent we have spoken above.

But for antiquity, the opinion which men cherish concerning it is altogether negligent, and scarcely congruous even to the name. For the old age and grandevity of the world are to be truly counted as antiquity; which are properly to be ascribed to our times, not to the younger age of the world, such as it was with the ancients. Since that age, in respect to us, indeed, is ancient \* and greater, but in respect to the world itself was new and lesser. And, in reality, as we look for a greater acquaintance with human affairs, and a more mature judgment, † from an old than from a young man, on account of his experience, ‡

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\* Mr. Glassford has "is, in respect to us, indeed, ancient."

† Mr. Glassford has "maturity of judgment."

‡ Mr. Glassford has "of experience."

and the variety and abundance of the things which he has seen, and heard, and considered, just so it is fit, also, that much greater things be expected from our age (if it knew its strength, and would endeavour and apply) than from the old times; as being a more advanced age of the world, and enlarged and accumulate with numberless experience and observations.

Neither is it to be accounted for nothing, that, through distant navigations and peregrinations (which in our times have become so frequent), very many things in nature have been laid open and discovered, by which new light may be cast upon philosophy. Nay, it would be disgraceful to men, if tracts of the material globes (that is, of countries, and seas, and stars) were in our times immeasurably disclosed and illustrated, but\* the boundaries of the intellectual globe were confined within the discoveries and straits of the ancients.†

Then, as touching authorities, it is the greatest pusillanimity to defer infinitely to authors, and yet from Time, the author of these, and so of all authority, to withhold his due. For Truth is rightly said to be the daughter of Time, not of authority. Thus it is no wonder if these spells of antiquity, authority, and consent have so tied the faculties of men, that (like those maleficiate and bewitched) they may not hold converse with things themselves.

85. Nor is it only the admiration of antiquity, and authority, and agreement, which has constrained the industry of men to rest in what has been already discovered, but an admiration also of the works themselves which have already been furnished in abundance to mankind. For if any shall bring under his review the variety of things, and that most beautiful apparatus which by the mechanic arts has been collected and introduced for man's use and adornment, he will certainly incline coming over to an admiration rather of the wealth of humanity † than to a sense of its poverty; not at all adverting, that the earliest observations of man, and works of nature (which are like the soul and first motive to all that variety), are neither many, nor drawn from any depth; all the rest belonging § only to men's perseverance, and the subtile and ordered motion of the hand or of

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\* Mr. Glassford has "yet."

† Mr. Glassford has "of the old" (with what intended meaning we do not understand). The Latin (*veterum*) is quite clear.

‡ Mr. Glassford has "of human wealth."

§ *Pertinere*.—Mr. Glassford has "having relation."

instruments. Thus (for an example) the making of horologies \* is truly a subtile and accurate thing, such, namely, as in its wheels appears to copy the celestials, in its successive and regulated movement the pulse of animals; which thing yet wholly depends on one or two axioms † of nature.

And, again, if one contemplates that subtilty which belongs to the liberal arts, or should even look to that which regards the preparation of natural bodies by the mechanic arts, and other such things; ‡ as the discovery of the celestial motions in astronomy; of concords in music; of the letters of the alphabet § in grammar (which even yet are not used in the kingdom of the Chinese); or again, in mechanics, || of the works of Bacchus and Ceres, that is the preparation of wine and beer, the making of breads, or even the delicacies of the table, and distillations, and the like; if he also considers with himself, and turns in his mind, through what revolutions of times these things have been advanced to the culture in which we now have them (for these all are ancient except distillation); and (as already noted of horologies) how little they hold of observations and axioms of nature, and how easily, and as it were by occasions presented, and incidental ¶ observations, these might be discovered; he will (I say) readily throw off all wonder, and rather compassionate the human condition, that for so many ages there should have been such a penury and barrenness of things and inventions. And yet these very inventions, of which we now made mention, were ancients than philosophy and the intellectual arts; so much (if the truth must be spoken), that, when these reasonings and dogmatical learnings came in, the invention of useful works ended.

Or if any one should turn from the workshops to the libraries, and hold in admiration the immense variety which we see of books; when he has examined, and looked more into the matters and contents of the books themselves, he will assuredly be filled with an opposite amazement: and after he shall have

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\* Mr. Glassford here inserts "clocks and other," for which there is nothing in the Latin.

† *Ex uno aut altero naturae axiomate.* Mr. Glassford has "on one or another axiom."

‡ Mr. Glassford has "other such."

§ Mr. Glassford has "the alphabet letters."

|| Mr. Glassford has "mechanicals."

¶ *Incurrentes.*—Mr. Glassford has "concurrent."

seen how endless are the repetitions, and that men act and speak still the same things, he will pass from admiration of the variety to astonishment at the indigence and paucity of those things which have hitherto detained and occupied the intellects of men.

Or, if one shall let down his mind to the contemplation of what things are esteemed rather curious than sound, and shall look more inwardly to the works of the alchemists or magicians, he will doubt perhaps whether they are more deserving of laughter or of tears. For the alchemist nurses an eternal hope, and, when the affair succeeds not, impeaches rather his own mistakes, revolving in self-accusation how he has not sufficiently understood the terms either of the art,\* or of the authors, and therefore applies his mind to traditions and auricular whispers; or that he has tripped something in scruples and moments of his practice, and therefore repeats his experiments without end; and meanwhile, as among the dies of experiment he lights upon some, either new in their very feature, or for some usefulness not to be slighted, with such pledges he feeds his mind, and these he most upholds and celebrates; the rest he keeps alive by hope. And yet it is not to be denied that the alchemists have discovered not a few things, and endowed men with profitable inventions. However, that fable squares not ill with them, of the old man who left to his sons gold buried under ground in his vineyard (but pretending ignorance of the spot); wherefore they diligently applied themselves in digging the vineyard, and no gold indeed was found, but the vintage was made richer by the culture.

But the cultivators of natural magic, who explain everything † by sympathies and antipathies of things, have, through idle and most supine conjectures, affixed to things wonderful virtues and operations; and if they have, at any time, exhibited works, they are such as suit to admiration and novelty, not to fruit and usefulness.

Again, in the superstitious magic (if we must speak even of this), it is to be specially observed ‡ that the subjects are of some fixed and determined sort only, in which the curious and superstitious arts, throughout all nations and ages and even religions, have had any power or have amused them-

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\* Mr. Glassford has "either not . . . the terms of the art."

† Mr. Glassford has "rid all."

‡ "Adverted" is Mr. Glassford's word.

...to be divided. ... has been a ...

...philosophy, the author goes on to ... by the craft of the ... who, by the mere ... and system of ... to hold them back ... to the utmost possible ... of man, as the ... the knowledge ... and never pro- ... The ... and ...

... influence on ... a hardly ...

and whatever human skill had failed in accomplishing had been pronounced to be impossible. If enquirers, instead of each confining his attention to one particular art, had extended their examination throughout the general realm of nature, they would have found that what was obscure in one department was manifest and familiar in another. Another impediment to the progress of natural philosophy in every age had been superstition, and a blind and immoderate zeal for religion. Even in his own day, Bacon complains, the discussion of the facts and laws of nature had been made more difficult and perilous by the summaries and methods of the scholastic theologians, who, after having reduced divinity, as far as they could, into order and the form of an art, had mingled with the body of religious truth much more than was necessary of the pugnacious and thorny philosophy of Aristotle. Others, again, though in a different way, had done equal injury to both Christianity and philosophy by attempting to deduce and confirm the truths of religion out of the principles and the authority of philosophers. The various ways in which almost all access to philosophy was intercepted by the ignorance of divines are thus enumerated. Some were afraid that an inquisition into nature might penetrate beyond the established bounds of sobriety. Others thought that, if intermediate or secondary causes remained unknown, every thing would be more readily referred (as they conceived religion required) to the actual hand and directing wand of God; which, says Bacon, is nothing else than to wish to gratify God with a lie.\* Others were afraid lest movement and change, once begun, in philosophy, should pass thence to religion. Others finally seemed to be anxious lest something should be found in the investigation of nature which might subvert or at least shake

\* In the original, "quam Deo per mendacium gratificari velle." Mr. Wood erroneously translates, "that God wishes to be gratified by means of falsehood." Nor does his rendering of the next sentence give exactly Bacon's meaning;—"but motion and change in philosophy should terminate in an attack upon religion."

religion, especially among the unlearned. But these two last apprehensions, Bacon declares, seem to him to savour wholly of animal wisdom, as if men in the recesses and secret thoughts of their minds were really diffident and doubtful about the strength of religion and the dominion of faith over the senses. He who truly considers the matter will perceive that natural philosophy is, after the word of God, the surest medicine against superstition, and the best minister of faith. The 90th aphorism, as translated by Mr. Wood, is as follows :—

90. Again, in the habits and regulations of schools, universities, and the like assemblies, destined for the abode of learned men, and the improvement of learning, everything is found to be opposed to the progress of the sciences. For the lectures and exercises are so ordered, that anything out of the common track can scarcely enter the thoughts and contemplations of the mind. If, however, one or two have perhaps dared to use their liberty, they can only impose the labour on themselves, without deriving any advantage from the association of others : and if they put up with this, they will find their industry and spirit of no slight disadvantage to them in making their fortune. For the pursuits of men in such situations are, as it were, chained down to the writings of particular authors, and if any one dare to dissent from them, he is immediately attacked as a turbulent and revolutionary spirit. Yet how great is the difference between civil matters and the arts ; for there is not the same danger from new activity and new light. In civil matters even a change for the better is suspected on account of the commotion it occasions : for civil government is supported by authority, unanimity, fame, and public opinion, and not by demonstration. In the arts and sciences, on the contrary, every department should resound, as in mines, with new works and advances. And this is the rational, though not the actual, view of the case : for that administration and government of science we have spoken of is wont too rigorously to repress its growth.

In the 91st aphorism the want of proper rewards for the cultivation of science is complained of. And here is the 92nd, also in Mr. Wood's version :—

92. But by far the greatest obstacle to the advancement of



the sciences and the undertaking of any new attempt or department is to be found in men's despair and the idea of impossibility. For men of a prudent and exact turn of thought, are altogether diffident in matters of this nature, considering the obscurity of nature, the shortness of life, the deception of the senses, and weakness of the judgment. They think therefore that in the revolutions of ages and of the world there are certain floods and ebbs of the sciences, and that they grow and flourish at one time and wither and fall off at another, that, when they have attained a certain degree and condition, they can proceed no further.

If therefore any one believe or promise greater things, they impute it to an uncurbed and immature mind, and imagine that such efforts begin pleasantly, then become laborious, and end in confusion. And, since such thoughts easily enter the minds of men of dignity and excellent judgment, we must really take heed lest we should be captivated by our affection for an excellent and most beautiful object, and relax or diminish the severity of our judgment; and we must diligently examine what gleam of hope shines upon us, and in what direction it manifests itself, so that banishing her lighter dreams we may discuss and weigh whatever appears of more sound importance. We must consult the prudence of ordinary life too, which is diffident upon principle,\* and in all human matters augurs the worst. Let us then speak of hope, especially as we are not vain promisers, nor are willing to force or ensnare men's judgment, but would rather lead them willingly forward. And, although we shall employ the most cogent means of enforcing hope when we bring them to particulars, and especially those which are digested and arranged in our Tables of Invention, (the subject partly of the Second but principally of the Fourth Part of the Instauration), which are indeed rather the very object of our hopes than hope itself; yet to proceed more leniently we must treat of the preparation of men's minds, of which the manifestation of hope forms no slight part. For without it all that we have said tends rather to produce a gloom than to encourage activity or quicken the industry of experiment, by causing them to have a worse and more contemptuous opinion of things as they are than they now entertain, and to perceive and feel more thoroughly their unfortunate condition. We must therefore disclose and prefix our reasons

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\* Rather upon rule. The Latin is "ex praescripto."

for not thinking the hope of success improbable ; as Columbus before his wonderful voyage over the Atlantic gave the reasons of his conviction that new lands and continents might be discovered besides those already known. And these reasons, though at first rejected, were yet proved by subsequent experience, and were the causes and beginnings of the greatest events.

The exposition of the grounds of hope for the future progress of philosophy occupies a number of subsequent aphorisms. Some religious considerations are first suggested :—as, that God is the author of good and the father of light ; that, as it is said in regard to spiritual things that the kingdom of heaven cometh not with observation, so in every more considerable work of providence progress is made imperceptibly, and from the smallest beginnings ; and that the prophet Daniel has declared that in the last days of the world many shall run to and fro and knowledge shall be increased. It is then remarked that even the errors and failures of the past afford hope for the future and encouragement for the trial of methods as yet unattempted. So Demosthenes argued, in his famous exhortation to the Athenians, that that which was worst in the past, their ill management of the war with Philip and their consequent misfortunes, was the very thing which chiefly entitled them to expect better success in the time to come, when they should have changed their system and corrected their errors. This remark introduces a more distinct or precise statement of the wrong courses that had been hitherto taken in the study of philosophy. Here is the 95th aphorism, as it is given by Shaw :—

95. Those who have treated the sciences were either empirics or rationalists. The empirics, like ants, only lay up stores, and use them ; the rationalists, like spiders, spin webs out of themselves ; but the bee takes a middle course, gathering her matter from the flowers of the field and garden, and digesting and preparing it by her native powers. In like manner, that is the true office and work of philosophy, which, not trusting too much to the faculties of the mind, does not lay up the matter, afforded by natural history and mechanical experience, entire or unfashioned in the memory, but treasures it after being first el-

borated and digested in the understanding. And, therefore, we have a good ground of hope, from the close and strict union of the experimental and rational faculty, which have not hitherto been united.

In the 96th aphorism it is observed that natural philosophy has never yet been found simple and pure, but always infected and corrupted by some foreign intermixture; as in the school of Aristotle by logic, in that of the later Platonists by mathematics. In the 97th it is added that no one has yet been found of sufficient constancy and firmness of mind to determine altogether to throw away common theories and notions, and to apply his understanding afresh to the examination of particular facts when it has been thus smoothed and made even. As Livy says of Alexander the Great that all he had done was only that he had judiciously dared to despise imaginary difficulties, so Bacon conceives that future times will say of him that he had achieved nothing very great, but had only looked upon some obstacles as of small account which were usually regarded as formidable. The 98th aphorism, as translated by Shaw, is as follows:—

And for the foundations of experience, which is the next thing we must proceed to, they either have not hitherto been laid, or very weakly. Nor has a collection of materials, competent either in number, kind, or certainty, for informing the understanding, or any way sufficient, and worthy of the end proposed, been hitherto made; but, on the contrary, learned men, after an easy, indolent manner, have received certain rumours of experience, and the popular reports and tales thereof, both for building and strengthening their philosophy, and given them the weight of strong testimonials; which is just as if a kingdom should govern itself, not according to the advices and intelligences of its ambassadors, and trusty officers in foreign courts, but by the idle rumours and common town-talk of its people. For as to matter of experience, there is nothing hitherto well discovered, verified, adjusted, weighed, or measured in natural history, but whatever is undefined and vague in observation must needs be fallacious and deceitful in the information. And if this shall seem surprising, or the complaint appear unjust to any one, whilst so great a philosopher as Aristotle, assisted with the purse of so great a prince as Alex-

ander, has compiled such an exact history of animals; and whilst some others, with greater diligence, though with less bustle, have contributed many things thereto; and whilst others again have written copious histories, and accounts of plants, metals, and fossils, he does not seem sufficiently to understand our meaning. A natural history, compiled for its own sake, is one thing; and a natural history, collected for informing the understanding, in order to the building up of natural philosophy, is another. And these two histories, as they differ in other respects, so principally in this, that the former contains various descriptions of natural bodies, but not experiments of mechanic arts. For as, in civil life, the temper of a man, and the secret dispositions of his mind and affections, are better understood, when he is ruffled, than otherwise; so the secrets of nature are better got out by the torturing of arts, than when suffered to take their own course. And, therefore, we may then have good hopes of natural philosophy, when natural history, which is the basis thereof, shall be better supplied, and not before.

Even in the plenty of mechanical experiments, Bacon proceeds to observe, there is a great scarcity of such as most help to inform the understanding; the mechanic seldom applying his mind or his hand to any other things than those which are of service to his work. Then only, he thinks, may a hope be reasonably entertained of the further progress of the sciences when there shall be collected into a natural history many experiments which are of no use in themselves, but contribute only to the discovery of causes and axioms; experiments which he is accustomed to call *light-bearing*, in contradistinction to others which may be called *fruit-bearing*. A different method, order, and manner of process must also be introduced. Then the experiments must be carefully recorded; and arranged tables must be formed of all observed facts appertaining to the subject of investigation. But even after this has been done the mind must not pass immediately to the inquisition or discovery of new particulars or effects; results of any importance are only to be looked for from the new light of axioms, deduced by a certain method and rule from the particulars first collected, and then employed to indicate and

mark out new particulars. Nor must the mind leap and fly at once from particulars to the most general axioms, such as what are called the principles of arts and of things. Then only can there be hope for the sciences when, by a true ladder, and steps not intermitted or broken off from one another, but continuous, an ascent shall be made from particulars to minor axioms, thence to intermediate, one rising above another, thence lastly to the most general. It is the intermediate that are the true, solid, and living axioms, upon which the affairs and the fortunes of the human race rest. It is not wings, but rather lead and weights ("non plumae, sed plumbum potius et pondera"), that the human understanding wants; something to restrain its tendency to leap and fly at once from particular facts to universal principles. In establishing axioms a form of induction different from that heretofore in use must be employed; an induction which shall separate nature by means of proper rejections and exclusions, and then shall after a sufficient number of negatives arrive at its affirmative conclusions. And men must avail themselves of the aid of this kind of induction, not only for the discovery of axioms, but for the definition of notions or conceptions. Every axiom thus obtained must be considered in reference to whether it is fitted only for those particular facts from which it is abstracted, or whether it be of greater extent and generality. And, as has been before said, in order to permit any hope of progress, all separation and dismemberment of the sciences must be prevented by the extension of natural philosophy, and the reduction of particular sciences to that one.

Besides these grounds of hope for the future, derived even from the errors and failures of the past, it is also to be considered that, if many useful things have been found out by men as it were by chance, when they were not seeking for them but were engaged about other matters, many more such must surely be discovered when they shall expressly apply themselves to the search, and shall prosecute it after a certain method and order, not desultorily and on the mere impulse of the moment. The

following is the 109th aphorism, as translated by Mr. Glassford :—

109. Even that, likewise, may be drawn into matter of hope,\* that, of the very things which have already been discovered, some are of such a kind, that before they were discovered it would not easily have come into the mind of any one to suspect aught concerning them ; but one should at once have contemned them as plainly impossible. For men are used to prognosticate of new things after the pattern of the old, and according to an imagination prejudiced and tinctured by them ; which kind of anticipation is most deceitful, since much of what is derived from the fountains of things flows not in the accustomed rills

As if, before the discovery of cannon, one should have described the thing by its effects, and talked of it after this manner ; that a certain invention had been disclosed, by which walls and the strongest fortresses might, from a long reach, be shaken and cast down ; undoubtedly men would † have set themselves to meditate much and variously about the powers of engines and mechanic contrivances, to be multiplied by weights and wheels, and such like arietations, and impulses ; but of inflamed air, so suddenly and violently expanding itself, and blowing forth, scarcely any thing would ever have occurred to the imagination or conceit of any one ; being a thing he saw no example of at hand, save, perhaps, in earthquakes or thunder, which, as *magnalia* (or greater works) of nature, and not imitable by man, men would straightway have rejected.

In the same way if, before discovery of the silk yarn, some one should have thrown out language of this sort ; that a certain kind of thread was discovered, for use of garments and furniture, which far exceeded linen or woollen thread in fineness, and, nevertheless, in tenacity, and in beauty too, and softness ; men would † have straight imagined something about a species of vegetable cotton, or about the more delicate piles of some animal, or about feathers and down of birds ; but of the spinings of a puny worm, and these so copious, and self-renewed, and annual, assuredly they would have conjectured nothing. Nay, if one had even dropped a word concerning a worm, doubtless he had been mocked as a dreamer, who dreamed new labours of the spider.

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\* Mr. Glassford has "drawn to hope."

† Mr. Glassford has "should."

In like manner, if, before discovery of the mariner's needle, some one should have broached a discourse of this nature; that a certain instrument was invented, by which the poles and points of the heavens might be accurately taken and discerned; men would\* immediately, through the workings of fancy, have pursued many and diverse cogitations regarding the more exquisite construction of astronomical instruments; but that anything could have been found whose motion should so well sort with the celestials, and yet itself should not be of the celestials, but a stony or metallic substance merely, would have appeared utterly incredible. And yet these, and like things, did escape the notice of men through so many ages of the world, and have been discovered, not by philosophy or art and skill of reasoning, but through some fortuitous and favouring occurrence; and are, as we said before, of such a kind as are plainly heterogeneous, and the most remote from things antecedently known, so that no preconceit could at all, or in any way, have led to them.

There is all reason, therefore, to hope, that in the lap of nature are many things of excellent use still hidden, which have no kindred or parallelism with those hitherto discovered, but are altogether placed without the roads of the fancy; which, in any case, are yet undiscovered; which, beyond doubt, in many turns and circuits of ages, will sometime also themselves come forth, as those former did come; but, by the way which we now treat, may speedily, and suddenly, and together, be presented to the view, and anticipated.

There are some other inventions, Bacon then observes, which are of such a kind as to show that men may pass by or step over the noblest discoveries, even when lying as it were at their feet; and he gives as an instance the art of printing. At first it seems incredible to us that a particular thing should ever be found out; and then, after it has been found out, equally incredible that it should have so long remained undiscovered.

Let men consider, too, what infinite expenditure of talent, time, and means they bestow upon things and studies of comparatively little use and value; a very small part of which, if it were directed to what is sound and solid, would overcome any difficulty. And in the

\* Mr. Glassford has "should."

mean time let no one be scared by the multitude of particular facts, but rather take encouragement from that very circumstance, seeing that the particular phenomena of the arts and of nature are a mere handful compared to the fictions of the imagination, disjointed and abstracted from the evidence of things. If we had but any one at hand, says Bacon, who would answer our interrogations respecting the realities of nature,\* the discovery of all causes and of all sciences would be the work of only a few years. And then he brings forward his own example in the 113th aphorism, which may be literally translated thus:—

We even think that something of hope may be supplied to man from our own example; nor do we say this in the spirit of boasting, but because it may be useful to say it. If any be distrustful, let them consider me, a man, among the men of my age, the most occupied with civil affairs, of somewhat infirm health (which occasions much loss of time), and in this matter clearly a first adventurer, following the steps of no other, nor even holding communication respecting these things with any mortal; and who yet, having entered firmly upon the true road, and submitting my understanding to things, have, as I conceive, carried forward these things somewhat; and then let them consider what may be expected, after these indications of ours, from men abounding in leisure, and from associated labours, and from a succession of ages; especially in a road, which is not pervious only to single travellers (as is the case with that logical way), but where men's labours and works (especially in so far as regards the collecting of experience) may be in the best manner both distributed and afterwards combined. For then will men begin to know their strength, when not infinite numbers shall undertake the same thing, but some one thing and some another.

Finally, he urges, even if the breeze of hope breathing from *that new continent* were much fainter and more doubtful than it is, it would be the wiser and in every way the better course to make the trial. The gain of

\* This, we apprehend, must be the meaning of "qui de facto naturae ad interrogata responderet;" not "who could *actually* answer our interrogations of nature," as Mr. Wood translates the passage.



trying might be a great good ; the result of failure would only be the loss of a little human labour.

Here then he closes what he calls the demolishing part (*pars destruens*) of the *Instauration*, consisting of three confutations ; the confutation of the natural human reason when left to itself ; of the established mode of demonstration ; and of the received theories or philosophical systems. One thing only remains to be done, before proceeding to expound the true art and rule of interpreting nature. The purpose of this First Book is to prepare the minds of men for understanding as well as for admitting what is to follow ; accordingly, the surface of the mind having been now cleansed, and polished, and made even, the mind ought next to be placed in a good position, and, as it were, in a benevolent aspect, in regard to the truths that are to be proposed for its acceptance. The remaining aphorisms, therefore, from the 116th inclusive to the 130th or last, are employed by Bacon in prepossessing the reader with a favourable opinion of the new method of philosophy, although, as he expresses it, only for the mean time, and by way of interest, until the thing itself be explained.

He begins by disclaiming any design or desire of founding a sect, or even of proposing any particular systematic view of nature, although upon some particular points he conceives that he holds truer, more certain, and more productive opinions than those commonly entertained, as may appear from what will be found collected in the Fifth Book of the *Instauration*. He does not think that the time is yet arrived for any universal theory ; and he has no hope even of being able to complete the Sixth and last Part of the *Instauration* (which is intended for the exposition of a philosophy discovered by means of the legitimate interpretation of nature). His purpose is solely to try whether he cannot establish the power and greatness of men upon a firmer foundation, and extend the boundaries of their sway ; and for the present, he will be satisfied if he can only sow the seeds of a purer truth for posterity, and make a commencement of the great work.

Neither does he offer or promise particular effects ; although in his Tables of Invention (forming the Fourth Part of the *Instauration*), and also in many particular instances (brought forward in the Second Part), and above all in his observations on the history of nature (in the Third Part), many indications and designations of noble effects may be noted by any one of ordinary perspicuity and skill. But his main purpose is, as he has repeatedly declared, to extract, not effects from effects, or experiments from experiments (as the empirics do), but from effects and experiments causes and axioms, and from causes and axioms new effects and experiments, in his character of a legitimate interpreter of nature. And thus, he adds, contending for greater things, he condemns all hasty and premature delay upon particular experiments, however promising, as (to use a favourite illustration of his) a running after the apples of Atalanta. He does not childishly aspire after golden apples, but bends all his efforts to make the course of art victorious over nature ;\* nor is he in haste to reap moss or the green blade, but is contented to wait for the harvest in its due season.

Carefully as his natural history and tables of invention have been compiled, he admits that some things insufficiently ascertained, and other things quite false, may possibly be found in them ; but this is of no more consequence than is the wrong placing of a letter here and there in writing or printing. Nor is it any reasonable objection, but the contrary, that many things in the history and the experiments may be, some light and common, some mean and illiberal, some subtle and merely speculative, and, as it were, of no use. Important truths are often to be gathered from the commonest facts ; and even the meanest things are, as much as the loftiest and most splendid, a portion of the universe. The following is the 121st Aphorism, as Mr. Glassford has translated it :—

\* In the original—“*Sed omnia in victoria cursus artis super naturam ponimus.*” But the expression seems awkward and harsh, and perhaps some misprint may be suspected.

121. But the next objection\* is, on all accounts, to be looked into more closely : that many things in our history will, to the vulgar apprehension, or indeed to any intellect accustomed to present things, appear of a somewhat curious and unprofitable subtlety. Of this, therefore, first and chiefly, we both have spoken, and are to speak. And we do so in this manner : † that as yet, in the beginning, and for a long time, we are seeking experiments of *light* only, not experiments of fruit ; after the example, as we have frequently remarked, of the divine creation, which, on the first day, produced the light only, and allotted one entire day to that alone, nor on that day mixed aught of *materiate* work.

Therefore, if any should consider such things to be of no use, let him think it to be the same as if he judged also that there is not any use of the light, because, indeed, it is not a solid or *materiate* substance. And we hesitate not to say, that knowledge of simple natures, if it be well examined and defined, is truly as the light, giving entrance to the universal recesses of works, and, with a sort of power and efficacy, embracing and drawing after it whole bands and troops of works, and opening the fountains of the noblest axioms ; yet in itself is that knowledge of no considerable use. Nay, even the elements of letters, by themselves and separately, signify nothing, and have not any use, yet are they like the first materials ‡ for composition and garniture of all discourse. Yea, the seeds of natural things, powerful in their possible virtue, as to use (except in their growth §) are nothing ; and the dispersed rays of the light itself, unless they concur, impart not their benefit.

But if any be offended || by subtleties of speculation, what shall we have to say of the schoolmen who have indulged in subtleties without measure ? Which subtleties, too, were wasted on words, or, at least, on vulgar notions (which is the same), not on things or nature ; and without profit not only in their beginnings, but even in their consequences ; not being such as have for the present perhaps no utility, but consequentially an infinite, like those we speak of. But of this let men be assured, that all subtlety of disputations and reasonings, if

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\* Mr. Glassford has "the next is."

† Mr. Glassford has "are to speak, in this manner."

‡ Mr. Glassford has "the *materia prima* (or rudiment)."

§ Mr. Glassford has "by their process."

|| Mr. Glassford has "take offence."

it be employed only after invention of axioms, is late and out of place; and that the true and proper, or at least chief time for subtlety, is in the balancing of experiment, and the constitution of axioms therefrom. For that other subtlety solicits \* and catches at nature, but never apprehends or takes hold of her. And that is undoubtedly most true, if transferred to nature, which they use to say of occasion or fortune, "that she offers a lock in front, but behind she is bald."

Finally, as touching this contempt, in natural history, of things either vulgar or base, or over-subtle, and in their beginnings unprofitable, let that speech of the poor woman to a swollen prince, who would have thrown aside her petition as something unworthy and beneath his majesty, be taken for an oracle, "Do you then give over to be a king." For it is most certain that the command over nature may neither be acquired nor maintained, if one will not be at leisure for things of this kind, as seeming too small and trifling.

Another objection is then answered:—that it is a strange and harsh proceeding to put away all sciences and all authorities in a mass, and to strike them off as it were at one blow; no aid nor support being sought from the ancients. It would not have been difficult, Bacon observes, if he had chosen to act with less sincerity, for him to have referred for the origin and sanction of his doctrines either to the early ages before the times of the Greeks (when the sciences relating to nature flourished more perhaps, † though in greater silence, and had not yet fallen into the trumpets and fifes of the Greeks), or even (in some particulars at least) to some of the Greeks themselves. But, trusting to the evidence of facts, he rejects every form of fiction and imposture. The discovery of things is to be sought from the light of nature, not demanded back from the darkness of antiquity. And the universal reprehension which he has directed against the existing philosophy is,

\* Mr. Glassford has "desires." The Latin is *prensat*.

— † The Latin is:—"Cum scientiæ de natura magis fortasse, sed tamen majore cum silentio, floruerint." Mr. Wood translates (erroneously, we apprehend); "Since the sciences in all probability flourished more *in their natural state*, though silently."

he contends, really more modest than any partial censure would have been; for it implies that men had rather, misled by erroneous principles of speculation, neglected and passed over facts, than formed a false judgment respecting them. Then he proceeds, as the passage is rendered by Mr. Wood:—

With regard to our presumption, we allow that, if we were to assume a power of drawing a more perfect straight line or circle than any one else by superior steadiness of hand or acuteness of eye, it would lead to a comparison of talent; but, if one merely assert that he can draw a more perfect line or circle with a ruler or compasses than another can by his unassisted hand or eye, he surely cannot be said to boast of much. Now this applies not only to our first original attempt, but also to those who shall hereafter apply themselves to the pursuit. For our method of discovering the sciences almost \* levels men's wits, and leaves but little to their superiority, since it achieves everything by the most certain rules and demonstrations. Whence (as we have often observed) our attempt is to be attributed to fortune rather than talent, and is the offspring of time rather than of wit. For a certain sort of chance has no less effect upon our thoughts than on our acts and deeds.

But still another objection may be made:—that the new method sins in the very way in which it charges other systems with being erroneous and defective, namely, in not establishing the true and best goal and aim of the sciences; that the contemplation of truth is more dignified and lofty than any utility or greatness of actual effects, and that this long and anxious dwelling upon experience and matter, and the fluctuations of particular facts, must fasten the mind to the ground, or rather throw it down into a Tartarus of confusion and perturbation. With this reasoning Bacon professes to agree; but he says that his object is simply to establish in the human understanding a true model of the universe, which can only be done by a diligent dissection and anatomy of nature.

Again, it may be said that he is only doing over again what has been already done; that the ancients, after all, followed the very method which he proposes. He

\* Mr. Wood has "merely." The Latin is *ferre*.

admits that the ancients probably did collect facts and note them down ; but still he contends that their method of deducing general principles was plainly altogether different from his. Their custom was, from certain instances and particulars, with the addition of common notions, and perhaps something taken from such of the received opinions as had the greatest currency, to fly at once to the most general conclusions, or to the principles of the sciences ; according to the fixed and immoveable truth of which they then deduced and proved inferior conclusions by means of intermediate propositions ; while, if any new instances were brought forward which contradicted their dogmas, they subtly reduced them into conformity by distinctions, or by explanations of their rules, or got rid of them in some clumsy way by means of exceptions ; but at any rate laboriously and pertinaciously accommodated to those their principles the causes of all such particular facts as were not manifestly repugnant to them.

In the next aphorism he defends himself against the charge of encouraging scepticism by his demand of a suspension of judgment till general principles have been arrived at by the proper steps ; asserting that his object is not to destroy certainty of conviction, but only to produce a wise certainty (*non acatalepsiam, sed eucatalepsiam meditatur et proponimus.*) In the 127th he declares that his method is intended for the perfecting, not of natural philosophy alone, but equally of all the other sciences, logical, ethical, and political. In the 128th he repeats his assurance that he has no wish to destroy the philosophy, arts, and sciences in common use ; appealing to his other writings, and especially his books on the Advancement of Learning, in proof of his good will and friendly disposition towards all the established forms and customary applications of scholarship. And this is the 129th, to avail ourselves once more of Mr. Glassford's version :—

129. It remains that we say a few things concerning the excellency of the end. These, if they had been mentioned

before, might have seemed no better than wishes; but, hope being now raised, and unjust prejudices removed, \* may chance to have greater weight. And if we had perfected and fully discharged our task, and were not proceeding to call others to a partnership and union† of labours, we should still have abstained from speech of this kind lest it should be taken for a publishing of our deserts. But since the industry of others is to be sharpened, and their minds provoked and kindled, some things it is convenient to recall to men's recollection.

First, then, the introduction of noble inventions appears to hold by far the foremost place among human actions; and so the early ages determined. For to the inventors of things they ascribed divine honours; but to those who deserved well ‡ in civil matters (such as founders of cities and empires, lawgivers, deliverers of their countries from long calamities, subverters of tyrannies, and others like to these), they adjudged the honours of heroes only. And certainly, if one compares them rightly, he will find this judgment of the old age to be just. For the benefits of inventions may belong to the whole human race, the civil exclusively to certain seats of men; these, again, endure not beyond a few generations; those, as it were, through perpetual times. And the amendments of civil estate proceed, for the most part, not without force and disturbance; but inventions bless and convey their advantages without the hurt or sadness of any one.

Besides, inventions are in a manner new creations, and somehow imitative of the Divine works; as he well sung:—

*Primum frugiferos fœtus mortalibus agris  
Dididerant quondam præstanti nomine Athenæ;  
Et recreaverunt vitam, legesque rogarunt.*

(Athens, that name renowned, the first gave birth  
To fruitful arts, for labouring man's relief;  
And life created new, and founded laws.)

And it seems worthy of note in Solomon, that, flourishing in sovereignty, in treasure, in magnificence of works, in atten-

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\* Mr. Glassford has "rid."

† *Partem et consortium*.—Mr. Glassford has "part and concert."

‡ Mr. Glassford has "merited."

dance and service, in shipping, moreover, and in renown of name, and in the height of men's admiration, he yet chose not any of these for the matter of his glory, but pronounced thus: "The glory of God is to conceal a thing; the glory of the king is to find out a thing."

Then (if he will) let any one reflect what difference is between the life of man in any the most cultivated province of Europe, and in some the wildest and most barbarous region of the new Indies; he shall esteem the difference so wide, as it may be deservedly said, that "man is to man a god," not on account of help only and advantage, but also on a comparison of estate. And this is procured neither by soil, nor climate, nor bodily power, but by arts.

Again, it is to our purpose \* to remark the force, and virtue, and consequences, of things invented; which in none others more manifestly appear than in those three unknown to the ancients, and whose beginnings, though recent, are dark and without celebrity; namely, the *art of printing, gunpowder, and the mariner's needle*. For these three have altered the face and condition of the whole world; the first in letters, the second in war, the third in navigation; whence innumerable changes of things have ensued; so that not any government, not any sect, not any planet, seems to have exercised a greater command and influence, † as it were, upon human affairs, than these mechanical inventions ‡ have exercised.

Moreover, it will not be foreign to distinguish three kinds and degrees, as it were, of human ambition. The first is of those who desire to enlarge their own power in their own country; which sort is common and unworthy. The second, of those who struggle to extend the power and dominion of their country among human kind; and that has more of dignity doubtless, not less of cupidity. But if one endeavours to renew and enlarge the power of the human kind itself, and its empire over the universe, beyond question this ambition (if it is to be so called, indeed) is both more wholesome than the others, and more majestic. But man's sovereignty over things is placed in art and science alone. For nature is not commanded except by obeying.

Besides, if the usefulness of any one invention separately

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\* Mr. Glassford has "availing."

† Mr. Glassford has "influx."

‡ Mr. Glassford has "mechanicals."



have moved \* men so, as that they have accounted † him who, by some particular benefit, could bind the whole human race, to be more than man; how much higher shall it not be thought to invent something so excellent, that by it all things else may readily be invented? And yet (that we may every way speak the truth), in the same manner that we are much beholden to the light, for that by it we are able to journey, to exercise arts, to read, to discern each other; and, nevertheless, the view itself of the light is a more excellent and a more beautiful thing than its manifold uses; so, for certain, the very contemplation of things as they are, without superstition or imposture, error or confusion, is of greater worth in itself than the whole fruit of inventions.

Lastly, if any should object the depravation of knowledge and arts to uses of malice, and luxury, and the like, let it move no one. For it may be said of all earthly goods; of wit, courage, strength, beauty, riches, light itself, and every thing else. Let mankind only recover their right over nature, which belongs to them by the divine endowment, and room be given for its exercise; just reason and sound religion will direct the use.

In the 130th and last aphorism of this First Book Bacon intimates that he does not attribute to {the art of interpreting nature, which he is now about to expound, any absolute necessity (as if nothing could be done without it), nor does he even hold it forth as perfect, or such as that nothing can be added to it. On the contrary, it behoves *him*, more especially, by whom the mind is always considered not simply in its own powers, but as it is connected with things, to hold that the art of discovery may grow with the progress of discovery.‡

\* Mr. Glassford has "should move."

† Mr. Glassford has "as they should account."

‡ The point of this concluding sentence is lost in Mr. Wood's translation:—"On the contrary, considering the mind in its connexion with things, and not merely relatively to its own powers, we ought to be persuaded that the art of invention can be made to grow with the inventions themselves."

THE Second Book of the *Novum Organum*, though much longer than the First, contains much less that is interesting at the present day, and a very summary review of it will suffice. Occupied more with facts and special investigations than with general views and principles, it not only wants the unity and finish which distinguish the First Book, but, owing to the immature state of physical knowledge in Bacon's day, and his own extremely imperfect acquaintance with any of those branches of it that had been at all systematically cultivated, it is full of matter entirely worthless in itself, and only curious as now and then illustrating the past history of science. We will extract, however, all that is necessary for putting the reader in possession of what is called the Baconian System of Philosophy, in so far as it is here expounded.

The Book, which is arranged, like the First, in a series of Aphorisms (though they do not so well deserve that title as the generally brief, compact, and pointed paragraphs, or statements, of the former Book), begins with a disquisition on the investigation of what Bacon calls *forms*, which, with the examples, extends over the first twenty aphorisms, making about a third part of the Book. The commencing aphorism may be thus literally translated :—

To generate and superinduce a new nature, or new-natures, upon a given body is the labour and the aim of human power. But to discover the form of a given nature or its true difference [that is, from other natures], or its naturalizing nature (*naturam naturantem*), or its fountain of emanation (for such are the terms we possess approaching nearest to the indication of the thing), is the labour and the aim of human science. And to these primary labours are subordinated two other labours which are secondary and of inferior mark; to the former, namely, the transformation of concrete bodies into one another, in so far as that is within the limits of possibility; to the latter, the discovery, in every kind of generation and motion, of the latent process as extending from the manifest agent and the manifest material to the acquired form; and the discovery in like

manner of the latent conformation (*schematismi*) of bodies which are quiescent and not in motion.

The reasoning then proceeds as follows. Although nothing really exists in nature except individual bodies, producing pure individual acts according to the law that governs them; yet in science, that law, and the investigation, discovery, and explanation of it, constitute the foundation both of knowledge and of practice. That law\* is what is to be understood by the form of anything in nature. It is only the knowledge of forms that comprehends the unity of nature in the most dissimilar substances, and that therefore can enable us to discover and show forth things that have never yet been done, and such as neither the vicissitudes of nature, nor the labours of experiment, nor accident itself, would ever have brought about, or such as would never have entered men's thoughts. The safest way is to begin and build up the sciences from those foundations which are laid with a reference to practice, and to allow that to mark out and determine the part of contemplation, or theory. It is then laid down in regard to a true and perfect rule for every kind of operation, that it be certain, free, and tending to actual performance ("disponens sive in ordine ad actionem"). "And this," continues Bacon, "is the same thing with the discovery of a true form. For the form of any nature is such that, it being set up (*posita*), the given nature infallibly follows. Wherefore it is constantly present when the nature is present, and universally declares it, and is in the whole of it. This same form is such, that, it being removed, the given nature infallibly vanishes. Wherefore it is constantly absent when the nature is absent, and constantly negatives it, and is in it alone. Lastly, the true form is such, that it

\* That law and its paragraphs (*ejusque paragraphos*), says Bacon. The paragraphs of a law are merely its clauses. Mr. Wood's translation—"This law, and its parallel in each science"—(whatever the latter expression may mean) is quite inadmissible.

deduces the given nature from some fountain of an essence which exists in many things, and which is better known to nature (as they express it) than the form itself. Wherefore, respecting a true and perfect axiom of science, this is what we pronounce and lay down; that there be found some nature which shall be convertible with the given nature, and which shall yet be a limitation of a more known nature after the manner of a true genus. But these two rules, the active and the contemplative, are the same thing; and that which is the most useful in practice, the same is the most true in theory."

It may be presumed that it is not from passages such as this that Bacon derives his claim to be accounted the father of modern physical science. But the notions which he here enunciates constitute an important part of his philosophical system. The investigation of what he calls *forms*, indeed, may be said to be the grand object or purpose of his philosophy. He conceives that little real improvement in science is to be hoped for in any department of nature without the discovery of forms. Yet it may be questioned if he attached any clear or consistent idea to the term. He informs us, indeed, in one of the above aphorisms, and more expressly in a subsequent one (the 17th), that a form is the same thing with a law; and hence it has been commonly stated that whenever Bacon speaks of a form in physics we are to understand him as meaning simply what is now commonly called a law of nature. But the fact is, that a law of nature with him is quite a different thing from what is now so called. This is evident from his explanations of what he means by a law or form, and still more from his examples. We have found him, for instance, in the Fourth Book of the *De Augmentis*\* asserting that no inquisition had been made into the form of light, in the same paragraph in which he complains that the attention of inquirers had been solely directed to what he calls perspective and radiations, and that the treat-

\* See *ante*, p. 9.

ment of the whole subject had been vitiated by the application of mathematics. The fact that the angle of reflection is equal to the angle of incidence would not have been accepted by Bacon as a law of light. A law of nature in modern physics is merely a statement of the manner in which nature has been uniformly found to act in certain given circumstances. Hence it implies always movement or process. It is a statement of some *operation* of nature. Modern physics know nothing of any law of light; or heat, or any thing else, in a state of rest or inaction. Bacon's use of the term has no such limitation. With him every natural substance—every nature as he terms it—has its law, absolutely and under all circumstances; which he tells us, as we have seen, is the same thing with that which distinguishes it from every other nature; or with its *natura naturans*, or the nature that produces it and makes it what it is, or with what he calls the fountain from which it emanates, meaning evidently some principle in the constitution of things to which the substance owes its existence. Anything more entirely distinct, more widely different, from what is now understood by a law of nature cannot be imagined.

One of the ablest and most judicious commentators upon the *Novum Organum*, indeed, and one who has carried highest the claims of the method therein unfolded, in respect both of its novelty and its practical importance, the late Professor Playfair of Edinburgh, has in his 'Dissertation on the Progress of Mathematical and Physical Science,' prefixed to the *Encyclopædia Britannica*, frankly given up all the pretensions of the Baconian *form* to be regarded as anything of the same kind with what we now call a law. Having explained that the *form* of a phenomenon, in the language of Bacon, is its cause, or its essence, he adds: "The form, then, differs in nothing from the cause; only we apply the word *cause* where it is event or change that is the effect. When the effect or result is a permanent quality, we speak of the form or essence."\* And afterwards he ob-

\* Dissertation, p. 459.

serves: "It also appears that Bacon placed the ultimate object of philosophy too high, and too much out of the reach of man, even when his exertions are most skilfully conducted. He seems to have thought, that, by giving a proper direction to our researches, and carrying them on according to the inductive method, we should arrive at the knowledge of the essences of the powers and qualities residing in bodies; that we should, for instance, become acquainted with the essence of heat, of cold, of colour, of transparency. The fact, however, is, that, in as far as science has yet advanced, no one essence has been discovered, either as to matter in general, or as to any of its more extensive modifications."\* And again; "In consequence of supposing a greater perfection in knowledge than is ever likely to be obtained, Bacon appears, in some respects, to have misapprehended the way in which it is ultimately to become applicable to art. He conceives that, if the *form* of any quality were known, we should be able, by inducing that form on any body, to communicate to it the said quality. It is not probable, however, that this would often lead to a more easy and simple process than that which art has already invented. In the case of colour, for example, though ignorant of its form, or of the construction of surface which enables bodies to reflect only light of a particular species, yet we know how to communicate that power from one body to another. Nor is it likely, though this structure were known with ever so great precision, that we should be able to impart it to bodies by any means so simple and easy as by the common process of immersing them in a liquid of a given colour.† This is gently expressed, but sufficiently explicit. We may remark, however, that the discovery of a construction of surface which enables bodies to reflect only light of a particular species certainly would not have satisfied Bacon's demand for the *form* either of light or of colour.

He proceeds to say that the rule or axiom respecting the transformation of bodies is of two kinds; the first

\* Dissertation, p. 473.

† Ibid.

contemplating the body as an aggregate of simple natures; the second, which depends on the discovery of the latent process, proceeding not by simple natures, but by concrete bodies, as they are ordinarily found in nature. A long illustration of this useless distinction is wound up by a warning that no one must hope to settle the question whether the diurnal motion be the rotation of the earth or of the heaven unless he shall have first made himself master of the nature of spontaneous rotation.

The subject of the Latent Process is then taken up: By this is meant not any measures, marks, or steps of a process, which are discernible in bodies; but such a continuous process as for the most part escape the senses. The investigation of this is put forward as altogether a new proposition. Equally new is asserted to be the investigation and discovery of the latent schematism, or internal conformation, of bodies. For this latter object, we are told, "a separation and solution of bodies is to be effected, not by fire, but by reasoning and true induction, with the aid of experiments; and by a comparison with other bodies, and a reduction to simple natures, and their forms, of those things which meet and are interwoven in composition; and we must pass from Vulcan to Minerva, if we would bring forward into the light the true textures and conformations of bodies, upon which all occult and, as they are called, specific properties and virtues in things depend, and whence also every rule of effective alteration and transformation is derived." "And in all discovery of latent conformation;" it is afterwards added, "it is from the primary axioms that there is sent in the true and clear light which dissipates all darkness and deceit." There is no reason to apprehend that in this way we shall be led to the atomic theory of the Epicureans,—"which," says Bacon, "presupposes a vacuum and immutable matter, both of which notions are false,"—but only to true particles, such as they are found to be. And it is further stated that the inquisition of nature proceeds best when the physical is terminated in the

mathematical ; that is apparently, when a physical discovery is converted into a mathematical theorem.\* Finally, from the two kinds of axioms arises the true division of philosophy and the sciences ; according to which, by a transference of the received terms to his own sense, Bacon proposes that the investigation of *forms*, which are by their very nature eternal and immovable, should constitute Metaphysics ; and that the investigation of the agent (*efficientis*), and of the material, and of the latent process, and of the latent schematism (which all regard the common and ordinary course, not the fundamental and eternal laws, of nature), should constitute Physics. And to these sciences he proposes that two practical arts should be respectively considered as subordinate ; namely, to Physics Mechanics, and to Metaphysics Magic, (in a purified sense of the term), “ on account of its broad ways, and its ample empire over nature.”†

Having thus settled the scope or object of his philosophy, Bacon next, in the 10th aphorism, proceeds to lay down its precepts or rules, and to illustrate them by examples. The Interpretation of Nature he divides into two parts ;—the first, the erecting and building up of axioms from experiment ; the second, the deducing or deriving of new experiments from axioms. And the first is further subdivided into what he designates three ministrations, or services ; namely, that for the senses, that for the memory, and that for the mind or reason. By means of the first is to be prepared, as the foundation of the whole business, a sufficient collection of facts, or a Natural and Experimental History ; by the second, these facts are to be properly distributed and arranged into

\* The Latin is “ quando physicum terminatur in mathematico ;” which will hardly warrant Mr. Wood’s translation, “ when mathematics are applied to physics,”—whatever difficulty there may be in assigning Bacon’s true meaning.

† These last words seem to be understood, erroneously, by Mr. Wood, as connected with, and explanatory of, the preceding expression, “ in a purified” (or, as he translates it, in the “rest”) sense of the term.”



Tables; by the third, that true and legitimate Induction is to be applied, which is the very key of the interpretation.

An example of the investigation of forms is then given in an investigation respecting the form of Heat. This extends over the eleven aphorisms from the 11th to the 20th inclusive. First, twenty-seven instances are enumerated; without order, of things possessing the nature or quality of heat; forming what is demonstrated a Table of Essence and Presence. Next is given a collection of thirty-two instances in which the quality of heat is wanting, while they are all at the same time such as to have the character of negatives or exceptions to one or other of the preceding instances, so that they are called by our author Proximate Instances (*Instantiæ in Proximo*): they form his table of Declination or Absence in Proximity. Thirdly, there are set down forty-one instances in which the quality of heat exists in different degrees according to circumstances; making what is called the Table of Degrees, or of Comparison. "For," says Bacon, "since the form of any thing is the very thing itself, and a thing differs from its form no otherwise than as the apparent differs from the existent, or the outer from the inner, or in relation to man from in relation to the universe; it necessarily follows that no nature can be received for a true form unless it constantly decreases when the nature itself decreases, and in like manner be constantly augmented when the nature itself is augmented." Here the term *nature* (*natura*) is evidently used in two senses; though what they precisely are it might be hazardous to attempt to define.

These three tables having been drawn up,—an operation which Bacon terms the Presentation or Exhibition (*Comparentia*) of instances to the understanding,—two of the three ministrations have been performed. Now, therefore, commences the third work, that of Induction. "For there is to be found," says Bacon, "upon the presentation of all and each of the instances, such a nature as with the given nature may constantly be present and

absent, increase and decrease, and be (as has been said above) the limitation of a more common nature.\* If the mind attempt this in the first instance by an easy act of affirmation,† (which, when left to itself, it always does,) there arise fancies, and notions, all ill defined, and axioms continually requiring correction, unless, indeed, (as is the custom of the schools,) we would contend for falsehoods. These conjectures will no doubt be better or worse, in proportion to the faculty and force of the understanding by which the operation is performed. God, no doubt, (the bestower and creator of forms,) and perhaps the angels and superior intelligences, are competent to recognize forms affirmatively at once, and at the beginning of the contemplation. But assuredly this is beyond the power of man; to whom it is only given to proceed in the first instance by negatives, and to end at last with affirmatives, after every kind of exclusion."

Rejection or exclusion, therefore, he proceeds to intimate, is the first work of true induction, in the investigation of forms; the rejection, that is to say, "of each of these natures which are not found in any instance where the given nature is present; or are found in any instance where the given nature is absent; or are found in any instance to increase when the given nature decreases; or to decrease when the given nature increases." After such rejection and exclusion properly made, will remain in the second place, as it were at the bottom, an affirmative, solid, true, and well-defined form, mere volatile opinions going off into smoke.

\* In the Latin "Limitatio naturae magis communis." Mr. Wood translates "a more common limit of the nature." But the construction of *communis* is indicated, we apprehend, by the preceding passage to the same effect in the 4th spherism, to which reference is made:—"et tamen est limitatio naturae notioris."

† This would seem to be the sense intended to be conveyed by "Hoc si mens jam ab initio facile tentet affirmative." Mr. Wood's translation omits the "facile," as it also does altogether the concluding clause of this sentence.

We give the seventeenth aphorism in Shaw's translation :—

But here a general caution, or perpetual admonition, must be given, lest, as we seem to attribute so much to forms, what we say of them should be understood of such forms as men have hitherto accustomed themselves to consider.

For we do not at present speak of compound forms, that is, combinations of simple natures, according to the common course of the universe, as the form of an eagle, a lion, a rose, gold, &c., the time of treating which will be when we come to concealed processes and secret textures, and the discovery of them, as they are found in those called substances, or concrete natures.

And even in the case of simple natures, we must not be understood to mean any abstract forms, or ideas, that are either undetermined, or ill-determined, in matter. For when we speak of forms, we mean no other than those laws and determinations of pure action which regulate and constitute any simple nature, as heat, light, and gravity, in all kinds of matter and subjects susceptible thereof; and therefore the form of heat, or the form of light, is the same thing as the law of heat, or the law of light: for we perpetually keep close to practice and things themselves; and therefore when we say, for example, in the inquiry into the form of heat, reject tenuity, or tenuity is not of the form of heat, it is the same as if we said, men may superinduce heat upon a dense body; or, on the other hand, that men may take away heat from a rare one.

And if any one shall think that our forms have somewhat abstracted in them, because they appear to mix and join together things that are heterogeneous, as the heat of the celestial bodies, and the heat of fire; the fixed redness of a rose, and the apparent redness of the rainbow, the opal, or the diamond; death by drowning, and death by burning, stabbing, the apoplexy, consumption, &c., which, though very dissimilar, we make to agree in the nature of heat, redness, death, &c., he must remember that his own understanding is held and detained by customs, things in the gross, and opinions. For it is certain that the things above mentioned, however heterogeneous and foreign they may seem, agree in the form, or law, that ordains heat, redness, and death. Nor can the human power be otherwise freed, and set at liberty from the common course of nature, and extended and exalted to new efficient, and new ways of working, than by disclosing and investigating this kind

concluded. Professor Playfair, however, has pronounced that, although Bacon's collection of facts on the subject of Heat be imperfect, "his method of treating them is extremely judicious, and the whole disquisition highly interesting."<sup>\*</sup> But he does not go so far as Dr. Shaw, who expresses his admiration of this example of the method of investigating forms, as follows:—"Though this method is here so fully delivered, and promises better things than possibly any other method of inquiry hitherto known, yet it appears strangely to be disregarded. And certainly it should seem as if very few were apprized that this method, thoroughly pursued, is an actual demonstration, as justly and properly suited to physics, or indeed to all philosophy, as mathematical demonstration and algebra are to geometry and general mathematics."

The investigation of the form of Heat appears to have been formerly regarded as the most interesting portion of the *Noëum Organum*, or at least as the part of the work that was likely to prove the most generally attractive. It is extracted in full, without any reference to the *Organum*, and produced as a separate treatise, in a small collection of Bacon's physical writings printed in a 12mo. volume at Leyden in 1638, with the title of "Francisci de Verulamio Historia Naturalis et Experimentalis de Ventis, &c.;" pp. 191-277. It is also included, under the title of "The Natural and Experimental History of the Form of Hot Things," in an English translation of this volume by R. G., Gent., originally published in 12mo. at London, in 1653, and reprinted in the Second Part of the *Resuscitatio*, folio, Lon., 1651.

And the investigation may be admitted to be really, in some respects, both curious and ingenious. It is curious as a record of the knowledge, or rather of the ignorance, of that age, and of Bacon himself. Even Playfair does not effect to rate it high on account of many new facts or observations which it contains. Bacon, we are merely told, "here proposes, as an experiment, to try the reflection of the heat of opaque bodies. He mentions also the

\* Dissertation, p. 460.

*vitrum calendere*, or thermometer, which was just then coming into use. His reflections, after finishing his enumeration of facts, show how sensible he was of the imperfect state of his own knowledge." The arrangement of the instances, indeed, trivial and wholly insignificant as a great many of them are, is not a little elaborate and imposing. But, even without reference to the visionary character of the object sought, it is plain that no process of physical discovery ever can have been, or ever will be, successfully conducted in the fashion here exemplified.

Mr. Coleridge, in *The Friend* (Vol. III., Essay IX.), and also in the *Introduction to the Encyclopædia Metropolitana* (p. 27), has contended that Bacon demands in all philosophic experiment, as its motive and guide, what may be called "the intellectual or mental initiative;" that is, "some well-grounded purpose, some distinct impression of the probable results, some self-consistent anticipation, as the ground of the *prudens quaestio*, the forethoughtful query, which he affirms to be the prior half of the knowledge sought, *dimidium scientiæ*." And there are undoubtedly some expressions in his writings which show that this view had not altogether escaped him. One passage which Coleridge quotes is in the *Distributio*, or Plan, of the *Instauratio Magna*, and will be found translated in our abstract at the beginning of the present volume. He there says, in asserting what he calls the far greater subtlety of experiments than of the senses, "We speak of such experiments as are skilfully and artistically imagined and applied in accordance with the design of the inquiry" (*ad intentionem ejus quod quaeritur*). He then proceeds:—"Itaque perceptionem sensus immediatæ ac propriæ non multum tribuimus; sed eo rem deducimus, ut sensus tantum de experimento, experimentum de re judicet." "This last sentence," observes Coleridge, "is, as the attentive reader will have himself detected, one of those faulty verbal antitheses not unfrequent in Lord Bacon's writings. Pungent antitheses, and the analogies of wit, in which the resemblance is too often more indebted to the double or

equivocal sense of a word than to any real conformity in the thing or image, form the *dulcia vitia* of his style, the Dalilahs of our philosophical Samson. But in this instance, as indeed throughout all his works, the meaning is clear and evident; namely, that the sense can apprehend, through the organs of sense, only the *phænomena* evoked by the experiment: *vis œero mentis ea, quæ experimentum excogitaverat, de re judicet*;\* that is, that power which out of its own conceptions had shaped the experiment must alone determine the true import of the *phænomena*." About the correctness of the view here taken by Coleridge of the nature and necessary method of philosophical investigation, there can be no question. To transcribe a few words that we have used elsewhere upon this subject:—"Whenever a discovery is made without being anticipated, we say that it has been made by chance. The history of all discoveries that have been arrived at by what can with any propriety be called philosophical investigation and induction attests the necessity of the experimenter proceeding in the institution and management of his experiments upon a previous idea of the truth to be evolved. This previous idea is what is properly called an *hypothesis*, which means something *placed under* as a foundation or platform on which to institute and carry on the process of investigation. A *theory* is a completed view of an harmonious system of truths, evolved and proved by calculation or induction. As the latter is the necessary completion of every philosophical inquiry, so the former is its equally indispensable beginning."† But, if this was Bacon's view, certainly not a trace of it is to be found in the present investigation into the form or nature of Heat; or, it may be added, of any of his other experimental inquiries. His method of procedure, as here developed, sets out simply with a blind accumulation of instances, no more collected under the guidance of any

\* But whence are these words? Are they Bacon's or Coleridge's own?

† Pursuit of Knowledge under Difficulties, II., 255 (in Weekly Volume, No. 31.)

kind of anticipation or hypothesis than are the fishes, great and small, that the net brings up when cast into the sea. Whatever chances to come to hand is laid hold of. It is no doubt probable that in this way all the necessary instances will usually be obtained; we do not assert that the method would prove positively ineffectual in any case in which it should be employed; what we say is, that is not the shortest method, nor the method which ever has been or ever will be employed in the actual business of investigation and discovery. It has been employed indeed by Bacon himself, who never invented or discovered any thing in physics: but by no other human being. If Bacon had laid it down as one of the rules or principles of his method, that, in the course of conducting any investigation according to it, a man should walk a certain number of measured miles on all fours, or with peas in his shoes; or if he had required that every one of his instances should be set down in all the languages of Europe; the method might still have served its purpose, notwithstanding the useless trouble thus imposed by it. But the indiscriminating and unreflecting rapacity with which he gathers in his instances from all quarters, and of all kinds, only encumbers and bewilders the investigation. The sagacity, or species of prescience, which is a part of the inventive faculty, dispenses with all this labour and all this parade. Instead of all kinds of instances, a few judiciously selected instances, sometimes only a single instance, will be all it requires. From those few, or that one, it will work its way to its end much more expeditiously and more surely than if it had started with the advantage of having previously made a formal survey of all the instances in nature. The notion of any one seriously setting about a philosophical investigation by means of Bacon's three tables of Essence and Presence, of Declination, and of Degrees, is ludicrous. It reminds one of the "project for improving speculative knowledge by practical mechanical operations" of the professor in the Grand Academy of Lagado, the frame with the forty iron handles, by which "the most ignorant person, at a reasonable charge, and with a little bodily

labour, might write books in philosophy, poetry, politics, laws, mathematics, and theology, without the least assistance from genius or study." It might almost indeed be suspected that Swift here had Bacon in his eye. Other things in the irreverent satire seem to glance at the very words of the illustrious author of the *Instauratio Magna*; as when the professor is made to declare that his invention "had employed all his thoughts from his youth," and to say "he flattered himself that a more noble, exalted thought never sprang in any other man's head." At any rate, the description of the invention is hardly an exaggeration of what appears to have been Bacon's own notion of the efficacy of his *Novum Organum*, or new instrument of discovery. It was to be almost literally a machine in men's hands. It was to level intellects, and enable the weakest to do the work of the strongest. So far from its requiring any guiding idea or anticipation in the mind of the experimenter; it was to make all inventive sagacity unnecessary and useless.

We now enter upon what may be called the second part of this Second Book, in which the author proposes to consider the remaining helps necessary for the understanding in the work of the Interpretation of Nature, and of a truer and perfect Induction. He will treat, he says, respecting, first, the Prerogatives among Instances (*Prærogativa Instantiarum*): secondly, the Aids or Props (*Admōnicula*) of Induction; thirdly, the Rectification of Induction; fourthly, the Varying of the Investigation according to the nature of the subject; fifthly, the Prærogative ones among Natures, in so far as regards investigation, or what should be investigated first, what last: sixthly, the Limits of Investigation, or a synopsis of all the natures in the universe; seventhly, the Reduction to Practice, or what relates to man; eighthly, the Præparations (*Præparatio*) for investigation; lastly, the Ascending and Descending Ladder or Stair (*Scala*) of Axioms. Of this extensive design, however, all that we have actually executed is the first head.

Anciently, when the Roman people voted by centuries, the century to whose lot it fell to give its vote



(*rogari*) first was called *Prærogativa*, literally, the first consulted century. By the *Prærogative Instantiarum*, therefore, Bacon means merely those instances that deserve first or principally to be attended to. It will be more convenient in English to vary the form of the expression, and to call them, as has been usually done, *Prerogative Instances*.

The remainder of this Second Book of the *Novum Organum* consists of an enumeration of twenty-seven different kinds of Prerogative Instances, accompanied with elaborate expositions and illustrative exemplifications. The account will not admit of any intelligible abridgement. We will preserve the list of names complete; but all that we shall attempt further will be to extract some of the more interesting and important passages, which we shall give as translated by Shaw.

### 1. *Solitary Instances*.—

Among the prerogative instances for interpreting nature, in first place come the solitary kind; that is, those which exhibit the nature inquired after, in such subjects as have nothing common with others besides that very nature; or, those that exhibit the nature inquired after, in such subjects as are every way similar to others, excepting in that very nature. For it is manifest, that such instances as these will shorten the inquiry, and promote and hasten the exclusion; so that a few of them may do the service of many.

For example, if the inquiry be about the nature of colour, solitary instances are prisms, and crystal gems, or glasses, which represent colours, not only in themselves, but also externally upon a wall, &c. Understand the same of dews, &c. For these have nothing in common with the fixed colours of flowers, coloured gems, coloured glass, metals, various woods, &c. besides the colour itself. Whence it may be easily inferred, that colour is nothing more than an alteration in the rays of light, occasioned, in the first case, by different degrees of incidence; and, in the second, by the different texture or structure of the body, and so reflected to the eye. But these instances are solitary, or single, in point of likeness.

Again, in the same inquiry, the distinct veins of black and white in marble, and the variegation of colours in flowers of the same species, are solitary instances, for the black and white

parts of marble, or the spots of white and purple in carnations, agree almost in every respect, except in colour. Whence it is easily collected, that colour does not greatly depend upon the intrinsic nature of the coloured body, but is owing to a somewhat gross, or bare mechanical texture of the parts. Thus these instances are solitary, in point of difference. And we call both the kinds by one and the same name.

## 2. *Travelling Instances (Instantiae Migrantes).*—

\* In the second place come travelling instances, or those wherein the nature inquired after travels, or advances to generation, when it was not before in being; or, on the contrary, travels, or tends to destruction, when it was in being before. And, therefore, in either correlative, such instances are always duplicate; or rather one instance, in motion, or passage, is continued to the opposite period. And instances of this kind not only accelerate and confirm the business of exclusion, but also drive the affirmation, or form itself, into a narrow compass. For the form of the thing must necessarily be somewhat introduced, or abolished, by this transmigration. And, though all exclusion promotes and forwards the affirmation, yet this is more directly done in the same subject than in different ones; for it plainly appears, from all we have said before, that the form discovering itself in one thing leads to its discovery in all the rest. But the more simple this passage is, the nobler the instance should be esteemed.

Again, these travelling instances are of great use in practice, because, as they exhibit the form joined with an efficient, or privation, they clearly design or mark out the practical operation in some cases; whence any easy passage is also afforded to the neighbouring discoveries. There is, however, some danger in these instances, that requires a particular caution; for they may be apt to restrain the form too much to the efficient, and to infect or at least to tinge the understanding with a false notion of the form, through an apparent mixture of the efficient; whereas the efficient is never more than the vehicle of the form. But this inconvenience is easily remedied by making a just exclusion.

To give an example of a travelling instance: suppose the nature inquired after were whiteness, an instance advancing to generation is glass, whole, and in powder; and again, simple water, and water beat into froth; for whole glass, and simple water, are transparent bodies, not white; but powdered

glass, and the froth of water, are white, not transparent. It comes therefore to be inquired, what has happened to the glass, or water, in this transmigration; for, it is manifest, that the form of whiteness travels, or is conveyed over by pounding the glass, and agitating the water; but nothing is here found added, besides a bare comminution of the parts of the glass and the water, together with the interposition of the air. And it is no small acquisition in discovering the form of whiteness, that two bodies, of themselves more or less transparent, viz. air and water, or air and glass, being mixed together, in subtile or small parts, should exhibit whiteness, by differently reflecting the rays of light.

We must also give an example of the danger, and caution, above mentioned; for it may here readily occur to the understanding, depraved by these kinds of efficientes, that air is always necessary to the form of whiteness, or that whiteness is generated only by transparent bodies, which two positions are absolutely false, and rejected by numerous exclusions. It will rather appear, without the interposition of the air, &c. that the bodies perfectly uniform, or similar, in their optical parts, prove transparent: that those which have the simple texture, or arrangement of their parts disturbed, are white; that a dissimilarity in the regular texture of bodies affords all colours, except black; and that a dissimilarity in a compound, absolutely irregular, and confused texture, constitutes blackness. And, for an instance advancing to destruction in the same nature of whiteness, we have it in froth subsided, or snow dissolved; for water deposits its whiteness, and puts on transparency, upon becoming entire, without any intermixture of air.

We must by no means omit, that under travelling instances should be comprehended, not only those which travel to absolute generation and privation, but such likewise as travel to a greater or less degree of the nature sought, since these also tend to the discovery of the form, as plainly appears both from the definition of a form, above laid down, and the table of comparison. And therefore the instance of paper, which is white when dry, but proves less white when wet, and comes nearer to the state of transparency, upon the exclusion of the air, and the reception of the water, is of the same use as the instances above mentioned.

### 3. *Forthshowing Instances (Instantiae Ostensivae);*

called also *Blazings* (*Effluvescentiæ*) and *Liberated* and *Predominant Instances*. It is as an example of these instances that the Thermometer is introduced, under the name of *vitrum calendare aëris*, which should mean the callendar glass of the air, but which Bacon probably intended to signify the glass for measuring the *heat* of the air, under the notion that *calendare* was a derivative of *caleo*.\*

4. *Clandestine* or *Twilight Instances*, which are the opposite of the preceding.—

For example; let the nature inquired into be consistence or solidity, the contrary of which is liquidity or fluidity, then clandestine instances are such as exhibit some faint and low degree of consistency in a fluid; suppose a bubble of water, which is a kind of consistent and determinate pellicule, made of the body of the water. In like manner icicles, if there be water to follow them, lengthen themselves out in a very slender thread, to prevent a discontinuity of the water; but if there be not a sufficient quantity to follow, the water then falls in round drops, which is the figure that best supports it against discontinuation; and at the very instant when the thread of water ends, and the falling in drops begins, the water recoils upwards to avoid being discontinued. So in metals, which are fluid upon fusion, though a little tenacious, some of the melted mass frequently springs up in drops, and sticks in that form to the sides of the crucible. There is a like instance in the looking-glasses, commonly made of spittle by children, in a loop of rush or whalebone, where we find a consistent pellicule of water. But this is observed to much better advantage in that other diversion of children when they take strong soapy water, and blow in it with a pipe, so as to raise the water into a tower or castle of bubbles, whilst by the interposition of the air, the soapy water becomes consistent to that degree as to be thrown a considerable distance without breaking. This also appears

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\* Shaw translates it the weather-glass, which would now be understood to mean the barometer, an instrument not invented in Bacon's day; but the thermometer also was formerly called the weather-glass. Thus Dryden writes:—

As in some weather-glass my love I hold,  
Which falls or rises with the heat or cold.

to advantage in froth and snow, which put on such a consistency, that they may be almost cut with a knife, though they are but bodies formed of air and water, both of them fluid. These several instances seem clearly to intimate that fluidity and consistency are no more than vulgar notions relative to the human sense, and that all bodies have a real appetite to avoid discontinuation, though in homogeneous bodies, such as fluids are, it is but weak and feeble, whilst in those compounded of heterogeneous matters, it proves more strong and powerful, because the application of what is heterogeneous binds bodies up, but the entrance of what is homogeneous relaxes and dissolves them.

As a farther example; if the nature sought were attraction, or the appetite of approach in bodies, a most remarkable glaring instance, as to the discovery of the form, is the loadstone. The contrary of an attractive nature is an unattractive nature; though in a similar substance; as in iron, which does not attract iron; nor does lead attract lead, nor wood attract wood; nor water attract water. But the loadstone armed with iron, or rather the iron of an armed loadstone, is a clandestine instance; for here it happens, that an armed loadstone does not, at a certain distance, attract iron stronger than an unarmed loadstone; but if the iron be moved so near as to touch the iron of the armed loadstone, then the armed loadstone will support a much greater weight of iron, than the naked and unarmed loadstone, by reason of the similitude of substance betwixt iron and iron, which operation was altogether clandestine and secret, or concealed in the iron before the loadstone was applied. Whence it is manifest, that the form of attraction is a thing that is vivid and strong in the loadstone, but weak and latent in iron.

After the same manner, it is observed, that headless arrows of wood, being fired out of a gun, will penetrate farther into wood, or the sides of a ship, than the same arrows headed or pointed with iron, by reason of the similitude of substance betwixt wood and wood, though this before lay concealed in the wood.

Again; though air does not manifestly attract air, nor water manifestly attract water, in a state of entireness, yet one bubble approaching another makes it easier dissolve, than if the other bubble were away, by reason of the appetite of conjunction between water and water, and between air and air.

And this kind of clandestine instances, which, as we before observed, have a noble use, are most remarkable in the small

and subtile parts of bodies, because the greater masses of things follow the more general and universal forms.

5. *Constituent, or Handfilling (Manipulares) Instances* :—

For example, let the nature sought be memory, or the means of exciting and helping the memory; the constituent instances will here be, first, order, or distribution, and places for artificial memory. Order, or distribution, manifestly assists the memory; and places for artificial memory may either be places in a proper sense, as a door, a window, a corner, &c., or familiar and known persons; or any other things at pleasure; provided they be placed in a certain order; as animals, plants, words, letters, characters, historical personages, &c., though some of these are more, and some less fit for the purpose. But such kind of places greatly help the memory, and raise it far above its natural powers. Again; verse is easier learnt and remembered than prose.

And this collection, or packet, of the three above-mentioned instances, viz. order, artificial place, and verse, constitute one species of help for the memory; and this species of help may be justly called the prevention of endless search. For when a person endeavours to recollect, or call a thing to mind; if he has no previous notion or perception of what he is in quest of, he casts about, and tries every track, as it were without end: but if he has any previous notion, this infinity of search is presently cut short; and the memory is brought to hunt nearer home. But in the three instances above mentioned, there is a clear and certain previous notion contained. For in the first, there is required somewhat agreeable to order; in the second, an image is required, that has some agreement, or relation, to those fixed places; in the third, words that will stand in verse: so that infinity is thus cut off or prevented, and the search limited and restrained.

Other instances will give this second species; that whatever brings an intellectual thing to strike the sense (which is the method principally used in artificial memory), helps the remembrance.

Other instances will give this third species; that those things which make an impression by means of a strong affection or passion, as by causing fear, surprise, blushing, delight, &c., assist the memory.

Other instances will give this fourth species; that those

things sink the deepest, and dwell the longest in the memory, which are chiefly impressed upon a clear mind, that remains unprejudiced, either before or after the impression; as the things we learn in childhood, or think of just before going to sleep; as likewise all the first times that things are taken notice of.

Other instances will give this fifth species; that a multitude of circumstances, or, as it were, handles or holds to be taken, help the memory: as the making of many breaks in writing, or printing; reading or repeating aloud, &c.

Lastly; other instances will give the sixth species of help; that those things which are expected, and raise the attention, stick better than such as pass slightly over the mind: whence, if a man should read a writing twenty times over, he would not remember it so well, as if he should read it but ten times, with trying between whiles to repeat it; and consulting the copy where his memory failed.

Hence there are, as it were, six lesser forms of helps for the memory; viz. (1) the cutting off infinity; (2) reducing intellectual to sensible things; (3) impression by a strong passion; (4) impression upon a mind free and disengaged; (5) variety of handles, or occasions; and (6) expectation conceived.

### 6. *Conformable or Proportionate Instances (Instantiæ Conformes sive Proportionatæ)*; called also *Parallels* or *Physical Similitudes*.

But this precept cannot be too frequently inculcated, that the procedure and method of mankind in their inquiries and endeavours to collect a natural history, must be entirely altered from the method at present in use; for men's curiosity and diligence have been hitherto principally employed in observing the variety of things, and explaining the precise differences of animals, vegetables, and fossils, the greatest part of which variety and differences are rather the sport of nature than matters of any considerable and solid use to the sciences. Such things, indeed, serve for delight, and sometimes contribute to practice, but afford little or no true information, or thorough insight into nature; human industry, therefore, must be bent upon inquiring into, and observing the similitudes and analogies of things, as well in their wholes as in their parts; for these are what unite nature, and begin to build up the sciences.

7. *Singular Instances (Instantiæ Monodiciæ)*; called also *Irregular* or *Heteroclite Instances*.

8. *Deviating Instances*.

9. *Frontier Instances (Instantiæ Limitantes)*; called also *Participles (Participia)*, from participating of two different natures; as the participle in grammar is said to be so called from its participating of the nature both of the noun and the verb.

10. *Instances of Power, or of the Fasces*; called also the *Head-works* or *Hand-works* of Man (*Ingenia sive Manus Hominis*).

For example, paper, though a very common thing, is a singular instance of art. For if well observed, artificial matters are either merely wove with direct and transverse threads, as silk, cloth, linen, &c. or made of concremented juices, as brick, clay, glass, enamel, porcelain, and the like, which if well united shine, but if less united, prove hard, but bear no polish. And all these latter substances, made of concremented juices, are brittle, and do not hold tenaciously together. On the contrary, paper is a tenacious substance, that may be cut, or torn; so that it resembles, and in a manner rivals the skin, or membrane of some animal; the leaves of some plant; or the like production of nature: for 't is neither brittle, as glass; nor thready, as cloth; for though it has its fibres, yet it has no distinct threads; but exactly resembles the texture of natural matters: insomuch that the like can hardly be found again among artificial things; but it remains perfectly singular. And in artificial things, those, doubtless, are to be preferred which imitate and resemble nature the nearest; or which, on the other hand, powerfully govern, invert, or change her.

Again; among instances of power, or the inventions and manual works of men, matters of dexterity, delusion, and diversion, are not to be rejected wholly: for some of these, though of small use, and only ludicrous, may yet be rich in information.

Lastly; neither are superstitious, and those commonly called magical, matters, to be quite excluded: for although things of this kind lie strangely buried, and deep involved in falsehood and fable; yet some regard should be had to discover whether no natural operation is concealed in the heap: for example, in fascination; the power of imagination; the sympathy or consent of things at a distance; the communication of im-



pressions, from spirit to spirit, as well as from body to body; and the like.

11. *Accompanying and Hostile Instances* (*Instantiæ Comitatus atque Hostiles*); called also *Instances of Fixed Propositions*.

12. *Subjunctive Instances*; called also *Ultimate Instances*, or *Instances of the Terminus*.

13. *Instances of Alliance or of Union*.

14. *Instances of the Cross* (or *Crucial Instances*), a name taken from the crosses erected where two roads meet, to point out and declare their different directions; called also *Decisive and Judicial Instances*, and in some cases *Instances of the Oracle and of Command*.

They are of this kind, that when in the search of any nature, the understanding comes to an equilibrium, as it were, or stands suspended as to which of two or more natures the cause of the nature inquired after should be attributed or assigned, by reason of the frequent and common occurrences of several natures, then these Crucial instances show the true and inviolable association of one of these natures to the nature sought, and the uncertain and separable alliance of the other, whereby the question is decided, the former nature admitted for the cause, and the other rejected.

These instances therefore afford great light, and have a kind of over-ruling authority, so that the course of interpretation will sometimes terminate in them, or be finished by them. Sometimes, indeed, these Crucial Instances occur, or are found, among those already set down, but in general they are new, and expressly and purposely sought and applied, or after due time and endeavours, discovered, not without great diligence and sagacity. . . .

Let the nature sought be the spontaneous motion of rotation; and in particular, whether the diurnal motion, whereby the sun and stars rise and set, to the sight, be a true motion of rotation in the heavenly bodies, or only apparent in them, and real in the earth. The following may be a Crucial Instance in this inquiry. If any motion, from east to west, is found in the ocean, though it be ever so languid and feeble, if the same motion be found somewhat quicker in the air, especially between the tropics, where, because of the larger circles, it will be more perceptible, if the same motion be found brisk and

strong in the lower comets, if the same motion be found in the planets, so dispensed and proportioned, that the nearer it comes to the earth, the slower it proves, and the farther off the quicker, but quickest of all in the sphere of the fixed stars, then doubtless the diurnal motion should be received for real in the heavens, and the motion of the earth be rejected, because it would then be manifest that the motion from east to west is perfectly cosmical, and by consent of the universe, which having the greatest velocity in the greatest heights of the heavens, gradually decreases, and at length terminates, and comes to nothing, in what is immoveable, viz. the earth.

On the other hand, let the nature inquired into be that other motion of rotation, famous among astronomers, and opposite and contrary to the diurnal motion, viz. the motion from west to east, which the astronomers attribute to the planets and sphere of the fixed stars, but Copernicus and his followers assign likewise to the earth; and let it be sought whether there is any such motion in nature, or whether it be only imaginary, and supposed for the readiness and convenience of calculation and the sake of the beauty and regularity of a system, so as to make the celestial motions performed in perfect circles.

This motion is by no means proved true and real in the higher celestial bodies, neither from hence, that a planet does not, in its diurnal motion, return to the same fixed star again, nor from hence, that the poles of the zodiac differ from the poles of the world, which are the two things whereon this motion is founded. For the first phenomenon is well solved by the supposition of antecedence and dereliction, and the second by spiral lines, so that the inequality of the revolution, and the declination to the tropics, may be rather modifications of the same diurnal motion, than contrary motions, or performed about different poles. And if we may here, for once, side with the vulgar, and leave the fictions of astronomers and the schools (who in many cases, and without reason, offer violence to the senses, and rather affect obscurities), we judge this motion to be to the sense such as we have above described it, from a model we once had purposely made of iron wire to represent it.

But it may be a crucial instance in this inquiry, if it shall be found from any history worthy of credit, that there was a comet, which did not revolve in a manifest consent (though ever so irregularly) with the visible diurnal motion; but rather to the opposite part of the heavens, for then it will be free to judge that some such motion, contrary to the visible diurnal

rotation, may exist in nature. But if nothing of this kind can be found, such a motion should not be embraced, but recourse be had to other crucial instances about it.

Again; suppose the nature sought was gravity, this will be the cross-road. Heavy and ponderous bodies must either have a natural tendency to the centre of the earth, on account of their proper mechanism, or else be attracted by the corporeal mass thereof, as by a collection of bodies of the same nature, and so be carried to it by consent.

If the latter be the cause, it will follow, that the nearer all heavy bodies approach to the earth, the stronger, and with the greater force and velocity they will tend to it; but the farther they are from it, the weaker and the slower, and this to a certain distance; whence, if they were removed so far from the earth, as that the virtue thereof could not act upon them, they would remain pendulous, like the earth itself, without falling.

And with regard hereto this may be a crucial instance. Take a clock that moves by weights, and another that moves by a steel spring; let them be exactly adjusted, that neither of them may go faster than the other; place the clock that goes with weights upon the top of some very high building; keep the other below; then carefully observe if the clock above move slower than usual, on account of the diminished virtue of its weight. Let the same experiment be made in the deepest mines, to show whether such a clock will not move faster there, for the contrary reason; and if the virtue of the weights shall be found diminished above, and increased below the surface of the earth, let the attraction of the terrestrial mass be received as the cause of weight or gravity.

### 15. *Instances of Divorce.*

Then follow five orders of Instances distinguished by the general name of *Instances of the Lamp*, or of *Primary Information*; as being such as assist the senses. The first strengthen, enlarge, and rectify the immediate actions of the senses; the second bring down the imperceptible to the perceptible ("non-sensibile ad sensibile"); the third indicate the continuous processes or series of those things and motions which (as most frequently happens) are not observed except in their termination or entire course ("exitu aut periodis"); the fourth substi-

tute something when the senses are, in a state of absolute destitution; the fifth excite the attention and notice of the senses; and at the same time limit the subtilty of things.

16. *Instances of the Door or of the Gate (Januae sive Portae)*, which are those that assist the immediate actions of the senses. But among the senses, the first place, in the furnishing of information, belongs to the sight. And the helps that may be sought for the sight appear to be of three kinds; namely, such as may enable it to see either things not previously seen; or to a greater distance than previously; or more exactly and distinctly.

Of the first kind\* are the newly invented microscopes, which show the latent, and otherwise invisible small parts of bodies, and their secret textures and motions, remarkably increased in the magnitude of the object, by means whereof the exact figure and lineaments of the body of the minutest creatures, such as flies, fleas, mites, &c., as also colours and motions, before invisible, may be seen in a delightful and surprising manner.† And here, as is usual in new and strange discoveries, a superstitious observation has crept into the minds of men, as if this invention of microscopes did honour to the works of nature, but dishonour to the works of art, by showing the one much finer than the other; whereas the truth only is, that natural textures are much more subtile than artificial ones. For these microscopes are only of use in the case of minute ob-

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\* Shaw omits a parenthesis here to the following effect:—"not to speak of spectacles (*bis-oculi*), and the like contrivances, which are able only to correct and alleviate the infirmity of a vision not properly adjusted (*non bene dispositi*), and therefore cannot be said to convey any additional information."

† Shaw here omits the following sentence:—"It is said also that a straight line drawn with a pen or pencil is discerned by such microscopes to be very unequal and tortuous; because neither the motions of the hand, although assisted by a ruler, nor the impression of ink or of colour, are in reality equal; although their inequalities are so minute that without the aid of such microscopes they cannot be perceived." Digitized by Google

jects, so that if Democritus had seen them, he would perhaps have rejoiced, and imagined a way was now discovered for rendering the atoms visible, which he pronounced to be no object of sight.

But the unsuitableness and insufficiency of these microscopes, except for very minute bodies (and then only when such minute bodies are not parts of larger), destroy the use of the invention; which, if it could be extended to large bodies, or to small particles of large bodies, in the piece, after the manner of making a piece of fine lawn appear like a net, so as that by this means the latent small particles and inequalities of gems, liquors, urine, blood, wounds, and many other things might be distinguished, great conveniences would doubtless arise from the discovery.

Of the second kind are telescopes, which were nobly attempted and discovered by Galileo; by means whereof, as by boats or little ships of intelligence, a nearer commerce may be opened and carried on with the celestial bodies. For by the help of these glasses, 1. The milky way appears to be a knot or cluster of little stars, perfectly separate and distinct, of which the ancients had but a bare suspicion. 2. And again, by their means it should seem that the planetary regions contain more stars besides the direct planets, and that the heavens may begin to be spangled with stars at a great distance below the sphere of the fixed stars, though with such only as are invisible without the help of telescopes. And again, 3. By their assistance we may behold the motion of those small stars, or satellites, about the planet Jupiter; from whence it may be conjectured that the revolutions of the stars have regard to several centres. 4. Again, by their means the luminous and opaque inequalities are more distinctly perceived and ascertained in the moon, from whence a geographical description might be made thereof. 5. And lastly, by means of these glasses, spots in the sun, and other things of that kind, appear to the sight; all which are, doubtless, noble discoveries, so far as they may be safely depended upon for real. But, indeed, I the rather incline to suspect them, because experience seems wholly to rest in these few particulars, without discovering, by the same means, numerous others, equally worthy of search and inquiry.\*

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\* Galileo, some of whose telescopic discoveries are noticed

17. *Summoning Instances* (*Instantiæ Citantes*); called also *Evoking Instances*. Here Bacon introduces one of his favourite doctrines, that of the living principle, or spirit, as he calls it, which he conceives to be contained even in bodies commonly considered to be dead.

Things escape the senses, either, 1, through the distance of the object, as to place; 2, through the interception of interposing bodies; 3, because the object is unfit to make an impression upon the sense; 4, because the object is not sufficient, in quantity, to strike the sense; 5, because the time is not proportionate, so as to actuate the sense; 6, because the percussion of the object is not endured by the sense; 7, and lastly, because an object before detained, and possessed the sense, so as to leave no room for a new motion. . . .

But the reduction in the third and fourth ways regard numerous particulars, and ought on all sides to be collected in inquiries. Thus, for example, it appears that the air, the spirit, and things of that kind, which in their whole substance prove light and subtile, can neither be perceived nor touched, whence in the inquiry after such bodies, we must necessarily use reductions.

Suppose, therefore, the subjects of inquiry were the action and motion of the spirit included in tangible bodies; for every tangible body, with us, contains an invisible and intangible spirit, over which the body is drawn like a garment. And hence arise those three powerful springs, and that wonderful process, of the spirit in tangible bodies. For, 1, the spirit being discharged out of a tangible body, the body contracts and dries; 2, whilst detained, it makes the body tender, supple, and soft; and, 3, being neither totally discharged, nor totally held in, it informs, fashions, assimilates, ejects, organizes, &c. And all these are rendered sensible by visible effects.

For in every tangible, inanimate body, the included spirit first multiplies itself, and, as it were, feeds upon those tangible

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in this and two or three other passages in Bacon's writings, should have been excepted from the enumeration, at p. 24, of his contemporaries whom he never mentions. Yet we see he had not nearly so much faith in the *novum organum* of the illustrious Florentine as in his own.

parts which are most disposed and prepared for that purpose ; and thus digests, works, and converts them into spirit, till at last they fly off together.

And this business of making and multiplying the spirit is brought down to the sense by the diminution of the weight of the body ; for in all drying, part of the quantity goes off, which is not only the spirit that pre-existed in the body, but a part of the body itself that was before tangible, and is now newly converted into spirit, for the pure spirit has no gravity.

The emission, or exit, of this spirit is rendered sensible by the rusting of metals and other corruptions and putrefactions of that kind, which stop before they come to the rudiments of life ; for in the more compact bodies the spirit finds no pores and passages through which to escape, and is therefore obliged to protrude the tangible parts, and drive them before it, so as to make them issue at the same time ; whence proceed rust, and the like.

But the contraction of the tangible parts, after some of the spirit is discharged, upon which dryness ensues, is made sensible by the increased hardness of the body, but much more by the subsequent cracking or splitting of the body, and the contracting, wrinkling, and overwrapping of the parts. Thus the parts of wood crack or split asunder, and are contracted ; skins wrinkle, and if the spirit be suddenly forced out by the heat of fire, they shrink so fast as to curl and roll themselves up, &c.

On the other hand, where the spirit is detained, and yet dilated and excited by heat or something analogous thereto (as happens in the more solid or tenacious bodies), then the body is either softened, as in the case of ignited iron, or flows, as in melted metals, or liquifies, as in dissolved rosin, wax, &c. ; therefore these contrary operations of heat, hardening some bodies and liquifying others, are easily reconciled ; because in the first case the spirit is driven out, but agitated and detained in the second ; the latter being the proper action of heat and spirit, and the former the action of the tangible parts, succeeding upon the emission of the spirit.

But where the spirit is neither quite detained nor quite discharged, but only attempts and tries to force its prison, and readily meets with such tangible parts as will obey and yield to its motions, so that wherever the spirit leads they follow it, then it is that an organical body is formed, with its distinct

parts or limbs, and that all the vital actions ensue, as well in animals as vegetables.

18. *Instances of the Road (Instantiae Viae)*; called also *Itinerating* or *Journeying*, and *Articulated* or *Jointed Instances (Itinerantes et Articulae)*.

19. *Instances of Supplement*, or of *Substitution*; called also *Instances of Refuge (Instantiae Refugii)*.

20. *Lancing Instances (Instantiae Persecantes)*, or *Instances of Democritus*; called also, for a different reason, *Twitching Instances (Instantiae Vellicantes)*. To which are to be subjoined those called the *Limits of the Lancing (Metae Persecationis)*; the consideration of which, however, is deferred to the head of the Supports of Induction (intended to form the next part of the treatise).

Such are the instances which assist the senses: those that remain are principally of use for operation or practice ("ad partem operativam"). They are seven in number, and are called by the general name of *Practical Instances*. Now there are two defects in practice. It either deceives, or it imposes too much trouble ("onerat nimis"). It deceives from the forces and activities of bodies being ill determined and measured. Now these forces and activities are circumscribed and measured in four ways; namely, by place, or by time, or by union of quantity ("per unionem quanti"), or by predominance of virtue. The four corresponding classes of instances are called *Mathematical Instances*, or *Instances of Measure*. Practice again is troublesome, either on account of the intermixture of useless things, or on account of the multiplication of instruments, or on account of the bulk of the material and of the substances which may be required for any work. The instances, therefore, that are to be prized here are such as either direct operation to those things which are of most consequence to mankind, or lessen the number of instruments, or the quantity of material. Hence three classes of instances, which are called by the general name of *Propitious* or *Benevolent Instances*.



21. *Instances of the Rod or Radius (Virgæ sive Radii)*; called also *Instances of Endurance (Perlatio-nis\*)*, or of *No Farther (Non Ultra)*.

22. *Instances of the Course (Curriculi)*; called also *Water Instances (Instantiæ ad Aquam)*, from the wa-ter-clocks of the ancients. These are instances of the measuring of things by time. Under this head Playfair observes that Bacon, after remarking that every change and every motion requires time, has the following very curious anticipation of facts, which appeared then doubtful, but which subsequent discovery has ascertained:—  
 “The consideration of these things produced in me a doubt altogether astonishing, namely, whether the face of the serene and starry heavens be seen at the instant it really exists, or not till some time later; and whether there be not, with respect to the heavenly bodies, a true time and an apparent time, no less than a true place and an apparent place, as astronomers say, on account of parallax. For it seems [Bacon’s word is *videbatur—*it seemed] incredible that the species or rays of the celestial bodies can pass through the immense interval between them and us in an instant, or that they do not even require some considerable portion of time.”—“The measurement of the velocity of light,” Playfair subjoins, “and the wonderful consequences arising from it, are the best commentaries on this passage, and the highest eulogy on its author.” Bacon, however, immediately proceeds thus:—

But this suspicion, as to any great interval betwixt the real and apparent time afterwards vanished, upon considering that infinite loss and diminution of quantity, as to sight, between the real body of a star and the apparent object, which difference is caused by the distance; and, at the same time, considering to what a distance objects that are barely white may, of a sudden, be seen here below, amounting to sixty miles at the least; for there is no question but that the light of the celestial bodies

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\* Shaw translates *Permeating Instances*; Mr. Wood, *In-stances of Completion*.

has not only the vivid strength of whiteness, but also vastly exceeds the light of flame, as we find flame here in power and strength of radiancy. Nay, that immense velocity wherewith gross matter moves, in the diurnal rotation, renders this wonderfully swift motion of the rays of light, from the fixed stars, more probable. But what has the greatest weight with me is this, that if there should here be any considerable space of time between reality and sight, or the existence of the object, and its being seen, it must then happen that the sight would be frequently intercepted and confounded by clouds arising in the mean time, or by the like disturbances in the medium. And thus much for the simple mensuration of time.

23. *Instances of the How Much (Instantiæ Quænti)*; called also *Doses of Nature (Doses Naturæ)*.

24. *Instances of Struggle (Instantiæ Luctæ)*; called also *Instances of Predominance*. Here Bacon enumerates and illustrates at great length the principal kinds of motions and active virtues or powers in nature; which he makes to be, 1. Motion of Resistance (*antitypiæ*); 2. Of Connexion (*nexus*); 3. Of Liberty; 4. Of Matter (*hyles*); 5. Of Continuity (*continuationis*); 6. Of Acquisition (*ad lucrum*), or Of Need (*indigentia*); 7. Of Greater Congregation; 8. Of Lesser Congregation; 9. The Magnetic Motion; 10. Of Avoidance (*fugæ*); 11. Of Assimilation, or Self-multiplication, or Simple Generation; 12. Of Excitement; 13. Of Impression; 14. Of Configuration or Position (*situs*); 15. Of Penetration (*Per-transitionis*), or Motion according to the Passages (*secundum meatus*); 16. The Royal or Political Motion (by which the predominant and ruling parts in any body bridle, conquer, subjugate, and regulate the rest, and compel them to unite, to separate, to stand still, to move, to take their places, not according to their own inclinations, but with a reference to, and as may be most conducive to the welfare of, that ruling part); 17. The Spontaneous Motion of Rotation (with its nine different species, all likewise enumerated); 18. Of Trepidation; 19. Of Repose (*decubitus*), or of Aversion to Motion (*exhorrentiæ motus*).

25. *Prompting Instances (Instantiæ Insuentes)*.

26. *Many-sided Instances* (*Instantiæ Polychrestæ*, literally *Instances of many uses*.) The ways in which man acts upon natural bodies (besides their mere application to and removal from one another), are stated to be seven: 1. By the exclusion of whatever impedes or disturbs; 2. By compressions, extensions, agitations, and such like; 3. By heat and cold; 4. By detention in a suitable place; 5. By checking and regulating motion; 6. By means of special agreements, or sympathies, in things (*consensus*); 7. By a temperate and due alternation, and a series and succession of all these ways. These seven methods are all illustrated at great length.

27. *Magical Instances*; being those in which the matter or efficient cause is slight or small in comparison of the magnitude of the work or effect produced.

And so much for the subject of prerogative instances. It must be observed, that in this our new machine for the understanding, we deliver a logic, not a philosophy: but as our logic directs the understanding, and instructs it, not like the common logic, to catch and lay hold of abstracted notions, as it were by the slender twigs, or tendrils, of the mind; but really enters and cuts through nature, and discovers the virtues and actions of bodies, together with their laws, as determined in matter; so that this knowledge flows not only from the nature of the mind, but also from the nature of things, and the universe; hence it is no wonder that, in order to give examples and illustrations of our art, we every where employ physical considerations and experiments. . . .

And now we should proceed to the helps and rectifications of induction, then to concretes, latent processes, concealed structures, &c., as mentioned in order under the Twenty-first Aphorism; that at length, like faithful guardians, we might possess mankind of their fortunes, and release and free the understanding from its minority, upon which an amendment of the state and condition of mankind, and an enlargement of their power over nature, must necessarily ensue. For by the fall man at once forfeited his innocency and his dominion over the creatures, though both of them are, in some measure, recoverable, even in this life: the former by religion and faith, and the latter by arts and sciences. For the world was not

made absolutely rebellious by the curse, but, in virtue of that denunciation, "In the sweat of thy brow shalt thou eat thy bread," is at length, not by disputes or indolent magical ceremonies, but by various real labours, subdued and brought in some degree to afford the necessaries of life.

END OF VOL. II.

## ERRATA IN VOL. I.

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Pages 119, 139, 153, read "Blackbourne."

Page 161, note ; insert semicolon after "minuteness of detail," line 9 from bottom ; and after "in half a page," line 8 from bottom.

Page 162, note ; insert semicolon after "the *Second* volume," line 6 from bottom.

Page 168, line 12 from bottom, for 1628, read 1625.

Page 214, note ; insert — after "before that year," line 6 from bottom.

**B A C O N ;**  
**H I S W R I T I N G S**  
**AND**  
**H I S P H I L O S O P H Y .**

**BY GEO. L. CRAIK, M.A.**

**IN THREE VOLUMES.**

**VOL. III.**

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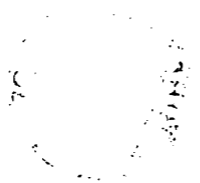
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## PART II.

## BACON'S PHILOSOPHICAL WORKS.

SECTION IV.—THE REMAINDER OF THE INSTAURATIO  
MAGNA, AND THE OTHER PHILOSOPHICAL WRITINGS.

OF the Six Parts of which the *Instauratio Magna* was to consist,\* not one was left by Bacon in a completed state. The treatise *De Augmentis Scientiarum* is merely a substitute for the First; the *Novum Organum*, which was to form the Second, is unfinished;† and of the remaining Parts we have only some portions and fragments. We will now proceed to give an account of the several tracts of which the Third Part of the *Instauratio* is composed, as they are commonly arranged.

At its head is placed a short Latin Dedication to Prince Charles, then heir to the crown, afterwards Charles I., which was originally prefixed to the ‘*Historia Naturalis et Experimentalis ad Condendam Philosophiam*,’ published, in 8vo., in 1622, by Bacon himself, designated by him the Third Part of the *Instauratio Magna*, but containing only the *Historia Ventorum* (or History of the Winds), the first of six similar histories or inquiries which it was designed to include.‡ Of this volume, which is now scarce, a very neat re-impression, in 12mo., in which certain other tracts were also included, was produced at Leyden in 1638; and there is an English translation of the entire contents of this latter volume “by R. G., Gent.” originally printed, in 12mo., at London, in 1653, and reprinted in the Second Part of the *Resuscitatio*, 1670. The principal portion of the volume

\* See Vol. ii. p. 25. † See Vol. ii. p. 214.

‡ See Vol. ii. p. 6.

of translations by R. G. has also been adopted by Mr. Montagu. Shaw has, with unaccountable perverseness, given the *History of the Winds* and what we have of the other similar Histories as portions of the Fourth Part of the *Instauratio*, nowhere, as far as we have observed, even deigning to notice Bacon's own express declaration that they belong to Part Third. In the Dedication to Prince Charles, Bacon describes what he now presents as the first fruits of his intended Natural History (*Primitias Historiæ nostræ Naturalis*); and he has bound himself, he says, as it were by a vow, that he shall every month that he may be allowed to live finish and produce, or publish (*edituros*), one or more of the other parts of it, according as the subjects may be more or less difficult or extensive. Others, he hopes, may perhaps be moved by his example to the like industry.

Then follows, in the common arrangement of the Third Part of the *Instauratio*, a short treatise entitled 'Parasceve (more properly printed *Parasceue*) ad Historiam Naturalem et Experimentalem' (A Preparation for Natural and Experimental History). This was originally published at the end of the 'Novum Organum,' folio, 1620. There is a translation of it in the Second Part of the *Resuscitatio*, by a writer who signs himself W. W. at the end of a short address to the reader, in which he considers the *Parasceue* as an introduction to the *Sylva Sylvarum*. Another translation, apparently by Mr. Wood, is given by Mr. Montagu in his 14th volume. Shaw gives his translation, or paraphrase, of it as part of an Introduction to the *Sylva*.

In a second or extended title the *Parasceue* is called 'Descriptio Historiæ Naturalis,' &c., that is, 'A Description of Natural and Experimental History, such as may be sufficient in itself, and may serve for laying the basis and foundations of a True Philosophy.' In a short introduction Bacon explains that his reason for publishing his *Instauratio* in portions is, that so much of it at least may be placed out of danger. This consideration has induced him to add to the *Novum Organum* the present Description and Delineation of Natural and Experi-

mental History, embracing materials for the Work of the Interpreter (*Opus Interpretis*), which is to follow it. Its proper place, it might be thought, would rather be when he should have come in the order of his inquiry to the Preparatives.

But it seems to us a wiser part (he proceeds, in the version of W. W.), rather to anticipate it than to tarry for its proper place, because that such an history, as we design in our mind, and shall presently describe, is a thing of exceeding great weight; nor can it be compassed without vast labour and charges, as that which stands in need of many men's endeavours; and, as we have elsewhere said, is a work truly regal. Wherefore we think it not amiss to try, if happily these things may be regarded by others; so that while we are perfecting in order those things which we design, this part, which is so various and burdensome, may in our lifetime, if so it please the Divine Majesty, be provided and prepared, others adjoining their labours to ours in this occasion; especially seeing that our strength, if we should stand under it alone, may seem hardly sufficient for so great a province: for, as for the business itself of the intellect, possibly we shall be able to conquer that with our own strength; but the materials of the understanding are of so large an extent, that those must be gained and brought in from every place, as it were by factors and merchants. Besides we esteem it as a thing scarce worthy our enterprise, that we ourselves should spend time in such a business as is obtainable by almost all men's industries. But that which is the main of the business we will now ourselves perform, which is to propound diligently and exactly the manner and description of such a sort of history as may satisfy our intention, lest men, not being admonished, should loiter out their times, and order themselves after the example of the *Natural Histories* now in use, and so should stray far from our intention.

First, then, he proposes to give some general precepts for the compiling of a History of this kind, and then to lay a particular figure, or exemplification, of it before the eyes of men. Such a History he is wont to call First History, or Mother History.

The remainder of the treatise is digested into ten Aphorisms. They comprise, however, only the general

precepts, and contain scarcely any thing worthy of note that is not to be found in the *Advancement of Learning* or the *De Augmentis*.

But the *Aphorisms* are followed, as originally published along with the *Novum Organum*, by what is called 'A Catalogue of Particular Histories, arranged according to Chapters' (*Catalogus Historiarum Particularium, secundum Capita*), which may perhaps be intended for the particular figure of First History promised in the introductory remarks to the *Parasceue*. The Catalogue is divided from the *Aphorisms* by a blank leaf; but the paging runs on, the blank leaf being reckoned though not numbered. The Catalogue, however, is not included by W. W. in his translation. Mr. Montagu has printed a translation of it by Mr. W. G. Glen; and it is also given by Shaw in his Introduction to the *Sylva Sylvarum*. The Histories enumerated are 130 in all; namely, 21 to which no heading is prefixed, but which all relate to the elements, constituent parts, principles, and processes of General Nature; 4 entitled Histories of the Greater Masses; 15 Histories of Species; 88 Histories of Man (including his inventions, works, &c.); and 2 of Mathematical subjects (Numbers and Figures).

The next tract is a fragment of a larger work which had been entitled 'Abecedarium Naturæ' (The Alphabet of Nature). It was first published by Tenison in the *Baconiana* (1679), along with an English translation. In his *Introduction* Tenison observes that the *Abecedarium* was commonly said to be lost, and is well nigh so, the latter part of it only remaining. "This work," he adds, "is said to be a metaphysical piece; but it is not so in the strictest sense. Its principal design is the partition of things into their several classes; a design which his Lordship brought to more perfection in his *Organon* and book *De Augmentis Scientiarum*. And, though in it were handled conditions of things, yet not abstractly from all body, but with reference to it. And therefore his lordship did not call it *Abecedarium verphysicum*, but the *Alphabet of Nature*. And his

lordship giveth express caution in his book of *Advancement* that, where he speaks of conditions of entities, which are called transcendental (such as *Much, Little, The Same, Diverse, Possible, Impossible*), he be not interpreted in a logical, but physical sense. His lordship was much averse to high and useless speculations, and he was wont to express that averseness in the following comparison:—The lark, said he, is an high flyer, and in its flight does nothing but sing; but the hawk flies high, and thence descends and catches its prey." It is not possible, however, to make much, or almost anything, of this fragment. It begins by an enumeration of six Inquisitions respecting the Greater Masses in Nature, which are designated by the six last letters of the Greek Alphabet. What follows about the Conditions of Entities, the Form of the Alphabet, &c., seems to be little more than an undigested miscellany of hints.

Next, in the arrangement of the Third Part of the *Instauratio*, is inserted, as a Preface to the Natural History, a discourse first published in Gruter's collection (1658) as the Preface to a number of pieces entitled by him 'Phænomena Universi, sive Historia Naturalis ad Condendam Philosophiam,' and forming a portion of what he calls the *Impetus Philosophici*. A few sentences of it are translated by Shaw in the Introduction to the *Sylva*. Bacon here points out the necessity of a correct and comprehensive natural history—that is, an arranged collection of facts, ascertained whether by observation or experiment, appertaining to every department of nature—as the only possible foundation on which to erect a true philosophy; and inveighs against the various defects of such collections of this kind as had hitherto been formed. This is done with great copiousness of illustration and felicity of expression; but the considerations dwelt upon and the general strain of the reasoning are for the most part the same as in the *De Augmentis* and the *Novum Organum*. With regard to his own collections of natural facts, the most usual course, he observes, would be to begin with the phenomena of the air; but he, remitting nothing of the severity of his

system, will first take in hand those things which constitute or relate to that more general nature of which either globe is participant. He will begin, therefore, with the history of bodies according to that difference which seems the most simple: namely, the plenty or paucity of matter contained and extended within the same space or boundary. For, whilst among our affirmations respecting nature there is none more true than the twin proposition, that nothing can come out of nothing, nor anything be reduced to nothing, but that the actual quantity of nature, or universal sum of matter, is unalterably permanent and constant, and can by no means be either increased or diminished; this also is not less certain, although it has not been so distinctly noted or asserted (whatsoever men may be wont to fable about the equable power of matter in regard to forms), that, of the actual quantity of matter, more or less is contained within the same dimensions of space according to the diversity of the bodies by which the said spaces are occupied, some bodies being evidently more compact, others more extended or diffused.\* Thus a vessel or hollow does not contain equal portions of matter when it is filled with water and when it is filled with air; but more in the one case, and less in the other. Wherefore, if any one should assert that from a certain mass of water an equal mass of air could be produced, it would be the same as if he should say that something could be produced out of nothing. From all this, and much more that follows, it would appear that, when he wrote the present Preface, Bacon's intention was to commence his Natural History with the treatise entitled *Historia Densit et Rari* (the History of Density and Rarity). This, however, has escaped the attention of all his editors.

Next, in the common arrangement of the Third Part of the *Instauratio Magna*, we have the List of the Histories and Inquisitions designed by Bacon for the first six months during which he was to employ himself in

\* All the editors of Bacon's works, following Gruter, have printed this passage in such a manner as to make it unintelligible, dividing what is evidently one sentence into two.

compiling his body of Natural History, as it is printed in the volume containing the *Historia Ventorum* (1622) immediately after the Dedication. The six Histories are : 1. The History of the Winds ; 2. The History of Density and Rarity, and of the Coming together and Expansion of Matter in Spaces ; 3. The History of Gravity and Levity ; 4. The History of the Sympathy and Antipathy of Things ; 5. The History of Sulphur, Mercury, and Salt ; 6. The History of Life and Death. But this order, although it has been followed by the editors of the *Instauratio*, is evidently founded upon no scientific principle, nor has it been anywhere announced by Bacon as the order which he meant to adopt in the final arrangement of the work ; it is merely the order in which he proposed to execute certain portions of it. Nor are these six Histories by any means all of which the work was to consist.

The list of the Six Histories is followed, as in Bacon's own publication of 1622, by another discourse upon the general subject of Natural History. A small portion of this disquisition also is inserted by Shaw in the medley which he gives us as the Introduction to the *Sylva Sylvarum*. It is given in full in R. G.'s translation of the 'History of the Winds, &c.' (1653 and 1670). Bacon here observes that in early times the world swarmed with theories or rather fables professing to be systems of the universe, and that even in later days, although the speculations of men had been somewhat more restrained by the discipline of schools and colleges, such fanciful system-making had by no means altogether ceased ; witness Patricius, Telesius, Brunus, Severinus the Dane, Gilbert the Englishman, Campanella, all of whom had advanced upon the stage, and produced their new fables, although they had neither been greeted with much applause nor distinguished by any great elegance of construction.

But of late (he proceeds, as the substance of the passage is given by Shaw), by the doctrine of certain learned men, joined perhaps with some dislike of the former licentiousness and difference in opinions, the sciences are confined to a few par-

ficular authors; and in this confinement impose upon the old and prejudice the young, insomuch that everything is transacted as it were by an edict; and authority goes for truth, not truth for authority. This kind of discipline, however useful it may be for the present, yet certainly excludes and banishes much better things. Indeed we all experience and imitate the sin of our first parents; they would be as gods: but we go farther, for we will be creating new worlds, ever going before and lording it over nature, and would have all things be as seems best to our own folly, not to the divine wisdom, or as they are in nature. And it is a question whether we distort things or our own minds the most, but we certainly stamp the seal of our own image upon the creatures and works of God, instead of carefully inspecting and acknowledging the seals of the Creator; whence it is but just that we are again fallen from our empire over the creation: and thus, though after the first fall man had still some dominion left him over the rebellious creatures, so as by true and solid arts to subdue and bend them to his purpose, yet, by our pride and desire of being like God, and following the dictates of our own reason, we have in great measure lost it; therefore if we have any humility towards the Creator, if we have any reverence and esteem of his works, if we have any charity towards men, or any desire of relieving their miseries and necessities, if we have any love for natural truths, any aversion to darkness, and any desire of purifying the understanding, mankind are to be most affectionately entreated and beseeched to lay aside, at least for a while, their preposterous, fantastic, and hypothetical philosophies, which have led experience captive, and childishly triumphed over the works of God, and now at length condescend, with due submission and veneration, to approach and peruse the volume of the creation, dwell some time upon it, and, bringing to the work a mind well purged of opinions, idols, and false notions, converse familiarly therein. This volume is the language which has gone out to all the ends of the earth, unaffected by the confusion of Babel; this is the language that men should thoroughly learn, and not disdain to have its alphabet perpetually in their hands; and in the interpretation of this language they should spare no pains, but strenuously proceed, persevere, and dwell upon it to the last.

To promote this capital end we are willing to leave, for the present, many principal parts of our *Novum Organum*, or new logic, unfinished, as choosing to set on foot and promote all



the parts of our Instauration rather than to perfect a few of them ; with this ardent and constant desire, that what was never attempted before may not now be attempted in vain. We have also considered that though doubtless there are spread over Europe great numbers of extensive, free, sublime, penetrating, solid, and settled geniuses, some whereof may perceive and perhaps approve the scope and use of our new logic, and yet not know how to proceed and apply themselves to real philosophy. If the business depended upon the reading of philosophical books, dispute, or force of thought, they might be abundantly qualified for it, but, as we refer them to the history of nature and the experiments of arts, they may stick here as at a thing unsuitable, or requiring too much time and expense, whilst we cannot desire any one should quit his former knowledge before we put him in possession of better. But after a faithful and copious history of nature and arts shall be collected, digested, laid before, and opened to mankind ; there are hopes that such great geniuses as those above mentioned, who both in ancient and later times have been so ready and expert, as by wonderful artifice and workmanship to build systems of philosophy from the poorest materials, will not fail to raise more solid structures when possessed of good and sound materials for the purpose ; and this though they should choose to proceed in the old way rather than in that laid down by our new logic, which appears to us either the only one or the best for the purpose ; so that upon the whole, though our new logic were perfected, yet could it not greatly promote the re-establishment of the sciences without the natural history we speak of, whilst this natural history may greatly promote the same end without the assistance of our new logic ; and therefore we judge it most advisable, first, and above all things, to endeavour at procuring this history.

This is followed by what is entitled *Norma Historiæ Præsentis* (The Rule or Method of the Present History) ; by which, however, it is plain that we are to understand, not the History of the Winds, but the proposed Natural and Experimental History in its whole extent. Bacon here says, to adopt the translation of R. G. :—

To the titles comprehended in the catalogue, which belong to the Concretes, we have added the titles of the abstract natures ; of which, as of a reserved history, we made mention

in the same place. These are the various figurations of the matter or forms of the first classes, simple motions, sums of motions, measures of motions, and some other things; of these we have made a new alphabet and placed it at the end of this volume. We have taken titles (being no way able to take them all), not according to order, but by choice; those, namely, the inquisition of which, either for use was most of weight, or for abundance of experiments most convenient, or for the obscurity of the thing most difficult and noble, or by reason of the discrepancy of titles among themselves most open to examples. In each title, after a kind of an entrance or preface, we presently propound certain particular topics or articles of inquisition, as well to give light to the present inquisition as to encourage a future. For we are masters of questions, but not of things; yet we do not in the history precisely observe the order of questions, lest that which is for an aid and assistance should prove a hinderance.

He then describes the manner in which he proposes to expound the several subjects, and concludes:—"It appears from what has been stated that the present History will not only serve in place of the Third Book of the Instauration, but will be a preparation by no means to be despised for the Fourth, by means of the Titles from the Alphabet and the Topics: and for the Sixth, by means of the greater observations, comments, and canons." But it is to be remembered that the scheme thus laid down was never more than very partially executed; in particular, of the *Novum Abecedarium*, or New Alphabet, which is spoken of as placed at the end of the volume, we have only the fragment printed by Tenison; the volume at the end of which it was Bacon's intention that it should stand was the volume of his general Natural and Experimental History. The modern editors of the *Instauration* appear to have quite overlooked all this.

The 'History of the Winds,' to which we now come, occupies about 240 widely printed octavo pages in the original edition of 1622. It has been translated both by R. G. and by Shaw, who, however, as already noticed, has chosen to place it and the other Histories in the Fourth Part of the *Instauration*.

Like the other Histories, it commences with what Bacon calls an *Aditus*, literally an Entry or Avenue, by way of preface or introduction. The *Aditus* is thus rendered by Shaw :—

The winds may be called the wings of mankind; by means whereof men fly through the sea, and maintain traffic and correspondence with all the parts of the globe. They are also the sweepers of man's habitation, the earth; and at the same time brush and cleanse the air about it. On the other hand they sometimes tear up and enrage the sea, that would otherwise remain quiet or undestructive, and have likewise other mischievous effects. Again, they produce strong and violent motions without human assistance; and thus, as servants to mankind, drive our ships and turn our mills. They might also be applied to abundance of other useful purposes, if men would exert their diligence. The nature of the winds is usually reckoned an occult and secret thing; and no wonder, whilst the nature and power of the air, which the winds administer to and wait upon (as, in the language of the poets, *Æolus* does on *Juno*), remain absolutely unknown. They are not primary creatures, or of the first six days' work, as to their action, no more than the other meteors, but were produced later in the order of creation.

Then are set down what are called *Particular Topics*, that is, articles of inquisition, or questions, relating to the Winds. Thirty-three questions are enumerated in all; and the remainder of the treatise consists of facts having reference to these questions, arranged under heads, and interspersed, though sparingly, with occasional observations. It will suffice for our purpose to subjoin a few of the more notable of these facts, in doing which we shall avail ourselves of R. G.'s not very polished, but generally intelligible enough translation :—

There are some whole countries where it never rains, or at least, very seldom; but there is no country where the wind doth not blow, and that frequently.

In our seas in Europe, when it is fair dry weather, and no particular winds stirring, there blows a soft kind of gale from the east, which followeth the sun.

Those who will not have Columbus to have conceived such a strong opinion concerning the West Indies by the relation of

a Spanish pilot, and much less believe that he might gather it out of some obscure footsteps of the ancients, have this refuge: that he might conjecture there was some continent in the west by the certain and stayed winds which blew from them towards the shores of Lusitania, or Portugal—a doubtful and not very probable thing, seeing that the voyage of winds will hardly reach so large a distance. In the mean time there is great honour due to this inquisition, if the finding of this new world be due to one of those axioms or observations, whereof it comprehends many.

Wheresoever are high and snowy mountains, from thence blow stayed winds until that time as the snow be melted away.

I believe also that from great pools which are full of water in the winter, there blow stayed winds in those seasons, when as they begin to dry up with the heat of the sun; but of this I have no certainty.

Wheresoever vapours are engendered in abundance, and that at certain times, be sure that stayed winds will blow there at the same times.

If stayed and certain winds blow anywhere, and the cause cannot be found near at hand, assure yourself that those certain winds are strangers, and come from far.

It hath been observed that stayed winds do not blow in the night-time, but do rise about three hours after sun-rising. Surely such winds are tired, as it were, with a long journey, that they can scarcely break through the thickness of the night-air, but being stirred up again by the rising of the sun, they go forward by little and little.

The word of attending winds is ours, and we thought good to give it, that the observation concerning them be not lost nor confounded. The meaning is this: divide the year, if you please (in what country soever you be), into three, four, or five parts; and if any one certain wind blow there, two, three, or four of those parts; and a contrary wind but one; we call that wind which blows most frequently the customary or attending wind of that country, and likewise of the times.

*Injunction.* Humane diligence hath almost ceased and stood still in the observation of attending winds in particular places, which, notwithstanding, should not have been, that observation being profitable for many things. I remember I asked a certain merchant (a wise and discreet man) who had made a plantation in Greenland, and had wintered there, why that country was so extreme cold, seeing it stood in a reasonable

temperate climate. He said it was not so great as it was reported, but that the cause was two-fold. One was, that the masses and heaps of ice which came out of the Scythian sea, were carried thither. The other (which he also thought to be the better reason), was because the west wind there blows many parts of the year more than the east wind, as also, said he, it doth with us: but there it blows from the continent, and cold, but with us from the sea, and warmish; and, said he, if the east wind should blow here in England so often and constantly as the west wind does there, we should have far colder weather, even equal to that as is there.

The south wind blowing, the sea becomes blue, and more bright than when the north wind blows, which causes it to look darker and blacker.

Beware a northern wind when you sow seed, neither would I wish any one to inoculate or graft in a southern wind.

Leaves fall from trees soonest on the south side; but vine sprouts or stalks bud forth and grow most that way.

Winds are hurtful to wheat and all manner of grain at three times: namely, at the opening and at the falling of the flower, and when the grain itself is ripe; for then they blow the corn out of the ear, and at the other two times either they blast the flower or blow it off.

While the south wind blows, men's breath grows ranker, all creatures' appetites decay, pestilent diseases reign, men wax more slow and dull. But when the wind is northwardly, men are more lively, healthful, and greedy after food. Yet the northern wind is hurtful for them that are troubled with the phthisic cough, gout, or any other sharp defluxions.

In an eastern wind all things visible appear bigger; but in a western wind all audible things are heard further, as sounds of bells and the like.

The east-north-east wind draws clouds to it. It is a proverb amongst the Greeks to compare it to usurers, who by laying out money do swallow it up. It is a vehement and large wind, which cannot remove clouds so fast as they will turn back and press upon it, which is likewise seen in great fires, which grow stronger against the wind.

March winds are far more drying than summer winds, inso-much that such as make musical instruments will stay for March winds to dry the stuff they make their instruments of, to make it more porous and better sounding.

In Wales, in the county of Denbigh, a mountainous and

rocky country, out of certain caves (as Gilbertus relateth) are such vehement eruptions of wind, that clothes or linen laid out there upon any occasion are blown up and carried a great way up into the air.

In Aber-Barry, near Severn, in Wales, in a rocky cliff, are certain holes, to which, if you lay your ear, you shall hear divers sounds and murmurs of winds under ground.

Acosta hath observed that the towns of Plata and Potosa, in Peru, are not far distant one from the other, and both situated upon a high and hilly ground, so that they differ not in that. And yet Potosa hath a cold and winter-like air, and Plata hath a mild and spring-like temperature; which difference it seems may be attributed to the silver mines which are near Potosa; which showeth that there are breathing-places of the earth, as in relation to hot and cold.

There are certain wells in Dalmatia and the country of Cyrene (as some of the ancients record), into which if you cast a stone, there will presently arise tempests, as if the stone had broken some covering of a place in which the force of the winds was enclosed.

It hath been observed that there is a murmuring of woods before we do plainly perceive the winds; whereby it is conjectured that the wind descends from a higher place; which is likewise observed in hills (as we said before), but the cause is more ambiguous by reason of the concavity and hollowness of the hills.

Wind follows darted or (as we call them) shooting stars, and it comes that way as the stars hath shot, whereby it appears that the air hath been moved above before the motion comes to us.

Small stars are not seen before the rising of winds, though the night be clear and fair; because, it should seem, the air grows thick, and is less transparent by reason of that matter which afterward is turned into wind.

The rainbow, which is, as it were, the lowest of meteors, and nearest to us, when it doth not appear whole, but curtailed, and, as it were, only some pieces of the horns of it, is dissolved into winds as often or rather oftener than into rain.

There arise many great and strong winds some hours before the eclipse of the moon: so that if the moon be eclipsed in the middle of the night, the winds blow the precedent evening; if the moon be eclipsed towards the morning, then the winds blow in the middle of the precedent night.

It is reported here in England, that, in those days that Gascoigne was under our jurisdiction, there was a petition offered to the king by his subjects of Bordeaux and the confines thereof, desiring him to forbid the burning of heath in the counties of Sussex and Southampton, which bred a wind towards the end of April which killed their vines.

It is thought that the sound of bells will disperse lightning and thunder; in winds it hath not been observed.

Pliny relates that the vehemence of a whirlwind may be allayed by the sprinkling of vinegar in the encounter of it.

It is reported of Mount Athos, and likewise of Olympus, that the priests would write in the ashes of the sacrifices which lay upon the altars built on the tops of those hills, and when they returned the year following (for the offerings were annual) they found the same letters undisturbed and uncanceled, though those altars stood not in any temple, but in the open air; whereby it was manifest that in such a height there had neither fallen rain nor wind blown.

They say that on the top of the Peak of Teneriffe, and on the Andes betwixt Peru and Chili, snowlieth upon the borders and sides of the hills, but that on the tops of them there is nothing but a quiet and still air, hardly breathable by reason of its tenuity: which also, with a kind of acrimony, pricks the eyes and orifice of the stomach, begetting in some a desire to vomit, and in others a flushing and redness.

If the south wind begin to blow two or three days, sometimes the north wind will blow presently after it. But if the north wind blows as many days, the south wind will not blow until the wind have blown a little from the east.

When the year is declining, and winter begins after autumn is passed, if the south wind blows in the beginning of winter, and after it comes the north wind, it will be frosty winter. But if the north wind blow in the beginning of winter and the south wind come after, it will be a mild and warm winter.

Pliny quotes Eudoxus to show that the order of winds returns after every four years, which seems not to be true, for revolutions are not so quick. This, indeed, hath been by some men's diligence observed, that greatest and most notable seasons (for heat, snow, frost, warm winters, and cold summers) for the most part return after the revolution of five-and-thirty years.

It hath been seen sometimes at sea that winds have come from contrary parts together, which was plainly to be perceived

by the perturbation of the water on both sides, and the calmness in the middle between them; but after those contrary winds have met, either there hath followed a general calm of the water everywhere, namely, when the winds have broken and quelled one another equally, or the perturbation of the water hath continued, namely, when the stronger wind hath prevailed.

In our greatest Britain ships (for we have chosen those for our pattern) there are four masts, and sometimes five, set up one behind the other, in a direct line drawn through the middle of the ship, which masts we will name thus:—

The mainmast, which stands in the middle of the ship, the foremast, the mizenmast (which is sometimes double), and the spritmast.

Each mast consists of several pieces, which may be lifted up and fashioned with several knots and joints, or taken away: some have three of them, some only two.

The spritsail mast from the lower joint lies bending over the sea, from that it stands upright; all the other masts stand upright.

Upon the masts hang ten sails, and when there be two mizenmasts, twelve; the mainmast and foremast have three tires of sails, which we will call the mainsail, the topsail, and the maintopsail: the rest have but two, wanting the main-topsail.

The sails are stretched out across near the top of every joint of the mast by certain beams which we call yards, to which the upper parts of the sails are fastened; the lower parts are fastened with ropes at each corner, the mainsails to the sides of the ship, top and maintopsails to the yards which are next below them.

The yard of every mast hangs across, only the yards of the mizenmasts hang sloping, one end up and the other down; in the rest they hang straight across the masts like unto the letter T.

The mainsails of the mainmast, foremast, and bowsprit are of a quadrangular parallelogram form; the top and maintop sails somewhat sharp, and growing narrow at the top; but the top mizensails are sharp, the lower or main sails triangular.

In a ship of eleven hundred ton, and which was one hundred and twelve foot long in the keel, and forty in breadth in the hold, the mainsail of the mainmast was two-and-forty foot deep and eighty-seven foot broad.



The topsail of the same mast was fifty foot deep, and eighty-four foot broad at the bottom, and forty-two at the top.

The maintopsail was seven-and-twenty foot deep, and two-and-forty broad at the bottom, and one-and-twenty at the top.

The foremast mainsail was forty foot and a half deep, and seventy-two foot broad.

The topsail was six-and-forty foot and a half deep, and sixty-nine foot broad at the bottom, and six-and-thirty at the top.

The maintopsail was four-and-twenty foot deep, six-and-thirty feet broad at the bottom, and eighteen foot at the top.

The mizen mainsail was, on the upper part of the yard, one-and-fifty foot broad; in that part which was joined to the yard, seventy-two foot: the rest ending in a sharp point.

The topsail was thirty feet deep, fifty-seven foot broad at the bottom, and thirty foot at the top.

If there be two mizenmasts, the hindermost sails are less than the foremost about the fifth part.

The mainsail of the bowsprit was eight-and-twenty foot deep and a half, and sixty foot broad.

The topsail five-and-twenty foot and a half deep, and sixty foot broad at the bottom, and thirty at the top.

The proportions of masts and sails do vary, not only according to the bigness of ships, but also according to the several uses for which they are built: some for fighting, some for merchandize, some for swiftness, &c. But the proportion of the dimension of sails is no way proportioned to the number of tons whereof the ships consist, seeing a ship of five hundred tons or thereabout may bear almost as large a sail as the other we spake of, which was almost as big again. Whence it proceeds that lesser ships are far swifter and speedier than great ones, not only by reason of their lightness, but also by reason of the largeness of their sails in respect to the body of the ship; for, to continue that proportion in bigger ships would be too vast and impossible a thing.

By this motion of the winds in the sails of ships (if it be a merry and prosperous gale) a merchant's ship may sail six score Italian miles in four-and-twenty hours; for there are certain packet-boats which are built a purpose for swiftness (that are called Caravels) which will go further. But when the wind is clean contrary, they fly to this last refuge, and a very weak one, to go on their course, namely, to proceed sideways, as the wind will suffer them, out of their course, then

turn their way again towards their course, and so proceed in an angular way; by which progression (which is less than creeping, for serpents creep on by crooked turnings, but they make angles) they may in four-and-twenty hours go fifteen miles' journey. By long observation, the fifth day of the moon is feared by mariners for stormy.

If the new moon do not appear before the fourth day, it foreshows a troubled air for the whole month.

If the new moon, at her first appearance or within a few days after, have its lower horn obscure or dusky, or any way blemished, it signifies stormy and tempestuous days before the full moon: if it be ill coloured in the middle, tempests will come about the full of the moon; if it be so about the upper part of the horn, they will be about the decreasing of the moon.

If at the fourth rising the moon appear bright, with sharp horns, not lying flat, nor standing upright, but in a middle kind of posture between both, it promises fair weather for the most part, until the next new moon.

If at the same rising it be red, it portends winds; if dusky or black, rain; but, howsoever, it signifies nothing beyond the full moon.

An upright moon is almost always threatening and hurtful, but it chiefly portends winds; but if it have blunt horns and, as it were, cut off short, it rather signifies rain.

If one horn of the moon be sharp and the other blunt, it signifies wind; if both be blunt, rain.

If a circle or halo appear about the moon, it signifies rain rather than wind, unless the moon stands directly within that circle, for then it signifies both.

Circles about the moon always foreshow winds on that side where they break, also a notable shining in some part of the circle signifies winds from that part where the shining is.

If the circles about the moon be double or treble, they foreshow horrible and rough tempests, and especially if these circles be not whole, but spotted and divided.

Full moons, as concerning the colours and circles, do in a manner foreshow the same things as the fourth rising, but more present, and not so long delayed.

The globe of flame which the ancients called *Castor*, which is seen by mariners and sea-faring men at sea, if there be but one, presages a cruel tempest (*Castor* is the dead brother), and much more if it stick not close to the mast, but dances up and

down. But if they be twins (and Pollux, the living brother, be present), and that when the tempest is high, it is a good presage; but if there be three (namely, if Helen, the plague of all things, come in), it will be a more cruel tempest: so that one seems to show the undigested matter of the storm; two, a digested and ripe matter; three or more, an abundance that will hardly be dispersed.

Fires upon the hearth, when they look paler than they are accustomed, and make a murmuring noise within themselves, do presage tempests; and if the flame rises, bending and turning, it signifies wind chiefly; and when the snuffs of lamps and candles grow like mushrooms with broad heads, it is a sign of rainy weather.

Leaves and straws playing on the ground, without any breath of wind that can be felt, and the down of plants flying about, feathers swimming and playing upon the water, signify that wind is near at hand.

Water-fowls flying at one another, and flying together in flocks, especially sea-mews and gulls, flying from the sea and lakes, and hastening to the banks and shores, especially if they make a noise, and play upon dry land, they are prognostics of winds, especially if they do so in the morning.

But, contrarywise, sea-fowls going to the water, and beating with their wings, chattering, and bathing themselves, especially the crow, are all presages of storms.

Duckers and ducks cleanse their feathers with their bills against wind; but geese, with their importunate crying, call for rain.

A heron flying high, so that it sometimes flies over a low cloud, signifies wind; but kites, when they fly high, foreshow fair weather.

Crows, as it were, barking after a sobbing manner, if they continue in it, do presage winds; but if they catchingly swallow up their voice again, or croak a long time together, it signifies that we shall have some showers.

A chattering owl was thought by the ancients to foretel change of weather: if it were fair, rain; if cloudy, fair weather; but with us the owl making a clear and free noise, for the most part signifies fair weather, especially in winter.

Birds perching in trees, if they fly to their nests, and give over feeding betimes, it presages tempest; but the heron standing, as it were, sad and melancholy upon the sand, or a crow walking up and down, do presage wind only.

Dolphins playing in a calm sea are thought to presage wind from that way they come; and if they play and throw up water when the sea is rough, they presage fair weather; and most kinds of fishes swimming on the top of the water, and sometimes leaping, do prognosticate wind.

Upon the approach of wind, swine will be so terrified and disturbed, and use such strange actions, that country people say that creature only can see the wind and perceive the horridness of it.

A little before the wind, spiders work and spin carefully, as if they prudently forestalled the time, knowing that in windy weather they cannot work.

Before rain the sound of bells is heard further off, but before wind it is heard more unequally, drawing near and going further off, as it doth when the wind blows really.

Pliny affirms for a certain that three-leaved grass creeps together, and raises its leaves against a storm.

He says likewise, that vessels which food is put into will leave a kind of sweat in cupboards, which presage cruel storms.

There lies hidden a flatuous and expansive spirit in quicksilver, so that it doth (in some men's opinions) imitate gunpowder: and a little of it mixed with gunpowder will make the powder stronger. Likewise the chymists speak the same of gold, that being prepared some way, it will break out dangerously, like to thunder; but these things I never tried.

As originally published the 'History of the Winds' had appended to it the *Aditus*, or Introduction, to the other five enumerated Histories. The second History, or that of Density and Levity, was after Bacon's death published from his papers, first by Gruter (1653), among the *Impetus Philosophici* (pp. 337-379), and secondly in a more perfect form by Rawley in the *Opuscula Varia Posthuma* (1658). That History, therefore, now follows the 'History of the Winds.' We believe the only English translation of the 'Historia Densi et Rari' is that inserted by Shaw in the Fourth Part of his arrangement of the *Instauration*, and entitled by him 'A Plan for the Particular History of Condensation and Rarefaction in Natural Bodies.' The following is Shaw's version of the *Aditus*, or Introduction:—

No wonder if nature remain debtor to philosophy and the sciences, when she has never been summoned to an account; for there has hitherto been no careful and regular inquiry, no exact or tolerable estimate made, as to the sum or quantity of matter in nature; nor any notice taken how it is disposed and laid out upon bodies. It is a just axiom that nothing can be detracted from or added to the sum total of the universe; and some indeed have handled the common-place, how bodies may be relaxed and contracted, in respect of more and less, without admitting a vacuum between: but for the nature of condensation and rarefaction, one attributes it to a greater and less quantity of matter; another eludes the point; whilst the generality following their author, think to discuss and settle the whole matter by that trifling distinction of art and power. And even they who attribute condensation and rarefaction to the different quantities of matter, which is the true notion, and do not totally deprive the *materia prima* of quantity; though for other forms they require it to be indifferent, yet here end their inquiry, and look no farther without perceiving the consequence: thus slightly passing over, or at best not fully pursuing a consideration which regards infinite particulars, and is in a manner the foundation of all natural philosophy.

To proceed, therefore, upon what has been justly laid down in all the transmutation of bodies; matter can never be annihilated, but it requires the same omnipotent power to annihilate as to create out of nothing; neither of which ever happens in the course of nature, so that the original quantity of matter remains still the same, without addition or diminution. And that this original stock of matter is differently portioned out among bodies cannot be doubted; for it were madness, by abstract subtilties, to pretend that one hogshead contains as much water as ten hogsheads of water; or, that one hogshead of air contains as much as ten hogsheads of air. But though it be admitted that the quantity of matter rises in proportion to measure in the same body, this is still questioned in bodies of different kinds: but if it be demonstrated that one hogshead of water turned into air will make ten hogsheads of air (and it may rather be proved to make a hundred), there is an end of the dispute, for in this case the water and the air are the same body, now contained in ten hogsheads, though before it was contained in one: and therefore to assert that one whole hogshead of water may be converted into but one whole hogshead of air, is in effect to assert that something may be reduced to nothing;

for in this case one-tenth part of the water is sufficient, and the other nine parts must then be annihilated: so, on the contrary, to assert that a hogshead of air is convertible into a hogshead of water, is to assert that something may be created out of nothing; for the hogshead of air will make but the tenth part of a hogshead of water, and therefore the other nine parts must be produced from nothing.

We shall, however, ingenuously confess it a difficult task to settle and ascertain the exact proportions and quantities of matter contained in different bodies, and to show by what industry and sagacity a true information may be had thereof; though the great and extensive usefulness of the inquiry may abundantly reward the pains that shall be bestowed upon it: for to understand the density and the rarity of bodies, and much more how to procure and effect their condensation and rarefaction, is a thing of the utmost importance, both in speculative and practical philosophy; therefore as the inquiry is, perhaps, of all others the most fundamental and universal, we should come to it well prepared, for all natural philosophy is a perfectly loose and untwisted thing without it.

This History, it therefore appears, is in reality mainly an inquiry into what is now called the specific gravity, or, as Bacon terms it, the comparative gravity (*gravitas comparata*), of different substances. Instead of distilled water, which is now commonly employed as the standard of comparison, he adopts pure gold as his standard. But his tables of specific gravities, if they were narrowly examined, would probably be found to exhibit much more serious discordances with the results of modern investigation than this. Bacon himself, however, distinguishes density and rarity throughout from gravity and levity, venturing to affirm only that the latter qualities appear to have a general consent or agreement with the former. And he had also, as we have seen, proposed a separate 'History of Gravity and Levity.' Much of the present investigation, besides, is occupied with the subject of heat and cold.

The 'History of Density and Rarity' shows all Bacon's wonted activity and patience in the collection of facts, and also considerable ingenuity in many of the experiments which are detailed or suggested; though it would

be difficult to detect in the conduct of the inquiry the regular application either of what he has propounded in the *Novum Organum* as his own novel method, or of any other. But it does not contain many things that are now of much interest in any point of view. The following extracts from Shaw's version will afford a sufficient specimen of the work :—

We know of nothing heavier than pure gold ; nor has any method yet been found of increasing the gravity of pure gold by art.

But lead has been observed to increase both in bulk and weight ; especially by lying in cellars underground, where bodies readily grow mouldy. This has principally been observed in stone statues ; the feet whereof, where fastened together with bands of lead, that have been found swelled so that some parts thereof hung prominent or pendulous, like warts upon the stone. But whether this were really an increase of the lead or only a sprouting of its vitriol, should be farther examined.

Having once, by accident, left a cut citron in a parlour for two months in the summer, I afterwards found a sprouted putrefaction on the part that was cut, appearing to rise in certain hairs, the height of an inch ; and on the top of each hair grew a head like the head of a small iron nail, thus plainly beginning to resemble a plant.

Air is simply dilated by heat ; for in this case there is nothing separated or emitted, as in tangible bodies ; but barely an expansion made.

In the case of cupping-glasses, when the glass and the air it contains are heated, the glass is applied to the skin ; and soon after the air which was dilated by the heat, gradually contracts itself as the heat decreases, upon which the flesh is thrust into the glass by the motion of connexion. If it be desired that the cupping-glass should draw stronger, let a sponge be dipped in cold water and applied to the belly of the glass ; for by this coolness the internal air will be more contracted, and the attraction of the glass increased.

If a glass be heated and inverted into water, it will attract the water, so as to fill a third part of the cavity ; whence it is plain that the air was rarefied by the heat in that proportion. But if instead of a thin glass, which will not bear a great heat without danger of breaking, an iron or copper vessel were

employed and heated to a greater degree, we judge that air might be dilated above twice or thrice more, which is an experiment very well worth trying; as likewise to ascertain the degree whereto the air may be rarefied, that we may the better judge of its degree of rarefaction in the upper regions, and thence of the ether itself.

It appears very plain from the thermometer, that a small increase of heat may prodigiously expand the air, so that the hand laid upon the glass, a few rays of the sun, or even the breath of the bystanders, shall affect it; nay, the tendencies of the external air to cold and heat, though imperceptible to the touch, do yet constantly dilate and contract the air in the glass.

Hero describes an altar built so artificially, that when the offering is lit up thereon, water shall of a sudden descend and put out the fire. No other contrivance is requisite to this purpose than to leave a close hollow space under the altar, filled with air, which being heated by the fire, and consequently dilated, shall find no exit but through a pipe rising along the wall of the altar; and having its mouth bent down at last so as to discharge upon the altar. This upright pipe was filled with water, and had a belly in the middle that it might contain the larger quantity, and a stop-cock at the bottom to prevent the water from falling through; which stop-cock being turned, admitted the dilated air to rise up and drive out the water.

It was the invention of Fracastorius to recover persons from apoplectic fits, by applying a heated metalline pan, at some distance, round the patient's head, in order to dilate, excite, and revive the spirits stagnating, congealed, or blocked up by the humours in the cells of the brain.

Bullets likewise shot from a gun, after their projectile motion entirely ceases, so as that to the eye they shall seem perfectly at rest, yet a great shuddering motion or pulsation will be found in their small parts for a long while after; insomuch that if any proper matter be laid upon them it will thence receive and manifest a considerable force; and this proceeds not so much from the burning heat as from the tremor of percussion.

Rods of wood being fresh gathered and kept turning in hot embers, acquire a softness, whence they may be bent at pleasure: and this experiment should be tried in old rods and canes.



Combustible bodies open so as by fire first to emit a fume, then to take flame, and lastly fall into ashes. . . .

There are certain ways of killing and destroying metals, so that when dissolved and opened they shall be no longer capable of reduction. And something of this kind appears remarkably in quicksilver; which, if forcibly ground along with a little turpentine, spittle, &c., the quicksilver is killed, and thence acquires an aversion to recover its pristine form.

A fleece of wool gains weight by lying long upon the earth, which could not happen if some pneumatical matter were not condensed into such as is tangible and ponderous.

It was an ancient practice at sea to spread and hang out fleeces of wool by night on the sides of ships, but so as not to touch the water; and by this means to collect and express a sweet water out of them in the morning, for the service of the voyage.

I have found upon trial that four ounces of wool being fastened to a rope and let down into a well, fifty-six yards deep, but so as to come only within twelve yards of the water, the wool has, in a night's time, acquired the additional weight of an ounce and a drachm; and perfect drops of water have appeared to stick on the outside of the wool, so that one might in a manner have washed one's hands therewith. And this I have several times tried, with different increases of weight, but always somewhat considerable.

In China they have artificial mines of porcelain earth, by burying at some depth underground a certain mass of prepared plaster or cement, which lying thus buried for about forty years, is converted into porcelain. So that these mines are transmitted, like an estate, from father to son.

I have been well assured that an egg, by long lying at the bottom of a moat, was found manifestly petrified, with the colours and distinctions of the shell, white and yolk, still remaining; only the shell was here and there broke, and shone scaly. And I have frequently heard that the white of an egg has been turned to a stony matter; but neither know the truth of the thing nor the manner of doing it.

There are found in the West Indies, even in sandy deserts and dry places, large canes containing in every joint a considerable quantity of sweet water, to the great refreshment of the traveller.

There is said to be a certain tree in one of the Canary Islands that continually distils water, and has a certain dewy cloud always hanging over it. It were highly worth examining,

whether any vegetable has such a potential coldness as to condense air into water. Of this particular, therefore, let diligent inquiry be made; though I rather suspect that these trees are no more than the knotted canes above mentioned.

Upon the smooth leaves of certain trees, as those of the oak, that neither drink in nor preserve moisture, there are found in England sweet, or, as it were, honey-dews like manna, especially in the month of May; but whether this proceeds from any coagulating virtue in the leaves, or whether the leaves only preserve the dew, is not certain.

These statements, of course, are by no means to be taken as all perfectly trustworthy: they are curious not so much in themselves as for the insight they give us into Bacon's mind, into the state both of his opinions and his knowledge. In the end he comes to the following conclusions, which, however, he designates only *Canones Mobiles*, meaning apparently deductions liable to correction from the results of further inquiry:—

The total sum of the matter in the universe ever remains the same, and there is no passage in nature either from nothing or to nothing.

Of this original sum there is more in some bodies and less in others under the same dimensions.

A greater and less quantity of matter afford the true criterions, if rightly understood, of density and rarity.

There is a boundary or limited degree of density and rarity, but not in any subject known to us.

There is no absolute vacuum in nature.

Matter folds and wraps itself up within the bounds of density and rarity, and again relaxes and unbends itself without admitting an absolute vacuity.

The differences of density and rarity in the tangible bodies known to us do not greatly exceed the proportions of thirty-two to one.

The difference between the rarest tangible body and the densest pneumatical body is above a hundred to one.

Flame is rarer than air, and oil than water.

Flame is not rarified air, nor oil rarified water; but they are plainly heterogeneous bodies, without any great relation between them.

The spirits of vegetables and animals are breaths composed

of an aerial and flamy pneumatical substance, as their juices are of one that is aqueous and oily.

All tangible bodies here with us have a pneumatical substance, or spirit, joined to and included in them.

No spirits, such as those of vegetables and animals, are found loose and unconfined amongst us, but shut up and imprisoned in tangible bodies.

Condensation and rarefaction are the proper effects of cold and heat.

Heat operates upon pneumatical bodies by simple expansion.

Heat has two operations upon tangible bodies, and always dilates the pneumatical parts, but sometimes contracts and sometimes relaxes the gross ones.

It observes this rule: when the spirit of the body is discharged, it contracts and indurates, but softens and dissolves when the spirit is detained.

Colliquation begins with expanding the pneumatical parts of the subject; but other dissolutions begin with expanding the gross parts, and setting free the operations of those that are pneumatical.

Next to heat and cold, the most powerful rarifier and condenser of bodies is consent and flight.

Restoration from violence both dilates and condenses, in a contrary tendency to the violence.

Assimilation both dilates and condenses, as the assimilating body is rarer or denser than the body assimilated.

The rarer the body, the greater expansion and contraction it is capable of from external violence, to a certain degree.

If tension or pressure exceeds its bounds in a rare body, such a body frees itself more powerfully than a dense one, as being more active.

The most powerful expansion is that of air and flame conjointly.

Dilation and contraction are but imperfect, where the bodies easily and readily restore themselves.

Density and rarity have a great affinity with gravity and levity.

Man has but little power in the business of condensation, for want of a potent degree of cold.

Age is like a lambent fire, and acts like heat, though in a more exquisite manner.

Age brings bodies either to a state of putrefaction or dryness.

Of the next three enumerated Histories we have only

the *Aditus*, or Introductions, as published at the end of the 'Historia Ventorum' (1622). We give them as translated by R. G.

*The History of Heavy and Light.*—The motion of gravity and lightness the ancients did illustrate with the name of natural motion, for they saw no external efficient nor no apparent resistance, yet the motion seemed swifter in its progress. This contemplation, or rather speech, they seasoned with that mathematical fantasy of the staying or stopping of heavy things at the centre of the earth (although the earth should be bored quite through), and the scholastical invention of the motion of bodies to their several places. Having laid or set down these things, supposing they had done their parts, they looked no further, but only that which some of them more carefully inquired after, namely, of the centre of gravity in divers figures, and of such things as are carried by water. Neither did any of the modern authors do anything worth speaking of concerning this, only by adding some few mechanical things which they had also wrested with their demonstrations. But, laying many words aside, it is most certain that a body cannot suffer but by a body, neither can there be any local motion made, unless it be solicited or set forward, either by the parts of the body itself which is moved or by the adjacent bodies, which either touch it or are near unto it, or are at least within the orb of its activity. So that Gilbertus did not unknowingly introduce magnetic powers, he also becoming a loadstone, namely, drawing more things by those powers than he should have done, and building a ship, as it were, of a round piece of wood.

*The History of the Sympathy and Antipathy of things.*—Strife and amity in nature are the eggers on of motions, and the keys of works. Hence proceed the union and dissension of bodies, hence the mixtion and separation of bodies, hence the high and intimate impressions of virtues, and that which they call joining of actives with passives; finally, they are the great and wonderful works of nature. But this part of philosophy, namely, of the sympathy and antipathy of things, is most impure, which also they call natural magic, and (which always likely comes to pass) where diligence and care hath wanted, there hath hope remained; but the operation thereof in men is merely like unto certain soporiferous medicines which cast one asleep, and do moreover  
 1 and infuse into him merry and pleasant dreams; for

first it casts man's understanding into a sleep, representing unto him specifical properties and hidden virtues, whereby men awake no more, nor look after the finding and searching out of true causes, but acquiesce and lie still in these idle ways; then it insinuates an innumerable company of fictions like unto dreams, and vain men hope to know the nature by the outward shape and show, and by extrinsical similitude to discover inward properties. Their practice also is very like unto their inquiry, for the precepts of natural magic are such, as if men should be confident that they could subdue the earth, and eat their bread without the sweat of their brow, and to have power over things by idle and easy applications of bodies; and still they have in their mouths, and, like undertakers or sureties, they call upon the loadstone and the consent which is between gold and quicksilver; and some few things of this kind they allege for to prove other things which are not bound by any such like contract. But God hath appointed the best of things to be inquired out, and be wrought by labours and endeavours. We will be a little more careful in searching out the law of nature and the mutual contracts of things, neither favouring miracles, nor making too lowly and straightened an inquisition.

*The History of Sulphur, Mercury, and Salt.*—This triple of principles hath been introduced by the chymists, and, as concerning speculations, is of them which they bring the best invention. The most subtile and acute of these, and those who are most philosophical, will have the elements to be earth, water, air, and the sky. And these they will not have to be the matter of things, but the matrixes in which the specifical seeds of things do engender in the nature of a matrix. But for the *materia prima*, or primary matter (which scholars do lay down, as it were, naked and indifferent), they substitute those three, sulphur, mercury, and salt, out of which all bodies are gathered together and mixed. We do accept of their words, but their opinions are not very sound. Yet that doth not ill agree with their opinion, namely, that we hold two of them, to wit, sulphur and mercury (taken according to our sense), to be very first and prime natures, and most inward figurations of matter, and almost chief among the forms of the first classis. But we may vary the words of sulphur and mercury, and name them otherwise oily, waterish, fat, crude, inflammable, not inflammable, or the like; for these seem to be two very great things of the three, and which possess and penetrate the universe, for amongst subterranean

things they are sulphur and mercury, as they are called; in the vegetable and animal kind they are oil and water; in the inferior spiritual things they are air and flame; in the heavenly, the body of a star and the pure sky; but of this last duality we yet say nothing, though it seem to be a probable deciphering. For if they mean by salt the fixed part of the body, which is not resolved either into flame or smoke, this belongeth to the inquisition of fluid and determinate things; but if we take salt according to the letter, without any parabolical meaning, salt is no third thing from sulphur and mercury, but mixed of both, connexed into one by an acrimonious and sharp spirit. For all manner of salt hath inflammable parts, and other parts also which not only will not take fire, but do also abhor it and fly from it. Yet the inquisition of salt being somewhat allied to the inquisition of the other two, and exceeding useful, as being a tie and band of both natures, sulphurous and salt, and the very rudiment of life itself, we have thought fitting to comprehend it also within this history and inquisition. But, in the mean time, we give you notice that those spiritual things, air, water, stars, and sky, we do (as they very well deserve it) reserve them for proper and peculiar inquisitions; and here in this place to set down the history only of tangible, that is to say, mineral or vegetable sulphur and mercury.

The last of the six enumerated Histories, that of *Life and Death*, was completed by Bacon, and published by him, in 8vo., in 1623, with the title of 'Historia Vitæ et Mortis, quæ est Instaurationis Magnæ Pars Tertia.' In this original edition the work fills 454 pages. An anonymous translation of it was published, in a duodecimo volume, in 1638, under the title of "The Historie of Life and Death, with Observations Naturale and Experimentale for the prolonging of Life; written by the Right Honorable Francis Lo: Verulam, Viscount St. Alban.—Printed for Humphrey Mosley at the Prince's Arms in Paul's Church Yard." It is dedicated by the bookseller to the Rt: Worshipful Sir Edward Mosley, Knight, his Majesty's Attorney-General of the Duchy of Lancaster, with whom, however, the dedicator claims no relationship, their names, he says, agreeing "only in denomination." The *Aditus* (called by this anonymous translator the *Access*) is also translated under the title of 'The Entrance' by R. G. at the end of the 'History

of the Winds' (1653). And along with the seventh edition of the *Sylva Sylvarum*, folio, 1658, appeared a new translation of the entire work, under the title of 'History, Natural and Experimental, of Life and Death; or, of the Prolongation of Life.' It was introduced by the following address 'To the Reader' from Dr. Rawley, the editor of the *Sylva*:—

I am to give advertisement that there came forth, of late, a translation of this book by an unknown person, who, though he wished well to the propagating of his lordship's works, yet he was altogether unacquainted with his lordship's style and manner of expressions, and so published a translation lame and defective in the whole. Whereupon, I thought fit to recommend the same to be translated anew by a more diligent and zealous pen, which hath since travailed in it; and though it still comes short of that lively and incomparable spirit and expression which lived and died with the author, yet I dare avouch it to be much more warrantable and agreeable than the former. It is true this book was not intended to have been published in English, but seeing it hath been already made free of that language, whatsoever benefit or delight may redound from it, I commend the same to the courteous and judicious reader.

W. R.

This translation, therefore, may be considered as having been at least sanctioned, if not actually revised, by Rawley. It is, however, very incorrectly printed. There is also a translation by Shaw, by whom this History of Life and Death is made to commence the Fourth Part of the *Instauration*.

The work is preceded by a Dedication, thus given in the translation published by Rawley:—

*To the present Age and Posterity, Greeting.*

Although I had ranked the History of Life and Death as the last amongst my six monthly designations, yet I have thought fit, in respect of the prime use thereof (in which the least loss of time ought to be esteemed precious), to invert that order and to send it forth in the second place. For I have hope and wish that it may conduce to a common good; and that the nobler sort of physicians will advance their thoughts, and not employ their time wholly in the sordidness of cures, neither be honoured for necessity only, but that they will become coadjutors

and instruments of the Divine omnipotence and clemency, in prolonging and renewing the life of man: especially, seeing I prescribe it to be done by safe and convenient and civil ways, though hitherto unassayed. For though we Christians do continually aspire and pant after the land of promise, yet it will be a token of God's favour towards us, in our journeyings through this world's wilderness, to have our shoes and garments (I mean those of our frail bodies) little worn or impaired.

FR. ST. ALBAN.

The *Aditus*, called 'The Preface' in this translation, is as follows:—

It is an ancient saying and complaint, that life is short and art long. Wherefore, it behoveth us, who make it our chiefest aim to perfect arts, to take upon us the consideration of prolonging man's life: God, the author of all truth and life, prospering our endeavours. For though the life of man be nothing else but a mass and accumulation of sins and sorrows, and they that look for an eternal life set but light by a temporary, yet the continuation of works of charity ought not to be condemned even by us Christians. Besides, the beloved disciple of our Lord survived the other disciples: and many of the fathers of the church, especially of the holy monks and hermits, were long lived: which shows, that this blessing of long life, so often promised in the old law, had less abatement after our Saviour's days than other earthly blessings had. But to esteem of this as the chiefest good, we are but too prone. Only the inquiry is difficult how to attain the same; and so much the rather, because it is corrupted with false opinions and vain reports. For both those things which the vulgar physicians talk of, radical moisture and natural heat, are but mere fictions; and the immoderate praises of chemical medicines first puff up with vain hopes, and then fail their admirers.

And as for that death which is caused by suffocation, putrefaction, and several diseases, we speak not now, for that pertains to an history of physic; but only of that death which comes by a total decay of the body, and the inconcoction of old age. Nevertheless, the last act of death and the very extinguishing of life itself, which may so many ways be wrought outwardly and inwardly (which, notwithstanding, have, as it were, one common porch before it comes to the point of death), will be pertinent to be inquired of in this treatise; but we reserve that for the last place.

That which may be repaired by degrees, without a total



waste of the first stock, is potentially eternal : as the vestal fire. Therefore, when physicians and philosophers saw that living creatures were nourished, and their bodies repaired, but that this did last only for a time, and afterwards came old age, and, in the end, dissolution ; they sought death in somewhat which could not properly be repaired, supposing a radical moisture incapable of solid reparation, and which, from the first infancy, received a spurious addition, but no true reparation, whereby it grew daily worse and worse, and in the end brought the bad to none at all. This conceit of theirs was both ignorant and vain ; for all things, in living creatures, are, in their youth, repaired entirely ; nay, they are, for a time, increased in quantity, bettered in quality, so as the matter of reparation might be eternal, if the manner of reparation did not fail. But this is the truth of it : there is, in the declining of age, an unequal reparation ; some parts are repaired easily, others with difficulty and to their loss ; so, as from that time the bodies of men begin to endure the torments of Mezentius—that the living die in the embraces of the dead. And the parts easily reparable, through their conjunction with the parts hardly reparable, do decay. For the spirits, blood, flesh, and fat are, even after the decline of years, easily repaired ; but the drier and more porous parts (as the membranes, all the tunicles, the sinews, arteries, veins, bones, cartilages, most of the bowels, in a word, almost all the organical parts), are hardly reparable, and to their loss. Now these hardly reparable parts, when they come to their office of repairing the other which are easily reparable, finding themselves deprived of their wonted ability and strength, cease to perform any longer their proper functions ; by which means it comes to pass that in process of time the whole tends to dissolution ; and even those very parts, which in their own nature are with much ease reparable, yet through the decay of the organs of reparation can no more receive reparation, but decline, and in the end utterly fail. And the cause of the termination of life is this : for that the spirits, like a gentle flame, continually preying upon bodies, conspiring with the outward air, which is ever sucking and drying of them, do in time destroy the whole fabric of the body, as also the particular engines and organs thereof, and make them unable for the work of reparation. These are the true ways of natural death well and faithfully to be revolved in our minds : for he that knows not the ways of nature, how can he succour her or turn her about ?

Therefore, the inquisition ought to be twofold: the one, touching the consumption or depredation of the body of man; the other, touching the reparation and renovation of the same: to the end that the former may, as much as possible, be forbidden and restrained, and the latter comforted. The former of these pertains especially to the spirits and outward air, by which the depredation and waste is committed; the latter to the whole race of alimention or nourishment, whereby the renovation or restitution is made. And as for the former part, touching consumption, this hath many things common with bodies inanimate or without life. For such things as the native spirit (which is in all tangible bodies, whether living or without life), and the ambient or external air, worketh upon bodies inanimate; the same it attempteth upon animate or living bodies, although the vital spirit superadded doth partly break and bridle those operations, partly exalt and advance them wonderfully. For it is most manifest that inanimate bodies (most of them) will endure a long time without any reparation; but bodies animate, without food and reparation, suddenly fall and are extinguished as the fire is. So, then, our inquisition shall be double: first, we will consider the body of man as inanimate, and not repaired by nourishment; secondly, as animate, and repaired by nourishment. Thus, having prefaced these things, we come now to the topic places of inquisition.

This 'History of Life and Death' is by far the most curious of these Natural Histories compiled by Bacon. Our space, however, will not allow us to extend the following extracts, which we continue to take from the translation published by Rawley:—

Let this be laid for a foundation, which is most sure: that there is, in every tangible body, a spirit or body pneumatical, enclosed and covered with the tangible parts; and that from this spirit is the beginning of all dissolution and consumption, so as the antidote against them is the detaining of this spirit.

Johannes de Temporibus, among all the men of our latter ages, out of a common fame and vulgar opinion, was reputed long-lived, even to a miracle, or rather, even to a fable; his age hath been counted above three hundred years; he was by nation a Frenchman, and followed the wars under Charles the

Great. Gartius Aretine, great-grandfather to Petrarch, arrived at the age of an hundred and four years; he had ever enjoyed the benefit of good health: besides, at the last he felt rather a decay of his strength than any sickness or malady, which is the true resolution by old age. Amongst the Venetians there have been found not a few long-livers, and those of the more eminent sort: Franciscus Donatus, Duke; Thomas Contarenus, Procurator of Saint Mark; Franciscus Molinus, Procurator also of Saint Mark; and others. But most memorable is that of Cornarus, the Venetian, who, being in his youth of a sickly body, began first to eat and drink by measure to a certain weight, thereby to recover his health; this cure turned, by use, into a diet, that diet to an extraordinary long life, even of a hundred years and better, without any decay in his senses, and with a constant enjoying of his health. In our age, William Postel, a Frenchman, lived to an hundred and well nigh twenty years; the top of his beard on the upper lip being black, and not grey at all, a man crazed in his brain, and of a fancy not altogether sound, a great traveller, mathematician, and somewhat stained with heresy.

I suppose there is scarce a village with us in England, if it be any whit populous, but it affords some man or woman of fourscore years of age. Nay, a few years since, there was, in the county of Hereford, a May-game or morris-dance, consisting of eight men, whose ages computed together made up eight hundred years; insomuch that what some of them wanted of an hundred others exceeded as much.

In the Hospital of Bethleem, corruptly called Bedlam, in the suburbs of London, there are found, from time to time, many mad persons that live to a great age.

Not only the goodness or pureness of the air, but also the equality of the air is material to long life. Intermixture of hills and dales is pleasant to the sight, but suspected for long life. A plain moderately dry, but yet not over-barren or sandy, nor altogether without trees and shade, is very convenient for length of life.

Inequality of air (as was even now said) in the place of our dwelling is naught; but change of air by travelling, after one be used unto it, is good; and therefore great travellers have been long-lived. Also those that have lived perpetually in a little cottage, in the same place, have been long-livers; for air accustomed, consumeth less; but air changed, nourisheth and repaireth more.

Fair in face, or skin, or hair, are shorter livers; black, or red, or freckled, longer. Also, too fresh a colour in youth doth less promise long life than paleuess. A hard skin is a sign of long life rather than a soft; but we understand not this of a rugged skin, such as they call the goose-skin, which is as it were spongy, but of that which is hard and close. A forehead with deep furrows and wrinkles is a better sign than a smooth and plain forehead.

The hairs of the head hard, and like bristles, do betoken longer life than those that are soft and delicate. Curled hairs betoken the same thing if they be hard withal, but the contrary if they be soft and shining. The like, if the curling be rather thick than in large bunches.

Early or late baldness is an indifferent thing: seeing many which have been bald betimes have lived long. Also, early grey hairs (howsoever they may seem forerunners of old age approaching) are no sure signs; for many that have grown grey betimes have lived to great years. Nay, hasty grey hairs, without baldness, is a token of long life; contrarily, if they be accompanied with baldness.

Tallness of stature (if it be not immoderate) with convenient making, and not too slender, especially if the body be active withal, is a sign of long life. Also, on the contrary, men of low stature live long, if they be not too active and stirring.

In the proportion of the body, they which are short to the waist, with long legs, are longer lived than they which are long to the waist and have short legs; also, they which are large in the nether parts, and straight in the upper (the making of their body rising, as it were, into a sharp figure), are longer lived than they that have broad shoulders and are slender downwards.

Leanness, where the affections are settled, calm, and peaceable, also a more fat habit of body, joined with choler, and a disposition stirring and peremptory, signify long life; but corpulency in youth foreshows short life; in age it is a thing more indifferent.

To be long and slow in growing is a sign of long life; if to a greater stature, the greater sign: if to a lesser stature, yet a sign, though. Contrarily, to grow quickly to a great stature is an evil sign; if to a small stature, the less evil.

Firm flesh, a raw-boned body, and veins lying higher than the flesh, betoken long life; the contrary to these, short life.

A head somewhat lesser than to the proportion of the

body; a moderate neck, not long, nor slender, nor fat, nor too short; wide nostrils, whatsoever the form of the nose be; a large mouth; an ear grisly, not fleshy; teeth strong and contiguous, small or thin set, foretoken long-life; and much more, if some new teeth put forth in our elder years.

Certainly this is, without all question, that diet well ordered bears the greatest part in the prolongation of life: neither did I ever meet an extreme long-lived man, but being asked of his course he observed something peculiar, some one thing, some another. I remember an old man above an hundred years of age, who was produced as a witness touching an ancient prescription; when he had finished his testimony, the judge familiarly asked him how he came to live so long: he answered, beside expectation, and not without the laughter of the hearers, "By eating before I was hungry, and drinking before I was dry."

I make some question touching the frequent letting of blood, whether it conduceth to long life or no; and I am rather in the opinion that it doth, if it be turned into a habit, and other things be well disposed; for it letteth out the old juice of the body, and bringeth in new.

I suppose, also, that some emaciating diseases well cured do profit to long life: for they yield new juice, the old being consumed; and (as he saith) to recover a sickness is to renew youth. Therefore, it were good to make some artificial diseases, which is done by strict and emaciating diets.

The spirits are the master-workmen of all effects in the body. This is manifest by consent and by infinite instances.

If any man could procure that a young man's spirit could be conveyed into an old man's body, it is not unlikely but this great wheel of the spirits might turn about the lesser wheel of the parts, and so the course of nature become retrograde.

In every consumption, whether it be by fire or by age, the more the spirit of the body or the heat preyeth upon the moisture the lesser is the duration of that thing. This occurs everywhere, and is manifest.

The spirits are to be put into such a temperament and degree of activity, that they should not (as he saith) drink or guzzle the juices of the body, but sip them only.

The Turks find opium, even in a reasonable good quantity, harmless and comfortable; insomuch that they take it before their battle to excite courage. But to us, unless it be in a very small quantity, and with good correctives, it is mortal.

The Turks use a kind of herb which they call Caphe, which they dry and powder, and then drink it in warm water, which, they say, doth not a little sharpen them both in their courage and in their wits; notwithstanding, if it be taken in a large quantity it affects and disturbs the mind, whereby it is manifest that it is of the same nature with opiates.

There is a root much renowned in all the eastern parts, which they call Betel, which the Indians and others use to carry in their mouths, and to champ it, and by that champing they are wonderfully enabled both to endure labours and to overcome sicknesses, and to the act of carnal copulation; it seems to be a kind of stupefactive, because it exceedingly blacks the teeth.

Tobacco, in our age, is immoderately grown into use, and it affects men with a secret kind of delight, insomuch that they who have once inured themselves unto it can hardly afterwards leave it; and, no doubt, it hath power to lighten the body, and to shake off weariness. Now the virtue of it is commonly thought to be because it opens the passages and voids humours; but it may more rightly be referred to the condensation of the spirits, for it is a kind of henbane, and manifestly troubles the head as opiates do.

It is affirmed that gunpowder, which consisteth principally of nitre, being taken in drink doth conduce to valour, and that it is used oftentimes by mariners and soldiers before they begin their battles, as the Turks do opium.

As the condensation of the spirits by subordinates to opium is, in some sort, performed by odours, so also that which is by subordinates to nitre; therefore the smell of new and pure earth, taken either by following the plough, or by digging, or by weeding, excellently refresheth the spirits. Also the leaves of trees in woods or hedges, falling towards the middle of autumn, yield a good refreshing to the spirits: but none so good as strawberry-leaves dying. Likewise the smell of violets, or wall-flowers, or bean-flowers, or sweet-briar, or honey-suckles, taken as they grow, in passing by them only, is of the same nature.

Nay, and we know a certain great lord who lived long, that had every morning, immediately after sleep, a clod of fresh earth, laid in a fair napkin, under his nose, that he might take the smell thereof.

These procure quiet sleep: violets, lettuce, especially boiled, syrup of dried roses, saffron, balm, apples, at our going to bed, a sop of bread in malmsey, especially where musk-roses have been first infused; therefore, it would not be amiss to make

some pill or a small draught of those things, and to use it familiarly. Quinces and wardens roasted do induce sound sleep: but above all things, in youth, and for those that have sufficient strong stomachs, it will be best to take a good draught of clear cold water when they go to bed.

Hope is the most beneficial of all the affections, and doth much to the prolongation of life, if it be not too often frustrated, but entertaineth the fancy with an expectation of good. Therefore, they which fix and propound to themselves some end as the mark and scope of their life, and continually and by degrees go forward in the same, are, for the most part, long-lived; insomuch, that when they are come to the top of their hope and can go no higher therein, they commonly droop, and live not long after; so that hope is a leaf-ivy, which may be beaten out to a great extension, like gold.

Admiration and light contemplation are very powerful to the prolonging of life, for they hold the spirits in such things as delight them, and suffer them not to tumultuate or to carry themselves unquietly and waywardly. And, therefore, all the contemplators of natural things, which had so many and so eminent objects to admire (as Democritus, Plato, Parmenides, Apollonius) were long-lived; also rhetoricians, which tasted but lightly of things, and studied rather exornation of speech than profundity of matters, were also long-lived: as Gorgias, Protagoras, Isocrates, Seneca; and certainly, as old men are, for the most part, talkative, so talkative men do often grow very old, for it shows a light contemplation, and such as doth not much strain the spirits or vex them; but subtile and acute and eager inquisition shortens life, for it tireth the spirit and wasteth it.

Ficinus saith not unwisely, that old men, for the comforting of their spirits, ought often to remember and ruminate upon the acts of their childhood and youth. Certainly, such a remembrance is a kind of peculiar recreation to every old man; and therefore it is a delight to men to enjoy the society of them which have been brought up together with them, and to visit the places of their education. Vespasian did attribute so much to this matter, that when he was emperor he would, by no means, be persuaded to leave his father's house, though but mean, lest he should lose the wonted object of his eyes, and the memory of his childhood; and besides, he would drink in a wooden cup tipped with silver, which was his grandmother's, upon festival days.

One thing, above all, is grateful to the spirits: that there be a continual progress to the more benign. Therefore we should lead such a youth and manhood that our old age should find new solaces, whereof the chief is moderate ease. And therefore old men in honourable places lay violent hands upon themselves, who retire not to their ease; whereof may be found an eminent example in Cassiodorus, who was of that reputation amongst the Gothish kings of Italy, that he was as the soul of their affairs. Afterwards, being near eighty years of age, he betook himself to a monastery, where he ended not his days before he was an hundred years old. But this thing doth require two cautions: one, that they drive not off till their bodies be utterly worn out and diseased, for in such bodies all mutation, though to the more benign, hasteneth death; the other, that they surrender not themselves to a sluggish ease, but that they embrace something which may entertain their thoughts and mind with contentation: in which kind the chief delights are reading and contemplation, and then the desires of building and planting.

The ancient Britons painted their bodies with woad, and were exceeding long-lived: the Picts also used paintings, and are thought by some to have derived their name from thence.

The Brazilians and Virginians paint themselves at this day; who are (especially the former) very long-lived; inso-much, that five years ago the French Jesuits had speech with some who remembered the building of Fernamburgh, which was done an hundred and twenty years since, and they were then at man's estate.

Johannes de Temporibus, who is reported to have extended his life to three hundred years, being asked how he preserved himself so long, is said to have answered, By oil without, and by honey within.

The Irish, especially the wild Irish, even at this day live very long. Certainly they report that within these few years the Countess of Desmond lived to a hundred and forty years of age, and bred teeth three times. Now, the Irish have a fashion to chafe, and, as it were, to baste themselves with old salt-butter against the fire.

The same Irish use to wear saffroned linnen and shirts, which, though it was at first devised to prevent vermin, yet, howsoever, I take it to be very useful for leugthening of life; for saffron, of all things that I know, is the best thing for the skin



and the comforting of the flesh : seeing that it is both notably astringent, and hath, besides, an oleosity and subtile heat, without any acrimony. I remember a certain Englishman who, when he went to sea, carried a bag of saffron next his stomach, that he might conceal it and so escape custom : and whereas he was wont to be always exceeding sea-sick, at that time he continued very well, and felt no provocation to vomit.

Hippocrates adviseth in winter to wear clean linen, and in summer foul linen and besmeared with oil ; the reason may seem to be, because in summer the spirits exhale most, therefore the pores of the skin would be filled up.

Hereupon we are of opinion that the use of oil, either of olives or sweet almonds, to anoint the skin therewith, would principally conduce to long life : the anointing would be done every morning, when we rise out of bed, with oil in which a little bay-salt and saffron is mixed. But this anointing must be lightly done with wool or some soft sponge, not laying it on thick, but gently touching and wetting the skin.

The wild Irish, as soon as they fall sick, the first thing they do is to take the sheets off their beds, and to wrap themselves in the woollen clothes.

Some report that they have found great benefit in the conservation of their health by wearing scarlet waistcoats next their skin and under their shirts, as well down to their nether parts as on the upper.

As for the bread, oaten bread, or bread with some mixture of peas in it, or rye-bread, or barley-bread, are more solid than wheat-bread ; and in wheat-bread the coarse cheat-bread is more solid than the pure manchet.

The inhabitants of the Orcades, which live upon salted fish, and generally all fish-eaters, are long-lived.

The monks and hermits, which fed sparingly and upon dry aliment, attained commonly to a great age.

Also pure water, usually drunk, makes the juices of the body less frothy ; unto which, if for the dulness of the spirits (which, no doubt, in water is but a little penetrative) you shall add a little nitre, we conceive it would be very good.

I wonder much how that same calidum bibere, to drink warm drink (which was in use among the ancients), is laid down again. I knew a physician that was very famous, who, in the beginning of dinner and supper, would usually eat a few spoonfuls of very warm broth with much greediness.

I do verily conceive it good that the first draught, either

of wine or ale, or any other drink (to which a man is most accustomed) be taken at supper warm.

Wine, in which gold hath been quenched, I conceive would be very good once in a meal; not that I believe the gold conferreth any virtue thereunto, but that I know that the quenching of all metals in any kind of liquor, doth leave a most potent astringtion; now I choose gold, because besides that astringtion which I desire, it leaveth nothing else behind it of a metalline impression.

I am of opinion that sops of bread, dipped in wine, taken at the midst of the meal, are better than wine itself, especially if there were infused into the wine in which the sops were dipped, rosemary and citron-peel, and that with sugar, that it may not slip too fast.

Principally, let there be in use the wine of sweet pomegranates; or, if that cannot be had, the juice of them newly expressed; let it be taken in the morning with a little sugar, and into the glass into which the expression is made, put a small piece of citron-peel green, and three or four whole cloves. Let this be taken from February till the end of April.

Bring also into use, above all other herbs, water-cresses, but young, not old; they may be used either raw in salads, or in broths, or in drinks: and after that take spoonwort.

We commend, above all others (as we have touched before), odour of plants growing, and not plucked, taken in the open air: the principal of that kind are violets, gilliflowers, pinks, bean-flowers, lime-tree blossoms, vine-buds, honeysuckles, yellow wallflowers, musk-roses (for other roses growing are fast of their smells), strawberry-leaves, especially dying, sweet-briar, principally in the early spring, wild mint, lavender flowered; and in the hotter countries, orange-tree, citron-tree, myrtle, laurel. Therefore, to walk or sit near the breath of these plants would not be neglected.

But champing (though we have no betel) or holding in the mouth only of such things as cheer the spirits (even daily done) is exceeding comfortable. Therefore, for that purpose make grains or little cakes of ambergris, musk, lignum, aloes, lignum rhodium, orris powder, and roses; and let those grains or cakes be made up with rose-water which hath passed through a little Indian balsam.

Out of that unprofitable rabble of cordials a few ought to be taken into daily diet. Instead of all, ambergris, saffron, and the grain of kermes of the hotter sort, roots of

buglosse and borrage, citrous, sweet lemons, and permaines of the colder sort. Also that way which we said, both gold and pearls work a good effect, not only within the veins, but in their passage and about the parts near the heart; namely, by cooling, without any malignant quality.

Of the affections we have spoken before, we only add this: that every noble and resolute, and (as they call it) heroical desire, strengtheneth and enlargeth the powers of the heart.

As for the brain, where the seat and court of the animal spirits is kept, those things which were inquired before, touching opium and nitre, and the subordinates to them both, also touching the procuring of placid sleep, may likewise be referred hither. This also is most certain, that the brain is in some sort in the custody of the stomach; and therefore those things which comfort and strengthen the stomach, do help the brain by consent, and may no less be transferred hither. We will add a few observations; three outward, one inward.

We would have bathing of the feet to be often used; at least once in the week; and the bath to be made of lye, with bay-salt, and a little sage, camomile, fennel, sweet-mارجoram, and pepper-wort, with the leaves of angelica, green.

We commend also a fume, or suffumigation, every morning, of dried rosemary, bay-leaves dried, and lignum aloes; for all sweet gums oppress the head.

Especially care must be taken that no hot things be applied to the head outwardly; such are all kind of spices, the very nutmeg not excepted: for those hot things we debase them to the soles of the feet, and would have them applied there only; but a light anointing of the head with oil, mixed with roses, myrtle, and a little salt, and saffron, we much commend.

Whereas we advised before that the first draught at supper should be taken warm, now we add, that for the preparation of the stomach, a good draught of that liquor (to which every man is most accustomed) be taken warm half an hour before meat also, but a little spiced to please the taste.

That which is most consubstantial to the body of man is warm blood, either of man or of some other living creature; but the device of Ficinus, touching the sucking of blood out of the arm of a wholesome young man, for the restoration of strength in old men, is very frivolous; for that which nourisheth from within ought no way to be equal or homogeneal to the body nourished, but in some sort inferior and subor-

dinate, that it may be converted; but in things applied outwardly, by how much the substance is liker, by so much the consent is better.

It hath been anciently received that a bath made of the blood of infants will cure the leprosy, and heal the flesh already putrified; insomuch that this thing hath begot envy towards some kings from the common people.

It is reported that Heraclitus, for cure of the dropsy, was put into the warm belly of an ox newly slain.

They use the blood of kitlins warm to cure the disease called Saint Anthony's fire; and to restore the flesh and skin.

An arm or other member newly cut off, or that upon some other occasion will not leave bleeding, is, with good success, put into the belly of some creature newly ripped up, for it worketh potently to stanch the blood; the blood of the member cut off, by consent sucking in, and vehemently drawing to itself the warm blood of the creature slain, whereby itself is stopped and retireth.

It is much used in extreme and desperate diseases to cut in two young pigeons yet living and apply them to the soles of the feet; and to shift them one after another, whereby sometime there followeth a wonderful ease. This is imputed vulgarly as if they should draw down the malignity of the disease; but howsoever this application goeth to the head and comforteth the animal spirits.

There hath gone a report almost undoubted, and that under several names, of certain men that had great noses, who being weary of the derision of people, have cut off the bunches or hillocks of their noses, and then making a wide gash in their arms, having held their noses in the place for a certain time, and so brought forth fair and comely noses; which if it be true, it shows plainly the consent of flesh unto flesh, especially in live fleshes.

Eels, serpents, and the insects, will move a long time in every part after they are cut asunder, insomuch that country people think that the parts strive to join together again. Also birds will flutter a great while after their heads are pulled off; and the hearts of living creatures will pant a long time after they are plucked out. I remember I have seen the heart of one that was bowelled, as suffering for high treason, that being cast into the fire, leaped at the first, at least a foot and half in height; and after by degrees lower and lower, for the space, as we remember, of seven or eight minutes. There is also an

ancient and credible tradition of an ox lowing after his bowels were plucked out. But there is a more certain tradition of a man, who being under the executioner's hand for high treason, after his heart was plucked out and in the executioner's hand, was heard to utter three or four words of prayer; which therefore we said to be more credible than that of the ox in sacrifice, because the friends of the party suffering do usually give a reward to the executioner to dispatch his office with the more speed, that they may the sooner be rid of their pain; but in sacrifices we see no cause why the priest should be so speedy in his office.

There have been many examples of men in show dead, either laid out upon the cold floor, or carried forth to burial; nay, of some buried in the earth which, notwithstanding, have lived again, which hath been found in those that were buried (the earth being afterwards opened), by the bruising and wounding of their head through the struggling of the body within the coffin, whereof the most recent and memorable example was that of Joannes Scotus, called the subtile, and a schoolman, who, being digged up again by his servant, unfortunately absent at his burial (and who knew his master's manner in such fits), was found in that state; and the like happened in our days in the person of a player, buried at Cambridge. I remember to have heard of a certain gentleman that would needs make trial in curiosity what men did feel that were hanged; so he fastened the cord about his neck, raising himself upon a stool, and then letting himself fall, thinking it should be in his power to recover the stool at his pleasure, which he failed in, but was helped by a friend then present. He was asked afterwards what he felt. He said, he felt no pain, but first he thought he saw before his eyes a great fire, and burning; then he thought he saw all black, and dark; lastly, it turned to a pale blue, or sea-water green, which colour is also often seen by them which fall into swoonings. I have heard also of a physician yet living, who recovered a man to life which had hanged himself, and had hanged half an hour, by frictions and hot baths; and the same physician did profess that he made no doubt to recover any man that had hanged so long, so his neck were not broken with the first swing.

I remember, when I was a young man at Poitiers, in France, I conversed familiarly with a certain Frenchman, a witty young man, but something talkative, who afterwards grew to be a very eminent man. He was wont to inveigh

against the manners of old men, and would say, that if their minds could be seen, as their bodies are, they would appear no less deformed; besides, being in love with his own wit, he would maintain that the vices of old men's minds have some correspondence, and were parallel to the putrefactions of their bodies. For the dryness of their skin he would bring in impudence; for the hardness of their bowels, unmercifulness; for the lippitude of their eyes, an evil eye, and envy; for the casting down of their eyes and bowing their body towards the earth, atheism (for, saith he, they look no more up to heaven as they were wont); for the trembling of their members, irresolution of their decrees and light inconstancy; for the bending of their fingers, as it were to catch, rapacity and covetousness; for the buckling of their knees, fearfulness; for their wrinkles, craftiness and obliquity, and other things which I have forgotten. But, to be serious, a young man is modest and shamefaced, an old man's forehead is hardened; a young man is full of bounty and mercy, an old man's heart is brawny; a young man is affected with a laudable emulation, an old man with a malignant envy; a young man is inclined to religion and devotion by reason of his fervency and inexperience of evil, an old man cooleth in piety through the coldness of his charity and long conversation in evil, and likewise through the difficulty of his belief; a young man's desires are vehement, an old man's moderate; a young man is light and moveable, an old man more grave and constant; a young man is given to liberality, and beneficence, and humanity, an old man to covetousness, wisdom for his own self, and seeking his own ends; a young man is confident and full of hope, an old man diffident, and given to suspect most things; a young man is gentle and obsequious, an old man froward and disdainful; a young man is sincere and open-hearted, an old man cautelous and close; a young man is given to desire great things, an old man to regard things necessary; a young man thinks well of the present times, an old man preferreth times past before them; a young man reverenceth his superiors, an old man is more forward to tax them, and many other things which pertain rather to manners than to the present inquisition. Notwithstanding, old men as in some things they improve in their bodies, so also in their minds, unless they be altogether out of date, namely, that as they are less apt for invention, so they excel in judgment, and prefer safe things and sound things before specious; also they improve in garrulity and ostentation, for they seek the fruit of speech,

while they are less able for action ; so as it was not absurd that the poets feigned old Tithon to be turned into a grasshopper.

The treatise concludes with Thirty-two Moveable Canons (*Canones Mobiles*) respecting the Duration of Life and the Form (or Nature) of Death, each accompanied by a long explanation. The English translation published by Rawley in 1658 was reprinted with every succeeding edition of the *Sylva* ; and the two works thus associated seem to have continued to be a favourite manual with our ancestors down to nearly the close of the seventeenth century.

After the *History of Life and Death* the modern editors of the *Instauration* have placed certain other short and for the most part unfinished physical investigations, which it will be sufficient merely to enumerate. The *History of Sound and of Hearing* ('*Historia et Inquisitio Prima de Sono et Auditū, et de Forma Soni et Auditus*') was first published by Rawley in the '*Opuscula Varia Posthuma*' (1658). Bacon's notions about Sound are given more fully in the *Sylva Sylvarum*. The *Articles respecting Metals* ('*Articuli de Metallis*') were also first published in Latin in the same volume ; but it appears that in this form the piece was a translation by Rawley from Bacon's English. Rawley himself afterwards gave the original English to Lee, the publisher of the *Sylva Sylvarum*, and it was published along with that work, with the title of '*Articles of Inquiry touching Metals,*' in folio, in 1662. Tenison does not appear to have been aware of this when he reprinted it in the *Baconiana* (1679), with the title of '*Articles of Questions touching Minerals ; written originally in English by the Lord Bacon, yet hitherto not published in that language.*' In his *Introduction* Tenison says :—“ These Questions were turned into Latin, and in that tongue published by Dr. Rawley amongst his Lordship's *Opuscula* ; but the English originals are now the first time set forth. And, having by me three copies, I publish them by that one on which his Lordship had endorsed with his own hand, *This is the clean copy.*” He adds :—“ Now, these

Inquiries being in themselves imperfect, and without much solution of his Lordship's adjoined, I have here added to them the several answers of Dr. Meverel, to whom they were proposed by his Lordship. It has not been in my power as yet to inform myself duly about this Doctor; but doubtless he was a chymist, as those times went, of the first order. It was his Lordship's manner, on divers mornings, to set down inquiries for the following days in some loose papers. And in one of them I find this, among other memoranda: 'To send to Dr. Meverel. Take iron and dissolve it in aquafortis, and put a loadstone near it, and see whether it will extract the iron; put also a loadstone into the water, and see whether it will gather a crust about it.' To the *Articles* is attached an *Inquiry respecting the Magnet* ('*Inquisitio de Magnete*'), which is likewise in the *Opuscula Posthuma*, but not in the *Baconiana*. It is remarkable, however, that the very first paragraph contains an answer to the question which Tenison found noted down upon the loose paper to be put to Meverel: "Si vero ferrum dissolvatur," &c., that is, "If iron be dissolved in aquafortis, and some drops of the solution be placed upon smooth glass, the magnet neither extracts the iron nor attracts the water." Bacon had apparently satisfied himself upon the point without sending to his chymical friend. Then comes a very short fragment on the *Transmutation of Bodies* ('*Inquisitio de Versionibus, Transmutationibus, Multiplicationibus, et Effectationibus Corporum*'), also first published in Latin in the *Opuscula Posthuma*, but written, it seems, by Bacon in English, and in that original form first published in the *Baconiana*. Lastly, we have certain *Topics of Inquiry respecting Light* ('*Topica Inquisitionis de Luce et Lumine*'), likewise from Rawley's volume, and also previously published by Gruter. The substance of all these tracts may probably be incorporated somewhere in Shaw's translation and re-arrangement of the Philosophical Works; but, as he rarely notes whence he has taken his materials, it is difficult to find the passages that are intended to correspond in his English and Bacon's Latin. The sub-



jects to which these fragments relate, however, have all been treated of by Bacon at greater length in other parts of his writings.

The next portion of the Third Part of the *Instauration*, as it has been arranged, consists of a number of pieces first published by Gruter in the 'Scripta in Naturali et Universali Philosophia' (1653). The first of these, which Gruter prints on the back of his title-page, is strangely headed 'Temporis Partus Masculus, sive Instauration Magna Imperii Humani in Universum;' that is, 'The Male Offspring of Time, or Great Restoration of the Empire of Man over the Universe.' It has been suggested that the reading should probably be 'Temporis Partus Maximus' (The Greatest Birth of Time), which, in a Letter to Father Fulgentio written in 1623 or 1624, Bacon says was the magnificent title he had in his youthful confidence given to a work he had composed on his method of philosophy forty years before. But, at all events, the fragment to which Gruter prefixes the title is nothing more than a Latin translation of the short address to the Deity which Tenison has published in the original English in the *Baconiana*, under the title, given to it, he says, by Bacon himself, of 'The Student's Prayer,' and which is introduced, nearly in the same words given by Gruter, in one of the paragraphs of the Preface published along with the *Novum Organum* in 1620.\* Then we have several pieces from the latter portion of Gruter's volume in the following order:— 'Franciscus Bacon Lectori,' a few general remarks by Bacon on the spirit of his philosophy; 'Filum Labyrinthi, sive Inquisitio Legitima de Motu' (The Thread of the Labyrinth, or a Legitimate Inquisition respecting Motion); 'Cogitationes de Natura Rerum' (Speculations on the Nature of Things), being Ten in all, namely, On the Section of Bodies, On the Equality and Inequality of Atoms, On the negligence of the Ancients in their Inquiries respecting Motion, On the inutility of the vulgar division of Motion, On the certainty (or con-

\* See it in the present work, vol. i. p. 167.

stancy) in the Quantity of Matter, On apparent Quiet, Consistency, and Fluidity, On the Accordance that there is between Bodies endowed with feeling and those not so endowed, On violent Motion, that it is a flight and running in different directions of the parts of a thing by reason of pressure, though the pressure may not be very visible, On the cause of Motion in Guns, and On the dissimilitude between the Celestial and Sublunary Bodies in respect of endurance and mutability. All these pieces, which are for the most part translated or abstracted in Shaw, are styled by Gruter *Impetus Philosophici* (Dashes at Philosophy, as it may be rendered), that, he says, being the name given to them by Bacon himself when they talked about them together; for so, he adds, he used to call whatsoever was connected with the dissertations standing first in the volume and distinguished each by its own title (“quicquid prioribus per titulos suos separatis connecteretur”), that the reader may not at once suspect that to be unfinished, which, from the decline of the impetus he may not feel to possess the continuity of a complete discussion (prolixæ tractationis). This explanation may not be thought particularly luminous; and it is rendered the more obscure from the careless blundering way in which Gruter's volume is printed, in which even the running titles on many of the pages are wrong; but we give it as we have it. Finally, there is added a disquisition on the *Flowing and Ebbing of the Tide* (‘De Fluxu et Refluxu Maris’), which is taken from the middle of Gruter's volume, and is, as it should seem, one of the more elaborate dissertations, with distinct titles, to which the *Impetus* are to be considered as appendices. This is also translated by Shaw, who out of it and several of the other last-mentioned pieces constructs for himself a Fifth Part of the *Instauration*.

Here is Shaw's translation of the Ninth Chapter of the ‘Cogitationes de Natura Rerum:’—

*Of the Cause of the Motion of Explosion in Guns and Gunpowder.*

The phenomenon of gunpowder, and the cause of explosion, though so powerful and noble a motion, have been hitherto

very imperfectly explained, and that too in the least considerable part. They pretend that gunpowder, when converted and rarefied into flame, dilates itself, and possesses a larger space, from whence follows the explosion or bursting of the obstructing body; but otherwise two bodies should be in one place, or a penetration of dimensions ensue, or the form of the element be destroyed, or the situation of the parts of the resisting body become preternatural. There is something in this, for the appetite and passion of matter here mentioned have some share in producing the effect; but the error lies in too hastily bringing the whole to a necessity of the body's dilating, without distinctly considering what precedes it in nature. For though it be necessary that the body of the powder, after it is converted into flame, should possess a greater space, yet it is not of the same necessity that the body of the powder should take flame, and that with such rapidity; but this depends upon the preceding conflict, and a train of motions. For doubtless the solid and ponderous body or bullet discharged makes a strong resistance before it yields; and if this resistance be great it must needs prevail, so as that the flame shall not drive out the bullet, but the bullet stifle the flame. Therefore, if instead of gunpowder we were to use sulphur, camphor, or the like bodies, which also suddenly catch flame, and because compactness hinders inflammability, if these materials were formed into corns of powder, with a proper proportion of the most combustible wood-coal, yet if nitre were not employed in the composition there would follow no such rapid and powerful motion as in gunpowder; but the motion of inflammation would be checked and kept down by the resistance of the bullet, and so the event be frustrated or no explosion be made.

The case seems to be this. The motion here inquired after is double and compounded, for besides the motion of inflammation, which principally resides in the sulphur of the powder, there is another more strong and violent. This chiefly proceeds from the crude and aqueous spirit of the nitre, and somewhat again from the willow coal. For this spirit is not only expanded, as vapours are by heat, but, what is here the principal thing, flies away and bursts forth with the utmost violence from the heat and inflammation, for which it thus opens and prepares the way. We see some resemblance of this motion in the crackling of dry bay or ivy leaves when thrown into the fire; and still more evidently in salt, which approaches nearer to the nature of the thing under consideration: we also find somewhat like it when the tallow of a burning candle

happens to be wet, and frequently in the flatulent flames of green wood. But a capital instance of this motion appears in quicksilver, which is an extremely crude body, and like a metallic water, the force whereof when close confined and excited by the fire, is little inferior to, or perhaps stronger than, that of gunpowder. From this example, therefore, men are to be admonished and entreated not suddenly to seize upon any one thing in the inquiry after causes, and hastily pronounce from it, but to cast about and fix their speculations deep and strong.

But, besides these treatises in Latin, we must consider as also belonging to the Third Part of the Instauration the voluminous work, written by Bacon in English, entitled 'Sylva Sylvarum, or A Natural History, in Ten Centuries.' This was first published by Dr. Rawley in 1627, the year after Bacon's death, with a Dedication to the King, Charles I., and a Preface, or address 'To the Reader,' having at the end the following note:—"This Epistle is the same that should have been prefixed to this book if his lordship had lived." The work, we may therefore assume, had been left by Bacon ready for the press.

The Dedication, which is very short, has been removed from the later editions of the *Sylva*; Mr. Montagu has neither reprinted it nor even noticed its existence; but it is of some interest at least in reference to the bibliography of Bacon's writings. "May it please your most excellent Majesty," it begins, "the whole body of the Natural History, either designed or written by the late Lord Viscount St. Alban, was dedicated to your majesty in the book *De Ventis*, about four years past, when your majesty was Prince: so as there needed no new Dedication of this work, but only in all humbleness to let your majesty know it is yours. It is true, if that lord had lived, your majesty ere long had been invoked to the protection of another History; whereof, not Nature's Kingdom, as in this, but these of your Majesty's (during the time and reign of King Henry the Eighth) had been the subject: which, since it died under the designation merely, there is nothing left but your majesty's princely goodness graciously to accept

of the undertaker's heart and intentions." Here, then, we are distinctly authorized to consider the Dedication prefixed to the *De Ventis* as intended to serve for the whole of the Third Part of the *Instauration*. It appears probable, too, from the manner in which the *History of the Reign of Henry the Eighth* is mentioned, that the mere commencement of that work which still exists is all of it that ever was prepared.\*

In the Preface Rawley, after stating that he had had the honour to be continually with his lordship in the compiling of the work, and to be employed therein, proceeds:—"I have heard his lordship often say, that, if he should have served the glory of his own name, he had been better not to have published this Natural History; for it may seem an undigested heap of particulars, and cannot have that lustre which books cast into methods have; but that he resolved to prefer the good of men, and that which might best secure it, before any thing that might have relation to himself. . . . Besides, this Natural History was a debt of his, being designed and set down for a Third Part of the *Instauration*. . . . He hopeth by this means to acquit himself of that for which he taketh himself in a sort bound, and that is, the advancement of all learning and sciences. For, having in this present work collected the materials for the building, and in his *Novum Organum*, of which his lordship is yet to publish a Second Part, set down the instruments and directions for the work, men shall now be wanting to themselves if they raise not knowledge to that perfection whereof the nature of mortal men is capable. And in this behalf I have heard his lordship speak complainingly that his lordship, who thinketh he deserveth to be an architect in this building, should be forced to be a workman and a labourer, and to dig the clay and burn the brick;

\* See the present work, vol. i. pp. 212, 213. But this Dedication would induce us to withdraw the conjecture there hazarded, that more of the History was probably written than the fragment that has come down to us.

and, more than that, according to the hard condition of the Israelities at the latter end, to gather the straw and stubble over all the fields to burn the bricks withal." A few sentences are added in defence of the contents and form of the work:—"His lordship hath often in his mouth the two kinds of experiments, *experimenta fructifera* and *experimenta lucifera*, experiments of use and experiments of light; and he reporteth himself whether he were not a strange man that should think that light hath no use because it hath no matter. . . . I have heard his lordship say also, that one great reason why he should not put these particulars into any exact method, though he that looketh attentively into them shall find that they have a secret order, was, because he conceived that other men would now think that they could do the like, and so go on with a further collection; which, if the method had been exact, many would have despaired to attain by imitation. . . . I will conclude with a usual speech of his lordship's: 'That this work of his Natural History is the world as God made it, and not as men have made it; for that it hath nothing of imagination.'

The *Sylva Sylvarum*, Tenison states, "was translated by an obscure interpreter into French, and out of that translation into Latin by James Gruter, in such ill manner that they darkened his lordship's sense and debased his expression." Gruter's Latin translation was published in Holland, in 12mo., in 1648. "James Gruter," Tenison adds, "was sensible of his miscarriage, being kindly advertised of it by Dr. Rawley; and he left behind him divers amendments, published by his brother Isaac Gruter in a second edition (Amstel. 16mo., 1661). Yet still so many errors have escaped, that the work requireth a third hand. Monsieur Aelius Deodatus had once engaged an able person in the translation of this book; one who could have done his lordship right, and obliged such readers as understood not the English original. He began, and went through the three first Centuries, and then desisted; being desired by him who set him on work to take his hand quite off from that

pen, with which he moved so slowly." The translation of the *Third Century* by this person was in possession of Tenison, who subjoins a small specimen of it; that of the two preceding *Centuries* he believed to be lost. James Gruter's translation is reprinted in the edition of Bacon's collected works ('Francisci Baconi, Baronis, &c., Opera Omnia quae extant'), published, in folio, at Frankfort in 1665.

The English work, as we have already mentioned, long continued extremely popular. No fewer than ten editions of it, all in folio, were published in the first half-century after Bacon's death. It is indeed full of curious matter; of facts, speculations, and suggestions, which must have interested readers of almost all classes. It was in this respect in physics what the *Essays* were in morals; and might be said, too, like them, to "come home to men's business and bosoms." The thousand experiments offered a variety in which every reader might find something to his taste; and an abundance, which, in those days of spare literary feeding, would last almost a lifetime. Nor has the collection by any means yet lost all its interest. The progress of science has refuted many both of the speculations and the facts in which Bacon placed his confidence; but they do not for that the less illustrate both the character of his mind and the state of science in his day. And perhaps, even in the present advanced state of our knowledge, a little light or a useful hint may here and there be derived from the work. It is now but seldom looked into,—less frequently, perhaps, than any of Bacon's other writings. Yet, besides the ingenuity and striking character of many of the observations, there are numerous passages in it having all his characteristic eloquence, all his beauty and brilliancy of expression. There is little method, for the greater part, as Rawley's Preface intimates, in the arrangement of the entries, or experiments, as they are called; but in the following specimens we have preserved the numerical designation of each for the sake of reference:—

1. Dig a pit upon the sea-shore somewhat above the high-

ing of parts of creatures when they are very young; doth alter the shape not a little; as the stroking of the heads of infants between the hands, was noted of old to make Macrocephali; which shape of the head, at that time, was esteemed. And the raising gently of the bridge of the nose doth prevent the deformity of a saddle-nose: which observation well weighed may teach a means to make the persons of men and women, in many kinds, more comely and better featured than otherwise they would be, by the forming and shaping of them in their infancy; as by stroking up the calves of the legs to keep them from falling down too low; and by stroking up the forehead to keep them from being low-foreheaded. And it is a common practice to swathe infants, that they may grow more straight and better shaped; and we see young women, by wearing straight bodies, keep themselves from being gross and corpulent.

31. Take a small wax-candle and put it in a socket of brass or iron; then set it upright in a porringer full of spirit of wine heated; then set both the candle and spirit of wine on fire, and you shall see the flame of the candle open itself and become four or five times bigger than otherwise it would have been; and appear in figure globular and not in pyramis. You shall see also that the inward flame of the candle keepeth colour, and doth not wax any wit blue towards the colour of the outward flame of the spirit of wine. This is a noble instance.

32. Take an arrow and hold it in flame for the space of ten pulses, and when it cometh forth you shall find those parts of the arrow which were on the outsides of the flame, more burned, blacked, and turned almost into a coal; whereas that in the midst of the flame will be as if the fire had scarce touched it. This is an instance of great consequence for the discovery of the nature of flame; and showeth manifestly that flame burneth more violently towards the sides than in the midst.

46. Take two large capons, perboil them upon a soft fire by the space of an hour or more, till in effect all the blood be gone; add in the decoction the peel of a sweet lemon, or a good part of the peel of a citron, and a little mace; cut off the shanks and throw them away; then with a good strong chopping-knife mince the two capons, bones and all, as small as ordinary minced-meat, put them into a large neat boulder, then take a kilderkin, sweet and well seasoned, of four gallons of beer of 8s. strength, new as it cometh from the tunning; make in the



kilderkin a great bunghole of purpose ; then thrust into it the boulder (in which the capons are) drawn out in length ; let it steep in it three days and three nights, the bunghole open, to work ; then close the bunghole, and so let it continue a day and a half ; then draw it into bottles, and you may drink it well after three days' bottling, and it will last six weeks (approved). It drinketh fresh, flowreth and mantleth exceedingly ; it drinketh not newish at all ; it is an excellent drink for a consumption, to be drunk either alone or carded with some other beer. It quenbeth thirst, and hath no whit of windiness. Note, that it is not possible that meat and bread, either in broths or taken with drink, as is used, should get forth into the veins and outward parts so finely and easily as when it is thus incorporate and made almost a chylus aforehand.

61. Generally diseases that are chronical, as coughs, phtisics, some kinds of palsies, lunacies, &c., are most dangerous at the first, therefore a wise physician will consider whether a disease be incurable, or whether the just cure of it be not full of peril ; and if he find it to be such, let him resort to palliation, and alleviate the symptom without busying himself too much with the perfect cure ; and many times (if the patient be indeed patient) that course will exceed all expectation. Likewise the patient himself may strive, by little and little, to overcome the symptom, in the exacerbation, and so, by time, turn suffering into nature.

69. The producing of cold is a thing very worthy the inquisition, both for use and disclosure of causes ; for heat and cold are nature's two hands, whereby she chiefly worketh ; and heat we have in readiness, in respect of the fire ; but for cold we must stay till it cometh, or seek it in deep caves or high mountains : and when all is done we cannot obtain it in any great degree, for furnaces of fire are far hotter than a summer's sun ; but vaults or hills are not much colder than a winter's frost.

74. It were not amiss to try opium, by laying it upon the top of a weather-glass, to see whether it will contract the air ; but I doubt it will not succeed ; for besides that the virtue of opium will hardly penetrate through such a body as glass, I conceive that opium and the like make the spirits fly rather by malignity than by cold.

75. There is an opinion that the moon is magnetical of heat, as the sun is of cold and moisture ; it were not amiss, therefore, to try it with warm waters ; the one exposed to the beams of the

moon, the other with some screen betwixt the beams of the moon and the water, as we use to the sun for shade, and to see whether the former will cool sooner.

78. It is reported of very good credit, that in the East Indies if you set a tub of water open in a room where cloves are kept, it will be drawn dry in twenty-four hours, though it stand at some distance from the cloves. In the country, they use many times, in deceit, when their wool is new shorn, to set some pails of water by in the same room, to increase the weight of the wool. But it may be that the heat of the wool, remaining from the body of the sheep, or the heat gathered by the lying close of the wool, helpeth to draw the watry vapour; but that is nothing to the version.

83. The examples of induration, taking them promiscuously, are many: as the generation of stones within the earth, which at the first are but rude earth or clay: and so of minerals, which come (no doubt) at first, of juices concrete, which afterward indurate; and so of porcelain, which is an artificial cement, buried in the earth a long time; and so the making of brick and tile: also the making of glass, of a certain sand, and brake-roots, and some other matters; also the exudations of rock-diamonds and crystal, which harden with time; also the induration of head-amber, which at first is a soft substance, as appeareth by the flies and spiders which are found in it.

85. It is certain that an egg was found, having lain many years in the bottom of a moat, where the earth had somewhat overgrown it; and this egg was come to the hardness of a stone, and had the colours of the white and yolk perfect, and the shell shining in small grains like sugar or alabaster.

91. The eye of the understanding is like the eye of the sense; for as you may see great objects through small crannies or levels, so you may see great axioms of nature through small and contemptible instances.

98. The knowledge of man hitherto hath been determined by the view or sight; so that whatsoever is invisible, either in respect of the fineness of the body itself, or the smallness of the parts, or of the subtilty of the motion, is little inquired; and yet these be the things that govern nature principally; and without which you cannot make any true analysis and indication of the proceedings of nature. The spirits or pneumatics, that are in all tangible bodies, are scarce known: sometimes they take them for vacuum, whereas they are the most active of bodies; sometimes they take them from air, from which they

differ exceedingly, as much as wine from water, and as wood from earth; sometimes they will have them to be natural heat, or a portion of the element of fire, whereas some of them are crude and cold; and sometimes they will have them to be the virtues and qualities of the tangible parts, which they see, whereas they are things by themselves. And then, when they come to plants and living creatures, they call them souls; and such superficial speculations they have, like prospectives, that show things inward when they are but paintings. Neither is this a question of words, but infinitely material in nature; for spirits are nothing else but a natural body, rarified to a proportion and included in the tangible parts of bodies as in an integument; and they be no less differing one from the other than the dense or tangible parts; and they are in all tangible bodies whatsoever, more or less; and they are never, almost, at rest; and from them and their motions principally proceed arefaction, colliquation, concoction, maturation, putrefaction, vivification, and most of the effects of nature; for, as we have figured them in our *Sapientia Veterum*, in the fable of Proserpina, you shall in the infernal regiment hear little doings of Pluto, but most of Proserpina; for tangible parts in bodies are stupid things; and the spirits do, in effect, all.

100. There is nothing more certain in nature than that it is impossible for any body to be utterly annihilated; but that, as it was the work of the omnipotency of God to make somewhat of nothing, so it requireth the like omnipotency to turn somewhat into nothing; and therefore it is well said by an obscure writer of the sect of the chymists, that there is no such way to effect the strange transmutations of bodies, as to endeavour and urge by all means the reducing of them to nothing: and herein is contained also a great secret of preservation of bodies from change; for if you can prohibit that they neither turn into air, because no air cometh to them; nor go into the bodies adjacent, because they are utterly heterogeneal; nor make a round and circulation within themselves; they will never change, though they be in their nature never so perishable or mutable. We see how flies and spiders, and the like, get a sepulchre in amber, more durable than the monument and embalming of the body of any king.

104. It is to be noted (the rather lest any man should think that there is anything in this number of eight to create the diapason) that this computation of eight is a thing rather received than any true computation; for a true computation

ought ever to be, by distribution into equal portions. Now there be intervenient in the rise of eight (in tones) two bé-mols, or half-notes; so as if you divide the tones equally, the eighth is but seven whole and equal notes; and if you subdivide that into half-notes (as it is in the stops of a lute), it maketh the number of thirteen.

105. Yet this is true, that in the ordinary rises and falls of the voice of man (not measuring the tone by whole notes, and half-notes, which is the equal measure), there fall out to be two bé-mols (as hath been said) between the unison and the diapason; and this varying is natural; for if a man would endeavour to raise or fall his voice, still by half-notes, like the stops of a lute, or by whole notes alone, without halves, as far as an eighth, he will not be able to frame his voice unto it; which showeth that after every three whole notes nature requireth, for all harmonical use, one half-note to be interposed.

113. There be in music certain figures or tropes, almost agreeing with the figures of rhetoric, and with the affections of the mind and other senses. First, the division and quavering, which please so much in music, have an agreement with the glittering of light, as the moonbeams playing upon a wave. Again, the falling from a discord to a concord, which maketh great sweetness in music, hath an agreement with the affections, which are reintegrated to the better, after some dislikes. It agreeth also with the taste, which is soon gluttied with that which is sweet alone. The sliding from the close or cadence hath an agreement with the figure in rhetoric which they call *præter expectatum*; for there is a pleasure even in being deceived. The reports and fuges have an agreement with the figures in rhetoric of repetition and traduction. The triplas and changing of times have an agreement with the changes of motions, as when galliard-time and measure-time are in the medley of one dance.

121. I heard it affirmed by a man, that was a great dealer in secrets, but he was but vain, that there was a conspiracy, which himself hindered, to have killed Queen Mary, sister to Queen Elizabeth, by a burning-glass, when she walked in St. James's Park, from the leads of the house; but thus much, no doubt, is true, that if burning-glasses could be brought to a great strength (as they talk generally of burning-glasses that are able to burn a navy), the percussion of the air alone by such a burning-glass would make no noise, no more than is found in coruscations and lightnings without thunders.

127. It hath been anciently reported, and is still received, that extreme applauses and shouting of people assembled in great multitudes, have so rarified and broken the air, that birds flying over have fallen down, the air being not able to support them. And it is believed by some that great ringing of bells in populous cities hath chased away thunder, and also dissipated pestilent air; all which may be also from the concussion of the air and not from the sound.

128. A very great sound, near hand, hath stricken many deaf; and at the instant they have found, as it were, the breaking of a skin or parchment in their ear; and myself standing near one that lured loud and shrill, had suddenly an offence, as if somewhat had broken or been dislocated in my ear, and immediately after a loud ringing (not an ordinary singing, or hissing, but far louder and differing); so as I feared some deafness; but after some half quarter of an hour it vanished.

134. Take one vessel of silver and another of wood, and fill each of them full of water, and then nap the tongs together as before, about a handful from the bottom, and you shall find the sound much more resounding from the vessel of silver than from that of wood; and yet if there be no water in the vessel, so that you nap the tongs in the air, you shall find no difference between the silver and the wooden vessel; whereby, beside the main point of creating sound without air, you may collect two things; the one, that the sound communicateth with the bottom of the vessel; the other, that such a communication passeth far better through water than air.

140. There is in St. James's Fields a conduit of brick, unto which joineth a low vault; and at the end of that a round-house of stone; and in the brick conduit there is a window; and in the round-house a slit or rift of some little breadth; if you cry out in the rift it will make a fearful roaring at the window. The cause is the same with the former; for that all concaves that proceed from more narrow to more broad, do amplify the sound at the coming out.

155. And as for water it is a certain trial; let a man go into a bath and take a pail, and turn the bottom upward, and carry the mouth of it even down to the level of the water, and so press it down under the water, some handful and a half, still keeping it even that it may not tilt on either side, and so the air get out; then let him that is in the bath dive with his head so far under water as he may put his head into the pail, and

there will come as much air bubbling forth as will make room for his head; then let him speak, and any that shall stand without shall hear his voice plainly, but yet made extreme sharp and exile, like the voice of puppets; but yet the articulate sounds of the words will not be confounded. Note, that it may be much more handsomely done, if the pail be put over the man's head above water and then he cower down and the pail be pressed down with him. Note that a man must kneel or sit that he may be lower than the water. A man would think that the Sicilian poet had knowledge of this experiment; for he saith that Hercules's page Hylas went with a water-pot to fill it at a pleasant fountain that was near the shore, and that the nymphs of the fountain fell in love with the boy and pulled him under water, keeping him alive; and that Hercules missing his page, called him by his name aloud, so that all the shore rang of it; and that Hylas from within the water answered his master; hut (that which is to the present purpose) with so small and exile a voice, as Hercules thought he had been three miles off, when the fountain, indeed, was fast by.

198. The motions of the tongue, lips, throat, palate, &c. which go to the making of the several alphabetical letters, are worthy inquiry and pertinent to the present inquisition of sounds; but because they are subtle and long to describe, we will refer them over and place them amongst the experiments of speech. The Hebrews have been diligent in it, and have assigned which letters are labial, which dental, which guttural, &c. As for the Latins and Grecians they have distinguished between semi-vowels and mutes; and in mutes, between *mutes tenues*, *mediæ*, and *aspiratæ*; not amiss, but yet not diligently enough. For the special strokes and motions that create those sounds they have little inquired; as that the letters *b*, *p*, *f*, *m*, are not expressed but with the contracting or shutting of the mouth; that the letters *n* and *b* cannot be pronounced; but that the letter *n* will turn into *m*, as hecatouba will be hecatomba. That *m* and *t* cannot be pronounced together, but *p* will come between, as *emptus* is pronounced *emptus*; and a number of the like; so that if you inquire to the full, you will find, that to the making of the whole alphabet there will be fewer simple motions required than there are letters.

200. There is found a similitude between the sound that is made by inanimate bodies or by animate bodies that have no voice articulate, and divers letters of articulate voices. And commonly men have given such names to those sounds as do

allude unto the articulate letters : as trembling of water hath resemblance with the letter *l* ; quenching of hot metals, with the letter *z* ; snarling of dogs, with the letter *r* ; the noise of screech-owls, with the letter *sh* ; voice of cats, with the diphthong *eu* ; voice of cuckoos, with the diphthong *ou* ; sounds of strings, with the letter *ng* ; so that if a man (for curiosity or strangeness sake) would make a puppet or other dead body to pronounce a word, let him consider, on the one part, the motion of the instruments of voice ; and on the other part, the like sounds made in inanimate bodies ; and what conformity there is that causeth the similitude of sounds, and by that he may minister light to that effect.

225. The sweetest and best harmony is, when every part or instrument is not heard by itself, but a conflation of them all, which requireth to stand some distance off : even as it is in the mixture of perfumes, or the taking of the smells of several flowers in the air.

236. It is a strange thing in nature, when it is attentively considered, how children and some birds learn to imitate speech. They take no mark at all of the motion of the mouth of him that speaketh, for birds are as well taught in the dark as by light. The sounds of speech are very curious and exquisite, so one would think it were a lesson hard to learn. It is true that it is done with time, and by little and little, and with many essays and proffers, but all this dischargeth not the wonder. It would make a man think (though this which we shall say may seem exceeding strange) that there is some transmission of spirits, and that the spirits of the teacher put in motion should work with the spirits of the learner, a predisposition to offer to imitate, and so to perfect the imitation by degrees. But, touching operations by transmissions of spirits (which is one of the highest secrets in nature) we shall speak in due place, chiefly when we come to inquire of imagination. But, as for imitation, it is certain that there is in men and other creatures a predisposition to imitate. We see how ready apes and monkeys are to imitate all motions of man ; and, in the catching of dotterels, we see how the foolish bird playeth the ape in gestures ; and no man, in effect, doth accompany with others, but he learneth, ere he is aware, some gesture, or voice, or fashion of the other.

239. But I conceive that the aptness of birds is not so much in the conformity of the organs of speech as in their attention ; for speech must come by hearing and learning ; and birds

give more heed, and mark sounds more than beasts, because, naturally they are more delighted with them, and practise them more, as appeareth in their singing. We see also that those that teach birds to sing do keep them waking, to increase their attention; we see also that cock-birds, amongst singing-birds, are ever the better singers, which may be because they are more lively, and listen more.

249. For echoes upon echoes there is a rare instance thereof in a place, which I will now exactly describe: it is some three or four miles from Paris, near a town called Pont-Charenton, and some bird-bolt shot or more from the river of Seine; the room is a chapel or small church, the walls all standing, both at the sides and at the ends; two rows of pillars, after the manner of aisles of churches, also standing; the roof all open, not so much as any emboument near any of the walls left. There was against every pillar a stack of billets, above a man's height, which the watermen that bring wood down the Seine in stacks, and not in boats, laid there, as it seemeth, for their ease. Speaking at the one end, I did hear it return the voice thirteen several times; and I have heard of others that it would return sixteen times, for I was there about three of the clock in the afternoon, and it is best (as all other echoes are) in the evening. It is manifest that it is not echoes from several places, but a tossing of the voice, as a ball to and fro, like to reflections in looking-glasses, where, if you place one glass before and another behind, you shall see the glass behind with the image within the glass before, and again the glass before in that, and divers such super-reflections, till the species speciei at last die, for it is every return weaker and more shady. In like manner the voice in that chapel createth speciem speciei, and maketh succeeding super-reflections, for it melteth by degrees, and every reflection is weaker than the former, so that if you speak three words, it will, perhaps, some three times report you the whole three words, and then the two latter words for some times, and then the last word alone for some times, still fading and growing weaker; and whereas in echoes of one return it is much to hear four or five words; in this echo, of so many returns upon the matter, you hear above twenty words for three.

251. There are certain letters that an echo will hardly express, as *s* for one, especially being principal in a word. I remember well, that when I went to the echo at Pont-Charenton, there was an old Parisian that took it to be the work of



spirits, and of good spirits; for (said he) call Satan, and the echo will not deliver back the Devil's name, but will say *Va t'en*, which is as much in French as *Apage*, or *Avoid*: and thereby I did hap to find that an echo would not return *s*, being but a hissing, and an interior sound.

285. Let it be tried, for the help of the hearing (and I conceive it likely to succeed), to make an instrument like a tunnel, the narrow part whereof may be of the bigness of the hole of the ear, and the broader end much larger, like a bell at the skirts, and the length half a foot or more; and let the narrow end of it be set close to the ear, and mark whether any sound abroad in the open air will not be heard distinctly from further distance than without that instrument, being, as it were, an ear-spectacle. And I have heard there is in Spain an instrument in use to be set to the ear, that helpeth somewhat those that are thick of hearing.

290. We have laboured, as may appear, in this inquisition of sounds diligently, both because sound is one of the most hidden portions of nature (as we said in the beginning), and because it is a virtue which may be called incorporeal and immateriate, whereof there be in nature but few; besides, we were willing now, in these our first Centuries, to make a pattern or president of an exact inquisition, and we shall do the like hereafter in some other subjects which require it; for we desire that men should learn and perceive how severe a thing the true inquisition of nature is, and should accustom themselves, by the light of particulars, to enlarge their minds to the amplitude of the world, and not reduce the world to the narrowness of their minds.

317. There were taken apples, and laid in straw, in hay, in flower, in chalk, in lime, covered over with onions, covered over with crabs, closed up in wax, shut in a box, &c.; there was also an apple hanged up in smoke, of all which the experiment sorted in this manner:—

318. After a month's space the apple inclosed in wax was as green and fresh as at the first putting in, and the kernels continued white. The cause is, for that all exclusion of open air (which is ever predatory) maintaineth the body in his first freshness and moisture, but the inconvenience is that it tasteth a little of the wax, which, I suppose, in a pomegranate, or some such thick-coated fruit, it would not do.

319. The apple hanged in the smoke turned like an old mellow apple, wrinkled, dry, soft, sweet, yellow within. The cause

is. for that such a degree of heat, which doth neither melt nor scorch (for we see that in a greater heat a roast apple softeneth and melteth, and pig's feet, made of quarters of wardens, scorch and have a skin of coal), doth mellow and not adure; the smoke also maketh the apple, as it were, sprinkled with soot, which helpeth to mature. We see that in drying of pears and prunes in the oven, and removing of them often as they begin to sweat, there is a like operation, but that is with a far more intense degree of heat.

320. The apples covered in the lime and ashes were well matured, as appeared both in their yellowness and sweetness. The cause is, for that that degree of heat which is in lime and ashes (being a smothering heat) is of all the rest most proper, for it doth neither liquify nor airify, and that is true maturation. Note, that the taste of those apples was good, and, therefore, it is the experiment fittest for use.

321. The apples covered with crabs and onions were likewise well matured. The cause is, not any heat, but for that the crabs and the onions draw forth the spirits of the apple, and spread them equally throughout the body, which taketh away hardness. So we see one apple ripeneth against another, and therefore, in making of cider, they turn the apples first upon a heap; so one cluster of grapes that toucheth another whilst it groweth ripeneth faster. *Botrus contra botrum citius maturascit.*

322. The apples in hay and the straw ripened apparently, though not so much as the other, but the apple in the straw more. The cause is, for that the hay and straw have a very low degree of heat, but yet close and smothering, and which drieth not.

323. The apple in the close box was ripened also. The cause is, for that all air kept close hath a degree of warmth, as we see in wool, fur, plush, &c. Note, that all these were compared with another apple of the same kind that lay of itself, and, in comparison of that, were more sweet, and more yellow, and so appeared to be more ripe.

327. The world hath been much abused by the opinion of making of gold. The work itself I judge to be possible, but the means hitherto propounded to effect it are, in the practice, full of error and imposture, and in the theory full of unsound imaginations; for, to say that nature hath an intention to make all metals gold, and that if she were delivered from impediments, she would perform her own work; and that if

the crudities, impurities, and leprosites of metals were cured, they would become gold, and that a little quantity of the medicine in the work of projection will turn a sea of the baser metal into gold, by multiplying: all these are but dreams, and so are many other grounds of alchemy; and, to help the matter, the alchemists call in likewise many vanities out of astrology, natural magic, superstitious interpretations of Scriptures, auricular traditions, feigned testimonies of ancient authors, and the like. It is true, on the other side, they have brought to light not a few profitable experiments, and thereby made the world some amends; but we, when we shall come to handle the version and transmutation of bodies, and the experiments concerning metals and minerals, will lay open the true ways and passages of nature, which may lead to this great effect. And we commend the wit of the Chinese, who despair of making of gold, but are mad upon the making of silver, for certain it is, that it is more difficult to make gold (which is the most ponderous and materiate amongst metals) of other metals less ponderous and less materiate, than *viâ versâ* to make silver of lead or quicksilver, both which are more ponderous than silver; so that they need rather a further degree of fixation than any condensation. In the mean time, by occasion of handling the axioms touching maturation, we will direct a trial touching the maturing of metals, and thereby turning some of them into gold; for we conceive, indeed, that a perfect good concoction, or digestion, or maturation of some metals will produce gold. And here we call to mind, that we knew a Dutchman that had wrought himself into the belief of a great person, by undertaking that he could make gold, whose discourse was, that gold might be made, but that the alchemists over-fired the work; for, he said, the making of gold did require a very temperate heat, as being in nature a subterrany work, where little heat cometh, but yet more to the making of gold than of any other metal; and, therefore, that he would do it with a great lamp that should carry a temperate and equal heat, and that it was the work of many months. The device of the lamp was folly; but the over-firing now used, and the equal heat to be required, and the making it a work of some good time, are no ill discourses.

Let there be a small furnace made of a temperate heat; let the heat be such as may keep the metal perpetually molten; and no more, for that above all importeth to the work. For the material, take silver, which is the metal that in nature

symbolizeth most with gold; put in also with the silver a tenth part of quicksilver and a twelfth part of nitre, by weight, both these to quicken and open the body of the metal, and so let the work be continued by the space of six months at least. I wish also that there be, as sometimes, an injection of some oiled substance, such as they use in the recovering of gold, which, by vexing with separations, hath been made churlish; and this is, to lay the parts more close and smooth, which is the main work: for gold, as we see, is the closest, and therefore the heaviest, of metals, and is likewise the most flexible and tensible. Note, that to think to make gold of quicksilver, because it is the heaviest, is a thing not to be hoped, for quicksilver will not endure the manage of the fire. Next to silver, I think, copper were fittest to be the material.

352. The experiment of wood that shineth in the dark we have diligently driven and pursued, the rather for that of all things that give light here below it is the most durable, and hath least apparent motion. Fire and flame are in continual expense; sugar shining only while it is in scraping, and salt-water while it is in dashing; glow-worms have their shining while they live, or a little after; only scales of fishes (putrified) seem to be of the same nature with shining wood, and it is true that all putrefaction hath with it an inward motion, as well as fire or light. The trial sorted thus: 1. The shining is in some pieces more bright, in some more dim, but the most bright of all doth not attain to the light of a glow-worm. 2. The woods that have been tried to shine are chiefly sallow and willow; also the ash and hazel; it may be it holdeth in others. 3. Both roots and bodies do shine, but the roots better. 4. The colour of the shining part by daylight is in some pieces white, in some pieces inclining to red, which in the country they call the white and red carrot. 5. The part that shineth is (for the most part) somewhat soft and moist to feel to, but some was found to be firm and hard, so that it might be figured into a cross or into beads, &c.; but you must not look to have an image or the like in anything that is lightsome, for even a face in iron red-hot will not be seen, the light confounding the small differences of lightsome and darksome, which show the figure. 6. There was the shining part pared off till you came to that that did not shine; but within two days the part contiguous began also to shine, being laid abroad in the dew, so, as it seemeth, the putrefaction spreadeth. 7. There was other dead wood of like kind that was laid

abroad, which shined not at the first, but after a night's lying abroad began to shine. 8. There was other wood that did first shine, and, being laid dry in the house, within five or six days lost the shining, and, laid abroad again, recovered the shining. 9. Shining woods being laid in a dry room, within a seven-night lost their shining, but being laid in a cellar, or dark room, kept the shining. 10. The boring of holes in that kind of wood, and then laying it abroad, seemeth to conduce to make it shine. The cause is, for that all solution of continuity doth help on putrefaction, as was touched before. 11. No wood hath been yet tried to shine that was cut down alive, but such as was rotted, both in stock and root, while it grew. 12. Part of the wood that shined was steeped in oil, and retained the shining a fortnight. 13. The like succeeded in some steeped in water, and much better. 14. How long the shining will continue if the wood be laid abroad every night, and taken in and sprinkled with water in the day, is not yet tried. 15. Trial was made of laying it abroad in frosty weather, which hurt it not. 16. There was a great piece of a root which did shine, and the shining part was cut off till no more shined; yet, after two nights, though it was kept in a dry room, it got a shining.

354. To accelerate growth or stature, it must proceed either from the plenty of the nourishment or from the nature of the nourishment, or from the quickening and exciting of the natural heat. For the first excess of nourishment is hurtful, for it maketh the child corpulent, and growing in breadth rather than in height. And you may take an experiment from plants, which if they spread much are seldom tall. As for the nature of the nourishment, first, it may not be too dry, and, therefore, children in dairy countries do wax more tall than where they feed more upon bread and flesh. There is also a received tale that boiling of daisy roots in milk (which it is certain are great driers) will make dogs little. . . . Neither is it without cause that Xenophon, in the nouriture of the Persian children, doth so much commend their feeding upon cardamon, which, he saith, made them grow better, and be of a more active habit. Cardamon is in Latin nasturtium, and with us, water-cresses, which, it is certain, is an herb that, whilst it is young, is friendly to life. As for the quickening of natural heat, it must be doue chiefly with exercise, and therefore, no doubt, much going to school, where they sit so much, hindereth the growth of chil-

dren, whereas country people that go not to school are commonly of better stature. And again, men must beware how they give children anything that is cold in operation, for even long sucking doth hinder both wit and stature. This hath been tried, that a whelp that hath been fed with nitre in milk hath become very little, but extremely lively; for the spirit of nitre is cold; and though it be an excellent medicine in strength of years for prolongation of life, yet it is in children and young creatures an enemy to growth: and all for the same reason; for heat is requisite to growth, but, after a man is come to his middle age, heat consumeth the spirits, which the coldness of the spirit of nitre doth help to condense and correct.

360. A chameleon is a creature about the bigness of an ordinary lizard; his head unproportionably big; his eyes great; he moveth his head without the writhing of his neck (which is inflexible), as a hog doth; his back crooked; his skin spotted with little tumours, less eminent nearer the belly; his tail slender and long; on each foot he hath five fingers, three on the outside and two on the inside; his tongue of a marvellous length in respect of his body, and hollow at the end, which he will launch out to prey upon flies; of colour, green, and of a dusky yellow, brighter and whiter towards the belly, yet spotted with blue, white, and red. If he be laid upon green, the green predominateth; if upon yellow, the yellow; not so if he be laid upon blue, or red, or white; only the green spots receive a more orient lustre; laid upon black, he looketh all black, though not without a mixture of green. He feedeth not only upon air (though that be his principal sustenance), for sometimes he taketh flies, as was said; yet some that have kept chameleons a whole year together could never perceive that ever they fed upon anything else but air, and might observe their bellies to swell after they had exhausted the air and closed their jaws, which they open commonly against the rays of the sun. They have a foolish tradition in magic, that if a chameleon be burnt upon the top of an house it will raise a tempest, supposing (according to their vain dreams of sympathies) because he nourisheth with air, his body should have great virtue to make impression upon the air.

365. Take damask roses and pull them; then dry them upon the top of a house, upon a lead or tarras in the hot sun in a clear day between the hours only of twelve and two, or thereabouts. Then put them into a sweet dry earthen bottle,

or a glass with narrow mouths, stuffing them close together, but without bruising; stop the bottle or glass close, and these roses will retain not only their smell perfect, but their colour fresh for a year at least. . . . Note, that these roses, when you take them from the drying, have little or no smell, so that the smell is a second smell that issueth out of the flower afterwards.

377. An orange, lemon, and apple, wrapped in a linen cloth, being buried for a fortnight's space four foot deep within the earth, though it were in a moist place and a rainy time, yet came forth no ways mouldy or rotten, but were become a little harder than they were, otherwise fresh in their colour, but their juice somewhat flatted; but with the burial of a fortnight more they became putrified.

378. A bottle of beer buried in like manner as before, became more lively, better tasted, and clearer than it was; and a bottle of wine in like manner. A bottle of vinegar so buried, came forth more lively and more odoriferous, smelling almost like a violet: and after the whole month's burial, all the three came forth as fresh and lively, if not better, than before.

379. It were a profitable experiment to preserve oranges, lemons, and pomegranates till summer, for then their price will be mightily increased. This may be done, if you put them in a pot or vessel well covered, that the moisture of the earth come not at them; or else by putting them in a conservatory of snow. And, generally, whosoever will make experiments of cold, let him be provided of three things—a conservatory of snow, a good large vault, twenty feet at least under the ground, and a deep well.

386. Divers we see do stut. The cause may be (in most) the refrigeration of the tongue, whereby it is less apt to move; and, therefore, we see that naturals do generally stut; and we see that in those that stut, if they drink wine moderately, they stut less, because it heateth; and so we see that they that stut do stut more in the first offer to speak than in continuance, because the tongue is by motion somewhat heated; in some, also, it may be (though rarely) the dryness of the tongue, which likewise maketh it less apt to move, as well as cold: for it is an affect that cometh to some wise and great men, as it did unto Moses, who was *linguæ præpeditæ*; and many stutters, we find, are very choleric men, choler inducing a dryness in the tongue.

400. Some creatures do move a good while after their head

is off, as birds; some a very little time, as men, and all beasts. Some move though cut in several pieces, as snakes, eels, worms, flies, &c. First, therefore, it is certain that the immediate cause of death is the resolution or extinguishment of the spirits, and that the destruction or corruption of the organs is but the mediate cause. But some organs are so peremptorily necessary, that the extinguishment of the spirits doth speedily follow, but yet so as there is an interim of a small time. It is reported by one of the ancients of credit, that a sacrificed beast hath lowed after the heart hath been severed; and it is a report also of credit, that the head of a pig hath been opened, and the brain put into the palm of a man's hand, trembling, without breaking any part of it, or severing it from the marrow of the back-bone, during which time the pig hath been, in all appearance, stark dead and without motion: and after a small time the brain hath been replaced and the skull of the pig closed, and the pig hath a little after gone about. And certain it is that an eye upon revenge hath been thrust forth, so as it hanged a pretty distance by the visual nerve; and during that time the eye hath been without any power of sight, and yet after (being replaced) recovered sight. Now, the spirits are chiefly in the head and cells of the brain, which in men and beasts are large, and, therefore, when the head is off they move little or nothing; but birds have small heads, and, therefore, the spirits are a little more dispersed in the sinews, whereby motion remaineth in them a little longer, insomuch as it is extant in story that an emperor of Rome, to show the certainty of his hand, did shoot a great forked arrow at an ostrich as she ran swiftly upon the stage, and struck off her head, and yet she continued the race a little way with the head off. As for worms, and flies, and eels, the spirits are diffused almost all over, and, therefore, they move in their several pieces.

401. There were sown in a bed turnip-seed, radish-seed, wheat, cucumber-seed, and peas; the bed we call a hot-bed, and the manner of it is this: there was taken horsedung, old and well rotted; this was laid upon a bank half a foot high, and supported round about with planks; and upon the top was cast sifted earth, some two fingers deep, and then the seed sprinkled upon it, having been steeped all night in water mixed with cowdung. The turnip-seed and the wheat came up half an inch above ground, within two days after, without any watering; the rest the third day. The experiment was made in October; and it may be in the spring the accele-



rating would have been the speedier. This is a noble experiment; for, without this help, they would have been four times as long in coming up; but there doth not occur to me at this present any use thereof for profit, except it should be for sowing of peas, which have their price very much increased by the early coming. It may be tried also with cherries, strawberries, and other fruit, which are dearest when they come early.

407. But the most admirable acceleration by facilitating the nourishment, is that of water; for a standard of a damask-rose with the root on was set in a chamber where no fire was, upright in an earthen pan full of fair water, without any mixture, half a foot under the water, the standard being more than two foot high above the water. Within the space of ten days the standard did put forth a fair green leaf, and some other little buds, which stood at a stay, without any show of decay or withering, more than seven days; but afterwards that leaf faded, but the young buds did sprout on, which afterward opened into fair leaves in the space of three months, and continued so a while after, till upon removal we left the trial. But note, that the leaves were somewhat paler and lighter-coloured than the leaves used to be abroad. Note, that the first buds were in the end of October; and it is likely that if it had been in the spring time it would have put forth with greater strength, and (it may be) to have grown on to bear flowers. By this means you may have (as it seemeth) roses set in the midst of a pool, being supported with some stay, which is matter of rareness and pleasure, though of small use. This is the more strange, for that the like rose-standard was put at the same time into water mixed with horsedung, the horsedung about the fourth part to the water, and in four months' space (while it was observed) put not forth any leaf, though divers buds at the first, as the other.

411. It seemeth by these instances of water, that for nourishment the water is almost all in all, and that the earth doth but keep the plant upright and save it from over-heat and over-cold, and therefore is a comfortable experiment for good drinkers.

422. It is an assured experience, that a heap of flint or stone laid about the bottom of a wild tree (as in oak, elm, ash, &c.) upon the first planting, doth make it prosper double as much as without it: the cause is, for that it retaineth the moisture which falleth at any time upon the tree, and suffereth it not

to be exhaled by the sun. Again, it keepeth the tree warm from cold blasts and frosts, as it were in a house; it may be also there is somewhat in the keeping of it steady at the first. *Quære*, if laying of straw some height about the body of a tree will not make the tree forwards; for though the root giveth the sap, yet it is the body that draweth it. But you must note, that if you lay stones about the stalk of lettuce, or other plants that are more soft, it will over-moisten the roots so as the worms will eat them.

432. The lowness of the bough where the fruit cometh maketh the fruit greater, and to ripen better; for you shall ever see in apricots, peaches, or melo-cotones upon a wall, the greatest fruits towards the bottom. And in France the grapes that make the wine grow upon the low vines bound to small stakes; and the raised vines in arbours make but verjuice. It is true that in Italy and other countries where they have hotter sun, they raise them upon elms and trees; but I conceive, that if the French manner of planting low were brought in use, their wines would be stronger and sweeter. But it is more chargeable in respect of the props: it were good to try whether a tree grafted somewhat near the ground, and the lower boughs only maintained, and the higher continually pruned off, would not make a larger fruit.

449. The pulling off many of the blossoms from a fruit-tree doth make the fruit fairer. The cause is manifest; for that the sap hath the less to nourish; and it is a common experience, that if you do not pull off some blossoms, the first time a tree bloometh it will blossom itself to death.

462. It is further reported, that if when a cucumber is grown you set a pot of water about five or six inches distance from it, it will, in twenty-four hours, shoot so much out as to touch the pot; which if it be true, it is an experiment of a higher nature that belongeth to this title; for it discovereth perception in plants to move towards that which should help and comfort them, though it be at a distance. The ancient tradition of the vine is far more strange; it is, that if you set a stake or prop some distance from it, it will grow that way, which is far stranger (as is said) than the other; for that water may work by a sympathy of attraction; but this of the stake seemeth to be a reasonable discourse.

477. It hath been set down by one of the ancients, that if you take two twigs of several fruit-trees, and flat them on the ground, and then bind them close together and set them in the

ground, they will come up in one stock ; but yet they will put forth in their several fruits without any commixture in the fruit. Wherein note (by the way) that unity of continuance is easier to procure than unity of species. It is reported also that vines of red and white grapes being set in the ground, and the upper parts being flatted and bound close together, will put forth grapes of the several colours upon the same branch, and grape-stowes of several colours within the same grape ; but the more after a year or two, the unity (as it seemeth) growing more perfect ; and this will likewise help, if from the first uniting they be often watered, for all moisture helpeth to union. And it is prescribed also to bind the bud as soon as it cometh forth, as well as the stock, at the least for a time.

492. It is reported that the shrub called our lady's seal (which is a kind of briony), and coleworts, set near together, one or both will die. The cause is, for that they be both great depredators of the earth, and one of them starveth the other. The like is said of reed and a brake, both which are succulent, and therefore the one deceiveth the other ; and the like of hemlock and rue, both which draw strong juices.

501. It is a curiosity to have several fruits upon one tree ; and the more when some of them come early and some come late, so that you may have upon the same tree ripe fruits all summer : this is easily done by grafting of several scions upon several boughs of a stock, in a good ground plentifully fed. So you may have all kinds of cherries, and all kinds of plums, and peaches, and apricots, upon one tree ; but I conceive the diversity of fruits must be such as will graft upon the same stock ; and therefore I doubt whether you can have apples, or pears, or oranges, upon the same stock upon which you graft plums.

502. It is a curiosity to have fruits of divers shapes and figures ; this is easily performed by moulding them when the fruit is young with moulds of earth or wood ; so you may have cucumbers, &c. as long as a cane, or as round as a sphere, or formed like a cross. You may have also apples in the form of pears or lemons. You may have also fruit in more accurate figures, as we said of men, beasts, or birds, according as you make the moulds ; wherein you must understand, that you make the mould big enough to contain the whole fruit when it is grown to the greatest, for else you will choke the spreading of the fruit, which otherwise would spread itself and fill the concave, and so be turned into the shape desired, as it is in

mould-works of liquid things. Some doubt may be conceived that the keeping of the sun from the fruit may hurt it; but there is ordinary experience of fruit that groweth covered. *Quære* also whether some small holes may not be made in the wood to let in the sun. And note, that it were best to make the moulds partible, glued, or cemented together, that you may open them when you take out the fruit.

503. It is a curiosity to have inscriptions or engravings in fruit or trees. This is easily performed by writing with a needle, or bodkin, or knife, or the like, when the fruit or trees are young; for as they grow so the letters will grow more large and graphical.

———— Teneresque meos incidere amores  
Arboribus, crescent illæ, crescetis amores.

504. You may have trees apparelled with flowers or herba, by boring holes in the bodies of them and putting into them earth holpen with muck, and setting seeds or slips of violets, strawberries, wild-thyme, camomile, and such like in the earth, wherein they do but grow, in the tree, as they do in pots, though perhaps with some feeding from the trees, as it would be tried also with shoots of vines and roots of red roses; for it may be, they being of a more ligneous nature, will incorporate with the tree itself.

505. It is an ordinary curiosity to form trees and shrubs (as rosemary, juniper, and the like) into sundry shapes; which is done by moulding them within and cutting them without; but they are but lame things, being too small to keep figure. Great castles made of trees upon frames of timber, with turrets and arches, were anciently matters of magnificence.

514. The making of fruits without core or stone is likewise a curiosity, and somewhat better, because whatsoever maketh them so is like to make them more tender and delicate. If a scion or shoot, fit to be set in the ground, have the pith finely taken forth (and not altogether, but some of it left, the better to save the life), it will bear a fruit with little or no core or stone. And the like is said to be of dividing a quick-tree down to the ground, and taking out the pith and then binding it up again.

515. It is reported also that a citron grafted upon a quince will have small or no seeds; and it is very probable that any sour fruit grafted upon a stock that beareth a sweeter fruit, may both make the fruit sweeter and more void of the harsher of kernels or seeds.

516. It is reported that not only the taking out of the pith, but the stopping of the juice of the pith from rising in the midst, and turning it to rise on the outside, will make the fruit without core or stone; as if you should bore a tree clean through and put a wedge in. It is true there is some affinity between the pith and the kernel, because they are both of a harsh substance and both placed in the midst.

517. It is reported that trees watered perpetually with warm water will make a fruit with little or no core or stone. And the rule is general, that whatsoever will make a wild tree a garden tree, will make a garden tree to have less core or stone.

522. There is an old tradition that boughs of oak put into the earth will put forth wild vines; which if it be true (no doubt), it is not the oak that turneth into a vine, but the oak-bough putrifying, qualifyeth the earth to put forth a vine of itself.

523. It is not impossible, and I have heard it verified, that upon cutting down of an old timber tree, the stub hath put out sometimes a tree of another kind, as that beech hath put forth birch, which if it be true, the cause may be, for that the old stub is too scant of juice to put forth the former tree, and therefore putteth forth a tree of smaller kind that needeth less nourishment.

524. There is an opinion in the country, that if the same ground be oft sown with the grain that grew upon it, it will, in the end, grow to be of a baser kind.

525. It is certain that, in sterile years, corn sown will grow to another kind.

This work of the transmutation of plants one into another, is *inter maglia naturæ*; for the transmutation of species is, in the vulgar philosophy, pronounced impossible; and certainly it is a thing of difficulty, and requireth deep search into nature; but seeing there appear some manifest instances of it, the opinion of impossibility is to be rejected, and the means thereof to be found out. We see that, in living creatures that come of putrefaction, there is much transmutation of one into another, as caterpillars turn into flies, &c. And it should seem probable that, whatsoever creature having life is generated without seed, that creature will change out of one species into another; for it is the seed and the nature of it which locketh and boundeth in the creature, that it doth not expatiate. So as we may well conclude, that seeing the earth of itself doth put forth plants without seed, therefore plants may well have a trans-

migration of species; wherefore wanting instances which do occur, we shall give directions of the most likely trials. And generally, we would not have those that read this work of "Sylva Sylvarum," account it strange or think that it is an over-haste, that we have set down particulars untried; for contrarywise, in our own estimation, we account such particulars more worthy than those that are already tried and known, for these later must be taken as you find them; but the other do level point blank at the inventing of causes and axioms.

547. It is reported that the bark of white or red poplar (which are of the moistest of trees), cut small and cast into furrows well dunged, will cause the ground to put forth mushrooms at all seasons of the year, fit to be eaten. Some add to the mixture leaven of bread resolved in water.

548. It is reported that if a hilly field, where the stubble is standing, be set on fire in the showery season, it will put forth great store of mushrooms.

549. It is reported that hartshorn, shaven or in small pieces, mixed with dung and watered, putteth up mushrooms. And we know that hartshorn is of a fat and clammy substance; and it may be ox-horn would do the like.

550. It hath been reported, though it be scarce credible, that ivy hath grown out of a stag's horn; which they suppose did rather come from a constrictation of the horn upon the ivy than from the horn itself. There is not known any substance but earth, and the procedures of earth (as tile, stone, &c.), that yieldeth any moss or herby substance.

560. It is certain that both stock-gillyflowers and rose-campions, stamped, have been applied with success to the wrists of those that have had tertian or quartan agues; and the vapour of colts-foot has a sanative virtue towards the lungs; and the leaf also is healing in surgery.

571. In some mines in Germany, as is reported, there grow in the bottom vegetables; and the workfolks use to say they have magical virtue, and will not suffer men to gather them.

574. It is reported that earth that was brought out of the Indies, and other remote countries for ballast for ships, cast upon some grounds in Italy, did put forth foreign herbs, to us in Europe not known; and, that which is more, that of their roots, barks, and seeds, contused together and mingled with other earth and well watered with warm water, there came forth herbs much like the other.

577. There be some flowers, blossoms, grains, and fruit,

which come more early, and others which come more late in the year. The flowers that come early with us are, prime-roses, violets, anemonies, water-daffadillies, crocus vernus, and some early tulippas; and they are all cold plants, which therefore (as it should seem) have a quicker perception of the heat of the sun increasing than the hot herbs have; as a cold hand will sooner find a little warmth than a hot. And those that come next after are wallflowers, cowslips, hyacinths, rosemary-flowers, &c.; and after them pinks, roses, flowerdeluces, &c.; and the latest are gillyflowers, hollyhocks, larksfoot, &c. The earliest blossoms are the blossoms of peaches, almonds, cornelians, mezerions, &c; and they are of such trees as have much moisture, either watery or oily; and therefore crocus vernus also, being an herb that hath an oily juice, putteth forth early, for those also find the sun sooner than the drier trees. The grains are, first rye and wheat, then oats and barley, then peas and beans; for though green peas and beans be eaten sooner, yet the dry ones, that are used for horsemeat, are ripe last; and it seemeth that the fatter grain cometh first. The earliest fruits are strawberries, cherries, gooseberries, currants; and after them early apples, early pears, apricots, rasps; and after them damasins and most kind of plums, peaches, &c.; and the latest are apples, wardens, grapes, nuts, quinces, almonds, sloes, briar-berries, hips, medlars, services, cornelians, &c.

578. It is to be noted that commonly trees that ripen latest blossom soonest, as peaches, cornelians, sloes, almonds, &c.; and it seemeth to be a work of Providence that they blossom so soon, for otherwise they could not have the sun long enough to ripen.

590. Flowers have all exquisite figures; and the flower-numbers are chiefly five and four, as in prime-roses, briar-roses, single musk-roses, single-pincks, and gillyflowers, &c., which have five leaves; lillies, flowerdeluces, borage, bugloss, &c., which have four leaves. But some put forth leaves not numbered, but they are ever small ones, as marygolds, trefoil, &c. We see also that the sockets and supporters of flowers are figured, as in the five brethren of the rose, sockets of gillyflowers, &c. Leaves also are all figured, some round, some long, none square, and many jagged on the sides, which leaves of flowers seldom are.

606. I left once, by chance, a citron cut, in a close room for three summer months that I was absent, and at my return

there were grown forth, out of the pith cut, tufts of hairs an inch long, with little black heads, as if they would have been some herb.

609. There is a fabulous narration, that in the northern countries there should be an herb that groweth in the likeness of a lamb, and feedeth upon the grass, in such sort, as it will bear the grass round about. But I suppose that the figure maketh the fable, for so we see, there be bee-flowers, &c.; and as for the grass, it seemeth the plant, having a great stalk and top, doth prey upon the grass a good way about, by drawing the juice of the earth from it.

623. It is reported that, in some places, vines are suffered to grow like herbs, spreading upon the ground; and that the grapes of those vines are very great. It were good to make trial whether plants that use to be born up by props, will put forth greater leaves and greater fruits, if they be laid along the ground, as hops, ivy, woodbine, &c.

626. Such fruits as you appoint for long keeping, you must gather before they be full ripe; and in a fair and dry day, towards noon, and when the wind bloweth not south, and when the moon is under the earth and in decrease.

627. Take grapes and hang them in an empty vessel, well stopped, and set the vessel, not in a cellar, but in some dry place, and it is said they will last long; but it is reported by some they will keep better in a vessel half full of wine, so that the grapes touch not the wine.

628. It is reported that the preserving of the stalk helpeth to preserve the grape, especially if the stalk be put into the pith of elder, the elder not touching the fruit.

629. It is reported by some of the ancients that fruit put in bottles, and the bottles let down into wells under water, will keep long.

656. The reed or cane is a watery plant, and groweth not but in the water; it hath these properties; that it is hollow, that it is knuckled, both stalk and root, that being dry it is more hard and fragile than other wood; that it putteth forth no boughs, though many stalks out of one root. It differeth much in greatness, the smallest being fit for thatching of houses and stopping the chinks of ships, better than glue or pitch. The second bigness is used for angle-rods and staves, and in China for beating of offenders upon the thighs. The differing kinds of them are the common reed, the cassia fistula and the sugar-reed. Of all plants it boweth the easiest and



riseth again. It seemeth, that amongst plants which are nourished with mixture of earth and water, it draweth most nourishment from water, which maketh it the smoothest of all others in bark, and the hollowest in body.

660. The putting forth of certain herbs discovereth of what nature the ground where they put forth is; as wild thyme showeth good feeding-ground for cattle; bettony and strawberries showeth grounds fit for wood; camomile showeth mellow grounds fit for wheat; mustard-seed, growing after the plough, showeth a good strong ground also for wheat; burnet showeth good meadow, and the like.

670. The remedies of the diseases of corn have been observed as followeth :—The steeping of the grain, before sowing, a little time in wine, is thought a preservative; the mingling of seed-corn with ashes is thought to be good; the sowing at the wane of the moon is thought to make the corn sound. It hath not been practised, but it is thought to be of use, to make some miscellany in corn, as if you sow a few beans with wheat your wheat will be the better. It hath been observed that the sowing of corn with houseleek doth good. Though grain that toucheth oil or fat receiveth hurt, yet the steeping of it in the dregs of oil, when it beginneth to putrify (which they call amurca), is thought to assure it against worms. It is reported also that if corn be mowed it will make the grain longer but emptier, and having more of the husk.

678. You may turn almost all flesh into a fatty substance, if you take flesh and cut it into pieces, and put the pieces into a glass covered with parchment, and so let the glass stand six or seven hours in boiling water. It may be an experiment of profit, for making of fat or grease, for many uses, but then it must be of such flesh as is not edible, as horses, dogs, bears, foxes, badgers, &c.

679. It is reported by one of the ancients that new wine, put into vessels well stopped and the vessels let down into the sea, will accelerate very much the making of them ripe and potable; the same would be tried in wort.

691. It was observed in the great plague of the last year, that there were seen, in divers ditches and low grounds about London, many toads that had tails, two or three inches long at the least; whereas toads (usually) have no tails at all; which argueth a great disposition to putrefaction in the soil and air. It is reported likewise that roots (such as carrots and parsnips) are more sweet and luscious in infectious years than in other years.

692. Wise physicians should with all diligence inquire what simples nature yieldeth that have extreme subtle parts without any mordication or acrimony, for they undermine that which is hard; they open that which is stopped and shut; and they expel that which is offensive, gently, without too much perturbation. Of this kind are elder-flowers, which therefore are proper for the stone; of this kind is the dwarf-pine, which is proper for the jaundice; of this kind is hartshorn, which is proper for agues and infections; of this kind is piony, which is proper for stoppings in the head; of this kind is fumitory, which is proper for the spleen; and a number of others. Generally, divers creatures bred of putrefaction, though they be somewhat loathsome to take, are of this kind, as earth-worms, timber-sowes, snails, &c. And I conceive that the trochichs of vipers (which are so much magnified) and the flesh of snakes some ways condited and corrected (which of late are grown into some credit), are of the same nature. So the parts of beasts putrified (as castoreum and musk, which have extreme subtle parts) are to be placed amongst them. We see also that putrefaction of plants (as agarick and jew's-ear) are of greatest virtue; the cause is, for that putrefaction is the subtlest of all motions in the parts of bodies; and since we cannot take down the lives of living creatures (which some of the Paracelsians say if they could be taken down, would make us immortal); the next is for subtlety of operation, to take bodies putrified, such as may be safely taken.

696. It is affirmed both by the ancient and modern observation, that in furnaces of copper and brass, where chalcites is (which is vitriol) often cast in, to mend the working, there riseth suddenly a fly, which sometimes moveth, as if it took hold on the walls of the furnace; sometimes is seen moving in the fire below, and dieth presently, as soon as it is out of the furnace, which is a noble instance and worthy to be weighed; for it showeth that as well violent heat of fire as the gentle heat of living creatures, will vivify if it have matter proportionable. Now the great axiom of vivification is, that there must be heat to dilate the spirit of the body, an active spirit to be dilated, matter, vicious or tenacious, to hold in the spirit, and that matter to be put forth and figured. Now a spirit dilated by so ardent a fire as that of the furnace, as soon as ever it cooleth never so little, congealeth presently. And (no doubt) this action is furthered by the chalcites, which hath a spirit, that will put forth and germinate, as we see in chemical  
ls.

697. It is true that they have (some of them) diaphragm and an intestine; and they have all skins, which in most of the insecta are cast often. They are not generally of long life; yet bees have been known to live seven years; and snakes are thought the rather for the casting of their spoil, to live till they be old; and eels, which many times breed of putrefaction, will live and grow very long; and those that interchange from worms to flies in the summer, and from flies to worms in the winter, have been kept in boxes four years at the least.

698. The insecta have voluntary motion, and therefore imagination; and whereas some of the ancients have said, that their motion is indeterminate and their imagination indefinite, it is negligently observed, for ants go right forwards to their hills; and bees do admirably know the way from a flowery heath, two or three miles off, to their hives. It may be gnats and flies have their imagination more mutable and giddy, as small birds likewise have. It is said by some of the ancients that they have only the sense of feeling, which is manifestly untrue; for if they go forth right to a place they must needs have sight; besides, they delight more in one flower or herb than in another, and therefore have taste; and bees are called with sound upon brass, and therefore they have hearing, which showeth likewise that though their spirits be diffused, yet there is a seat of their senses in their head.

704. The Turkish bow giveth a very forcible shoot; inso-much as it hath been known that the arrow hath pierced a steel target or a piece of brass of two inches thick. But that which is more strange, the arrow, if it be headed with wood, hath been known to pierce through a piece of wood of eight inches thick. And it is certain that we had in use at one time, for sea-fight, short arrows which they called sprights, without any other heads save wood sharpened, which were discharged out of muskets, and would pierce through the sides of ships where a bullet would not pierce. But this dependeth upon one of the greatest secrets in all nature, which is, that similitude of substance will cause attraction where the body is wholly freed from the motion of gravity; for if that were taken away, lead would draw lead, and gold would draw gold, and iron would draw iron, without the help of the loadstone. But this same motion of weight or gravity (which is mere motion of matter, and hath no affinity with the form or kind) doth kill the other motion, except itself be killed by a violent motion: and in

these instances of arrows; for then the motion of attraction by similitude of substance beginneth to show itself.

705. They have in Turkey and the East, certain confections which they call *servets*, which are like to candied conserves, and are made of sugar and lemons, or sugar and citrons, or sugar and violets, and some other flowers, and some mixture of amber for the more delicate persons; and those they dissolve in water, and thereof make their drink, because they are forbidden wine by their law. But I do much marvel that no Englishman, or Dutchman, or German doth set up brewing in Constantinople, considering they have such quantity of barley. For as for the general sort of men, frugality may be the cause of drinking water, for that it is no small saving to pay nothing for one's drink; but the better sort might well be at the cost. And yet I wonder the less at it, because I see France, Italy, or Spain have not taken into use beer or ale, which perhaps if they did, would better both their healths and their complexions. It is likely it would be matter of great gain to any that should begin it in Turkey.

721. Laughing causeth a dilatation of the mouth and lips, a continued expulsion of the breath, with the loud noise which maketh the interjection of laughing, shaking of the breast and sides, running of the eyes with water if it be violent and continued. Wherein first it is to be understood, that laughing is scarce properly a passion, but hath his source from the intellect; for in laughing there ever precedeth a conceit of somewhat ridiculous, and therefore it is proper to man. Secondly, that the cause of laughing is but a light touch of the spirits, and not so deep an impression as in other passions. And therefore (that which hath no affinity with the passions of the mind) it is moved, and that in great vehemency, only by tickling some parts of the body: and we see that men, even in a grieved state of mind, yet cannot sometimes forbear laughing. Thirdly, it is ever joined with some degree of delight: and therefore exhilaration hath some affinity with joy, though it be much lighter motion: *res severa est verum gaudium*. Fourthly, that the object of it is deformity, absurdity, shrewd turns, and the like. Now to speak of the causes of the effects before mentioned, whereunto these general notes give some light. For the dilatation of the mouth and lips, continued expulsion of the breath and voice, and shaking of the breast and sides, they proceed all from the dilatation of the spirits, especially being sudden. So likewise the running of the eyes with

water (as hath been formerly touched, where we spake of the tears of joy and grief), is an effect of dilatation of the spirits. And for suddenness, it is a great part of the matter: for we see that any shrewd turn that lighteth upon another, or any deformity, &c., moveth laughter in the instant, which, after a little time, it doth not. So we cannot laugh at any thing after it is stale, but whilst it is new. And even in tickling, if you tickle the sides, and give warning, or give a hard or continued touch, it doth not move laughter so much.

738. They have in Turkey a drink called Coffa, made of a berry of the same name, as black as soot, and of a strong scent, but not aromatical, which they take, beaten into powder, in water, as hot as they can drink it; and they take it and sit at it in their coffa-houses, which are like our taverns. This drink comforteth the brain and heart, and helpeth digestion. Certainly this berry coffa, the root and leaf betel, the leaf tobacco, and the tear of poppy (opium), of which the Turks are great takers (supposing it expelleth all fear), do all condense the spirits and make them strong and aleger. But it seemeth they are taken after several manners: for coffa and opium are taken down, tobacco but in smoke, and betel is but champed in the mouth with a little lime. It is like there are more of them, if they were well found out and well corrected. Quære of heubane-seed, of mandrake, of saffron-root and flower, of folium indum, of ambergris, of the Assyrian amomum, if it may be had, and of the scarlet powder which they call kermex, and generally of all such things as do inebriate and provoke sleep. Note, that tobacco is not taken in root or seed, which are more forcible ever than leaves.

739. The Turks have a black powder, made of a mineral called alcohole, which, with a fine long pencil, they lay under their eyelids, which doth colour them black, whereby the white of the eye is set off more white. With the same powder they colour also the hairs of their eyelids and of their eyebrows, which they draw into embowed arches. You shall find that Xenophon maketh mention that the Medes used to paint their eyes. The Turks use with the same tincture to colour the hair of their heads and beards black: and divers with us that are grown grey, and yet would appear young, find means to make their hair black by combing it (as they say) with a leaden comb, or the like. As for the Chinese, who are of an ill complexion (being olivaster), they paint their cheeks scarlet, especially their king and grandees. Generally, bar-

barous people, that go naked, do not only paint themselves, but they pounce and raze their skin, that the painting may not be taken forth; and they make it into works; so do the West Indians, and so did the ancient Picts and Britons; so that it seemeth men would have the colours of birds' feathers, if they could tell how; or, at least, they will have gay skins instead of gay clothes.

741. The Turks have a pretty art of chamoletting of paper, which is not with us in use. They take divers oiled colours, and put them severally in drops upon water, and stir the water lightly, and then wet their paper (being of some thickness) with it, and the paper will be waved and veined like chamolet or marble.

762. It would be well boulded out whether great refractions may not be made upon reflections, as well as upon direct beams. For example: we see, that take an empty basin, put an angel of gold, or what you will, into it; then go so far from the basin till you cannot see the angel, because it is not in a right line; then fill the basin with water, and you shall see it out of his place because of the reflection. To proceed therefore, put a looking-glass into a basin of water; I suppose you shall not see the image in a right line, or at equal angles, but aside. I know not whether this experiment may not be extended so as you might see the image and not the glass, which for beauty and strangeness were, a fine proof: for then you shall see the image like a spirit in the air. As for example: if there be a cistern or pool of water, you shall place over against it a picture of the devil, or what you will, so as you do not see the water; then put a looking-glass in the water; now, if you can see the devil's picture aside, not seeing the water, it will look like a devil indeed. They have an old tale in Oxford, that Friar Bacon walked between two steeples, which was thought to be done by glasses when he walked upon the ground.

776. It is, at this day, in use in Gaza, to couch potsherd or vessels of earth in their walls, to gather the wind from the top, and to pass it down in spouts into rooms. It is a device for freshness in great heats; and it is said there are some rooms in Italy and Spain for freshness and gathering the winds and air in the heats of summer. But they be but pennings of the winds and enlarging them again, and making them reverberate, and go round in circles, rather than this device of spouts in the wall.

785. It hath been noted by the ancients that in full or

impure bodies, ulcers or hurts in the legs are hard to cure ; and in the head more easy. The cause is, for that ulcers or hurts in the legs require desiccation, which by the defluxion of humours to the lower parts is hindered ; whereas hurts and ulcers in the head require it not, but, contrarywise, dryness maketh them more apt to consolidate.

789. Weigh iron and aquafortis severally, then dissolve the iron in the aquafortis, and weigh the dissolution, and you shall find it to bear as good weight as the bodies did severally, notwithstanding a good deal of waste by a thick vapour that issueth during the working, which showeth that the opening of a body doth increase the weight. This was tried once or twice, but I know not whether there were any error in the trial.

794. There is in the city of Ticinum, in Italy, a church that hath windows only from above ; it is in length an hundred feet, in breadth twenty feet, and in height near fifty, having a door in the midst. It reporteth the voice twelve or thirteen times, if you stand by the close end wall over against the door. The echo fadeth, and dieth by little and little, as the echo at Pont Charenton doth. And the voice soundeth as if it came from above the door. And if you stand at the lower end, or on either side of the door, the echo holdeth, but if you stand in the door, or in the midst just over against the door, not. Note, that all echoes sound better against old walls than new, because they are more dry and hollow.

795. Those effects which are wrought by the percussion of the sense, and by things in fact, are produced likewise in some degree by the imagination. Therefore, if a man see another eat sour or acid things which set the teeth on edge, this object tainteth the imagination ; so that he that seeth the thing done by another hath his own teeth also set on edge. So, if a man see another turn swiftly and long, or if he look upon wheels that turn, himself waxeth turn-sick ; so if a man be upon a high place without rails or good hold, except he be used to it, he is ready to fall : for imagining a fall, it putteth his spirits into the very action of a fall. So many upon the seeing of others bleed, or strangled, or tortured, themselves are ready to faint, as if they bled, or were in strife.

796. Take a stock gilliflower and tie it gently upon a stick, and put them both into a stoop-glass full of quicksilver, so that the flower be covered ; then lay a little weight upon the top of the glass that may keep the stick down ; and look upon them after four or five days, and you shall find the flower

fresh, and the stalk harder and less flexible than it was; if you compare it with another flower gathered at the same time it will be the more manifest. This showeth that bodies do preserve excellently in quicksilver, and not preserve only, but, by the coldness of the quicksilver, indurate: for the freshness of the flower may be merely conservation (which is the more to be observed because the quicksilver presseth the flower); but the stiffness of the stalk cannot be without induration, from the cold (as it seemeth) of the quicksilver.

797. It is reported by some of the ancients, that in Cyprus there is a kind of iron that, being cut into little pieces and put into the ground, if it be well watered, will increase into greater pieces. This is certain and known of old, that lead will multiply and increase, as hath been seen in old statues of stone which hath been put in cellars, the feet of them being bound with leaden bands, where (after a time) there appeared that the lead did swell, insomuch as it hanged upon the stone like warts.

798. I call drowning of metals when that the baser metal is so incorporate with the more rich as it can by no means be separated again, which is a kind of version, though false; as if silver should be inseparably incorporated with gold, or copper and lead with silver. The ancient electrum, had in it a fifth of silver to the gold, and made a compound metal as fit for most uses as gold, and more resplendent, and more qualified in some other properties, but then that was easily separated. This to do privily, or to make the compound pass for the rich metal simple is an adulteration, or counterfeiting; but if it be done avowedly, and without disguising, it may be a great saving of the richer metal. I remember to have heard of a man skilful in metals, that a fifteenth part of silver incorporate with gold will not be recovered by any water of separation, except you put a greater quantity of silver to draw to it the less, which, he said, is the last refuge in separations. But that is a tedious way, which no man (almost) will think on. This would be better inquired, and the quantity of the fifteenth turned to a twentieth, and likewise with some little additional that may further the intrinsic incorporation. Note, that silver in gold will be detected by weight, compared with the dimension; but lead in silver (lead being the weightier metal) will not be detected, if you take so much the more silver as will countervail the over weight of the lead.

826. Beasts do take comfort generally in a moist air, and



it maketh them eat their meat better; and, therefore, sheep will get up betimes in the morning to feed against rain; and cattle, and deer, and coneyes will feed hard before rain; and a heifer will put up his nose and snuff in the air against rain.

832. It hath been observed by the ancients, that where a rainbow seemeth to hang over or to touch, there breatheth forth a sweet smell. The cause is, for that this happeneth but in certain matters which have in themselves some sweetness, which the gentle dew of the rainbow doth draw forth: and the like do soft showers, for they also make the ground sweet, but none are so delicate as the dew of the rainbow where it falleth; it may be also that the water itself hath some sweetness, for the rainbow consisteth of a glomeration of small drops, which cannot possibly fall but from the air that is very low, and therefore may hold the very sweetness of the herbs and flowers as a distilled water.

847. Take lead and melt it, and in the midst of it, when it beginneth to congeal, make a little dint or hole, and put quicksilver wrapped in a piece of linen into that hole, and the quicksilver will fix, and run no more, and endure the hammer. This is a noble instance of induration by consent of one body with another, and motion of excitation to imitate; for to ascribe it only to the vapour of lead is less probable. Query, whether the fixing may be in such a degree as it will be figured like other metals? for, if so, you may make works of it for some purposes, for they come not near the fire.

848. Sugar hath put down the use of honey, insomuch as we have lost those observations and preparations of honey which the ancients had when it was more in price. First, it seemeth that there was in old time tree-honey as well as bee-honey, which was the tear or blood issuing from the tree; insomuch, as one of the ancients relateth, that in Trebesond there was honey issuing from the box-trees, which made men mad. Again, in ancient time there was a kind of honey which, either of the own nature or by art, would grow as hard as sugar, and was not so luscious as ours. They had also a wine of honey, which they made thus:—They crushed the honey into a great quantity of water, and then strained the liquor, after they boiled it in a copper to the half, then they poured it into earthen vessels for a small time, and after turned it into vessels of wood, and kept it for many years. They have also at this day in Russia, and those northern coun-

tries, mead simple, which (well made and seasoned) is a good wholesome drink, and very clear. They use also in Wales a compound drink of mead, with herbs and spices. But meanwhile it were good, in recompense of that we have lost in honey, there were brought in use a sugar-mead (for so we call it), though without any mixture at all of honey, and to brew it and keep it stale, as they used mead; for certainly, though it would not be so abstersive, and opening, and solutive a drink as mead, yet it will be more grateful to the stomach, and more lenitive, and fit to be used in sharp diseases: for we see that the use of sugar in beer and ale hath good effect in such cases.

859. It is said that witches do greedily eat man's flesh, which, if it be true, besides a devilish appetite in them, it is likely to proceed for that man's flesh may send up high and pleasing vapours, which may stir the imagination. and witches' felicity is chiefly in imagination, as hath been said.

866. It is reported, that amongst the Leucadians in ancient time, upon a superstition, they did use to precipitate a man from a high cliff into the sea, tying about him with strings at some distance many great fowls, and fixing unto his body divers feathers, spread to break the fall. Certainly many birds of good wing (as kites, and the like) would bear up a good weight as they fly, and spreading of feathers thin, and close, and in great breadth, will likewise bear up a great weight, being even laid, without tilting upon the sides. The further extension of this experiment for flying may be thought upon.

887. There is in some places (namely, in Cephalonia) a little shrub which they call holy-oak, or dwarf-oak, upon the leaves whereof there riseth a tumour like a blister, which they gather, and rub out of it a certain red dust, that converteth (after a while) into worms, which they kill with wine (as is reported) when they begin to quicken. With this dust they dye scarlet.

896. There may be other secret effects of the influence of the moon which are not yet brought into observation. It may be, that if it so fall out that the wind be north, or north-east, in the full of the moon it increaseth cold; and if south, or south-west, it disposeth the air for a good while to warmth and rain, which would be observed.

901. Men are to be admonished that they do not withdraw credit from the operations by transmission of spirits and force of imagination, because the effects fail sometimes. For, as in

infection and contagion from body to body (as the plague, and the like) it is most certain that the infection is received, many times, by the body passive; but yet it is by the strength and good disposition thereof repulsed and wrought out before it be formed in a disease; so much more in impressions from mind to mind, or from spirit to spirit, the impression taketh, but is encountered and overcome by the mind and spirit, which is passive before it work any manifest effect; and therefore they work most upon weak minds and spirits, as those of women, sick persons, superstitious and fearful persons, children, and young creatures.

‘Nescio quis teneros oculus mihi fascinat agnos:’

The poet speaketh not of sheep, but of lambs. As for the weakness of the power of them upon kings and magistrates, it may be ascribed (besides the main, which is the protection of God over those that execute his place) to the weakness of the imagination of the imaginant; for it is hard for a witch or a sorcerer to put on a belief that they can hurt such persons. Men are to be admonished, on the other side, that they do not easily give place and credit to these operations, because they succeed many times; for the cause of this success is oft to be truly ascribed unto the force of affection and imagination upon the body agent, and then, by a secondary means, it may work upon a divers body, as for example: if a man carry a planet's seal, or a ring, or some part of a beast, believing strongly that it will help him to obtain his love, or to keep him from danger of hurt in fight, or to prevail in a suit, &c., it may make him more active and industrious, and again, more confident and persisting than otherwise he would be. Now, the great effects that may come of industry and perseverance (especially in civil business) who knoweth not? For we see audacity doth almost blind and mate the weaker sort of minds, and the state of human actions is so variable, that to try things oft and never to give over doth wonders; therefore it were a mere fallacy and mistaking to ascribe that to the force of imagination upon another body, which is but the force of imagination upon the proper body: for there is no doubt but that imagination and vehement affection work greatly upon the body of the imaginant, as we shall show in due place.

Men are to be admonished, that as they are not to mistake the causes of these operations, so much less they are to mistake

941. There are conceits, that some men that are of an ill and melancholy nature do incline the company into which they come, to be sad and ill disposed; and contrarywise, that others that are of a jovial nature do dispose the company to be merry and cheerful. And again, that some men are lucky to be kept company with and employed; and others unlucky. Certainly it is agreeable to reason, that there are, at the least, some light effluxions from spirit to spirit, when men are in presence one with another, as well as from body to body.

942. It hath been observed, that old men who have loved young company, and been conversant continually with them, have been of long life; their spirits (as it seemeth) being recreated by such company. Such were the antient sophists and rhetoricians, which ever had young auditors and disciples, as Gorgias, Protagoras, Isocrates, &c., who lived till they were an hundred years old; and so likewise did many of the grammarians and schoolmasters, such as was Orbilius, &c.

943. Audacity and confidence doth, in civil business, so great effects as a man may reasonably doubt, that besides the very daring, and earnestness, and persisting, and importunity, there should be some secret binding and stooping of other men's spirits to such persons.

946. The power of imagination is in three kinds: the first, upon the body of the imaginant, including likewise the child in the mother's womb; the second is. the power of it upon dead bodies, as plants, wood, stone, metal, &c.; the third is, the power of it upon the spirits of men and living creatures; and with this last we will only meddle.

The problem therefore is, whether a man constantly and strongly believing that such a thing shall be (as that such an one will love him; or that such an one will grant him his request; or that such an one shall recover a sickness, or the like), it doth help any thing to the effecting of the thing itself. And here again we must warily distinguish; for it is not meant (as hath been partly said before) that it should help by making a man more stout or more industrious (in which kind constant belief doth much), but merely by a secret operation. or binding, or changing the spirit of another; and in this it is hard (as we began to say) to make any new experiment; for I cannot command myself to believe what I will, and so no trial can be made: nay it is worse; for whatsoever a man imagineth doubtfully or with fear, must needs do hurt, if imagination have any power at all; for a man representeth that manner that he feareth, than the contrary.

The help therefore is, for a man to work by another, in whom he may create belief, and not by himself, until himself have found by experience that imagination doth prevail; for then experience worketh in himself belief, if the belief that such a thing shall be, be joined with a belief that his imagination may procure it.

For example, I related one time to a man that was curious and vain enough in these things, that I saw a kind of juggler that had a pair of cards, and would tell a man what card he thought. This pretended learned man told me it was a mistaking in me; for, said he, it was not the knowledge of the man's thought (for that is proper to God), but it was the enforcing of a thought upon him, and binding his imagination by a stronger, that he could think no other card. And thereupon he asked me a question or two, which I thought he did but cunningly, knowing before what used to be the feats of the juggler. Sir, said he, do you remember whether he told the card the man thought, himself, or bade another to tell it? I answered (as was true), that he bade another tell it. Whereunto he said, So I thought; for, said he, himself could not have put on so strong an imagination; but by telling the other the card (who believed that the juggler was some strange man and could do strange things), that other man caught a strong imagination. I hearkened unto him, thinking for a vanity he spake prettily. Then he asked me another question. Saith he, Do you remember whether he bade them an think the card first, and afterwards told the other man in his ear what he should think; or else that he did whisper first in the man's ear that should tell the card, telling that such a man should think such a card, and after bade the man think a card? I told him (as was true) that he did first whisper the man in the ear, that such a man should think such a card; upon this the learned man did much exult, and please himself, saying, Lo, you may see that my opinion is right; for if the man had thought first his thought had been fixed; but the other imagining first, bound his thought. Which though it did somewhat sink with me, yet I made it lighter than I thought and said; I thought it was confederacy between the juggler and the two servants, though, indeed, I had no reason so to think, for they were both my father's servants, and he had never played in the house before. The juggler also did cause a garter to be held up; and took upon him to know that such an one should point in such a place of the garter, as it should be near so many

inches to the longer end and so many to the shorter ; and still he did it, by first telling the imaginer, and after bidding the actor think.

951. When you work by the imagination of another, it is necessary that he by whom you work have a precedent opinion of you, that you can do strange things, or that you are a man of art, as they call it ; for else the simple affirmation to another that this or that shall be, can work but a weak impression in his imagination.

952. It were good, because you cannot discern fully of the strength of imagination in one man more than another, that you did use the imagination of more than one, that so you may light upon a strong one ; as if a physician should tell three or four of his patient's servants that their master shall surely recover.

953. The imagination of one that you shall use (such is the variety of men's minds), cannot be always alike constant and strong ; and if the success follow not speedily, it will faint and leese strength. To remedy this, you must pretend to him, whose imagination you use, several degrees of means by which to operate ; as to prescribe him, that every three days, if he find not the success apparent, he do use another root or part of a beast, or ring, &c., as being of more force ; and if that fail, another ; and if that, another, till seven times. Also you must prescribe a good large time for the effect you promise ; as if you should tell a servant of a sick man that his master shall recover, but it will be fourteen days ere he findeth it apparently, &c. ; all this to entertain the imagination, that it waver less.

957. Trials likewise would be made upon plants, and that diligently ; as if you should tell a man that such a tree would die this year ; and will him at these and these times to go unto it to see how it thriveth. As for inanimate things, it is true that the motions of shuffling of cards, or casting of dice, are very light motions ; and there is a folly very useful, that gamesters imagine that some that stand by them bring them ill luck. There would be trial also made of holding a ring by a thread in a glass, and telling him that holdeth it before, that it shall strike so many times against the side of the glass and no more ; or of holding a key between two men's fingers without a charm, and to tell those that hold it, that at such name it shall go off their fingers, for these two are extreme light motions. And howsoever I have no opinion of these

things, yet so much I conceive to be true, that strong imagination hath more force upon things living, or that have been living, than things merely inanimate; and more force likewise upon light and subtle motions than upon motions vehement or ponderous.

958. It is an usual observation, that if the body of one murdered be brought before the murderer, the wounds will bleed afresh. Some do affirm that the dead body, upon the presence of the murderer, hath opened the eyes; and that there have been such like motions, as well where the party murdered hath been strangled or drowned, as where they have been killed by wounds. It may be that this participateth of a miracle, by God's just judgment, who usually bringeth murders to light; but if it be natural, it must be referred to imagination.

960. There be many things that work upon the spirits of man by secret sympathy and antipathy; the virtues of precious stones worn have been antiently and generally received, and curiously assigned to work several effects. So much is true, that stones have in them fine spirits, as appeareth by their splendour; and therefore they may work by consent upon the spirits of men to comfort and exhilarate them. Those that are the best for that effect are the diamond, the emerald, the jacinth oriental, and the gold-stone, which is the yellow topaz. As for their particular properties there is no credit to be given to them: but it is manifest that light, above all things, excelleth in comforting the spirits of men; and it is very probable that light varied doth the same effect with more novelty, and this is one of the causes why precious stones comfort. And therefore it were good to have tinted lanthorns, or tinted screens, of glass coloured into green, blue, carnation, crimson, purple, &c., and to use them with candles in the night; so likewise to have round glasses, not only of glass coloured through, but with colours laid between crystals, with handles to hold in one's hand. Prisms are also comfortable things; they have, of Paris-work, looking-glasses bordered with broad borders of small crystal and great counterfeit precious stones of all colours, that are most glorious and pleasant to behold, especially in the night. The pictures of Indian feathers are likewise comfortable and pleasant to behold; so also fair and clear pools do greatly comfort the eyes and spirits, especially when the sun is not glaring but overcast, or when the moon shineth.

961. There be divers sorts of bracelets fit to comfort the

spirits, and they be of three intentions: refrigerant, corroborant, and aperient. For refrigerant, I wish them to be of pearl, or of coral, as is used; and it hath been noted that coral, if the party that weareth it be ill disposed, will wax pale, which I believe to be true, because otherwise distemper of heat will make coral lose colour. I commend also beads, or little plates of lapis lazuli, and beads of nitre, either alone or with some cordial mixture.

962. For corroboration and comfortation, take such bodies as are of astringent quality without manifest cold; I commend bead-amber, which is full of astriction, but yet is unctuous and not cold, and is conceived to impinguate those that wear such beads; I commend also beads of hartshorn and ivory, which are of the like nature; also orange-beads; also beads of lignum aloes, macerated first in rose-water and dried.

977. It hath been observed that the diet of women with child doth work much upon the infant: as if the mother eat quinces much and coriander-seed (the nature of both which is to repress and stay vapours that ascend to the brain) it will make the child ingenious; and on the contrary side, if the mother eat much onions or beans, or such vaporous food, or drink wine or strong drink immoderately, or fast much, or be given to much musing (all which send or draw vapours to the head), it endangereth the child to become lunatic or of imperfect memory; and I make the same judgment of tobacco often taken by the mother.

978. The writers of natural magic report that the heart of an ape worn near the heart, comforteth the heart and increaseth audacity. It is true that the ape is a merry and bold beast; and that the same heart, likewise, of an ape applied to the neck or head helpeth the wit, and is good for the falling sickness. The ape also is a witty beast and hath a dry brain, which may be some cause of attenuation of vapours in the head; yet it is said to move dreams also; it may be the heart of a man would do more, but that it is more against men's minds to use it, except it be in such as wear the reliques of saints.

980. Mummy hath great force in stanching of blood, which, as it may be ascribed to the mixture of balms that are glutinous, so it may also partake of a secret propriety, in that the blood draweth man's flesh: and it is approved, that the moss which groweth upon the skull of a dead man unburied will stanch blood potently; and so do the dregs or powder of blood, severed from the water and dried.



985. It is a common experience that dogs know the dog-killer, when as in times of infection some petty fellow is sent out to kill the dogs; and that though they have never seen him before, yet they will all come forth and bark and fly at him.

986. The relations touching the force of imagination and the secret instincts of nature are so uncertain, as they require a great deal of examination ere we conclude upon them, I would have it first thoroughly inquired whether there be any secret passages of sympathy between persons of near blood, as parents, children, brothers, sisters, nurse-children, husbands, wives, &c. There be many reports in history that, upon the death of persons of such nearness, men have had an inward feeling of it. I myself remember, that being in Paris, and my father dying in London, two or three days before my father's death I had a dream, which I told to divers English gentlemen: that my father's house in the country was plastered all over with black mortar. There is an opinion abroad (whether idle or no I cannot say), that loving and kind husbands have a sense of their wives' breeding child by some accident in their own body.

987. Next to those that are near in blood there may be the like passage and instincts of nature between great friends and enemies; and sometimes the revealing is unto another person and not to the party himself. I remember Philipus Commineus (a grave writer) reporteth, that the archbishop of Vienna (a reverend prelate) said one day after mass, to King Louis the Eleventh of France, "Sir, your mortal enemy is dead." What time Charles Duke of Burgundy was slain at the battle of Granson, against the Switzers. Some trial also would be made whether pact or agreement do anything; as if two friends should agree that such a day in every week they, being in far distant places, should pray one for another, or should put on a ring or tablet one for another's sake; whether, if one of them should break their vow and promise, the other should have any feeling of it in absence.

988. If there be any force in imaginations and affections of singular persons, it is probable the force is much more in the joint imaginations and affections of multitudes: as if a victory should be won or lost in remote parts, whether is there not some sense thereof in the people whom it concerneth, because of the great joy or grief that many men are possessed with at once? Pius Quintus, at the very time when that memorable victory

was won by the Christians against the Turks, at the naval battle of Lepanto, being then hearing of causes in the Consistory, brake off suddenly and said to those about him, "It is now more than time we should give thanks to God for the great victory he hath granted us against the Turks." It is true, that victory had a sympathy with his spirit, for it was merely his work to conclude that league. It may be that revelation was divine; but what shall we say then to a number of examples amongst the Grecians and Romans? Where the people, being in theatres at plays, have had news of victories and overthrows, some few days before any messenger could come.

It is true that that may hold in these things which is the general root of superstition, namely, that men observe when things hit, and not when they miss, and commit to memory the one and forget and pass over the other.

997. The sympathy of individuals that have been entire or have touched is, of all others, the most incredible; yet according unto our faithful manner of examination of nature, we will make some little mention of it; the taking away of warts, by rubbing them with somewhat that afterward is put to waste and consume, is a common experiment; and I do apprehend it the rather, because of mine own experience; I had from my childhood a wart upon one of my fingers; afterwards, when I was about sixteen years old, being then at Paris, there grew upon both my hands a number of warts (at least an hundred) in a month's space; the English ambassador's lady, who was a woman far from superstition, told me one day she would help me away with my warts: whereupon she got a piece of lard with the skin on, and rubbed the warts all over with the fat side, and amongst the rest that wart which I had from my childhood; then she nailed the piece of lard with the fat towards the sun, upon a post of her chamber window, which was to the south. The success was, that within five weeks' space, all the warts went quite away: and that wart, which I had so long endured, for company; but at the rest I did little marvel, because they came in a short time and might go away in a short time again, but the going of that which had stayed so long doth yet stick with me. They say the like is done by rubbing of warts with a green elder stick, and then burying the stick to rot in muck. It would be tried with corns and wens and such other excrescences; I would have it also tried with some parts of living creatures that are nearest

the nature of excrescences : as the combs of cocks, the spurs of cocks, the horns of beasts, &c. And I would have it tried both ways, both by rubbing those parts with lard or elder, as before; and by cutting off some piece of those parts, and laying it to consume, to see whether it will work any effect towards the consumption of that part which was once joined with it.

1000. The delight which men have in popularity, fame, honour, submission and subjection of other men's minds, wills, or affections (although these things may be desired for other ends), seemeth to be a thing in itself, without contemplation of consequence, grateful and agreeable to the nature of man. This thing surely is not without some signification, as if all spirits and souls of men came forth out of one divine limbus; else why be men so much affected with that which others think or say? The best temper of minds desireth good name and true honour; the lighter, popularity and applause; the more depraved, subjection and tyranny, as is seen in great conquerors and troublers of the world, and yet more in arch-heretics, for the introducing of new doctrines is likewise an affectation of tyranny over the understandings and beliefs of men.

All this seems a strange mixture of knowledge and ignorance, of philosophic insight and childish credulity, of light and darkness, to us looking back upon it from our more advanced station in the ascending road of physical discovery. It is truly a wood, as Bacon has himself called it, in which he often appears to wander without path or progress. His conjectures and articles of belief may now and then make us smile; but there is after all something very touching in the contemplation of such an intellect thus groping its way, and staggering and stumbling about, where we walk on a plain road and in the clear day. It reminds one of the blinded Samson and his pathetic quest :—

A little onward lend thy guiding hand  
To these dark steps, a little further on.

The following passage from Tenison's Introduction to the *Baconiana* ought not to be here omitted :—“ Whilst I am speaking of this work of his lordship's of *Natural History*, there comes to my mind a very memorable relation, reported by him who bare a part in it, the

Reverend Dr. Rawley. One day his lordship was dictating to that Doctor some of the experiments in his *Sylva*. The same day he had sent a friend to court to receive for him a final answer touching the effect of a grant which had been made him by King James. He had hitherto only hope of it, and hope deferred; and he was desirous to know the event of the matter, and to be freed, one way or other, from the suspense of his thoughts. His friend, returning, told him plainly that he must thenceforth despair of that grant, how much soever his fortunes needed it. *Be it so*, said his lordship; and then he dismissed his friend very cheerfully, with thankful acknowledgments of his service. His friend being gone, he came straightway to Dr. Rawley, and said thus to him: *Well, Sir! Your business won't go on; let us go on with this, for this is in our power.* And then he dictated to him afresh for some hours without the least hesitancy of speech or discernible interruption of thought."

The *Sylva Sylvarum* was accompanied on its first appearance by a very remarkable piece entitled 'New Atlantis, a Work Unfinished.' This is a philosophical romance, unfortunately only begun, the name being taken from Plato's fiction of the great lost island of the Western Ocean. A Latin translation of the fragment, which would seem to have been executed by Bacon himself, was afterwards published by Rawley in his collection of Bacon's Moral and Civil Writings ('*Moralium et Civilium Tomus*'), folio, Lon. 1638. The pieces in that volume, as we have already had occasion to remark, are described on the title-page as having been all, with a few exceptions, rendered into Latin by their author; and Rawley in his Life of Bacon expressly mentions the Latin translation of the *New Atlantis* as one of the performances of the last five years of his lordship's life. In an advertisement to the Reader prefixed to the English edition Rawley says:—"This fable my lord revised, to the end that he might exhibit therein a plan or description of a college, instituted for the in-

terpreting of nature and the producing of great and marvellous works for the benefit of men, under the name of Solomon's House, or the College of the Six Days' Works. And even so far his lordship hath proceeded as to finish that part. . . . His lordship thought also in this present fable to have composed a frame of laws, or of the best state or mould of a commonwealth; but, foreseeing it would be a long work, his desire of collecting the Natural History diverted him, which he preferred many degrees before it." And he adds:—"This work of the *New Atlantis*, as much as concerneth the English edition, his lordship designed for this place; in regard it hath so near affinity, in one part of it, with the preceding *Natural History*."

The *New Atlantis* would be especially interesting were it but as being the only example we have of any attempt made by Bacon in the character of a writer of fiction. But it is besides one of the most brilliant productions of his pen. It has no passion nor any dramatic exhibition of incident or character; but with a scene so removed from our ordinary humanity nothing of that sort was required or even admissible; in a copious and easy-flowing vein of invention it does not yield to any other performance of the same kind; no mere narrative skill of a higher order is to be anywhere found; and in beauty and expressiveness of language, combined with general abundance of thought, only the highest writers of any kind have equalled or approached it. We will give it with very little abridgment. It commences as follows:—

We sailed from Peru (where we had continued by the space of one whole year) for China and Japan, by the South-Sea, taking with us victuals for twelve months, and had good winds from the east, though soft and weak, for five months' space and more; but then the wind came about and settled in the west for many days, so as we could make little or no way, and were sometimes in purpose to turn back. But then again there arose strong and great winds from the south, with a point east, which carried us up (for all that we could do) towards the north; by which time our victuals failed us, though we had

made good spare of them. So that finding ourselves in the midst of the greatest wilderness of waters in the world without victual, we gave ourselves for lost men, and prepared for death. Yet we did lift up our hearts and voices to God above, who showeth his wonders in the deep, beseeching him of his mercy, that as in the beginning He discovered the face of the deep, and brought forth dry land, so He would now discover land to us, that we might not perish. And it came to pass, that the next day about evening, we saw within a kenning before us, towards the north, as it were thicker clouds, which did put us in some hope of land, knowing how that part of the South-Sea was utterly unknown, and might have islands or continents that hitherto were not come to light. Wherefore we bent our course thither, where we saw the appearance of land, all that night; and in the dawning of the next day we might plainly discern that it was a land flat to our sight and full of boscaje, which made it show the more dark; and after an hour and a half's sailing we entered into a good haven, being the port of a fair city, not great indeed, but well built, and that gave a pleasant view from the sea. And we, thinking every minute long till we were on land, came close to the shore and offered to land. But straightways we saw divers of the people, with bastons in their hands (as it were), forbidding us to land; yet without any cries or fierceness, but only as warning us off by signs that they made. Whereupon, being not a little discomfited, we were advising with ourselves what we should do; during which time there made forth to us a small boat, with about eight persons in it, whereof one of them had in his hand a tipstaff of a yellow caue, tipped at both ends with blue, who made aboard our ship without any show of distrust at all; and when he saw one of our number present himself somewhat afore the rest, he drew forth a little scroll of parchment (somewhat yellower than our parchment, and shining like the leaves of writing-tables, but otherwise soft and flexible), and delivered it to our foremost man; in which scroll were written in ancient Hebrew, and in ancient Greek, and in good Latin of the school, and in Spanish, these words: "Land ye not, none of you, and provide to be gone from this coast within sixteen days, except you have further time given you; meanwhile, if you want fresh water or victual, or help for your sick, or that your ship needeth repair, write down your wants, and you shall have that which belongeth to mercy." This scroll was signed with a stamp of cherubims' wings, not spread, but

hanging downwards, and by them a cross : this being delivered, the officer returned, and left only a servant with us to receive our answer. Consulting hereupon amongst ourselves we were much perplexed ; the denial of landing and hasty warning us away troubled us much ; on the other side, to find that the people had languages and were so full of humanity did comfort us not a little ; and above all, the sign of the cross to that instrument was to us a great rejoicing, and, as it were, a certain presage of good. Our answer was in the Spanish tongue : that for our ship it was well, for we had rather met with calms and contrary winds than any tempests ; for our sick, they were many and in very ill case, so that if they were not permitted to land they ran in danger of their lives. Our other wants we set down in particular, adding that we had some little store of merchandize, which, if it pleased them to deal for, it might supply our wants without being chargeable unto them. We offered some reward in pistolets unto the servant, and a piece of crimson velvet to be presented to the officer, but the servant took them not, nor would scarce look upon them ; and so left us, and went back in another little boat which was sent for him.

About three hours after we had dispatched our answer there came towards us a person (as it seemed) of place. He had on him a gown with wide sleeves, of a kind of water chamolet, of an excellent azure colour, far more glossy than ours ; his under apparel was green, and so was his hat, being in the form of a turban, daintily made, and not so huge as the Turkish turbans, and the locks of his hair came down below the brims of it. A reverend man was he to behold ; he came in a boat gilt in some part of it, with four persons more only in that boat, and was followed by another boat wherein were some twenty. When he was come within a flight-shot of our ship, signs were made to us that we should send forth some to meet him upon the water, which we presently did in our ship-boat, sending the principal man amongst us save one, and four of our number with him. When we were come within six yards of their boat they called to us to stay, and not to approach further, which we did. And thereupon the man, whom I before described, stood up, and with a loud voice, in Spanish, asked, "Are ye Christians?" We answered, we were, fearing the less because of the cross we had seen in the subscription ; at which answer the said person lift up his right hand towards heaven and drew it softly to his mouth (which is the gesture they use

when they thank God), and then said: "If you will swear (all of you), by the merits of the Saviour, that ye are no pirates, nor have shed blood lawfully nor unlawfully within forty days past, you may have license to come on land." We said we were all ready to take that oath; whereupon, one of those that were with him, being (as it seemed) a notary, made an entry of this act; which done, another of the attendants of the great person, which was with him in the same boat, after his lord had spoken a little to him, said aloud, "My lord would have you know, that it is not of pride or greatness that he cometh not aboard your ship; but for that, in your answer, you declare that you have many sick amongst you, he was warned by the conservator of health of the city that he should keep a distance." We bowed ourselves towards him, and answered, we were his humble servants, and accounted for great honour and singular humanity towards us that which was already done; but hoped well that the nature of the sickness of our men was not infectious. So he returned, and a while after came the notary to us aboard our ship, holding in his hand a fruit of that country like an orange, but of colour between orange-tawny and scarlet, which cast a most excellent odour; he used it (as it seemeth) for a preservative against infection. He gave us our oath, by the name of Jesus and his merits; and after, told us that the next day by six of the clock in the morning, we should be sent to and brought to the stranger's house (so he called it) where we should be accommodated of things both for our whole and for our sick, so he left us; and when we offered him some pistolets, he, smiling, said, he must not be twice paid for one labour: meaning (as I take it), that he had salary sufficient of the state for his service: for (as I after learned) they call an officer that taketh rewards twice paid.

The next morning early there came to us the same officer that came to us at first with his cane, and told us he came to conduct us to the strangers' house, and that he had prevented the hour because we might have the whole day before us for our business; "For," said he, "if you will follow my advice, there shall first go with me some few of you and see the place, and how it may be made convenient for you; and then you may send for your sick, and the rest of your number which ye will bring on land." We thanked him, and said, that this care which he took of desolate strangers God would reward; and so six of us went on land with him; and when



we were on land he went before us, and turned to us, and said, he was but our servant and our guide. He led us through three fair streets, and all the way we went there were gathered some people on both sides, standing in a row, but in so civil a fashion as if it had been not to wonder at us, but to welcome us; and divers of them as we passed by them put their arms a little abroad, which is their gesture when they bid any welcome. The strangers' house is a fair and spacious house, built of brick of somewhat a bluer colour than our brick, and with handsome windows, some of glass, some of a kind of cambric oiled. He brought us first into a fair parlour above stairs, and then asked us what number of persons we were, and how many sick. We answered we were in all (sick and whole) one and fifty persons, whereof our sick were seventeen. He desired us to have patience a little, and to stay till he came back to us, which was about an hour after, and then he led us to see the chambers which were provided for us, being in number nineteen; they having cast it (as it seemeth) that four of those chambers, which were better than the rest, might receive four of the principal men of our company and lodge them alone by themselves, and the other fifteen chambers were to lodge us two and two together. The chambers were handsome and cheerful chambers, and furnished civilly. Then he led us to a long gallery, like a dorture, where he showed us all along the one side (for the other side was but wall and window) seventeen cells, very neat ones, having partitions of cedar-wood, which gallery and cells, being in all forty (many more than we needed), were instituted as an infirmary for sick persons; and he told us withal, that as any of our sick waxed well, he might be removed from his cell to a chamber: for which purpose there were set forth ten spare chambers, besides the number we spake of before. This done, he brought us back to the parlour, and lifting up his cane a little (as they do when they give any charge or command), said to us, "Ye are to know that the custom of the land requireth that, after this day and to-morrow (which we give you for removing your people from your ship), you are to keep within doors for three days: but let it not trouble you, nor do not think yourselves restrained, but rather left to your rest and ease. You shall want nothing, and there are six of our people appointed to attend you for any business you may have abroad." We gave him thanks with all affection and respect, and said, "God surely is manifested in this land." We offered him also twenty pie-

tolets : but he smiled, and only said, "What? twice paid!" and so he left us. Soon after our dinner was served in, which was right good viands, both for bread and meat, better than any collegiate diet that I have known in Europe. We had also drink of three sorts, all wholesome and good : wine of the grape, a drink of grain, such as is with us our ale, but more clear, and a kind of cider made of a fruit of that country, a wonderful pleasing and refreshing drink ; besides, there were brought in to us great store of those scarlet oranges for our sick, which they said were an assured remedy for sickness taken at sea. There was given us also a box of small grey or whitish pills, which they wished our sick should take one of the pills every night before sleep, which they said would hasten their recovery. The next day, after that our trouble of carriage and removing of our men and goods out of our ship was somewhat settled and quiet, I thought good to call our company together, and when they were assembled, said unto them, "My dear friends, let us know ourselves, and how it standeth with us. We are men cast on land, as Jonas was, out of the whale's belly, when we were as buried in the deep ; and now we are on land we are but between death and life, for we are beyond both the old world and the new ; and whether ever we shall see Europe God only knoweth. It is a kind of miracle hath brought us hither, and it must be little less that shall bring us hence ; therefore, in regard of our deliverance past, and our danger present and to come, let us look up to God, and every man reform his own ways. Besides, we are come here amongst a Christian people full of piety and humanity ; let us not bring that confusion of face upon ourselves as to show our vices or unworthiness before them. Yet there is more : for they have by commandment (though in form of courtesy) cloistered us within these walls for three days ; who knoweth whether it be not to take some taste of our manners and conditions, and if they find them bad, to banish us straightways ; if good, to give us further time ? For these men that they have given us for attendance may withal have an eye upon us. Therefore, for God's love, and as we love the weal of our souls and bodies, let us so behave ourselves as we may be at peace with God and may find grace in the eyes of this people." Our company with one voice thanked me for my good admonition, and promised me to live soberly and civilly, and without giving any the least occasion of offence. So we spent our three days joyfully, and without care, in expectation what

would be done with us when they were expired ; during which time we had every hour joy of the amendment of our sick, who thought themselves cast into some divine pool of healing, they mended so kindly and so fast.

The morrow after our three days were past, there came to us a new man that we had not seen before, clothed in blue as the former was, save that his turban was white, with a small red cross on the top ; he had also a tippet of fine linen. At his coming in he did bend to us a little, and put his arms abroad. We, of our parts, saluted him in a very lowly and submissive manner, as looking that from him we should receive sentence of life or death. He desired to speak with some few of us ; whereupon six of us only stayed, and the rest avoided the room. He said, "I am, by office, governor of this house of strangers, and by vocation I am a Christian priest, and therefore am come to you to offer you my service, both as strangers and chiefly as Christians. Some things I may tell you which I think you will not be unwilling to hear. The state hath given you license to stay on land for the space of six weeks ; and let it not trouble you if your occasions ask further time, for the law in this point is not precise ; and I do not doubt but myself shall be able to obtain for you such further time as shall be convenient. Ye shall also understand that the strangers' house is at this time rich, and much aforehand, for it hath laid up revenue these thirty-seven years : for so long it is since any stranger arrived in this part ; and, therefore, take ye no care, the state will defray you all the time you stay ; neither shall you stay one day less for that. As for any merchandize you have brought, ye shall be well used, and have your return either in merchandize, or in gold and silver, for to us it is all one. And if you have any other request to make, hide it not, for ye shall find we will not make your countenance to fall by the answer ye shall receive. Only this I must tell you, that none of you must go above a karan (that is with them a mile and a half) from the walls of the city without special leave." We answered, after we had looked a while upon one another, admiring this gracious and parent-like usage, that we could not tell what to say, for we wanted words to express our thanks, and his noble free offers left us nothing to ask. It seemed to us that we had before us a picture of our salvation in heaven ; for we that were a while since in the jaws of death, were now brought into a place where we found nothing but consolations. For the commandment laid upon us, we would

not fail to obey it, though it was impossible but our hearts should be inflamed to tread further upon this happy and holy ground. We added, that our tongues should first cleave to the roofs of our mouths ere we should forget either this reverend person, or this whole nation in our prayers. We also most humbly besought him to accept of us as his true servants, by as just a right as ever men on earth were bounden, laying and presenting both our persons and all we had at his feet. He said, he was a priest, and looked for a priest's reward, which was our brotherly love and the good of our souls and bodies. So he went from us, not without tears of tenderness in his eyes, and left us also confused with joy and kindness, saying amongst ourselves, that we were come into a land of angels, which did appear to us daily, and prevent us with comforts which we thought not of, much less expected.

The next day about ten of the clock, the Governor came to us again, and after salutations, said familiarly that he was come to visit us, and called for a chair and sat him down; and we being some ten of us (the rest were of the meaner sort or else gone abroad) sat down with him; and when we were set he began thus. We of this island of Bensalem (for so they call it in their language) have this; that by means of our solitary situation, and of the laws of secrecy which we have for our travellers, and our rare admission of strangers, we know well most part of the habitable world, and are ourselves unknown; therefore because he that knoweth least is fittest to ask questions, it is more reason, for the entertainment of the time, that ye ask me questions than that I ask you. We answered, that we humbly thanked him that he would give us leave so to do; and that we conceived by the taste we had already, that there was no worldly thing on earth more worthy to be known than the state of that happy land. But above all, we said, since that we were met from the several ends of the world, and hoped assuredly that we should meet one day in the Kingdom of Heaven (for that we were both parts Christians), we desired to know (in respect that land was so remote, and so divided by vast and unknown seas from the land where our Saviour walked on earth) who was the apostle of that nation, and how it was converted to the faith. It appeared in his face that he took great contentment in this our question. He said, "Ye knit my heart to you, by asking this question in the first place; for it showeth that you first seek the Kingdom of Heaven; and I shall gladly and briefly satisfy your demand."

“About twenty years after the ascension of our Saviour, it came to pass, that there was seen by the people of Renfusa (a city upon the eastern coast of our island) within night (the night was cloudy and calm), as it might be some mile in the sea, a great pillar of light, not sharp, but in form of a column or cylinder, rising from the sea, a great way up towards heaven; and on the top of it was seen a large cross of light, more bright and resplendent than the body of the pillar: upon which so strange a spectacle the people of the city gathered apace together upon the sands to wonder; and so after put themselves into a number of small boats to go nearer to this marvellous sight; but when the boats were come within about sixty yards of the pillar, they found themselves all bound, and could go no further, yet so as they might move to go about, but might not approach nearer; so as the boats stood all as in a theatre, beholding this light as a heavenly sign. It so fell out that there was in one of the boats one of the wise men, of the Society of Salomon's House; which House or College, my good brethren, is the very eye of this kingdom, who having awhile attentively and devoutly viewed and contemplated this pillar and cross, fell down upon his face, and then raised himself upon his knees, and lifting up his hands to heaven, made his prayers in this manner:

“‘Lord God of Heaven and Earth, thou hast vouchsafed of thy grace, to those of our order, to know thy works of creation and true secrets of them; and to discern (as far as appertaineth to the generations of men) between divine miracles, works of nature, works of art, and impostures and illusions of all sorts. I do here acknowledge and testify before this people that the thing we now see before our eyes is thy finger and a true miracle. And forasmuch as we learn in our books that thou never workest miracles, but to a divine and excellent end (for the laws of nature are thine own laws, and thou exceedest them not but upon good cause), we most humbly beseech thee to prosper this great sign, and to give us the interpretation and use of it in mercy, which thou dost in some part secretly promise by sending it unto us.’

“When he had made his prayer, he presently found the boat he was in moveable and unbound, whereas all the rest remained still fast; and taking that for an assurance of leave to approach, he caused the boat to be softly and with silence rowed towards the pillar; but ere he came near it the pillar and cross of light brake up, and cast itself abroad, as it were in:

a firmament of many stars; which also vanished soon after, and there was nothing left to be seen but a small ark, or chest of cedar, dry, and not wet at all with water, though it swam: and in the fore end of it, which was towards him, grew a small green branch of palm; and when the wise man had taken it with all reverence into his boat, it opened of itself, and there was found in it a book and a letter, both written in fine parchment, and wrapped in sindons of linen. The book contained all the Canonical Books of the Old and New Testament, according as you have them (for we know well what the churches with you receive); and the Apocalypse itself, and some other Books of the New Testament, which were not at that time written, were nevertheless in the book. And for the letter, it was in these words:

“ I, Bartholomew, a servant of the Highest, and Apostle of Jesus Christ, was warned by an angel that appeared to me in a vision of Glory, that I should commit this ark to the floods of the sea; therefore I do testify and declare unto that people, where God shall ordain this ark to come to land, that in the same day is come unto them salvation and peace, and good will from the Father, and from the Lord Jesus.’

“ There was also in both these writings, as well the book as the letter, wrought a great miracle, conform to that of the Apostles in the original Gift of Tongues. For there being at that time in this land Hebrews, Persians, and Indians, besides the natives, every one read upon the book and letter, as if they had been written in his own language. And thus was this land saved from infidelity (as the remain of the old world was from water) by an ark, through the apostolical and miraculous evangelism of St. Bartholomew.” And here he paused, and a messenger came, and called him forth from us. So this was all that passed in that conference.

The next day the same Governor came again to us, immediately after dinner, and excused himself, saying, that the day before he was called from us somewhat abruptly, but now he would make us amends, and spend time with us, if we held his company and conference agreeable. We answered, that we held it so agreeable and pleasing to us, as we forgot both dangers past, and fears to come, for the time we heard him speak; and that we thought an hour spent with him was worth years of our former life. He bowed himself a little to us, and after we were set again he said, “ Well, the questions are on your part.” One of our number said, after a little pause,

that there was a matter we were no less desirous to know than fearful to ask, lest we might presume too far. But encouraged by his rare humanity towards us (that could scarce think ourselves strangers, being his vowed and professed servants), we would take the hardiness to propound it, humbly beseeching him, if he thought it not fit to be answered, that he would pardon it though he rejected it. We said, we well observed those his words, which he formerly spake, that this happy island where we now stood was known to few, and yet knew most of the nations of the world; which we found to be true, considering they had the languages of Europe, and knew much of our state and business; and yet we in Europe (notwithstanding all the remote discoveries and navigations of this last age) never heard any of the least inkling or glimpse of this island. This we found wonderful strange; for that all nations have interknowledge one of another, either by voyage into foreign parts, or by strangers that come to them; and though the traveller into a foreign country doth commonly know more by the eye than he that stayed at home can by relation of the traveller, yet both ways suffice to make a mutual knowledge, in some degree, on both parts. But for this island, we never heard tell of any ship of theirs that had been seen to arrive upon any shore of Europe; no, nor of either the East or West Indies, nor yet of any ship of any other part of the world, that had made return for them. And yet the marvel rested not in this; for the situation of it (as his Lordship said) in the secret conclave of such a vast sea might cause it; but then, that they should have knowledge of the languages, books, affairs, of those that lie such a distance from them, it was a thing we could not tell what to make of, for that it seemed to us a condition and propriety of divine powers and beings, to be hidden and unseen to others, and yet to have others open, and as in a light to them. At this speech the Governor gave a gracious smile, and said, that we did well to ask pardon for this question we now asked; for that it imported, as if we thought this land a land of magicians, that sent forth spirits of the air into all parts to bring them news and intelligence of other countries. It was answered by us all, in all possible humbleness, but yet with a countenance taking knowledge, that we knew that he spake it but merrily; that we were apt enough to think there was somewhat supernatural in this island, but yet rather as angelical than magical. But to let his Lordship know truly what it was that made us tender and doubtful to ask this ques-

tion, it was not any such conceit, but because we remembered he had given a touch in his former speech, that this land had laws of secrecy touching strangers. To this he said, "You remember it aright; and therefore in that I shall say to you I must reserve some particulars, which it is not lawful for me to reveal; but there will be enough left to give you satisfaction.

"You shall understand (that which perhaps you will scarce think credible) that about three thousand years ago, or somewhat more, the navigation of the world (specially for remote voyages) was greater than at this day. Do not think with yourselves that I know not how much it is increased with you within these threescore years; I know it well; and yet I say greater then than now. Whether it was that the example of the ark, that saved the remnant of men from the universal deluge, gave men confidence to adventure upon the waters, or what it was, but such is the truth. The Phœnicians, and specially the Tyrians, had great fleets; so had the Carthaginians their colony, which is yet further west. Toward the east the shipping of Egypt and of Palestina was likewise great. China also, and the great Atlantis (that you call America), which have now but junks and canoes, abounded then in tall ships. This island (as appeareth by faithful registers of those times) had then fifteen hundred strong ships of great content. Of all this there is with you sparing memory or none; but we have large knowledge thereof.

"At that time this land was known and frequented by the ships and vessels of all the nations before-named. And (as it cometh to pass) they had many times men of other countries that were no sailors, that came with them, as Persians, Chaldeans, Arabians, so as almost all nations of might and fame resorted hither; of whom we have some stirps and little tribes with us at this day. And for our own ships they went sundry voyages, as well to your straits, which you call the Pillars of Hercules, as to other parts in the Atlantic and Mediterranean Seas; as to Paguin (which is the same with Cambalaine) and Quinzy, upon the Oriental Seas, as far as to the borders of the East Tartary.

"At the same time, and an age after or more, the inhabitants of the great Atlantis did flourish; for though the narration and description which is made by a great man with you, that the descendants of Neptune planted there, and of the magnificent temple, palace, city, and hill, and the manifold streams of wondrously navigable rivers, which (as so many chains) environed



the same site and temple; and the several degrees of ascent, whereby men did climb up to the same, as if it had been a *scala cœli*, be all poetical and fabulous; yet so much is true, that the said country of Atlantis, as well that of Peru then called Coya, as that of Mexico, then named Tyrambel, were mighty and proud kingdoms in arms, shipping, and riches; so mighty, as at one time (or at least within the space of ten years) they both made two great expeditions; they of Tyrambel through the Atlantic to the Mediterranean Sea; and they of Coya, through the South Sea upon this island: and for the former of these, which was into Europe, the same author amongst you (as it seemeth) had some relation from the Egyptian priest, whom he citeth. For assuredly such a thing there was; but whether it were the ancient Athenians that had the glory of the repulse and resistance of those forces, I can say nothing; but certain it is there never came back either ship or man from that voyage. Neither had the other voyage of those of Coya upon us, had better fortune, if they had not met with enemies of greater clemency; for the king of this island (by name Altabin), a wise man and a great warrior, knowing well both his own strength and that of his enemies, handled the matter so, as he cut off their land-forces from their ships, and entailed both their navy and their camp, with a greater power than theirs, both by sea and land, and compelled them to render themselves without striking stroke; and after they were at his mercy, contenting himself only with their oath, that they should no more bear arms against him, dismissed them all in safety. But the divine revenge overtook not long after those proud enterprises; for within less than the space of one hundred years the Great Atlantis was utterly lost and destroyed; not by a great earthquake, as your man saith (for that whole tract is little subject to earthquakes), but by a particular deluge or inundation, those countries having, at this day, far greater rivers and far higher mountains to pour down waters than any part of the Old World. But it is true that the same inundation was not deep, not past forty foot in most places from the ground; so that although it destroyed man and beasts generally, yet some few wild inhabitants of the wood escaped. Birds also were saved by flying to the high trees and woods; for as for men, although they had buildings in many places higher than the depth of the water; yet that inundation, though it were shallow, had a long continuance, whereby they of the vale that were not drowned perished for

want of food and other things necessary ; so as marvel you not at the thin population of America, nor at the rudeness and ignorance of the people, for you must account your inhabitants of America as a young people, younger a thousand years, at the least, than the rest of the world, for that there was so much time between the universal flood and their particular inundation. For the poor remnant of human seed which remained in their mountains, peopled the country again slowly, by little and little, and being simple and a savage people (not like Noah and his sons, which was the chief family of the earth), they were not able to leave letters, arts, and civility to their posterity ; and having likewise in their mountainous habitations been used (in respect of the extreme cold of these regions) to clothe themselves with the skins of tigers, bears, and great hairy goats that they have in those parts ; when after they came down into the valley and found the intolerable heats which are there, and knew no means of lighter apparel, they were forced to begin the custom of going naked, which continueth at this day ; only they take great pride and delight in the feathers of birds ; and this also they took from those their ancestors of the mountains, who were invited unto it by the infinite flight of birds that came up to the high grounds while the waters stood below. So you see, by this main accident of time, we lost our traffic with the Americans, with whom, of all others, in regard they lay nearest to us, we had most commerce. As for the other parts of the world, it is most manifest that, in the ages following (whether it were in respect of wars or by a natural revolution of time), navigation did everywhere greatly decay ; and specially, far voyages (the rather by the use of galleys and such vessels as could hardly brook the ocean) were altogether left and omitted. So then that part of intercourse which could be from other nations, to sail to us, you see how it hath long since ceased, except it were by some rare accident as this of yours. But now of the cessation of that other part of intercourse, which might be by our sailing to other nations, I must yield you some other cause ; for I cannot say (if I should say truly) but our shipping, for number, strength, mariners, pilots, and all things that appertain to navigation, is as great as ever ; and therefore why we should sit at home I shall now give you an account by itself, and it will draw nearer to give you satisfaction to your principal question.

“There reigned in this island, about 1900 years ago, a king, whose memory of all others we most adore ; not superstitiously,

but as a divine instrument, though a mortal man; his name was Salomona; and we esteem him as the law-giver of our nation. This king had a large heart, inscrutable for good, and was wholly bent to make his kingdom and people happy. He therefore, taking into consideration how sufficient and substantive this land was to maintain itself without any aid at all of the foreigner, being 5600 miles in circuit, and of rare fertility of soil, in the greatest part thereof; and finding also the shipping of this country might be plentifully set on work, both by fishing and by transportations from port to port, and likewise by sailing unto some small islands that are not far from us, and are under the crown and laws of this state; and recalling into his memory the happy and flourishing estate wherein this land then was, so as it might be a thousand ways altered to the worse, but scarce any one way to the better, thought nothing wanted to his noble and heroical intentions, but only (as far as human foresight might reach) to give perpetuity to that, which was in his time so happily established; therefore amongst his other fundamental laws of this kingdom, he did ordain the interdicts and prohibitions which we have touching entrance of strangers, which at that time (though it was after the calamity of America) was frequent, doubting novelties and commixture of manners. It is true the like law, against the admission of strangers without licence, is an ancient law in the kingdom of China, and yet continued in use; but there it is a poor thing, and hath made them a curious, ignorant, fearful, foolish nation. But our law-giver made his law of another temper; for first, he hath preserved all points of humanity in taking order and making provision for the relief of strangers distressed, whereof you have tasted." At which speech (as reason was) we all rose up and bowed ourselves. He went on. "That king also still desiring to join humanity and policy together, and thinking it against humanity to detain strangers here against their wills, and against policy, that they should return and discover their knowledge of this estate, he took this course. He did ordain, that of the strangers that should be permitted to land, as many (at all times) might depart as would; but as many as would stay should have very good conditions and means to live from the state; wherein he saw so far, that now in so many ages since the prohibition, we have memory not of one ship that ever returned, and but of thirteen persons only, at several times, that chose to return in our bottoms. What those few that returned may have reported

abroad I know not; but you must think, whatsoever they have said, could be taken where they came but for a dream. Now for our travelling from hence into parts abroad, our law-giver thought fit altogether to restrain it. So is it not in China; for the Chinese sail where they will or can; which showeth that their law of keeping out strangers is a law of pusillanimity and fear. But this restraint of ours hath one only exception, which is admirable, preserving the good which cometh by communicating with strangers, and avoiding the hurt; and I will now open it to you: and here I shall seem a little to digress, but you will by and by find it pertinent. Ye shall understand, my dear friends, that amongst the excellent acts of that king, one above all hath the pre-eminence. It was the erection and institution of an order, or society, which we call Salomon's House; the noblest foundation, as we think, that ever was upon the earth, and the lantern of this kingdom; it is dedicated to the study of the works and creatures of God. Some think it beareth the founder's name a little corrupted, as if it should be Solomon's House; but the records write it as it is spoken. So as I take it to be denominate of the King of the Hebrews, which is famous with you and no stranger to us, for we have some parts of his works which with you are lost; namely, that natural history which he wrote of all plants, from the cedar of Libanus to the moss that groweth out of the wall; and of all things that have life and motion. This maketh me think that our king, finding himself to symbolize in many things with that King of the Hebrews (which lived many years before him), honoured him with the title of this foundation: and I am the rather induced to be of this opinion, for that I find in antient records this order or society is sometimes called Salomon's House; and sometimes the College of the Six Days' Works, whereby I am satisfied that our excellent king had learned from the Hebrews that God had created the world and all that therein is, within six days; and therefore he instituted that House for the finding out of the true nature of all things (whereby God might have the more glory in the workmanship of them, and men the more fruit in their use of them) did give it also that second name: but now to come to our present purpose. When the king had forbidden to all his people navigation in any part that was not under his crown, he made nevertheless this ordinance; that every twelve years there should be set forth, out of this kingdom, two ships appointed to several voyages; that in either of these ships there should be

a mission of three of the Fellows or Brethren of Salomon's House, whose errand was only to give us knowledge of the affairs and state of those countries to which they were designed; and especially of the sciences, arts, manufactures, and inventions of all the world; and withal to bring unto us books, instruments, and patterns in every kind. That the ships, after they had landed the Brethren, should return; and that the Brethren should stay abroad till the new mission. The ships are not otherwise fraught than with store of victuals and good quantity of treasure to remain with the Brethren, for the buying of such things, and rewarding of such persons, as they should think fit. Now for me to tell you how the vulgar sort of mariners are contained from being discovered at land; and how they that must be put on shore for any time colour themselves under the names of other nations; and to what places these voyages have been designed; and what places of rendezvous are appointed for the new missions; and the like circumstances of the practice, I may not do it, neither is it much to your desire; but thus you see we maintain a trade, not for gold, silver, or jewels, nor for silks, nor for spices, nor any other commodity of matter; but only for God's first creature, which was light; to have light, I say, of the growth of all parts of the world." And when he had said this he was silent, and so were we all; for indeed we were all astonished to hear so strange things so probably told. And he perceiving that we were willing to say somewhat, but had it not ready, in great courtesy took us off, and descended to ask us questions of our voyage and fortunes, and in the end concluded that we mought do well to think with ourselves what time of stay we would demand of the state, and bade us not to scant ourselves, for he would procure such time as we desired. Whereupon we all rose up and presented ourselves to kiss the skirt of his tippet, but he would not suffer us, and so took his leave; but when it came once amongst our people that the state used to offer conditions to strangers that would stay, we had work enough to get any of our men to look to our ship, and to keep them from going presently to the Governor to crave conditions; but with much ado we refrained them till we mought agree what course to take.

We took ourselves now for freemen, seeing there was no danger of our utter perdition, and lived most joyfully, going abroad and seeing what was to be seen, in the city and places adjacent, within our tedder; and obtaining acquaintance with

many of the city, not of the meanest quality, at whose hands we found such humanity, and such a freedom and desire to take strangers, as it were, into their bosom, as was enough to make us forget all that was dear to us in our own countries; and continually we met with many things right worthy of observation and relation; as indeed, if there be a mirror in the world worthy to hold men's eyes, it is that country. One day there were two of our company bidden to a feast of the family, as they call it. A most natural, pious, and reverend custom it is, showing that nation to be compounded of all goodness. This is the manner of it. It is granted to any man that shall live to see thirty persons descended of his body alive together, and all above three years' old, to make this feast, which is done at the cost of the State. The Father of the family, whom they call the Tirsan, two days before the feast, taketh to him three of such friends as he liketh to choose; and is assisted also by the Governor of the city or place where the feast is celebrated; and all the persons of the family, of both sexes, are summoned to attend him. These two days the Tirsan sitteth in consultation concerning the good estate of the family. There, if there be any discord or suits between any of the family, they are compounded and appeased. There, if any of the family be distressed or decayed, order is taken for their relief and competent means to live. There, if any be subject to vice, or take ill courses, they are reprov'd and censured; so likewise direction is given touching marriages and the courses of life which any of them should take, with divers other the like orders and advices. The Governor assisteth, to the end to put in execution, by his public authority, the decrees and orders of the Tirsan, if they should be disobey'd, though that seldom needeth; such reverence and obedience they give to the order of nature. The Tirsan doth also then ever choose one man from amongst his sons to live in house with him, who is called, ever after, the Sou of the Vine; the reason will hereafter appear. On the feast-day the Father, or Tirsan, cometh forth after divine service into a large room where the feast is celebrated; which room hath an half-pace at the upper end. Against the wall, in the middle of the half-pace, is a chair placed for him, with a table and carpet before it. Over the chair is a state, made round or oval, and it is of ivy; an ivy somewhat whiter than ours, like the leaf of a silver aspe, but more shining, for it is green all winter. And the state is curiously wrought with silver and silk of divers colours, breiding or binding in the

ivy ; and is ever of the work of some of the daughters of the family ; and veiled over at the top with a fine net of silk and silver ; but the substance of it is true ivy, whereof, after it is taken down, the friends of the family are desirous to have some leaf or sprig to keep. The Tirsan cometh forth with all his generation or lineage, the males before him and the females following him ; and if there be a mother, from whose body the whole lineage is descended, there is a traverse placed in a loft above on the right hand of the chair, with a privy door, and a carved window of glass, leaded with gold and blue, where she sitteth but is not seen. When the Tirsan is come forth he sitteth down in the chair, and all the lineage place themselves against the wall, both at his back, and upon the return of the half-pace, in order of their years, without difference of sex, and stand upon their feet. When he is set, the room being always full of company, but well kept and without disorder, after some pause there cometh in from the lower end of the room a Taratan (which is much as an herald), and on either side of him two young lads, whereof one carrieth a scroll of their shining yellow parchment, and the other a cluster of grapes of gold, with a long foot or stalk. The herald and children are clothed with mantles of sea-water green satin ; but the herald's mantle is streamed with gold, and hath a train. Then the herald with three courtesies, or rather inclinations, cometh up as far as the half-pace, and there first taketh into his hand the scroll. This scroll is the king's charter, containing gift of revenue, and many privileges, exemptions, and points of honour granted to the father of the family ; and it is ever styled and directed, "To such an one, our well-beloved Friend and Creditor ;" which is a title proper only to this case ; for they say the king is debtor to no man, but for propagation of his subjects ; the seal set to the king's charter is the king's image, embossed or moulded in gold ; and though such charters be expedited of course, and as of right, yet they are varied by discretion according to the number and dignity of the family. This charter the herald readeth aloud ; and while it is read, the father or Tirsan standeth up, supported by two of his sons, such as he chooseth. Then the herald mounteth the half-pace, and delivereth the charter into his hand ; and with that there is an acclamation, by all that are present, in their language, which is thus much ; "Happy are the people of Bensalem." Then the herald taketh into his hand from the other child the cluster of grapes, which is of gold, both the stalk and the grapes ; but

the grapes are daintily enamelled; and if the males of the family be the greater number, the grapes are enamelled purple, with a little sun set on the top; if the females, then they are enamelled into a greenish yellow with a crescent on the top. The grapes are in number as many as there are descendants of the family.' This golden cluster the herald delivereth also to the Tirsan, who presently delivereth it over to that son that he had formerly chosen, to be in house with him, who beareth it before his father as an ensign of honour when he goeth in public ever after, and is thereupon called the Son of the Vine. After this ceremony ended, the father or Tirsan retireth; and after some time cometh forth again to dinner, where he sitteth alone under the state as before; and none of his descendants sit with him, of what degree or dignity soever, except he hap to be of Salomon's House. He is served only by his own children, such as are male, who perform unto him all service of the table upon the knee; and the women only stand about him, leaning against the wall. The room below his half-pace hath tables on the sides for the guests that are bidden, who are served with great and comely order; and toward the end of dinner (which in the greatest feasts with them lasteth never above an hour and a half) there is an hymn sung, varied according to the invention of him that composed it (for they have excellent poesy). But the subject of it is always the praises of Adam, and Noah, and Abraham; whereof the former two peopled the world, and the last was the Father of the Faithful; concluding ever with a thanksgiving for the nativity of our Saviour, in whose birth the births of all are only blessed. Dinner being done, the Tirsan retireth again; and having withdrawn himself alone into a place, where he maketh some private prayers, he cometh forth the third time to give the blessing, with all his descendants, who stand about him as at the first. Then he calleth them forth by one and by one, by name, as he pleaseth, though seldom the order of age be inverted. The person that is called (the table being before removed) kneeleth down before the chair, and the father layeth his hand upon his head, or her head, and giveth the blessing in these words: "Son of Bensalem (or daughter of Bensalem), thy father saith it; the man by whom thou hast breath and life speaketh the word; the blessing of the everlasting Father, the Prince of Peace, and the holy dove be upon thee, and make the days of thy pilgrimage good and many." This he saith to every of them; and that done, if there be any of his sons of eminent



merit and virtue (so they be not above two), he calleth for them again, and saith, laying his arm over their shoulders, they standing, "Sons, it is well you are born : give God the praise, and persevere to the end." And withal delivereth to either of them a jewel, made in the figure of an ear of wheat, which they ever after wear in the front of their turban or hat. This done they fall to music and dances and other recreations, after their manner, for the rest of the day. This is the full order of that feast.

By that time six or seven days were spent, I was fallen into straight acquaintance with a merchant of that city, whose name was Joabin. He was a Jew, and circumcised ; for they have some few stirps of Jews yet remaining among them, whom they leave to their own religion ; which they may the better do because they are of a far differing disposition from the Jews in other parts : for whereas they hate the name of Christ, and have a secret inbred rancour against the people among whom they live ; these, contrarywise, give unto our Saviour many high attributes, and love the nation of Bensalem extremely. Surely this man, of whom I speak, would ever acknowledge that Christ was born of a virgin, and that he was more than a man ; and he would tell how God made him ruler of the seraphims which guard his throne ; and they call him also the Milken Way, and the Eliab of the Messiah, and many other high names ; which though they be inferior to his Divine Majesty, yet they are far from the language of other Jews. And for the country of Bensalem, this man would make no end of commending it, being desirous by tradition among the Jews there, to have it believed that the people thereof were of the generations of Abraham, by another son whom they call Nachoran ; and that Moses, by a secret Cabala, ordained the laws of Bensalem which they now use ; and that when the Messiah should come, and sit in his throne at Hierusalem, the king of Bensalem should sit at his feet, whereas other kings should keep a great distance. But yet setting aside these Jewish dreams, the man was a wise man and learned, and of great policy, and excellently seen in the laws and customs of that nation.

He afterwards questions the Jew on their laws and customs touching marriage ; and, among other things, is told that they allow no polygamy, and that "marriage without consent of parents they do not make void, but

they mulct it in the inheritors; for the children of such marriages are not admitted to inherit above a third part of their parents' inheritance." The narrative then proceeds:—

And as we were thus in conference there came one that seemed to be a messenger, in a rich huke, that spake with the Jew, whereupon he turned to me, and said, "You will pardon me, for I am commanded away in haste." The next morning he came to me again joyful, as it seemed, and said, "There is word come to the governor of the city that one of the fathers of Salomon's House will be here this day seven-night; we have seen none of them this dozen years; his coming is in state, but the cause of his coming is secret. I will provide you and your fellows of a good standing to see his entry." I thanked him, and told him I was most glad of the news. The day being come, he made his entry. He was a man of middle stature and age, comely of person, and had an aspect as if he pitied men. He was clothed in a robe of fine black cloth, with wide sleeves, and a cape; his under garment was of excellent white linen down to the foot, girt with a girdle of the same, and a sindon or tippet of the same about his neck; he had gloves that were curious and set with stone, and shoes of peach-coloured velvet; his neck was bare to the shoulders; his hat was like a helmet or Spanish montera, and his locks curled below it decently, they were of colour brown; his beard was cut round, and of the same colour with his hair, somewhat lighter. He was carried in a rich chariot, without wheels, litter-wise, with two horses at either end richly trapped in blue velvet embroidered, and two footmen on each side in the like attire. The chariot was all of cedar, gilt and adorned with crystal; save that the fore end had panuels of sapphires, set in borders of gold, and the hinder end the like of emeralds of the Peru colour; there was also a sun of gold, radiant upon the top in the midst, and on the top before a small cherub of gold with wings displayed; the chariot was covered with cloth of gold tissue upon blue: he had before him fifty attendants, young men, all in white satin loose coats up to the mid-leg, and stockings of white silk, and shoes of blue velvet, and hats of blue velvet, with fine plumes of divers colours set round like hatbands. Next before the chariot went two men bareheaded, in linen garments down to the foot, girt, and shoes of blue velvet, who carried the one a crosier, the other a pastoral staff

like a sheephook, neither of them of metal, but the crozier of balm-wood, the pastoral staff of cedar. Horsemen he had none, neither before nor behind his chariot, as it seemeth, to avoid all tumult and trouble; behind his chariot went all the officers and principals of the companies of the city; he sat alone upon cushions of a kind of excellent plush, blue; and under his foot curious carpets of silk of divers colours, like the Persian, but far finer; he held up his bare hand as he went, as blessing the people, but in silence. The street was wonderfully well kept, so that there was never any army had their men stand in better battle-array than the people stood; the windows likewise were not crowded, but every one stood in them as if they had been placed. When the show was past, the Jew said to me, "I shall not be able to attend you as I would, in regard of some charge the city hath laid upon me for the entertaining of this great person." Three days after, the Jew came to me again, and said, "Ye are happy men: for the father of Salomon's House taketh knowledge of your being here, and commanded me to tell you that he will admit all your company to his presence, and have private conference with one of you that ye shall choose; and for this hath appointed the next day after to-morrow, and because he meaneth to give you his blessing he hath appointed it in the forenoon." We came at our day and hour, and I was chosen by my fellows for the private access. We found him in a fair chamber richly hanged, and carpeted under foot, without any degrees to the state; he was set upon a low throne richly adorned, and a rich cloth of state over his head, of blue satin embroidered. He was alone, save that he had two pages of honour, on either hand one, finely attired in white. His under-garments were the like that we saw him wear in the chariot, but instead of his gown he had on him a mantle with a cape, of the same fine black, fastened about him. When we came in, as we were taught, we bowed low at our first entrance; and when we were come near his chair he stood up, holding forth his hand ungloved and in posture of blessing; and we every one of us stooped down and kissed the hem of his tippet; that done, the rest departed, and I remained.

The Father, then, having warned the pages forth of the room, and caused his visitor to sit down beside him, gives him the following account of Solomon's House:—

The end of our foundation is the knowledge of causes and

secret motions of things, and the enlarging of the bounds of human empire to the effecting of all things possible.

The preparations and instruments are these : we have large and deep caves of several depths ; the deepest are sunk six hundred fathom, and some of them are digged and made under great hills and mountains ; so, that if you reckon together the depth of the hill and the depth of the cave, they are some of them above three miles deep ; for we find that the depth of an hill, and the depth of a cave from the flat, is the same thing, both remote alike from the sun and heaven's beams, and from the open air. These caves we call the lower region, and we use them for all coagulations, indurations, refrigerations, and conservations of bodies ; we use them likewise for the imitation of natural mines, and the producing also of new artificial metals by compositions and materials, which we use and lay there for many years. We use them also sometimes (which may seem strange) for curing of some diseases, and for prolongation of life in some hermits that choose to live there, well accommodated of all things necessary, and indeed live very long, by whom also we learn many things.

We have burials in several earths, where we put divers cements, as the Chinese do their porcelain ; but we have them in greater variety, and some of them more fine. We also have great variety of composts and soils for the making of the earth fruitful.

We have high towers ; the highest about half-a-mile in height, and some of them likewise set upon high mountains ; so that the vantage of the hill with the tower is, in the highest of them, three miles at least ; and these places we call the upper region, accounting the air between the high places and the low as a middle region. We use these towers according to their several heights and situations, for insolation, refrigeration, conservation, and for the view of divers meteors, as winds, rain, snow, hail, and some of the fiery meteors also ; and upon them, in some places, are dwellings of hermits, whom we visit sometimes and instruct what to observe.

We have great lakes both salt and fresh, whereof we have use for the fish and fowl ; we use them also for burials of some natural bodies : for we find a difference in things buried in earth, or in air below the earth, and things buried in water. We have also pools, of which some do strain fresh water out of salt ; and others, by art, do turn fresh water into salt. We have also some rocks in the midst of the sea, and some bays

upon the shore, for some works wherein is required the air and vapour of the sea; we have likewise violent streams and cataracts, which serve us for many motions: and likewise engines for multiplying and enforcing of winds, to set also on going divers motions.

We have also a number of artificial wells and fountains made in imitation of the natural sources and baths: as tinted upon vitriol, sulphur, steel, brass, lead, nitre, and other minerals. And again, we have little wells for infusions of many things, where the waters take the virtue quicker and better than in vessels or basins; and amongst them we have a water which we call Water of Paradise: being, by that we do it, made very sovereign for health and prolongation of life.

We have also great and spacious houses where we imitate and demonstrate meteors: as snow, hail, rain, some artificial rains of bodies, and not of water, thunders, lightnings; also generations of bodies in air, as frogs, flies, and divers others.

We have also certain chambers, which we call Chambers of Health, where we qualify the air as we think good and proper for the cure of divers diseases and preservation of health.

We have also fair and large baths, of several mixtures, for the cure of diseases and the restoring of man's body from arefaction; and other for the confirming of it in strength of sinews, vital parts, and the very juice and substance of the body.

We have also large and various orchards and gardens, wherein we do not so much respect beauty as variety of ground and soil, proper for divers trees and herbs; and some very spacious, where trees and berries are set, whereof we make divers kinds of drinks, besides the vineyards. In these we practise likewise all conclusions of grafting and inoculating, as well of wild trees as fruit-trees, which produceth many effects; and we make by art in the same orchards and gardens trees and flowers to come earlier or later than their seasons, and to come up and bear more speedily than by their natural course they do; we make them also, by art, greater much than their nature, and their fruit greater and sweeter, and of differing taste, smell, colour, and figure from their nature; and many of them we so order that they become of medicinal use.

We have also means to make divers plants rise by mixtures of earths without seeds; and likewise to make divers new plants, differing from the vulgar; and to make one tree or plant turn into another.

¶ We have also parks and enclosures of all sorts of beasts and birds, which we use not only for view or rareness, but likewise for dissections and trials : that thereby we may take light what may be wrought upon the body of man, wherein we find many strange effects, as continuing life in them though divers parts which you account vital, be perished and taken forth, resuscitating of some that seem dead in appearance, and the like. We try also all poisons and other medicines upon them, as well of chirurgery as physic. By art, likewise, we make them greater or taller than their kind is, and, contrarywise, dwarf them and stay their growth; we make them more fruitful and bearing than their kind is, and, contrarywise, barren, and not generative; also we make them differ in colour, shape, activity, many ways. . . . .

I will not hold you long with recounting of our brewhouses, bakehouses, and kitchens, where are made divers drinks, breads, and meats, rare, and of special effects. Wines we have of grapes, and drinks of other juice of fruits, of grains, and of roots; and of mixtures with honey, sugar, manna, and fruits dried and decocted; also of the tears or woundings of trees, and of the pulp of canes; and these drinks are of several ages, some to the age or last of forty years. We have drinks also brewed with several herbs, and roots, and spices, yea, with several fleshes and white meats, whereof some of the drinks are such as they are in effect meat and drink both, so that divers, especially in age, do desire to live with them with little or no meat or bread: and, above all, we strive to have drinks of extreme thin parts, to insinuate into the body, and yet without all biting, sharpness, or fretting, insomuch as some of them put upon the back of your hand, will, with a little stay, pass through to the palm, and yet taste mild to the mouth. We have also waters which we ripen in that fashion as they become nourishing, so that they are indeed excellent drink, and many will use no other. Breads we have of several grains, roots, and kernels, yea, and some of flesh and fish, dried, with divers kinds of leavings and seasonings, so that some do extremely move appetites; some do nourish so as divers do live of them without any other meat who live very long; so for meats, we have some of them so beaten, and made tender, and mortified, yet without all corrupting, as a weak heat of the stomach will turn them into good chilus, as well as a strong heat would meat otherwise prepared. We have some meats also, and breads, and drinks, which, taken by men, enable them to

fast long after, and some other that used make the very flesh of men's bodies sensibly more hard and tough, and their strength far greater than otherwise it would be. . . .

We have also divers mechanical arts, which you have not, and stuffs made by them, as papers, linen, silks, tissues, dainty works of feathers of wonderful lustre, excellent dyes, and many others, and shops likewise, as well for such as are not brought into vulgar use amongst us, as for those that are. . . .

We have also perspective-houses, where we make demonstrations of all lights and radiations, and of all colours; and out of things uncoloured and transparent we can represent unto you all several colours not in rainbows (as it is in gems and prisms), but of themselves single. We represent also all multiplications of light, which we carry to great distance and make so sharp as to discern small points and lines; also all colourations of light, all delusions and deceits of the sight, in figures, magnitudes, motions, colours, all demonstrations of shadows. We find also divers means yet unknown to you of producing of light originally from divers bodies. We procure means of seeing objects afar off, as in the heaven and remote places, and represent things near as afar off, and things afar off as near, making feigned distances. We have also helps for the sight far above spectacles and glasses in use; we have also glasses and means to see small and minute bodies perfectly and distinctly, as the shapes and colours of small flies and worms, grains, and flaws in gems which cannot otherwise be seen. . . . We make artificial rainbows, halos, and circles about light; we represent also all manner of reflections, refractions, and multiplication of visual beams of objects.

We have also precious stones of all kinds, many of them of great beauty, and to you unknown; crystals likewise, and glasses of divers kinds, and amongst them some of metals vitrificated, and other materials beside those of which you make glass; also a number of fossils and imperfect minerals which you have not; likewise loadstones of prodigious virtue, and other rare stones, both natural and artificial.

We have also sound-houses, where we practise and demonstrate all sounds and their generation. We have harmonies which you have not, of quarter sounds and lesser slides of sounds. Diverse instruments of music likewise to you unknown, some sweeter than any you have, with bells and rings that are dainty and sweet. We represent small sounds as great and deep; likewise great sounds extenuate and sharp;

we make diverse tremblings and warblings of sounds, which in their original are entire. We represent and imitate all articulate sounds and letters, and the voices and notes of beasts and birds. We have certain helps, which, set to the ear, do further the hearing greatly. We have also diverse strange and artificial echoes, reflecting the voice many times, and, as it were, tossing it: and some that give back the voice louder than it came, some shriller, and some deeper, yea, some rendering the voice differing in the letters or articulate sound from that they receive. We have all means to convey sounds in trunks and pipes, in strange liues and distances.

We have also perfume-houses, wherewith we join also practices of taste. We multiply smells, which may seem strange; we imitate smells, making all smells to breathe out of other mixtures than those that give them; we make diverse imitations of taste likewise, so that they will deceive any man's taste; and in this house we contain also a confiture-house, where we make all sweetmeats, dry and moist, and divers pleasant wines, milks, broths, and salads far in greater variety than you have.

We have also engine-houses, where are prepared engines and instruments for all sorts of motions. There we imitate and practise to make swifter motions than any you have, either out of your muskets or any engine that you have, and to make them and multiply them more easily, and with small force, by wheels and other means, and to make them stronger and more violent than yours are, exceeding your greatest canons and basilisks. We represent also ordnance and instruments of war, and engines of all kinds, and likewise new mixtures and compositions of gunpowder, wildfires, burning in water, and unquenchable; also fireworks of all variety, both for pleasure and use. We imitate also flights of birds; we have some degrees of flying in the air. We have ships and boats for going under water, and brooking of seas; also swimming-girdles and supporters. We have divers curious clocks, and other like motions of return, and some perpetual motions. We imitate also motions of living creatures, by images of men, beasts, birds, fishes, and serpents. We have also a great number of other various motions, strange for equality, fineness, and subtlety.

We have also a mathematical-house, where are represented all instruments, as well of geometry as astronomy, exquisitely made.



We have also houses of deceits of the senses, where we represent all manner of feats of juggling, false apparitions, impostures, and illusions, and their fallacies; and surely you will easily believe that we that have so many things truly natural, which induce admiration, could in a world of particulars deceive the senses, if we would disguise those things and labour to make them more miraculous. But we do hate all impostures and lies, insomuch as we have severely forbidden it to all our fellows, under pain of ignominy and fines, that they do not show any natural work or thing adorned or swelling, but only pure as it is, and without all affectation of strangeness.

These are, my son, the riches of Salomon's house.

For the several employments and offices of our fellows we have twelve that sail into foreign countries under the names of other nations (for our own we conceal), who bring us the books, and abstracts, and patterns of experiments of all other parts. These we call merchants of light.

We have three that collect the experiments which are in all books. These we call depredators.

We have three that collect the experiments of all mechanical arts, and also of liberal sciences, and also of practices which are not brought into arts. These we call mystery-men.

We have three that try new experiments.

Such as themselves think good. These we call pioneers or miners.

We have three that draw the experiments of the former four into titles and tables, to give the better light for the drawing of observations and axioms out of them. These we call compilers.

We have three that bend themselves, looking into the experiments of their fellows, and cast about how to draw out of them things of use and practice for man's life and knowledge, as well for works as for plain demonstration of causes, means of natural divinations, and the easy and clear discovery of the virtues and parts of bodies. These we call dowry-men, or benefactors.

Then after diverse meetings and consults of our whole number, to consider of the former labours and collections, we have three that take care, out of them, to direct new experiments of a higher light, more penetrating into nature than the former. These we call lamps.

We have three others that do execute the experiment, so directed, and report them. These we call inoculators.

Lastly, we have three that raise the former discoveries by experiments into greater observations, axioms, and aphorisms. These we call interpreters of nature.

We have also, as you must think, novices and apprentices, that the succession of the former employed men do not fail, besides a great number of servants and attendants, men, and women. And this we do also: we have consultations, which of the inventions and experiences which we have discovered shall be published, and which not, and take all an oath of secrecy for the concealing of those which we think meet to keep secret, though some of those we do reveal sometimes to the state, and some not.

For our ordinances and rites we have two very long and fair galleries; in one of these we place patterns and samples of all manner of the more rare and excellent inventions: in the other we place the statues of all principal inventors. There we have the statue of your Columbus, that discovered the West Indies; also the inventor of ships; your monk that was the inventor of ordnance and of gunpowder; the inventor of music; the inventor of letters; the inventor of printing; the inventor of observations of astronomy; the inventor of works in metal; the inventor of glass; the inventor of silk of the worm; the inventor of wine; the inventor of corn and bread; the inventor of sugars; and all these by more certain tradition than you have. Then we have divers inventors of our own of excellent works, which, since you have not seen, it were too long to make descriptions of them, and, besides, in the right understanding of those descriptions you might easily err: for upon every invention of value we erect a statue to the inventor, and give him a liberal and honourable reward. These statues are, some of brass, some of marble and touchstone, some of cedar, and other special woods, gilt and adorned, some of iron, some of silver, some of gold.

We have certain hymns and services, which we say daily, of laud and thanks to God for his marvellous works, and forms of prayers, imploring his aid and blessing for the illumination of our labours, the end turning them into good and holy uses.

Lastly, we have circuits or visits of divers principal cities of the kingdom, where, as it cometh to pass, we do publish such new profitable inventions as we think good; and we do also declare natural divinations of diseases, plagues, swarms of

hurtful creatures, scarcity, tempest, earthquakes, great inundations, comets, temperature of the year, and divers other things; and we give counsel thereupon what the people shall do for the prevention and remedy of them.

And when he had said this, he stood up; and I, as I had been taught, kneeled down, and he laid his right hand upon my head and said, "God bless thee, my son, and God bless this relation which I have made. I give thee leave to publish it, for the good of other nations; for we here are in God's bosom, a land unknown." And so he left me, having assigned a value of about two thousand ducats for a bounty to me and my fellows; for they give great largesses where they come, upon all occasions.

To this Third Part of the *Instauratio* are also to be referred certain other papers first published by Tenison in that division of the *Baconiana* (1679) entitled *Physiological Remains*. Of these a mere enumeration will be sufficient. The first, an imperfect tract in English entitled 'Inquisitions touching the Compounding of Metals,' is different from the portion relating to the same subject of the 'Articles respecting Metals' already noticed. The others are, 'Certain Experiments made by the Lord Bacon about Weight in Air and Water;'—'Certain Sudden Thoughts of the Lord Bacon's, set down by him under the title of *Experiments for Profit*;'—'Certain Experiments of the Lord Bacon's about the Commixture of Liquors only, not Solids, without heat or agitation, but only by simple composition and settling;'—'A Catalogue of Bodies attractive and not attractive, made by the Lord Bacon, together with experimental observations about Attraction;' partly in Latin, and given also in English by Tenison. Along with these may be placed a collection in English of facts respecting Heat and Cold, first published in Stephens's Second Collection, *Letters and Remains*, 4to. Lon. 1734, under the title of 'Sequela Chartarum; sive, Inquisitio Legitima de Calore et Frigore.' Then there are the *Medical Remains* published in the *Baconiana*;—consisting of a receipt styled by Bacon 'Grains of Youth;' various other ointments, preservatives, restorative drinks, &c.; a receipt for

'Methusalem Water, against all asperity and torrefaction of inward parts, all adustion of the blood, and generally against the dryness of age ;'—'A Catalogue of Astringents, &c. instrumental to Health ;'—'A Catalogue by the Lord Bacon, for his own use, out of the Book for the Prolongation of Life ; together with some new Advices in order to Health ;'—and our other receipts. Bacon's most celebrated receipt, however, is one for the Gout, of which he says in the *Sylva* (*Exp.* 60) :—" I have tried, myself, a remedy for the gout, which hath seldom failed, but driven it away in twenty-four hours' space :— it is first to apply a poultice, of which *vide* the Receipt, and then a bath, or fomentation, of which *vide* the Receipt ; and then a plaster, *vide* the Receipt. . . . The poultice is to be laid to for two or three hours ; the fomentation for a quarter of an hour or somewhat better, being used hot, and seven or eight times repeated ; the plaster to continue on still till the part be well confirmed." The Receipt is given at the end of the *Sylva*, and is as follows :—

1. The Poultice.—R. Of manchet, about 3 ounces, the crum only, thin cut ; let it be boiled in milk till it grow to a pulp. Add in the end a dram and a half of the powder of red roses ; of saffron, 10 grains ; of oil of roses, an ounce. Let it be spread upon a linen cloth and applied luke-warm, and continued for three hours' space.

2. The Bath, or Fomentation.—R. Of sage-leaves half a handful ; of the root of hemlock, sliced, 6 drams ; of briony-roots, half an ounce ; of the leaves of red roses, 2 pugills. Let them be boiled in a pottle of water wherein steel bath been quenched till the liquor come to a quart. After the straining put in half a handful of bay-salt. Let it be used with scarlet cloth, or scarlet wool, dipped in the liquor hot, and so renewed seven times, all in the space of a quarter of an hour, or little more.

3. The Plaster.—R. Emplastrum diacalcitheos, as much as is sufficient for the part you mean to cover. Let it be dissolved with oil of roses in such a consistence as will stick, and spread upon a piece of holland and applied.

The volume containing the *Sylva* and the *New Atlan-*

*tis* closes in the old editions with an enumeration of what are designated 'Magnalia Naturæ, præcipuè quoad usus humanos' (The great Things of Nature, more especially in so far as regards the needs of Man). These *Magnalia* include the Prolongation of Life, the Restitution of Youth in some degree, the Retardation of Age, the Curing of Diseases counted Incurable, the Mitigation of Pain, the Increasing of Strength and Activity and, of ability to suffer Pain or Torture, the Altering of Complexions, of Fatness and Leanness of Statures, and of Features, the Increasing and Exalting of the Intellectual Parts, the Version (or Conversion) of Bodies into other Bodies, the Making of new Species, Instruments of Destruction as of War and Poison, Exhilaration of the Spirits, Force of the Imagination either upon another body or upon the body itself, Acceleration of Time in Maturations and Classifications, the Acceleration of Putrefaction, Decoction, and Germination, the Raising of Tempests, New Foods, New Threads for Apparel and New Stuffs, Natural Divinations, Deceptions of the Senses, Greater Pleasures of the Senses, Artificial Minerals and Cements.

Of the FOURTH PART of the *Instauratio Magna*, all that appears to have been executed is a short Preface or Introduction printed by Gruter among the *Impetus Philosophici* with the titles of 'Scala Intellectus, sive Filum Labyrinthi' (The Ladder of the Understanding, or the Thread of the Labyrinth). The second of these two titles, it may be remembered, is the same that Gruter has also given to an Inquiry respecting Motion, noticed above, which he has printed in another part of his volume, and which has been assigned by the modern editors to the Third Part of the *Instauratio*. The *Scala Intellectus* is the title given by Bacon himself to the Fourth Part of his great work in the *Distributio*, or Plan, published along with the *Novum Organum*.\* In that discourse he describes this Fourth Part as in fact nothing else than a particular and expanded application of the Second Part.† The Preface published by Gruter

\* See the present work, Vol. II. p. 25. † Ibid. p. 31.

is translated by Archdeacon Wrangham in Mr. Montagu's edition of Bacon's Works; and it is also inserted in what Shaw has given as an Introduction to the Fourth Part of the *Instauratio*, which he describes as having been "collected from certain scattered fragments in the *Scripta* published by Gruter." Here is Shaw's translation of the concluding portion of it:—

The entrance of the road we pursue is described in the second part of our *Instauratio*, or *Novum Organum*; and followed in the third part, the *Phænomena of the Universe*, in our *Sylva Sylvarum*; where we endeavoured to penetrate and pass through the woods of nature, thick set and darkened with a great variety of experiments, as with leaves; and entangled and twined together, like shrubs and bushes, with the subtilty of observations. We are now, perhaps, proceeding to the more open parts of nature, which however are still more difficult; and having got through the woods, are come to the bottoms of the mountains; for though the way was never attempted before, we shall lead on from particular histories to universals, in one certain and continued path.

And here we cannot but observe, that those two famous ways of the ancients in active life, have a great correspondence with the ways of contemplation; the one whereof, being at the first plain and easy, leads on to cragged, dangerous, and impassable places; but the other, beginning steep and difficult, ends in a plain: for in the same manner, he who at the first inquiry into nature lays hold of certain immoveable principles in the sciences, and trusting to them shall hope to find out everything else, as it were, at leisure; if he proceeds in his inquiries, without being over satisfied or dissatisfied by the way, will find himself got into the first of these roads. But he that shall be able to withhold his judgment, ascend by degrees, and pass as it were over the tops of mountains, climbing first up one, then up another, and so to a third, with true patience and unwearied diligence; will in due time arrive at the heights and top-grounds of nature, where there is a sure footing, a serene station, and a beautiful prospect of things; with a gentle and easy descent leading down to all practical arts.

Our design therefore is this: that as in the second part of our work, we have laid down precepts for a just and legitimate inquiry into nature; so in this fourth part we would give examples of such an inquiry in a variety of subjects, in such

a manner as we judge to have the exactest correspondence with truth ; and therefore deliver as a manner chosen and approved.

We do not, however, after the common custom of men, propose our own forms and methods of inquiry, as if they were inviolable, the only ones and perfect in all their parts, so as to make it absolutely necessary to use them ; for we would by no means cramp or confine the industry and felicity of mankind. There is no doubt but men of genius and leisure, either of themselves or as being now freed from the difficulties which necessarily attend the first breaking up of the ice of experience, may carry our method to greater perfection ; and it is our earnest desire that the true art of conducting inquiries should improve.

From what is said here and in the *Distributio* Shaw appears to have inferred, that the examples of investigation and discovery according to his new system, which Bacon intended to give in the Fourth Part of the *Instauration*, were no other than those which he published under the titles of his Histories of the Winds, of Life and Death, &c. And these treatises are accordingly placed by Shaw in the Fourth Part. But this is to go directly in the face of Bacon's own title-pages, which expressly declare all these Histories to belong to the Third Part of the *Instauration*.

In the *Distributio* Bacon has himself entitled the FIFTH PART of the *Instauration* 'Prodromi sive Anticipationes Philosophiæ Secundæ ;'\* and among the *Impetus Philosophici* published by Gruter is a short paper bearing that title, and further designated 'Præfatio' (The Preface). The following is the greater part of it, as translated by Shaw :—

Though in our own opinion we lay better things before mankind than either the ancient or those at present received, yet we are far from lessening these latter in the public esteem ; but desire that even these should be improved, enlarged, and prized as they deserve. For it is no part of our intention to lead all men totally, or any of them immediately, away from the things at present authorized and believed. But as an arrow in shooting whirls round its axis all the time of its progressive motion, and thus helps itself forwards, so whilst we

\* See Vol. LL. p. 25.

tend to our mark, we desire to roll round in the things now commonly known and received: and thus we candidly and ingenuously make use of the assistance of common reason and the vulgar demonstrations, though we disallow their sway or absolute authority; but with the same right as the rest of mankind, deliver such things as we have discovered and approved by the ordinary means; for such things may doubtless have a great share of truth and utility.

By this procedure, however, we mean not in the least to derogate from what we have all along said of the insufficiency of the unassisted natural reason, and the demonstrations of the ancients; but only lent out these things to the world for a time, to accommodate those who, through a want of abilities, or through multiplicity of other affairs, have just excuse for confining their contemplations within the old beaten paths and provinces of the sciences, or at least within the confines thereof; and again to serve such as, according to our indications and directions, shall enter into and pursue our true method of interpreting nature; thus setting up for them inns by the way, for their ease, support, and refreshment; whilst at the same time, we in some degree promote the felicity of mankind, and afford a large supply of matter to such minds as have a somewhat closer affinity and connection with nature. Though this we no way hope to do on account of any extraordinary talent, or any uncommon reliance we have upon ourselves.

On the other hand, if any person of a common capacity, but of a ripe judgment, would lay aside the idols of his own mind, resolve to begin his inquiries anew, and with attention, diligence, and freedom, converse among realities, or the facts and experiments of natural history, he might thus doubtless penetrate much further into nature, by the sole, proper, and genuine powers of the mind, and by his own mere natural thoughts and apprehensions, than by reading all the authors that have wrote, or by indulging himself in abstract contemplations, or by pursuing and repeating the most rigorous and assiduous disputations; and this though he were not to use any of our machinery or contrivances, to assist his understanding; nor was acquainted with the true form of induction and interpretation. We therefore hope that something of this kind may happen to ourselves, especially as we have already had some experience in the business of interpreting nature; which may probably correct and change the perverse habit and bent of the mind.

This, however, must not be so understood, as if we required



that assent to our own doctrines and opinions which we refuse to the ancients; for we openly profess and declare that we will by no means abide by the things we shall here declare, whatsoever they may prove; and this purely to reserve everything as it were entire, for our secondary, inductive, and more perfect philosophy.

We think proper, in the work itself, to deliver our thoughts loose and free, without binding them up into method, because this form best suits the young sciences that are but just sprouting anew from their roots; and has no tendency to build up an art by the cementing of things together, but leaves, as it ought for the present, every subject unlimited and open to further inquiry.

There still remain several pieces in Latin among those published by Gruter, and also one or two fragments in English, which may be considered as belonging to the *Instauratio*, but to which Part it would be difficult to say. Blackbourne, the first editor of Bacon's collected works, and the only one of all his editors who seems even to have read them, has assigned the Latin pieces to the Third Part of the *Instauratio*; others appear to have been inclined to regard them as more properly belonging to the Fifth; but perhaps the safest plan is to place all these dubious disquisitions by themselves, as an Appendix to the author's great work. Some of them may be considered as the original draughts, or as earlier forms, of portions of the *Instauratio* which we have already examined. It is assumed on all hands that the Sixth Part of the *Instauratio* was never even begun by Bacon.

The first tract in Gruter's collection is entitled 'Cognitata et Visa de Interpretatione Naturæ, sive de Inventionione Rerum et Operum' (Things Thought and Seen respecting the Interpretation of Nature, or the Discovery of Realities and Effects). It fills 61 pages of his little volume. Two Letters of Bacon's relating to the 'Cognitata et Visa' are printed in the First Part of the *Resuscitatio*. In the first, addressed to Bishop Andrews, he says:—"I hasten not to publish; perishing I would prevent. . . . This hath put me into these Miscellanies; which I purpose to suppress if God give me leave

to write a just and perfect volume of Philosophy, which I go on with, though slowly. I send not your Lordship too much, lest it may glut you." It is only from the heading prefixed to this Letter by Rawley that it is ascertained to relate to the *Cogitata et Visa*. The other, similarly headed, is addressed to Sir Thomas Bodley: it is merely a short note requesting him to return the papers. "You are, I bear you witness," says Bacon, "slothful, and you help me nothing; so as I am half in conceit that you affect not the argument: for myself, I know well, you love and affect. . . . If you be not of the lodgings chalked up, whereof I speak in my preface, I am but to pass by your door." When these letters were written does not appear; but that to Bodley at least must have been written before 1608; for we have a letter from Bodley to Bacon, dated Fulham, 19 February, 1607 (that is, 1608), containing a long criticism upon the '*Cogitata et Visa*,' which he thanks Bacon for having allowed him to peruse. This letter of Bodley's was published by Gruter, in a Latin translation, along with the treatise to which it relates (*Scripta*, pp. 62—74); but the original English had been previously published in the first edition of the '*Cabala*,' 1651. "Although I myself," says Bodley, after he has gone over his various objections, "like a carrier's horse, cannot balk the beaten way in which I have been trained, yet such is my censure [judgment] of your *Cogitata*, that I must tell you, to be plain, you have very much wronged yourself and the world to smother such a treatise so long in your coffer." From this it would appear that the *Cogitata* had been written probably some years before 1608. But whether the treatise submitted to Bodley was the same that Gruter has printed with the same title may be doubted. There is no preface with the simile about the lodgings chalked up in Gruter's edition; nor indeed does the declamation (for such it is) seem almost to admit of a preface of any kind. It appears to be in fact one of the forms into which the leading views of his *Instauratio Magna* were at various times thrown by Bacon, and of which Rawley says that he had himself seen at the least

twelve—"revised year by year, one after another, and every year altered and amended in the frame thereof, till at last it came to that model in which it was committed to the press." There is not perhaps a thought in the 'Cogitata et Visa' which is not to be found in some part of the *Instauratio*; still it does not deserve to be called, as it sometimes has been, merely a rough draught of that work; it is not at all a rough or unfinished composition, but in a very remarkable degree polished, eloquent, and striking. It has never been translated into English, as far as we are aware; but there is a fragment in English, entitled 'Filum Labyrinthi, sive Formula Inquisitionis; Ad Filios; Pars Prima' (The Thread of the Labyrinth; or Formula of Inquiry; To his Sons; Part First), originally published in Stephens's Second Collection (1734), which corresponds generally, and for the most part very closely, with the commencing portion of it. This, it will be observed, is the third *Filum Labyrinthi* we have had to enumerate; the title seems to have been used by Bacon to designate any exposition of his peculiar views or system of philosophy. As for the inscription *Ad Filios* (To his Sons) here, it must apparently be understood to mean To his Disciples or Followers. We will extract the greater part of this English *Filum Labyrinthi*:—

1. Francis Bacon thought in this manner. The knowledge whereof the world is now possessed, especially that of nature, extendeth not to magnitude and certainty of works. The physician pronounceth many diseases incurable, and faileth oft in the rest; the alchemists wax old and die in hopes; the magicians perform nothing that is permanent and profitable; the mechanics take small light from natural philosophy, and do but spin on their own little threads. Chance sometimes discovereth inventions, but that worketh not in years but ages; so he saw well that the inventions known are very imperfect; and that new are not like to be brought to light, but in great length of time; and that those which are, came not to light by philosophy.

4. He thought, also, that knowledge is uttered to men in a form as if every thing were finished; for it is reduced into arts and methoda, which, in their divisions, do seem to include all that may be; and how weakly soever the parts are filled, yet

they carry the show and reason of a total, and thereby the writings of some received authors go for the very art: whereas antiquity used to deliver the knowledge which the mind of man had gathered, in observations, aphorisms, or short and dispersed sentences, or small tractates of some parts that they had diligently meditated and laboured, which did invite men both to ponder that which was invented and to add and supply further. But now sciences are delivered to be believed and accepted, and not to be examined and further discovered; and the succession is between master and disciple, and not between inventor and continuer or advancer; and therefore sciences stand at a stay, and have done for many ages, and that which is positive is fixed, and that which is question is kept question, so as the columns of no further proceeding are pitched: and, therefore, he saw plainly men had cut themselves off from further invention, and that it is no marvel that that is not obtained which hath not been attempted, but rather shut out and debarred.

5. He thought, also, that knowledge is almost generally sought either for delight and satisfaction, or for gain and profession, or for credit and ornament, and that every of these are as Atalanta's balls, which hinder the race of invention. For men are so far, in these courses, from seeking to increase the mass of knowledge, as of that mass which is they will take no more than will serve their turn; and if any one amongst so many seeketh knowledge for itself, yet he rather seeketh to know the variety of things than to discern of the truth and causes of them: and if his inquisition be yet more severe, yet it tendeth rather to judgment than to invention; and rather to discover truth in controversy than new matter; and if his heart be so large as he propoundeth to himself farther discovery or invention, yet it is rather of new discourse and speculation of causes than of effects and operations. And as for those that have so much in their mouths, action, and use, and practice, and the referring of sciences thereunto, they mean it of application of that which is known, and not of a discovery of that which is unknown. So he saw plainly, that this mark, namely, invention of further means to endow the condition and life of man with new powers or works, was almost never yet set up and resolved in man's intention and inquiry.

6. He thought, also, that, amongst other knowledges, natural philosophy hath been the least followed and laboured: For since the Christian faith the greatest number of wits have been employed, and the greatest helps and rewards have been con-

ferred upon divinity. And before-time, likewise, the greatest part of the studies of philosophers was consumed in moral philosophy, which was as the heathen divinity. And in both times a great part of the best wits betook themselves to law, pleadings, and causes of estate, specially in the time of the greatness of the Romans, who, by reason of their large empire, needed the service of all their able men for civil business. And the time amongst the Grecians, in which natural philosophy seemed most to flourish, was but a short space; and that, also, rather abused in differing sects and conflicts of opinions than profitably spent. Since which time natural philosophy was never any profession, nor never possessed any whole man, except, perchance, some monk in a cloister, or some gentleman in the country, and that very rarely, but became a science of passage to season a little young and unripe wits, and to serve for an introduction to other arts, especially physic and the practical mathematics; so as he saw plainly, that natural philosophy hath been intended by few persons, and in them hath occupied the least part of their time, and that in the weakest of their age and judgment.

7. He thought, also, how great opposition and prejudice natural philosophy had received by superstition, and the immoderate and blind zeal of religion; for he found that some of the Grecians which first gave the reason of thunder had been condemned of impiety; and that the cosmographers which first discovered and described the roundness of the earth, and the consequence thereof touching the antipodes, were not much otherwise censured by the ancient fathers of the Christian church; and that the case is now much worse, in regard of the boldness of the schoolmen, and their dependencies in the monasteries, who, having made divinity into an art, have almost incorporated the contentious philosophy of Aristotle into the body of Christian religion; and, generally, he perceived in men of devout simplicity this opinion: that the secrets of nature were the secrets of God, and part of that glory whereunto the mind of man, if it seek to press, shall be oppressed; and that the desire in men to attain to so great and hidden knowledge hath a resemblance with that temptation which caused the original fall; and on the other side, in men of a devout policy he noted an inclination to have the people depend upon God the more when they are less acquainted with second causes, and to have no stirring in philosophy lest it should lead to an innovation in divinity, or else should dis-

cover matter of further contradiction to divinity; but in this part, resorting to the authority of the Scriptures and holy examples, and to reason, he rested not satisfied alone, but much confirmed. For first, he considered that the knowledge of nature, by the light whereof man discerned of every living creature, and imposed names according to their propriety, was not the occasion of the fall; but the moral knowledge of good and evil affected, to the end, to depend no more upon God's commandments, but for man to direct himself. Neither could he find in any Scripture that the inquiry and science of man in any thing, under the mysteries of the Deity, is determined and restrained, but contrarywise, allowed and provoked. For concerning all other knowledge the Scripture pronounceth, "That it is the glory of God to conceal: but it is the glory of man (or of the king, for the king is but the excellency of man) to invent;" and again, "The spirit of man is as the lamp of God, wherewith he searcheth every secret;" and again, most effectually, "That God hath made all things beautiful and decent, according to the return of their seasons; also that he hath set the world in man's heart, and yet man cannot find out the work which God worketh from the beginning to the end;" showing that the heart of man is a continent of that concave or capacity wherein the content of the world, that is, all forms of the creatures, and whatsoever is not God, may be placed or received; and complaining that, through the variety of things and vicissitudes of times, which are but impediments, and not impuissances, men cannot accomplish his invention. In precedent, also, he set before his eyes, that in those few memorials before the flood, the Scripture honoureth the name of the inventors of music and works in metal; that Moses had this addition of praise, that he was seen in all the learning of the Egyptians; that Solomon, in his grant of wisdom from God, had contained, as a branch thereof, that knowledge whereby he wrote a natural history of all verdure from the cedar to the moss, and of all that breatheth; that the book of Job, and many places of the prophets, have great aspersion of natural philosophy; that the church, in the bosom and lap thereof, in the greatest injuries of times, ever preserved as holy relics, the books of philosophy, and all heathen learning; and that when Gregory, the bishop of Rome, became adverse and unjust to the memory of heathen antiquity, it was censured for pusillanimity in him, and the honour thereof soon after restored, and his own memory almost persecuted by his successor Sabin-

ian; and lastly, in our times, and the ages of our fathers, when Luther and the divines of the Protestant church on the one side, and the Jesuits on the other, have enterprized to reform, the one the doctrine, the other the discipline and manners of the Church of Rome, he saw how well both of them have awaked to their great honour and succour all human learning. And for reason, there cannot be a greater and more evident than this: that all knowledge, and especially that of natural philosophy, tendeth highly to the magnifying of the glory of God in his power, providence, and benefits appearing and engraven in his works, which, without this knowledge, are beheld but as through a veil; for if the heavens, in the body of them, do declare the glory of God to the eye, much more do they, in the rule and decrees of them, declare it to the understanding. And another reason, not inferior to this is, that the same natural philosophy principally amongst all other human knowledge, doth give an excellent defence against both extremes of religion, superstition, and infidelity: for both it freeth the mind from a number of weak fancies and imaginations, and it raiseth the mind to acknowledge that to God all things are possible; for to that purpose speaketh our Saviour in that first canon against heresies, delivered upon the case of the resurrection: "You err, not knowing the Scriptures, nor the power of God;" teaching that there are but two fountains of heresy: not knowing the will of God revealed in the Scriptures, and not knowing the power of God revealed, or at least made most sensible, in his creatures. So, as he saw well, that natural philosophy was of excellent use to the exaltation of the Divine majesty; and that which is admirable, that being a remedy of superstition, it is nevertheless a help to faith. He saw, likewise, that the former opinions to the prejudice hereof, had no true ground, but must spring either out of mere ignorance or out of an excess of devotion, to have divinity all in all; whereas, it should be only above all; both which states of mind may be best pardoned; or else out of worse causes, namely out of envy, which is proud weakness and deserveth to be despised: or out of some mixture of imposture to tell a lie for God's cause; or out of an impious diffidence as if men should fear to discover some things in nature which might subvert faith. But still he saw well, howsoever these opinions are in right reason reprov'd, yet they leave not to be most effectual hinderances to natural philosophy and invention.

8. He thought also, that there wanted not great contrariety

to the further discovery of sciences in regard to the orders and customs of universities, and also in regard of common opinion. For in universities and colleges men's studies are almost confined to certain authors, from which, if any dissenteth or propoundeth matter of redargution, it is enough to make him thought a person turbulent; whereas, if it be well advised, there is a great difference to be made between matters contemplative and active. For in government change is suspected, though to the better; but it is natural to arts to be in perpetual agitation and growth. Neither is the danger alike of new light and of new motion or remove; and for vulgar and received opinions nothing is more usual, or more usually complained of, than that it is imposed for arrogancy and presumption for men to authorize themselves against antiquity and authors towards whom envy is ceased, and reverence by time amortised; it not being considered what Aristotle himself did, upon whom the philosophy that now is chiefly dependeth, who came with a professed contradiction to all the world, and did put all his opinions upon his own authority and argument, and never so much as nameth an author but to confute and reprove him; and yet his success well fulfilled the observation of Him that said, "If a man come in his own name, him will you receive." Men think, likewise, that if they should give themselves to the liberty of invention and travail of inquiry, that they shall light again upon some conceits and contemplations which have been formerly offered to the world, and have been put down by better, which have prevailed and brought them to oblivion; not seeing that howsoever the property and breeding of knowledge is in great and excellent wits, yet the estimation and price of them is in the multitude, or in the inclinations of princes and great persons mealy learned. So, as those knowledges are like to be received and honoured which have their foundation in the subtilty or finest trial of common sense, or such as fill the imagination, and not such knowledge as is digged out of the hard mine of history and experience, and falleth out to be in some points as adverse to common sense or popular reason, as religion or more. Which kind of knowledge, except it be delivered with strange advantages of eloquence and power, may be likely to appear and disclose a little to the world, and straight to vanish and shut again. So that time seemeth to be of the nature of a river or flood, that bringeth down to us that which is light and blown up, and sinketh and drowneth that which is solid and grave. So he



saw well that both in the state of religion, and in the administration of learning, and in common opinion, there were many and continual stops and traverses to the course of invention.

9. He thought, also, that the invention of works and further possibility was prejudiced in a more special manner than that of speculative truth; for, besides the impediments common to both, it hath, by itself, been notably hurt and discredited by the vain promises and pretences of alchemy, magic, astrology, and such other arts, which, as they now pass, hold much more of imagination and belief than of sense and demonstration. But to use the poet's language: men ought to have remembered, that although Ixion, of a cloud in the likeness of Juno, begat centaurs and chimeras, yet Jupiter, also, of the true Juno, begat Vulcan and Hebe. Neither is it just to deny credit to the greatness of the acts of Alexander, because the like, or more strange have been feigned of an Amades or an Arthur, or other fabulous worthies. But though this in true reason should be, and that men ought not to make a confusion of unbelief; yet he saw well it could not otherwise be in event, but that experience of untruth had made access to truth more difficult, and that the ignominy of vanity hath abated all greatness of mind.

10. He thought, also, there was found in the mind of man an affection naturally bred and fortified, and farthered by discourse and doctrine, which did pervert the true proceeding towards active and operative knowledge. This was a false estimation, that it should be as a diminution to the mind of man to be much conversant in experiences and particulars, subject to sense and bound in matter, and which are laborious to search, ignoble to meditate, harsh to deliver, illiberal to practise, infinite as is supposed in number, and no ways accommodate to the glory of arts. This opinion, or state of mind, received much credit and strength by the school of Plato, who, thinking that particulars rather revived the notions or excited the faculties of the mind than merely informed; and having mingled his philosophy with superstition, which never favoureth the sense, extolleth too much the understanding of man in the inward light thereof. And again, Aristotle's school, which giveth the due to the sense in assertion, denieth it in practice much more than that of Plato. For we see the schoolmen, Aristotle's successors, which were utterly ignorant of history, rested only upon agitation of wit: whereas Plato giveth good example of inquiry by induction and view of par-

particulars, though in such a wandering manner as is of no force or fruit. So that he saw well that the supposition of the sufficiency of man's mind hath lost the means thereof.

Scarcely anything in all this will be absolutely new to the student of the *Instauratio*; but the expression is different from that with which the same thoughts are elsewhere clothed. No mind certainly was ever more completely impregnated and possessed by any peculiar set of ideas than that of Bacon was by what is called his system of philosophy; all his remarkable views and thoughts are to be found expressed in the course of his voluminous writings in many various forms. Of the remainder of the 'Cogitata et Visa' the greater part is transcribed, with some expansion or contraction, into the *Novum Organum* and other treatises that have been already noticed.

The next piece in Gruter's volume is entitled 'Descriptio Globi Intellectualis (Description of the Intellectual Globe). It is divided into seven chapters, of which the first four, filling only 15 pages in Gruter, are, as Tenison has remarked, only a rude draught of the Partition of the Sciences which we have in its mature and complete form in the *Advancement of Learning* and the *De Augmentis Scientiarum*. The three remaining chapters, which fill 64 of Gruter's pages, are regarded by Tenison as reducible to the Fourth Chapter of the Third Book of the *De Augmentis*, where the doctrine of the Celestial Bodies is noticed as one of the divisions of Physics.\* This principal portion of the treatise is translated by Shaw, under the title of 'A Specimen of Animated Astronomy; or, An Essay towards a Philosophical History of the Heavens.' "Had it been finished," he remarks, "it might have nobly supplied the Animated Astronomy set down for deficient in the *De Augmentis*; and, as it now stands, it exhibits the whole plan, executes some considerable proportion, and instructs a less able architect to carry on the work." "The author," he further observes, "proceeds in the cautious way of inquiry, by questions and arguments on both sides; with-

\* See ante, Vol. II. p. 75.

out undertaking to determine anything in a subject that lies so remote from direct experiment." Bacon himself proposes three things: first, to propound certain philosophical questions relating to the facts of Astronomy; secondly, to show distinctly wherein the History of the Heavens consists, and to lay down certain heads of induction, or Articles of Inquiry, concerning the Celestial Bodies; thirdly, to give directions how the things sought for should be considered when obtained, how they should be exhibited, and how recorded. The treatise, as we have it, however, embraces only the first of these three divisions. It is curious as a record, not of the state of astronomical science in Bacon's day, but of his own knowledge and notions on the subject; and it is interspersed with some ingenious observations; but for the purpose of the present review it may be dismissed without further examination.

To the same Fourth Chapter of the Third Book of the *De Augmentis* Tenison would reduce the next piece in Gruter's volume, which extends from p. 154 to p. 177, and is entitled 'Thema Coeli' (A Thesis or System of the Heaven). It may be regarded as a sequel to the preceding speculation, and is curious as giving us the conclusions upon several of the points there inquired about, which Bacon was disposed to adopt for the present, or, as he states, till his facts and inductions should be more matured. Among other things, he conceives that from the earth up to the highest point of the heaven there are three general regions, or as it were stories or floors, in respect of flame: the region in which flame is extinguished; that in which it is combined with air; and that in which it exists in a state of dispersion. He rejects the vulgar opinion that flame is merely air set on fire; affirming that air and flame are two clearly heterogeneous bodies or substances, like water and oil, sulphur and mercury. The moon, he maintains, is neither a fluid nor a solid body, but a mass of flame, although of a slow and languid kind, being in fact the first rudiment and at the same time the last sediment of the true celestial flame. The stars, he affirms, are true flames.

Then follows a long disquisition about the various kinds of motion in the heavenly bodies. The following passage is very characteristic:—"Neque ista non viderunt astronomi praestantiores," &c.—that is, "It is not that the better order of astronomers have not seen all these things, but that, intent upon what they call their art, and befooled with their dreams of perfect circles, and catching at vain subtleties, and subserviently humouring a false philosophy, they have disdained to follow nature. But that arbitrary authority assumed by the learned over nature is something worse than even the simplicity and credulity of the vulgar, at least when it goes the length of making us despise things that are manifest merely because they are manifest. Nevertheless it is a great evil, and one of very extensive operation, that the human mind, when it finds itself unable to understand nature, will try to overstand it (*cum par rebus esse non possit, supra res esse malit*)." In the end, he denies the rotation of the earth around the sun, and at the same time maintains that the diurnal rotation does not exist either in the earth or in the heavens, but only in the air, the waters, and whatever else lies immediately outside the earth (*etiam extimis terrae*). The planets, he thinks, move with more or less velocity according as they are placed higher or lower in the heaven. "But all this," he repeats, in conclusion, "is only what we behold while standing as it were on the threshold of the history and philosophy of nature, although the farther we advance we may peradventure find the greater reason for believing that we are right. Still we again protest that we will not be permanently bound by anything we have here set down. For, in these inquiries, as in others, we are certain of our road, but the abiding place to which it may finally conduct us we do not know (*certi viae nostrae sumus, certi sedis nostrae non sumus*)." The 'Thema Coeli,' as far as we are aware, has not been translated.

Then follows in Gruter (pp. 178-207) the paper 'De Fluxu et Refluxu Maris' (On the Flowing and Ebbing of the Tide), which has been already noticed. And

after that comes a long disquisition (filling from p. 208 to p. 285) entitled 'De Principiis atque Originibus, secundum Fabulas Cupidinis et Coeli; sive, Parmenidis et Telesii, et præcipue Democriti, Philosophia tractata in Fabula de Cupidine' (On the Originating Principles of the Universe according to the Fables of Cupid and Coelus; or, The Philosophy of Parmenides and Telesius, and especially of Democritus, as developed in the Mythological Fable of Cupid). This has been translated by Shaw under the title of 'An Essay towards a scientific History of Natural Philosophy from the Primitive Times to the Present: deduced by way of explanation upon the Ancient Fable of Cupid.' He makes it a portion of the Fifth Part of the *Instauration*. In Blackbourne's arrangement it stands in the Third Part. Tenison considers it as properly belonging to the *Distributio*, or Plan, of the *Instauration*. It may be regarded as connected with the treatise *De Sapientia Veterum*,\* in which we have also two short chapters (the 12th and 17th) on the fables of 'Coelus, or the Origins,' and of 'Cupid, or the Doctrine of Atoms.' It seems, in fact, to have been designed for an extension of or supplement to these two chapters; but it is only a fragment, and it breaks off before the fable of Coelus has been taken up, or the philosophical systems of Parmenides and Telesius more than entered upon. Telesius, or Bernardino Telesio, was an Italian, who opposed the Aristotelian doctrines, and promulgated his own views of the origin of things, in a work first published at Rome in 1565, with the title of 'De Rerum Natura juxta Propria Principia.' His system was that the productive principles of all things were Cold and Heat, which is said to have been also the doctrine of the Eleatic philosopher Parmenides, who lived five centuries before the commencement of our era.

Gruter's next piece, being the first of those designated *Impetus Philosophici*, is entitled 'Indicia Vera de Interpretatione Naturæ' (True Indications respecting

\* See our First Volume, pp. 91-112.

the Interpretation of Nature), and extends from p. 285 to p. 323. But the first eight pages are the same with the Preface to the *Novum Organum*.\* What follows, on p. 293, has the new heading of 'Partis Instaurationis Secundae Delineatio et Argumentum' (The Delineation and Argument of the Second Part of the *Instauration*). This is a compendium of the doctrine of the First Book of the *Novum Organum*, and may be another of the many various forms of that treatise which Rawley speaks of having seen. At the end, however, in speaking of a general *redargutio*, or refutation, of the existing systems of philosophy, which he is preparing, Bacon introduces a friend newly arrived from France, who gives him an account of a meeting of distinguished persons at which he had lately been present in that country, when a stranger of singularly serene and benign aspect, who had entered after they were all seated, delivered an eloquent oration on that theme, which he goes on to report. But what Gruter gives is only the commencement; the greater part of the declamation was first given in what is called Stephens's Second Collection, published in 1734, and again in 1736.

Various pieces already noticed occupy the next 125 pages of Gruter's volume. Then at p. 448, and still included under the running title of *Impetus Philosophici*, we have a short fragment entitled 'Aphorismi et Consilia de Auxiliis Mentis et Accensione Luminis Naturalis' (Aphorisms and Counsels respecting the Helps of the Mind and the Kindling of its Natural Light). It concludes with or is followed by a Prayer similar to one which is at the end of the *Distributio*.

Next follows, at p. 451, a tract entitled 'De Interpretatione Naturæ Sententiæ XII.' (On the Interpretation of Nature Twelve Sentences or Rules); the first four headed 'On the Condition (that is, the proper function or duty) of Man;' the next four, 'On the Impediments to Interpretation;' the ninth, 'On the Character and Disposition (*moribus*) of the Interpreter;'

\* See ante, Vol. II. p. 152.

the tenth, 'On the Office of the Interpreter;' the eleventh and twelfth, 'On the Anticipation (*provisu*) of Things.' In the two last the discourse assumes the form of an address by the author to a son or disciple (*mi fili*); and there is tacked to it a further discourse in the same form, entitled in Gruter 'Tradendi Modus Legitimus' (The Legitimate Mode of Handing down the Sciences), but in Stephens's Second Collection, where a part of it is also printed from another original copy, 'Temporis Partus Maximus, sive De Interpretatione Naturae Lib. 3' (The Greatest Birth of Time, or the Third Book of the Interpretation of Nature). The greater part of this Latin piece has been translated by Shaw, under the title of 'A Short Scientifical Critique on the Works of the more Eminent Philosophers, Ancient and Modern:' and the following Specimen is transcribed from his version:—

We plainly perceive that the sciences will not be considerably advanced till man shall be once made thoroughly acquainted with the proper characters and merits of those ancient and modern philosophers they so much admire. The present design is, therefore, to deal roundly, and fix a mark upon such pretended philosophers as we take to have been more fabulous than the poets: debauchers of men's minds, and falsifiers of the works of nature, and to make, at least, as free with that degenerate servile tribe, their followers, flatterers, and the hirelings who corrupt mankind for gain. And we shall take the liberty to cite each of them by name, lest, as their authority is so great, we should be apprehended only to act a part, and under colour side with some or other of them, since they cherish such violent disputes and animosities among themselves.

Let Aristotle first appear, whom we charge 1. with abominable sophistry; 2. useless subtilty; and 3. a vile sporting with words. Nay, when men by any accident, as by a favourable gale, arrived at any truth, and there cast anchor, this man had the assurance to fetter the mind with the heaviest irons; and, composing a certain art of madness, enslaved mankind with words.

Again, from the nursing and tutoring of this man have arisen a shoal of cunning triflers, who, turning their backs

upon nature and all the light of things and history, overspread the world with numerous mock schools, raised by the restless agitation of wit, principally upon that extremely ductile matter of his precepts and positions. But they, indeed, are more excusable than their haughty dictator, because they did not, like him, offend against better light and knowledge : for he, after having trod in the open plains of history, and viewed the works of nature, yet dug to himself a dungeon and filled it with the vainest idols. And what adds to his guilt, he has, even upon the history of particulars, raised certain cobweb structures which he would palm upon mankind for causes, whilst in reality they are matters of no validity nor value, but nearly resembling those, which, in our time, that antipode to things, as well as to himself, Cardan, busied himself in forming.

But, whilst I thus arraign the works of Aristotle, let me not be supposed a conspirator and in league with Ramus, that modern rebel against him. I have no affection for that sculking hole of ignorance, that destructive bookworm of learning, that father of epitomes, who, when he wrings and presses things with the shackles of his method and contraction, the substance, if there was any, immediately starts out and escapes him, whilst he grasps nothing but the empty chaff and exhausted carcass.

Aquinas has gone further, and spun a variety of things out of nothing : leaving, by way of compensation, a solitude in things themselves. And although he has done this, yet he has the assurance to be frequently talking of human uses : so that I take him for a most prevaricating sophister ; and the same accusations I likewise bring against Scotus and his followers.

Let Plato next appear, whom we charge with being—1. A well-bred sophister ; 2. A tumid poet ; and 3. A fanatical divine, who, by finely polishing and working together certain philosophical rumours, and dissembling his pretence to knowledge, endeavoured to loosen and unsettle men's minds by vague inductions : and has thus, indeed, supplied abundant matter of table-talk to men of letters, in respect of civil conversation, polite life, ornament, and sweetness of familiar discourse. But, when he falsely asserted that truth was not an inhabitant of the human mind, but a stranger come from far, and turned men's thoughts from the history of nature, and from things themselves (though never sufficiently applied hereto), and taught the mind to euter into itself, and there,



under the name of contemplation, to tumble over its own blind and confused idols: then it was he committed the capital crime of which we accuse him; and no less impiously has he introduced the canonization of folly, and had the assurance to screen his degenerate and corrupt notions under the cloak of religion; and here lies the strength of the charge. But for his being the father of philology, polite literature, and elegant writing, who, by his example, authority, and success, captivated, persuaded, and led numbers to content themselves with a character for wit, politeness, agreeableness, and a popular knowledge of things, to the detriment and corruption of a severe and rigorous inquiry after truth; we account this a less heinous offence; and among the men thus captivated by him, we reckon Cicero, Seneca, and Plutarch, with numerous others no way comparable to them.

Let us next proceed to the physicians, and first summon Galen to appear, whom we implead—1. As a man of a very narrow mind; 2. A deserter of experience; and 3. An idle caviller. This is the man that would screen the ignorance and sloth of physicians from their deserved reproach, and preserve them unattacked; whilst himself most feebly and unequally pretends to perfect their art and fill up their office. This is the man that, like the raging dog-star, or the plague, devotes mankind to death and destruction by pronouncing such tribes of diseases incurable, taking away all glimmering of hope, and leaving no room for future industry. This is the man who makes his own fiction of mixture to be nature's sole prerogative. This is the man that is everywhere fond of showing and boasting the sedition, strife, and disagreement betwixt the celestial heat and that of fire: and upon this and all other occasions maliciously curbs the human power, and endeavours to surround and protect ignorance with eternal despair. It is owing to this man's unworthiness that we dwell no longer upon his charge; let him then be dismissed, and take along with him his whole train of associates; those dispensatory-compilers from the Arabians, who have shown such folly in their theories, and from their supine and jejune conjectures amassed together such heaps of promises, instead of real helps, from vulgar remedies. And let the rear be brought up with that superficial tribe of modern doctors whose names are not worth the mentioning.

We must, however, make some difference in this tribe of triflers: the worst and most absurd sort whereof are those who

have pent the whole art into strict methods and narrow systems, which men commonly cry up for the sake of their regularity and style: and such a kind of author is Fernelius. But they are less prejudicial to the art and to mankind, who deliver a large stock and variety of observations, experiments, and particular cases, even though they pollute and obscure them with their absurd and foolish reasons, idle hypotheses, and solutions, like Arnoldus de Villa Nova and others of the same stamp.

On the opposite side stand the tribe of chemists, with Paracelsus at their head, who, for his insolence, deserves to be separately chastised as a flagrant example: for those accused above are only falsifiers and pretenders, but this man is throughout a monster. What Bacchanalian oracles are those he utters in meteorology, whilst he is ridiculously aping of Epicurus? All that Epicurus offers upon the subject is but drowsy opinion, which he unconcernedly left to its fate; but Paracelsus, blinder than fate and more rash than chance, is ready to avouch the absurdest falsehoods. What dreams of resemblances, correspondences, and parallels of the productions of his elements, are given us by this fanatical linker-together of idols? His three principles, indeed, might be received with some utility, as having a foundation in nature: but he is continually wresting them to every thing according to his great dexterity in delusion and imposture. But these are not the worst of his crimes; for, besides all this, he, like a sacrilegious impostor, has mixed and polluted divine things with natural, sacred with profane, fables with heresies, and human truths with religious; so as, not, like the ancient sophists, to have hid, but utterly extinguished that sacred thing he has so frequently in his impious mouth, the light of nature. The sophists were only deserters of experience, but Paracelsus has betrayed it: and subjecting the crude and personated evidence of things to rules of contemplation, and deriving the various alterations of substances from imaginary motions, he has thus endeavoured to corrupt the fountains of science and dethrone the human mind. At the same time, so far is he from understanding or justly representing experience, that he has added to the trouble and tediousness in experimenting, of which the sophists complain, and to which the empirics are unequal. In short, he has every where to the utmost magnified the absurd pretences of magicians, countenanced such extravagancies, and encouraged others to believe them from his own assurances; being thus at once the work and servant of imposture.

It is great pity he should ever have found such an abettor and apologist as Severinus, whose abilities might have been much better employed than upon the fooleries of that man. It is Severinus who has modulated the brayings of that ass, and by his own skill in music played them sweetly off in a variety of tunes, and thus converted shocking and monstrous fictions and falsehoods into pleasing and delightful fables. This author, indeed, is the more excusable, in that being of the doctrine of the sophists, which is not only barren of works but professedly tends to introduce despair, he went in quest of firmer foundations in this general decay of philosophy and arts. And thus, when the works of Paracelsus offered themselves and came recommended with pompous show, the subterfuge of obscurity, affinity with religion, and other impostures, Severinus gave into them, delivered not the real fountains of things, but only threw out promises and hopes with somewhat of warmth and indignation; whereas, would he have acted as he ought, he should have left the determinations and maxims of wit and genius, and gone over to the real doctrines and precepts of nature, which alone is the way to shorten arts and lengthen life.

This charge we have brought against Paracelsus seems to astonish the rest of the chemists, who greedily swallow those decrees and points of doctrine which he has rather promulgated and promised, than actually laid down or made good, and defended them with arrogance instead of caution. His whole tribe of followers appear linked to one another by the lying spirit that shows itself in their sworn hopes and promises which they are constantly boasting. However, by wandering through the wilds of experience they sometimes stumble upon certain useful discoveries, not by reason but by accident: whence, proceeding to form theories, they plainly carry the smoke and tarnish of their art along with them. For as that simple youth, who, finding a stick upon the shore, would needs convert it into a ship, so these childish operators at the furnace must needs be raising philosophy from a few experiments of distillation, and introducing, at every turn, their own idols of separation and analysis where no traces of them are really found.

Yet we do not accuse them all in the lump, but make a difference between that little serviceable set who, being not very solicitous about raising of theories, principally practise a certain mechanical subtilty in searching out and laying hold

of new inventions and discoveries with their extensive uses, after the manner of Friar Bacon, and distinguish these from that impious tribe who endeavour only at procuring applause to their theories, and court and beg it by a pretended zeal for religion, by large promises and the art of imposture, which is the way of Basil Valentine, Hollandus, and much the greatest part of the chemical authors.

Let Hippocrates be next called to the bar, whom we arraign — 1. As a creature patched up of antiquity; and 2. A retailer of other men's knowledge, under whose authority both Galen and Paracelsus ridiculously endeavour to shelter themselves like asses under a tree. To do him justice, he seems to have had his eyes at first perpetually fixed upon experience: but then they are fixed indeed, stupid and immoveable, without ranging and searching for noble, manly, and full views: and afterwards, recovering a little from this stupidity, he takes in certain idols, though not those monstrous ones of theories, but such as are more neat, elegant, and surround the limits of history, and having drunk these in, he becomes swollen, sophistical; and, according to the custom of the age he lived in, wraps himself up in brevity, and thus, as his followers imagine, utters oracles, of which they are ambitious of being thought the interpreters; whilst in reality he does no more than deliver sophistry by broken, short, and interrupted sentences, so as to prevent a confutation; or else in a haughty manner records such observations as are trite, vulgar, and known to every rustic.

Celsus, as he is justly allowed, comes nearly up to the views and designs of Hippocrates, which are not so faulty as they are useless; but he shows himself a more practised sophister and a better modeller of history than his master. He is, however, for checking the advancement of science from moral and civil considerations: thus paring off the extremities of errors instead of cutting them down at the root.

This free censure of the most eminent men will doubtless have a strange appearance to many; and yet, in truth, we produce it not as an inflamed or aggregated accusation, but as the real state of the case, representing the very bottom of their writings, which mankind are so fond of and take for the pillars and fabric of all arts and sciences.

The only piece in Gruter's volume which we have not yet noticed is a short paper, at p. 479, entitled 'De

Interpretatione Naturae Prooemium' (A Preface respecting the Interpretation of Nature). This Teriscon would connect with the existing Preface to the *Instauratio*.<sup>\*</sup> And it may have been written with the intention of introducing either that work as a whole, or the portion of it designated the *Novum Organum*. It is, however, peculiarly interesting and remarkable for the almost autobiographical way in which it is written, although, never having been translated, it has attracted little if any attention from Bacon's biographers. "Ego cum me ad utilitates humanas natum existimarem, &c." it begins; that is, "When I came to conceive of myself as born for the service of humanity, and to look upon state employment as amongst those things which are of public right, and patent to all like the wave or the breeze, I proceeded both to inquire what might most conduce to the benefit of men, and to deliberate for what special work I myself had been best fitted by nature. Thereupon I found that no other thing was of so great merit in reference to the human race as the discovery and authorship (*auctoramentum*) of new truths and arts, by which human life may be improved. For even in early times, among uncultivated men, I perceived that the inventors and teachers of the first rude arts had been consecrated and adopted into the number of the Gods; and I remarked that the actions of the heroes who had either built cities, or distinguished themselves as legislators, or wielded supreme power righteously, or overthrown unjust dominations, had been circumscribed in their fame within certain narrow bounds of time and place; but that, as it seemed to me, the invention of new arts, although a thing of less pomp, had a greater adaptation for universality and eternity. And, above all, if any one, not merely bringing to light some particular invention, of however great utility, kindled a new light in nature, which as soon as it dawned illustrated those unvisited coasts lying around whatever is already known, and then as it rose higher

<sup>\*</sup> See *ante*, Vol II. p. 13.

laid open and completely revealed to view whatever had before been hidden farthest away, that individual seemed to me to be the enlarger of the empire of man over the universe, the true champion of human liberty, and stormer of the necessities of things. Myself, moreover, I apprehended to be formed rather for the contemplation of truth than for aught else, as having an understanding both sufficiently moveable for discerning the resemblances of things (which is the point of highest importance), and sufficiently fixed and intent for observing the subtleties of differences, and as being also one who had in me the desire of inquiry, and the patience to doubt, and an enjoyment in meditation, and an indisposition to hasty assertion, and a facility of retracting, and a solicitude for orderly arrangement, while at the same time I was neither unduly addicted to novelty nor carried away by admiration of antiquity, and hated all imposture. I judged, therefore, that my nature had a certain inherent intimacy and relationship with truth. Yet, seeing that both by descent and education I had been imbued in civil affairs, and inasmuch as I was still a young man was sometimes shaken in my opinions, and thinking that I owed something peculiar to my country which was not equally due in all other cases, and hoping that, if I might obtain some honourable rank in the state, I should accomplish what I had designed with greater advantages in the exercise of my genius and my industry, I both applied myself to the acquirement of political knowledge, and, with such modesty as beseemed and in as far as it could be done without any disingenuousness, endeavoured to commend myself to such friends as had it in their power to assist my advancement. There was this too, that the things that have been mentioned, of whatever importance they may be reckoned, do not penetrate beyond the condition and amelioration of this mortal life, but a hope entered my mind that, born in an age when religion was in no very prosperous state, I might be able, if I should rise to civil dignities, to effect something which would be profitable for the salvation of souls. But when afterwards my mind was

weaned from ambition, and my life was as it were at a stand, and my health beginning to give way admonished me of my unfortunate procrastination, and I was assailed with frequent fears that I should never in any way fulfil my duty if I neglected those pursuits by means of which I might myself through myself serve men, and gave up my time to those which depended upon the will of another, I wholly withdrew from those other objects, and according to my earlier determination dedicated myself wholly to the present work. Nor is this resolution lessened for that I perceive in the state of the times the approaching decline and downfall of all that system of doctrine and learning which is now in vogue; for, although I dread no incursions of barbarians (unless perchance the Spanish empire should still grow stronger, and at last oppress and reduce to debility other nations by conquest and itself by its own weight), yet, what from civil wars (which, by reason of certain changes of manners of but recent introduction, appear to me to be about to involve many countries), and from the malignity of religious sects, and from those compendious systems of artifice and caution which have crept into the place of erudition, no less a tempest seems to impend over literature and science. The art of printing cannot suffice against these evils. And so that peaceable learning, which is fostered by ease and quiet, and flourishes under the encouragement of rewards and praise, and cannot sustain the vehemence of conflicting opinion, and is eluded by artifices and impostures, gets buried under those incumbrances of which I have spoken. Far different is the case with that science, the dignity of which is defended by its useful purposes, and its accomplished works. And, as I am thus almost secure from the injuries of time, so for the injuries that may be attempted by men I do not distress myself. For if any one shall say that my philosophy soars too high, I merely reply, that in civil affairs is the place for modesty, in speculation is the place for truth. But if any person shall at once demand actual performances, I say, without any attempt at deceit, that I, a man, although not yet old,

of failing health, involved in the business of the state, who have attempted a thing the most obscure of all others without either guide or light, have done enough if I have constructed a machine and art of discovery although I may never have applied it or put it in motion. And with the same candour I profess that the legitimate interpretation of nature, in our first ascent, and before we have come to some landing-place of general principles, ought to be kept pure and separate from all application to works." Then follow a few sentences in enforcement of this assertion, and in anticipation of one or two other objections. After which the paper concludes thus:—"But it is for the sake of others if I attempt any applications of my philosophy. For myself, nothing which is external to the establishment of its principles is of any interest to me. For neither am I a hungerer after fame, nor have I after the manner of heresiarchs any ambition to originate a sect, and, as for deriving any private emolument from such labours, I should hold the thought as base as it is ridiculous. Enough for me the consciousness of desert, and that coming accomplishment of real effects which fortune itself shall not be able to intercept." In no other of his writings has Bacon given such full and frank expression to his lofty confidence in the destiny of his philosophy, or to his anticipation of future renown; nowhere else has he told us so much of the history of his mind, and of the inner spirit of his life.

There remain only two or three more philosophical discourses, all in English. The most important was first published in Stephens's Second Collection, and is there entitled 'Valerius Terminus, or The Interpretation of Nature; with the Annotations of Hermes Stella; a few fragments of the First Book.' "None of the Annotations of Stella," it is added, "are set down in these fragments." But Stella, we presume, is a fictitious name, as well as Valerius Terminus. The paper consists of two parts;—the first composed of portions of several chapters of the complete treatise on to the sixteenth inclusive; the second, of what is described as "An Abridgment of



divers chapters of the First Book of the Interpretation of Nature." Most, if not all, that is in the *Valerius Terminus* is to be found in the *Novum Organum*, of which it is probably to be considered as a fragment of an early sketch or rough draught, prepared perhaps at a time when it was intended that the work should be published in English. But much of the first part of it especially has all Bacon's wonderful power of style. Here is a portion of the First Chapter, entitled 'Of the Limits and End of Knowledge:—

To conclude then: let no man presume to check the liberality of God's gifts, who, as was said, "hath set the world in man's heart." So as whatsoever is not God, but parcel of the world, he hath fitted it to the comprehension of man's mind, if man will open and dilate the powers of his understanding as he may.

But yet evermore it must be remembered, that the least part of knowledge passed to man by this so large a charter from God, must be subject to that use for which God hath granted it, which is the benefit and relief of the state and society of man; for otherwise all manner of knowledge becometh malign and serpentine, and therefore, as carrying the quality of the serpent's sting and malice, it maketh the mind of man to swell, as the Scripture saith excellently, "Knowledge bloweth up, but charity buildeth up." And again, the same author doth notably disavow both power and knowledge, such as is not dedicated to goodness or love; for saith he, "If I have all faith, so as I could remove mountains," there is power active; "if I render my body to the fire," there is power passive; "if I speak with the tongues of men and angels," there is knowledge, for language is but the conveyance of knowledge, "all were nothing."

And therefore it is not the pleasure of curiosity, nor the quiet of resolution, nor the raising of the spirit, nor victory of wit, nor faculty of speech, nor lucre of profession, nor ambition of honour or fame, or enablement for business, that are the true ends of knowledge; some of these being more worthy than other, though all inferior and degenerate; but it is a restitution and reinvesting, in great part, of man to the sovereignty and power, for whensoever he shall be able to call the creatures by their true names, he shall again command them, which he had in his first state of creation. And to speak plainly and clearly,

dustry of artificers maketh some small improvement of things invented ; and chance sometimes in experimenting maketh us to stumble upon somewhat which is new ; but all the disputation of the learned never brought to light one effect of nature before unknown. When things are known and found out, then they can descant upon them, they can knit them into certain causes, they can reduce them to their principles. If any instance of experience stand against them, they can range it in order by some distinctions. But all this is but a web of the wit, it can work nothing. I do not doubt but that common notions which we call reason, and the knitting of them together, which we call logic, are the art of reason and studies. But they rather cast obscurity than gain light to the contemplation of nature. All the philosophy of nature which is now received, is either the philosophy of the Grecians, or that other of the alchemists. That of the Grecians hath the foundations in words, in ostentation, in confutation, in sects. in schools, in disputations. The Grecians were, as one of themselves saith, " You Grecians, ever children." They knew little antiquity ; they knew, except fables, not much above five hundred years before themselves. They knew but a small portion of the world. That of the alchemists hath the foundation in imposture, in auricular traditions and obscurity. It was catching hold of religion, but the principle of it is, " Populus vult decipi." So that I know no great difference between these great philosophers, but that the one is a loud crying folly, and the other is a whispering folly. The one is gathered out of a few vulgar observations, and the other out of a few experiments of a furnace. The one never faileth to multiply words, and the other ever faileth to multiply gold. Who would not smile at Aristotle, when he admireth the eternity and invariableness of the heavens, as there were not the like in the bowels of the earth ? Those be the confines and borders of these two kingdoms, where the continual alteration and incursion are. The superficies and upper parts of the earth are full of varieties. The superficies and lower parts of the heavens, which we call the middle region of the air, is full of variety. There is much spirit in the one part that cannot be brought into mass. There is much massy body in the other place that cannot be refined to spirit. The common air is as the waste ground between the borders. Who would not smile at the astronomers ; I mean not these few carmen which drive the earth about, but the ancient astronomers, which feign the moon to be the swiftest of

the planets in motion, and the rest in order, the higher the slower; and so are compelled to imagine a double motion; whereas how evident is it, that that which they call a contrary motion is but an abatement of motion. The fixed stars overgo Saturn, and so in them and the rest all is but one motion, and the nearer the earth the slower. A motion also whereof air and water do participate, though much interrupted. But why do I in a conference of pleasure enter into these great matters, in sort that pretending to know much, I should forget what is reasonable? Pardon me, it was because all things may be endowed and adorned with speeches, but knowledge itself is more beautiful than any apparel of words that can be put upon it. And let not me seem arrogant without respect to these great reputed authors. Let me so give every man his due, as I give Time his due, which is to discover truth. Many of these men had great wits, far above mine own, and so are many in the universities of Europe at this day. But alas, they learn nothing there but to believe; first to believe that others know that which they know not; and after themselves know that which they know not. But indeed facility to believe, impatience to doubt, temerity to answer, glory to know, doubt to contradict, end to gain, sloth to search, seeking things in words, resting in part of nature; these and the like have been the things which have forbidden the happy match between the mind of man and the nature of things; and in place thereof have married it to vain notions and blind experiments; and what the posterity and issue of so honourable a match may be, it is not hard to consider. Printing, a gross invention; artillery, a thing that lay not far out of the way; the needle, a thing partly known before; what a change have these three made in the world in these times; the one in the state of learning, the other in the state of war, the third in the state of treasure, commodities, and navigation! And those, I say, were but stumbled upon and lighted upon by chance. Therefore, no doubt, the sovereignty of man lieth hid in knowledge; wherein many things are reserved, which kings with their treasure cannot buy, nor with their force command; their spials and intelligencers can give no news of them; their seamen and discoverers cannot sail where they grow: now we govern nature in opinions, but we are thrall unto her in necessity; but if we would be led by her in invention, we should command her in action.

Lastly, there is a paper entitled 'A Discourse touching the Helps for Intellectual Powers,' originally pub-

lished in the First Part of the *Resuscitatio* (1657). It commences thus:—

I did ever hold it for an insolent and unlucky saying, “*Faber quisque fortunæ suæ;*” except it be uttered only as a hortative or spur to correct sloth. For otherwise, if it be believed as it soundeth, and that a man entereth into a high imagination that he can compass and fathom all accidents; and ascribeth all successes to his drifts and reaches, and the contrary to his errors and sleepings, it is commonly seen that the evening fortune of that man is not so prosperous as of him that without slackening of his industry attributeth much to felicity and Providence above him. But if the sentence were turned to this, “*Faber quisque ingenii sui;*” it were somewhat more true, and much more profitable, because it would teach men to bend themselves to reform those imperfections in themselves, which now they seek but to cover, and to attain those virtues and good parts, which now they seek but to have only in show and demonstration. Yet notwithstanding every man attempteth to be of the first trade of carpenters, and few bind themselves to the second; whereas nevertheless the rising in fortune seldom amendeth the mind; but on the other side the removing of the stands and impediments of the mind doth often clear the passage and current to a man’s fortune. But certain it is, whether it be believed or no, that as the most excellent of metals, gold, is of all others the most pliant and most enduring to be wrought; so of all living and breathing substances, the perfectest man is the most susceptible of help, improvement, impression, and alteration, and not only in his body but in his mind and spirit; and there again not only in his appetite and affection, but in his powers of wit and reason.

There are many proofs, it is then remarked, of what great things may be done with the body by exercise and custom. “It is true, no doubt, that some persons are apter than others; but so as the more aptness causeth perfection, but the less aptness doth not disable: so that, for example, the more apt child that is taken to be made a *funambulo* (rope-dancer) will prove more excellent in his feats; but the less apt will be *gregarius funambulo* (an ordinary rope-dancer) also.” The will is still more obedient, and admits more medicines to cure and alter it. Of these the most sovereign is religion; the next is opi-

nion and apprehension ; the third is example ; the fourth is, when one affection is heated and corrected by another, as cowardice by shame ; “and lastly, when all these means or any of them have new-framed or formed human wits, then doth custom and habit corroborate and confirm all the rest.” The effect of any remedy applied to the mind is usually either to reform the affections really and truly, or else to conceal them, and sometimes to pretend and represent them ; “of the former sort whereof the examples are plentiful in the schools of philosophers, and in all other institutions of moral virtue ; and of the other sort the examples are more plentiful in the courts of princes and in all politic traffic ; where it is ordinary to find, not only profound dissimulations, and suffocating the affections, that no note or mark appear of them outwardly ; but also lively simulations and affectations, carrying the tokens of passions which are not, as *risus jussus* (the commanded laugh) and *lacrymae coactae* (the forced tears), and the like.” The proper subject indicated by the title of the paper is then entered upon, but only in a few undigested notes. “The intellectual powers,” it is observed, “have fewer means to work upon them than the will or body of man ; but the one that prevaieth, that is, exercise, worketh more forcibly in them than in the rest.” ‘Five Points’ relating to the subject of Exercises are afterwards set down ; and then the following remarks are made in conclusion :—

The exercises in the universities and schools are of memory and invention ; either to speak by heart that which is set down *verbatim*, or to speak *extempore* ; whereas there is little use in action of either or both ; but most things which we utter are neither verbally premeditated nor merely extemporal. Therefore exercise would be framed to take a little breathing and to consider of heads ; and then to fit and form the speech *extempore*. This would be done in two manners ; both with writing and tables, and without ; for in most actions it is permitted and passable to use the note, whereunto if a man be not accustomed, it will put him out.

There is no use of a narrative memory *in accademis*, namely, with circumstances of times, persons, and places, and with

names ; and it is one art to discourse and another to relate and describe ; and herein use and action is most conversant.

Also to sum up and contract, is a thing in action of very general use.

This paper, or at least the first part of it, was sent by Bacon to his friend, the learned Sir Henry Saville, Provost of Eton College, accompanied with a letter in which he tells Sir Henry that the thoughts he had hastily set down had occurred to him as he was returning home from a visit he had made to him on his invitation at Eton, "where," says he, "I had refreshed myself with company which I loved." Sir Henry Saville was Provost of Eton from 1596 till his death in February, 1622. It is probable that this letter was addressed to him towards the close of his incumbency. He was succeeded as Provost by Mr. Thomas Murray, who, however, held the office only for a few months, having died on the 1st of April, 1623. Upon the occurrence of this last vacancy, or rather when it was anticipated, Bacon, in his fallen fortunes, made application for the place. Among his Letters published by Birch (1763) is one to Mr. Secretary Conway, dated from Gray's Inn, the 25th of March, in which he says, "Good Mr. Secretary, when you did me the honour and favour to visit me, you did not only in general terms express your love unto me, but, as a real friend, asked me whether I had any particular occasion wherein I might make use of you. At that time I had none ; now there is one fallen. It is, that Mr. Thomas Murray, Provost of Eton, whom I love very well, is like to die. It were a pretty cell for my fortune. The college and school I do not doubt but I shall make to flourish. His majesty, when I waited on him, took notice of my wants, and said to me, that, as he was a king, he would have care of me. This is a thing somebody would have ; and costs his majesty nothing." Inclosed was a shorter note to the king, in which we find him repeating the pathetic expression—"Your beadsman addresseth himself to your majesty *for a cell to retire into.*" Conway's reply, dated Royston, March 27th, informs Bacon

that he had delivered his letter to the king; adding, "I will give you his majesty's answer, which was; That he could not value you so little, or conceive you would have humbled your desires and your worth so low; that it had been a great deal of ease to him to have had such a scantling of your mind, to which he could never have laid so unequal a measure." His majesty, Conway goes on to state, further said that, since Bacon's intentions moved that way, he would study his accommodation; and, although a sort of engagement had been already made with a Sir William Becher, he expressed a hope that some other way might perhaps be found of satisfying that person. Becher, it appears, had obtained a promise of the place from the Marquis (soon after this created Duke) of Buckingham, who was now in Spain, and upon whose friendship Bacon would otherwise have chiefly relied. "My most noble friend, the marquis," he had said in writing to Conway, "is now absent. Next to him I could not think of a better address than to yourself, as one likeliest to put on his affection." He continued, however, to press the matter. Acknowledging Conway's answer on the 31st, he wrote:—"I am very much bound to his majesty, and I pray you, Sir, thank his majesty most humbly for it, that, notwithstanding the former designment of Sir William Becher, his majesty, as you write, is not out of hope, in due time, to accommodate me of this cell, and to satisfy him otherwise. Many conditions, no doubt, may be as contenting to that gentleman, and his years may expect them. But there will hardly fall, especially in the spent hour-glass of my life, anything so fit for me, being a retreat to a place of study so near London, and where, if I sell my house at Gorhambury, as I purpose to do, to put myself in some convenient plenty, I may be accommodated of a dwelling for summer-time. And, therefore, good Mr. Secretary, further this his majesty's good intention by all means, if the place fall." He had also written in urgent though general terms both to Buckingham on the 30th, and to Count Gondomar on the 28th, intrusting the letters, and, as it would seem, the specific explanation of what he wanted, to Sir John:

Epsley, who was then setting out for Spain. And perhaps another letter, entreating his friendly services, which he sent to Gondomar soon after by Mr. Tobie Matthew, may relate to the same affair. In the end, however, the Provostship was given neither to Bacon nor to Sir William Becher, but to Sir Henry Wotton, who was inducted on the 26th of July, 1624.

Bacon received no other place or office. His only cell of rest continued to be his old lodgings in Gray's Inn Square, from which, however, he occasionally retired to his country-seat at Gorhambury. "He died," says Dr. Rawley, "on the 9th day of April in the year 1626, in the early morning of the day then celebrated for our Saviour's resurrection, in the sixty-sixth year of his age, at the Earl of Arundel's house in Highgate, near London, to which place he casually repaired about a week before; God so ordaining, that he should die there of a gentle fever, accidentally accompanied with a great cold, whereby the defluxion of rheum fell so plentifully upon his breast that he died by suffocation." A short time before his death he dictated the following letter to Lord Arundel, from which we learn the circumstances under which he had repaired to his Lordship's house:—"My very good Lord, I was likely to have had the fortune of Caius Plinius the Elder, who lost his life by trying an experiment about the burning of the mount Vesuvius; for I was also desirous to try an experiment or two, touching the conservation and induration of bodies. As for the experiment itself, it succeeded excellently well; but in the journey, between London and Highgate, I was taken with such a fit of casting [vomiting], as I knew not whether it were the stone, or some surfeit, or cold, or indeed a touch of them all three. But when I came to your lordship's house, I was not able to go back, and therefore was forced to take up my lodging here, where your housekeeper is very careful and diligent about me; which I assure myself your lordship will not only pardon towards him, but think the better of him for it. For indeed your lordship's house was happy to me; and I kiss your noble hands for the welcome which I am sure you give me to



it. I know how unfit it is for me to write to your lordship with any other hand than mine own; but, by my troth, my fingers are so disjointed with this fit of sickness, that I cannot steadily hold a pen." It is evident, however, that Bacon did not think he was dying when this was written. John Aubrey relates, that when Bacon was attacked by his illness he was accompanied by Dr. Witherborne, the King's Physician, and that, seeing snow on the ground as they approached Highgate, coming from London, they alighted out of the coach and went into a poor woman's house at the foot of Highgate Hill, where they bought a hen, and stuffed the body with snow, Bacon assisting in the operation with his own hands. Aubrey further states that the bed into which he was put at Lord Arundel's house was damp, and had not been slept in for a year before. He breathed his last in the arms of his friend, and relation by marriage, Sir Julius Caesar, the Master of the Robes, who had been sent for at the commencement of his illness.

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## PART III.

BACON'S LEGAL, POLITICAL, AND EPIS-  
TOLARY WRITINGS.

BACON'S enduring fame is that of a moralist, an historian, and a philosopher; but in his own day he was chiefly known as a lawyer and a politician. Ethics, theology, history, and philosophy were but the studies and pursuits of his leisure; his professional occupations were law and politics. Nor have his legal and political writings by any means yet lost all their interest and value. Here too we have his fertile, ingenious, abundant mind everywhere at work, and the same rich eloquence gilding whatever it touches with sunshine.

A very summary account, however, of the pieces composing this division of our author's works will suffice for our present purpose.

The tract entitled 'The Elements of the Common Law of England' has been already mentioned.\* It is introduced by a Dedication to Elizabeth dated 1596, and also by a Preface; but both these addresses, as has been already remarked, refer only to the First Part of the work, which is entitled 'A Collection of some of the principal Rules and Maxims of the Common Law, with their Latitude and Extent.' The Second Part, entitled 'The Use of the Common Law for Preservation of our Persons, Goods, and Good Names, according to the Practice of the Law and Customs of this Land,'

\* See *ante*, Vol. I. p. 17.

appears to have been subsequently compiled. The two Parts were printed for the first time together, in 4to., at London, in 1630. In the Dedication of 'The Maxims' Bacon speaks of the collection as having been suggested both by what had been published by the Lord Chancellor, speaking for the queen, in full parliament in the year 1593, and much more by what he had himself been vouchsafed to understand from her majesty, "imparting [importing?]," he says, "a purpose for these many years infused into your majesty's breast to enter into a general amendment of the state of your laws, and to reduce them to more brevity and certainty, that the great hollowness and unsafety in assurances of lands and goods may be strengthened, the snaring penalties that lie upon many subjects removed, the execution of many profitable laws revived, the judge better directed in his sentence, the counsellor better warranted in his counsel, the student eased in his reading, the contentious suitor, that seeketh but vexation, disarmed, and the honest suitor, that seeketh but to obtain his right, relieved." In giving an account of his work in the Preface he says:—"I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves, by way of amends, to be a help and ornament thereunto. . . . Having therefore from the beginning come to the study of the laws of this realm with a mind and desire no less, if I could attain unto it, that the same laws should be the better by my industry than that myself should be the better by the knowledge of them, I do not find that by mine own travail, without the help of authority, I can in any kind prefer so profitable an addition unto that science as by collecting the rules and grounds dispersed throughout the body of the same laws." The collection comprehends twenty-five general maxims or rules, which are illustrated by explanations and short examples. No rules, it is stated, have been omitted because they are ordinary or vulgar; those that concur with the civil or Roman law have been set down in the same words that

the civilians use ; no certain method or order has been observed, because (a favourite principle with Bacon) " this delivering of knowledge in distinct and disjointed aphorisms doth leave the wit of man more free to turn and to toss, and to make use of that which is so delivered to more several purposes and applications ;" the rules are set down only in Latin, without regard to grace or ornament of expression, or to anything in style except the preservation of the proper terms and technical language of the law ; and no references to the books are given ; " for although," says Bacon, " the meanness of mine own person may now at first extenuate the authority of this collection, and that every man is adventurous to control ; yet surely, according to Gamaliel's reason, if it be of weight, time will settle and authorize it ; if it be light and weak, time will reprove it. So that, to conclude, you have here a work without any glory of affected novelty, or of method, or of language, or of quotations and authorities, dedicated only to use, and submitted only to the censure of the learned, and chiefly of time." What chiefly, however, makes the maxims profitable and instructive, he conceives, is the examples with which he has accompanied them. Finally, he adds, " Though I have thus, with as much discretion and foresight as I could, ordered this work, and, as I may say, without all colours or shows, husbanded it best to profit ; yet nevertheless, not wholly trusting to mine own judgment, having collected three hundred of them, I thought good, before I brought them all into form, to publish some few, that, by the taste of other men's opinions in this first, I might receive either approbation in mine own course or better advice for the altering of the other which remain ; for it is great reason that that which is intended to the profit of others should be guided by the conceits of others." The Second Part, on the Use of the Law, is a compendious account of the practice and administration of the English law both in criminal and civil cases. It appears, however, to be unfinished. The use of the law is defined as consisting " principally in these three things: 1. To se-

cure men's persons from death and violence ; 2. To dispose the property of their goods and lands ; 3. For preservation of their good names from shame and infamy." But the last of these three heads is not entered upon. The tract is very clearly written, and is curious for the details it contains respecting some now obsolete institutions and forms.

Another law tract is entitled 'The learned Reading of Mr. Francis Bacon, one of her Majesty's Counsel at Law, upon the Statute of Uses ; being his double Reading to the Hon. Society of Gray's Inn, 42 Eliz.'" (1600). This was not printed till the year 1642. "When this piece was first published," says Blackbourne, "the state of printing resembled the state of monarchy, both being at a low ebb ; and none of our noble author's works have been more miserably racked and disjointed than this before us. I have been fortunate in procuring a corrected copy of the whole ; and, farther still, a second and much better copy in MS., which I take, upon comparison of hands, to be the character of our author's clerk or amanuensis." Blackbourne's MS., however, only contained part of the tract ; but the emendations it afforded were so important, as to render, he states, the work in a manner new. The Statute of Uses is the 27 Hen. VIII. c. 10 ; "a law," says Bacon, "whereupon the inheritances of this realm are tossed at this day, like a ship upon the sea, in such sort, that it is hard to say which bark will sink, and which will get to the haven ; that is to say, what assurances will stand good, and what will not." This Reading upon the Statute of Uses is considered to be creditable to Bacon's legal learning.

The 'Account of the lately erected Service called the Office of Compositions for Alienations,' first printed in the Appendix to the Third Volume of what is called Mallet's edition of Bacon's Works, 3 vols. folio, 1753, from a MS. in the Library of the Inner Temple, and described as having been "written (about the close of 1598) by Mr. Francis Bacon"—a performance in admiration of which Bacon's biographers have been particularly enthusiastic, and which has kept its place

among his works down to the present day—is certainly not his at all, but was most probably compiled by William Lambard, the author of the 'Perambulation of the County of Kent,' the 'Archaionomia,' and other works. It has not a trace of Bacon's manner.

'The Arguments in Law, of Sir Francis Bacon, Knight, the King's Solicitor-General, in certain great and difficult Cases,' were first published by Blackbourne in his Edition of Bacon's Works, 1730. "The world," says Blackbourne, "is indebted for this treasure to the humanity of a worthy man, Mr. Thomas Richardson, apothecary, of Aldersgate Street, who is a citizen of the world, a credit to his employ, and a blessing to his neighbourhood. Mr. Stephens, knowing these arguments to be authentic, and the unquestionable writings of our noble author, was so obliging as to peruse and examine them sheet by sheet, as the press delivered them; and I can vouch they are printed to a degree of nicety from the fair original." The cases are, 1. The Case of Impeachment of Waste, argued before all the Judges in the Exchequer Chamber; 2. Low's Case of Tenures, in the King's Bench; 3. The Case of Revocation of Uses, in the King's Bench; 4. The Jurisdiction of the Marches. The arguments must have been held between June, 1607, and October, 1613, the period of Bacon's tenure of the office of Solicitor-General. They had been intended for publication by Bacon himself, as appears from a short but characteristic Dedication to his "Loving Friends and Fellows, the Readers, Ancients, Utter-Barristers, and Students of Gray's Inn, in which, after observing that the publication of such pleadings has been usual both in ancient times and in other modern nations, he proceeds: "I know no reason why the same should not be brought in use by the professors of our law for their arguments in principal cases. And this I think the more necessary, because the compendious form of reporting resolutions, with the substance of the reasons, lately used by Sir Edward Coke, Lord Chief Justice of the King's Bench, doth not delineate or trace out to the young practisers of the law a method and form

of argument for them to imitate. It is true I could have wished some abler person had begun ; but it is a kind of order sometimes to begin with the meanest. Nevertheless, thus much I may say with modesty, that these arguments which I have set forth, most of them, are upon subjects not vulgar ; and therewithal, in regard of the commixture which the course of my life hath made of law with other studies, they may have the more variety, and perhaps the more depth of reason : for the reasons of municipal laws, severed from the grounds of nature, manners, and policy, are like wall-flowers, which, though they grow high upon the crests of states, yet they have no deep root. Besides, in all public services, I ever valued my reputation more than my pains ; and, therefore, in weighty causes I always used extraordinary diligence. . . . This work I knew not to whom to dedicate, rather than to the Society of Gray's Inn, the place whence my father was called to the highest place of justice, and where myself have lived and had my procedure so far as, by his majesty's rare, if not singular, grace, to be of both his councils." This must have been written, apparently, not only after Bacon had become Attorney-General on the removal of Coke to the King's Bench, in October, 1613, but after he had been made a privy-counsellor in June, 1616. By being of both councils he means, apparently, the having been made a privy-counsellor at the same time that he held the office of attorney-general, or chief of the King's counsel learned in the law ; according to what he says in the beginning of his ' Proposition touching the amendment of the Laws,' where he speaks of such a union of offices or honours as more than what had been " these hundred years before." \*

The remaining pieces that come under the present head, with the dates of the first publication of each, as far as we have been able to ascertain them, are as follow :—  
 ' A draught of an Act against an Usurious Shift of Gain

\* In Vol. I. p. 113, misprinted " three hundred years before."

in delivering Commodities instead of Money,' in the Second Part of the *Resuscitatio* (1670); 'A Preparation toward the Union of the Laws of England and Scotland,' addressed to the King, in Stephens's Second Collection (1734); 'An Explanation what manner of persons those should be that are to execute the power or ordinance of the King's Prerogative' (of doubtful authenticity), with the 'Essay of a King,' in 1642, and again in the 'Remains of the Right Honourable Francis Lord Verulam,' &c., 1648, and 'The Mirror of State and Eloquence' (the same with the *Remains*), 1656;\* 'The Office of Constables, Original and Use of Courts Leet, Sheriff's Turn, &c., with the Answers to the Questions propounded by Sir Alexander Hay, Knt., touching the Office of Constables; A.D. 1608,' when first printed we have not been able to discover; 'The Argument of Sir Francis Bacon, Knt., His Majesty's Solicitor-General, in the Case of the Post-Nati of Scotland, in the Exchequer Chamber, before the Lord Chancellor and all the Judges of England,' separately, in 4to., Lon. 1641, and afterwards in the Second Part of the *Resuscitatio* (1670); 'A Proposition to his Majesty, by Sir Francis Bacon, Knt., His Majesty's Attorney-General and one of his Privy Council, touching the Compiling and Amendment of the Laws of England,' written between June, 1616, and March, 1617,† in the First Part of the *Resuscitatio* (1657); 'An Offer to King James of a Digest to be made of the Laws of England,' in 'Certain Miscellany Works of the Right Honourable Francis Lord Verulam, &c., published by William Rawley, D.D.' 1629; 'The Judicial Charge of Sir Francis Bacon, Knt., the King's Solicitor, upon the Commission of Oyer and Terminer held for the Verge of the Court,' delivered in 1611, 4to. Lon. 1662, and again in the Second Part of the *Resuscitatio* (1670); 'A Charge delivered by Sir Francis Bacon, Knight, the King's Solicitor-General, at the arraignment of the Lord Sanquhar in the King's Bench at Westminster'

\* See *ante*, Vol. I. p. 86. † See *ante*, Vol. I. p. 115.



(29th June, 1612, for the murder of John Turner, of which he was found guilty and for which he suffered death), in the Second Part of the *Resuscitatio* (1670); 'The Charge of Sir Francis Bacon, Knight, the King's Attorney-General, touching Duels, upon an information in the Star-Chamber against Priest and Wright; with the Decree of the Star-Chamber in the same cause' (26th January, 1614), 4to. Lon. 1614, and in the Second Part of the *Resuscitatio* (1670); 'The Charge of Sir Francis Bacon, Knight, the King's Attorney General, against William Talbot, a Counsellor at Law, of Ireland, upon an information in the Star-Chamber, *ore tenus*, for a writing under his hand, whereby the said William Talbot, being demanded whether the doctrine of Suarez touching the deposing and killing of Kings excommunicated were true or no, he answered that he referred himself unto that which the Catholic Roman Church should determine thereof,' delivered in Hilary Term, 1613, in the First Part of the *Resuscitatio* (1657); 'A Charge given by Sir Francis Bacon, Knight, His Majesty's Attorney General, against Mr. Oliver St. John, for scandalizing and traducing, in the public sessions, Letters sent from the Lords of the Council touching the Benevolence,' in the First Part of the *Resuscitatio* (1657); 'The Charge of Owen, indicted for High Treason, in the King's Bench, by Sir Francis Bacon, Knight, his Majesty's Attorney General,' (in 1615, for affirming, conditionally, that if the King were excommunicated, it were lawful to kill him), in the First Part of the *Resuscitatio* (1657); 'The Charge of Sir Francis Bacon, Knight, the King's Attorney General, against Mr. Lumsden, Sir John Wentworth, and Sir John Holmes, for Scandal and traducing the King's justice in the proceedings against Weston in the Star-Chamber, November, 1615' (Weston was one of the persons implicated in the poisoning of Sir Thomas Overbury), in the First Part of the *Resuscitatio* (1657); 'The Charge of Sir Francis Bacon, Knight, His Majesty's Attorney General, against Frances Countess of Somerset, intended to have been spoken by him at her

Arraignment, on Friday, May 24, 1616, in case she had pleaded Not Guilty' (for the murder of Sir Thomas Overbury), in Birch's 'Letters, Speeches, Charges, Advices, &c., of Francis Bacon, Lord Viscount St. Alban,' 8vo., Lon. 1763; 'The Charges, by Way of Evidence, by Sir Francis Bacon, Knight, His Majesty's Attorney General, before the Lord High Steward and the Peers, against Frances Countess of Somerset, and against Robert Earl of Somerset, concerning the poisoning of Sir Thomas Overbury,' very incorrectly in 'A True and Historical Relation of the Poisoning of Sir Thomas Overbury,' 12mo. Lon. 1651, first correctly by Tenison in the *Baconiana* (1679): 'The Effect of that which was spoken by the Lord Keeper of the Great Seal of England, at the taking of his place in Chancery, in performance of the Charge his Majesty had given him when he received the Seal, May 7, 1617,' in the First Part of the *Resuscitatio* (1657); 'The Speech which was used by the Lord Keeper of the Great Seal in the Star-Chamber before the Summer Circuits, the King being then in Scotland, 1617,' in the First Part of the *Resuscitatio* (1657); 'The Speech used by Sir Francis Bacon, Lord Keeper of the Great Seal of England, to Sir William Jones, upon his calling to be Lord Chief Justice of Ireland, 1617,' in the First Part of the *Resuscitatio* (1657); 'The Lord Keeper's Speech in the Exchequer to Sir John Denham, when he was called to be one of the Barons of the Exchequer, in 1617,' in the First Part of the *Resuscitatio* (1657); 'His Lordship's Speech in the Common Pleas to Justice Hutton, when he was called to be one of the Judges of the Common Pleas,' in the First Part of the *Resuscitatio* (1657); and 'Ordinances made by the Lord Chancellor Bacon, for the Better and more regular Administration of Justice in the Chancery, to be daily observed, saving the prerogative of the Court,' separately in 4to. in 1642, but much more correctly in the Fourth Volume of Blackbourne's edition of Bacon's Works (1730). In the latter editions of the collected Works are added, 'The Passages in Parliament against Francis Viscount St. Al-

ban, Lord Chancellor of England, Anno Domini 1620 and 1621.'

Of Bacon's Political Writings the piece which is placed first in the common editions of his collected Works is a tract entitled 'Of the State of Europe,' originally printed in Stephens's Second Collection (1734). Mallet describes it as having been written by Bacon in 1580; "as I have discovered," he adds, "by a circumstance mentioned in it. He says that Henry III. of France was then 30 years old: now that King began his reign in 1574, at the age of 24 years." This is a somewhat simple piece of self-gratulation in Mallet; if he had read on he would have made many more such discoveries, but he would also have found that they would not avail him much; for, although the ages of most of the other reigning sovereigns are mentioned as well as that of Henry III. of France, they are too incorrectly given to be of any use. Thus, the Pope, Gregory XIII., who is stated to have been "of the age of 70 years," was 78 in 1580; Philip II. of Spain, described as "about 60 years of age," was then only 53; and so in other cases. We would not infer from these discrepancies, with the writer of the Life of Bacon in the *Biographia Britannica*, that the tract was written at different periods; it evidently describes one state of things, and its meaning and purpose are lost if we suppose otherwise. Its inaccuracies upon a point of little or no real importance, and as to which exact information was not readily attainable, are easily accounted for. But the date of its composition is sufficiently indicated by the mention of some facts of another description as to which the writer could not be mistaken. For instance, in one place he says:—"At this present the King [of France] is about to restore Don Antonio, King of Portugal, whereto are great levies and preparation;" and again:—"D. Antonio, elect King of Portugal, thrust out by the King of Spain, is now in France, where he hath levied soldiers, whereof part are embarked, &c." Now this expedition of Don Antonio

from France under the auspices of Henry III., or rather of Catherine de' Medici, was fitted out in the latter part of the year 1582. It was at that time, therefore, that the account was drawn up. It is a comprehensive and luminous sketch of the political condition of Europe, evincing a remarkable judgment in the selection of the particulars noted, as well as great extent and minuteness of information, for so young a man as Bacon was at this time. Much of it is still interesting. We will give a specimen from the portion of it relating to the Princes of Italy:—

The great Duke of Tuscany, Francisco de Medici, son to Cosmo, and the third duke of that family and province; of the age of forty years, of disposition severe and sad rather than manly and grave; no princely port or behaviour more than a great justicer: inclined to peace and gathering money. All Tuscany is subject unto him, wherein were divers commonwealths, whereof the chief were Florence, Siena, and Pisa, Prato, and Pistoia saving Lucca, and certain forts on the sea-coast held by the King of Spain.

He retaineth in his service few, and they strangers, to whom he giveth pensions. In all his citadels he hath garrison of Spaniards except at Siena; in housekeeping spendeth little, being as it were in pension, agreeing for so much the year with a citizen of Florence for his diet: he hath a small guard of Swisssers, and when he rideth abroad, a guard of forty light horsemen. The militia of his country amounteth to forty thousand soldiers, to the which he granteth leave to wear their weapons on the holy days and other immunities; besides, he entertaineth certain men of arms, to the which he giveth seven crowns the month. He also maintaineth seven galleys, the which serve under his knights, erected by his father in Pisa, of the order of St. Stephano; of these galleys three go every year in chase.

His common exercise is in distillations and in trying of conclusions, the which he doth exercise in a house called Cassino, in Florence, where he spendeth the most part of the day; giving ear in the mean season to matters of affairs, and conferring with his chief officers. His revenues are esteemed to amount to a million and a half of crowns, of the which, spending half a million, he layeth up yearly one million; but certainly he is the richest prince in all Europe of coin.

The form of his government is absolute, depending only of his will and pleasure, though retaining in many things the ancient offices and show; but those magistrates resolve nothing without his express directions and pleasure. Privy council he useth none, but repositeth most his trust on sound secretaries, and conferreth chiefly with his wife, as his father did with one of his secretaries. For matter of examinations, one Corbolo hath the especial trust; he doth favour the people more than the nobility, because they do bear an old grudge to the gentlemen, and the people are the more in number, without whom the nobility can do nothing. One thing in him giveth great contentment to the subjects, that he vouchsafeth to receive and hear all their petitions himself; and in his absence from Florence, those that have suit do resort to the office, and there exhibit their bill endorsed; whereof within three days absolute answer is returned to them, unless the matter be of great importance, then have they direction how to proceed. He is a great justicer; and for the ease of the people, and to have the better eye over justice, hath built hard by his palace a fair row of houses for all offices together in one place.

Two years sithence he married la Signora Bianca, his concubine, a Venetian of Casa Capelli, whereby he entered straiter amity with the Venetians; with the Pope he hath good intelligence, and some affinity by the marriage of Signor Jacomo, the Pope's son, in Casa Sforza.

To the emperor he is allied, his first wife being the Emperor Maximilian's sister.

With Spain he is in a strait league, and his mother was of the house of Toledo; his brother likewise, D. Pietro, married in the same house. With France he standeth at this present in some misliking.

With Ferrara always at jar, as with all the Dukes of Italy, for the preasence in some controversy.

All his revenues arise of taxes and customs; his domains are very small.

He hath by his first wife one son of the age of four or five years, and four daughters; he hath a base child by this woman, and a base brother, D. Joanni, sixteen years of age, of great expectation.

One of the most remarkable passages is that relating to the Duke of Anjou, recently dismissed from his suitorship for the hand of Elizabeth, but only about to enter upon that scene of his brief government of the

Netherlands which showed what an erroneous estimate of him the world had previously formed :—

Francis, Duke of Anjou and of Brabant, for his calling and quality greatly to be considered as any prince this day living, being second person to the king his brother, and in likelihood to succeed him. There is noted in the disposition of this prince a quiet mildness, giving satisfaction to all men; facility of access, and natural courtesy; understanding and speech great and eloquent; secrecy more than commonly is in the French; from his youth always desirous of action, the which thing has made him always followed and respected: and though hitherto he hath brought to pass no great purpose, having suffered great wants and resistance, both at home and abroad, yet by the intermeddling is grown to good experience, readiness, and judgment, the better thereby able to guide and govern his affairs, both in practice, in treaty, and action. Moreover, the diseased estate of the world doth so concur with this his active forwardness, as it giveth matter to work upon; and he is the only man to be seen of all them in distress or desirous of alteration: a matter of special furtherance to all such as have achieved great things, when they have found matter disposed to receive form.

And there is to be found in no other prince in this part of the world so towards and forward as the Duke, towards whom they in distress may turn their eyes. We do plainly see in the most countries of Christendom so unsound and shaken an estate, as desireth the help of some great person, to set together and join again the pieces asunder and out of joint; wherefore the presumption is great that if this prince continue this his course, he is likely to become a mighty potentate: for one enterprise failing, other will be offered, and still men evil at ease and desirous of a head and captain, will run to him that is fittest to receive them; besides, the French, desirous to shake off the civil wars, must needs attempt somewhat abroad. This Duke first had intelligence with the Count Ludovic in King Charles's days, and an enterprise to escape from the court, and in this king's time joined with them of the religion and malcontents; after was carried against them; seeketh the marriage with her Majesty, so mighty a princess, as it were to marry might with his activity.

This passage, by the by, confirms what we have said as to the time when the paper was written; for the

Duke of Anjou did not become Duke of Brabant till the latter part of the year 1582.

The panegyric on Elizabeth entitled 'Mr. Bacon's Discourse in the Praise of his Sovereign,' first published in Stephens's Second Collection (1734), has been already noticed among the Historical Writings.\*

The piece that stands next in order is 'Certain Observations upon a Libel published this present year, 1592, entitled A Declaration of the True Causes of the Great Troubles pre-supposed to be intended against the realm of England.' This is an elaborate tract, filling 48 folio pages of the First Part of the *Resuscitatio*, in which it seems to have been for the first time printed; at least the editors make no mention of any earlier impression, although it had evidently been written with the design of immediate publication.† The libel, or pamphlet, to which it is a reply, is supposed to have been one of the productions of the famous Parsons, the Jesuit. It has all Bacon's characteristic ingenuity of reasoning and power of style, as will sufficiently appear from the following extracts:—

It were just and honourable for princes, being in wars together, that howsoever they prosecute their quarrels and debates by arms and acts of hostility, yea, though the wars be such, as they pretend the utter ruin and overthrow of the forces and states one of another, yet they so limit their passions as they preserve two things sacred and inviolable, that is, the life and good name each of other. For the wars are no massacres and confusions, but they are the highest trials of right, when princes and states that acknowledge no superior upon earth, shall put themselves upon the justice of God for the deciding of their controversies, by such success as it shall please him to give on either side; and as, in the process of particular pleas between private men, all things ought to be ordered by the rules of civil laws, so, in the proceedings of the war, nothing ought to be done against the law of nations or the law of honour: which laws have ever pronounced those two sorts of men, the one conspirators against

\* See Vol. I. p. 215.

† It is incorrectly spoken of, therefore, in Vol. I. p. 16, as "Bacon's first publication."

the persons of princes, the other libellers against their good fame, to be such enemies of common society as are not to be cherished, no, not by enemies. For, in the example of times which were less corrupted, we find that when in the greatest heats and extremities of wars, there have been made offers of murderous and traitorous attempts against the person of a prince to the enemy, they have been not only rejected, but also revealed; and, in like manner, when dishonourable mention hath been made of a prince before an enemy prince, by some that have thought therein to please his humour, he hath showed himself, contrarywise, utterly distasted therewith, and been ready to contest for the honour of an enemy. . . . .

The benefits of Almighty God upon this land since the time that, in his singular providence, he led, as it were, by the hand and placed in the kingdom his servant, our Queen Elizabeth, are such as, not in boasting or in confidence of ourselves, but in praise of his holy name, are worthy to be both considered and confessed, yea, and registered in perpetual memory; notwithstanding, I mean not, after the manner of a panegyric, to extol the present time. It shall suffice only, that those men that through the gall and bitterness of their own heart have lost their taste and judgment, and would deprive God of his glory, and us of our senses, in affirming our condition to be miserable, and full of tokens of the wrath and indignation of God, be reproved.

If then it be true that "*nemo est miser aut felix, nisi comparatus,*" whether we shall (keeping ourselves within the compass of our own island) look into the memories of times past, or, at this present time, take a view of other states abroad in Europe: we shall find that we need not give place to the happiness, either of ancestors or neighbours; for if a man weigh well all the parts of state and religion, laws, administration of justice, policy of government, manners, civility, learning, and liberal sciences, industry and manual arts, arms and provisions of wars for sea and land, treasure, traffic, improvement of the soil, population, honour, and reputation, it will appear that, taking one part with another, the state of this nation was never more flourishing. . . . .

Now for her Majesty, we will first speak of the blessing of continuance as that which wanted in the happiest of these kings, and is not only a great favour of God unto the prince, but also a singular benefit unto the people; for that sentence of the Scripture, "*Misera natio, cum multi sunt principes ejus,*"



is interpreted not only to extend to divisions and distractions in government, but also to frequent changes in succession, considering that the change of a prince bringeth in many charges which are harsh and unpleasant to a great part of the subjects. It appeareth then, that of the line of five hundred and fourscore years and more, containing the number of 22 kings, God hath already prolonged her Majesty's reign to exceed sixteen of the said two-and-twenty, and, by the end of this present year (which God prosper), she shall attain to be equal with two more, during which time there have deceased four emperors, as many French kings, twice so many bishops of Rome. Yea, every state in Christendom, except Spain, have received sundry successions: and, for the King of Spain, he is waxed so infirm, and thereby so retired, as the report of his death serveth for every year's news; whereas her Majesty (thanks be given to God), being nothing decayed in vigour of health and strength, was never more able to supply and sustain the weight of her affairs, and is, as far as standeth with the dignity of her Majesty's royal state, continually to be seen, to the great comfort and heart-ease of her people. . . . .

The fourth blessing is plenty and abundance; and first, for grain and all victuals, there cannot be more evident proof of the plenty than this, that, whereas England was wont to be fed by other countries from the east, it sufficeth now to feed other countries, so as we do many times transport and serve sundry foreign countries; and yet there was never the like multitude of people to eat it within the realm. Another evident proof thereof may be, that the good yields of corn which have been, together with some toleration of vent, hath of late time invited and enticed men to break up more ground and to convert it to tillage, than all the penal laws for that purpose made and enacted could ever by compulsion effect. A third proof may be, that the prices of grain and victual were never of late years more reasonable. Now for arguments of the great wealth, in all other respects, let the points following be considered.

There was never the like number of fair and stately houses, as have been built and set up from the ground since her Majesty's reign, insonmuch that there have been reckoned in one shire that is not great, to the number of thirty-three, which have been all new built within that time, and whereof the meanest was never built for two thousand pounds.

There were never the like pleasures, of goodly gardens, and orchards, walks, pools, and parks as do adorn almost every mansion-house.

There was never the like number of beautiful and costly tombs and monuments, which are erected in sundry churches in honourable memory of the dead.

There was never the like quantity of plate, jewels, sumptuous moveables, and stuff as is now within the realm.

There was never the like quantity of waste and unprofitable ground inned, reclaimed, and improved.

There was never the like husbanding of all sorts of grounds, by fencing, manuring, and all kinds of good husbandry.

The towns were never better built nor peopled, nor the principal fairs and markets never better customed nor frequented.

The commodities and ease of rivers cut by hand, and brought into a new channel, of piers that have been built, of waters that have been forced and brought against the ground, were never so many.

There was never so many excellent artificers, nor so many new handicrafts used and exercised, nor new commodities made within the realm, sugar, paper, glass, copper, divers silks, and the like.

There was never such complete and honourable provision of horse, armour, weapons, ordnance of the war. . . . .

Now, to pass from the comparison of time to the comparison of place, we may find in the states abroad cause of pity and compassion in some, but of envy or emulation in none: our condition being, by the good favour of God, not inferior to any.

The kingdom of France, which, by reason of the seat of the empire of the west, was wont to have the precedence of the kingdoms of Europe, is now fallen into those calamities that, as the prophet saith, "from the crown of the head to the sole of the foot, there is no whole place." The divisions are so many and so intricate, of Protestants and Catholics, royalists and leaguers, Bourbonists and Lorrainists, patriots and Spanish; as it seemeth God hath some great work to bring to pass upon that nation, yea, the nobility divided from the third estate, and the towns from the field. All which miseries, truly to speak, have been wrought by Spain and the Spanish faction.

The Low Countries, which were, within the age of a young man, the richest, the best peopled, and the best built plots of Europe, are in such estate as a country is like to be in, that hath been the seat of thirty years' war; and, although the sea-provinces be rather increased in wealth and shipping than

otherwise, yet they cannot but mourn for their distraction from the rest of their body.

The kingdom of Portugal which, of late times, through their merchandizing and places in the East Indies, was grown to be an opulent kingdom, is now at the last, after the unfortunate journey of Affrick, in that state as a country is like to be that is reduced under a foreigner by conquest, and such a foreigner as hath his competitor in title, being a natural Portugal, and no stranger, and having been once in possession yet in life, whereby his jealousy must necessarily be increased, and through his jealousy their oppression, which is apparent by the carrying of many noble families out of their natural countries to live in exile, and by putting to death a great number of noblemen naturally born to have been principal governors of their countries. These are three afflicted parts of Christendom; the rest of the states enjoy either prosperity or tolerable condition.

The kingdom of Scotland, though at this present, by the good regiment and wise proceeding of the king, they enjoy good quiet, yet since our peace, it hath passed through no small troubles, and remaineth full of boiling and swelling humours, but like, by the maturity of the said king, every day increasing to be repressed.

The kingdom of Poland is newly recovered out of great wars about an ambiguous election; and besides, is a state of that composition, that their king being elective, they do commonly choose rather a stranger than one of their own country. A great exception to the flourishing estate of any kingdom.

The kingdom of Swedeland, besides their foreign wars upon their confines, the Muscovites and the Danes, hath been also subject to divers intestine tumults and mutations, as their stories do record.

The kingdom of Denmark hath had good times, especially by the good government of the late king, who maintained the profession of the Gospel, but yet greatly giveth place to the kingdom of England in climate, wealth, fertility, and many other points, both of honour and strength.

The estates of Italy, which are not under the dominion of Spain, have had peace equal in continuance with ours, except in regard of that which hath passed between them and the Turk, which hath sorted to their honour and commendation; but yet they are so bridled and overawed by the Spaniard, that possesseth the two principal members thereof, and that in

the two extreme parts, as they be like quilllets of freehold, being intermixed in the midst of a great honour or lordship: so as their quiet is intermingled, not with jealousy alone, but with restraint.

The states of Germany have had, for the most part, peaceable times: but yet they yield to the state of England, not only in the great honour of a great kingdom (they being of a mean style and dignity), but also in many other respects, both of wealth and policy.

The state of Savoy having been, in the old Duke's time, governed in good prosperity, hath since, notwithstanding their new great alliance with Spain, whereupon they waxed insolent to design to snatch up some piece of France: after the dishonourable repulse from the siege of Geneva, been often distressed by a particular gentleman of Dauphiny: and at this present day the Duke feeleth, even in Piedmont beyond the mountains, the weight of the same enemy, who hath lately shut up his gates and common entries between Savoy and Piedmont.

So as hitherto I do not see but that we are as much bound to the mercies of God as any other nation, considering that the fires of dissension and oppression in some parts of Christendom may serve us for lights to show us our happiness: and the good estates of other places, which we do congratulate with them for, is such nevertheless as doth not stain and exceed ours, but rather doth still leave somewhat wherein we may acknowledge an ordinary benediction of God.

Lastly, we do not much emulate the greatness and glory of the Spaniards, who, having not only excluded the purity of religion, but also fortified against it by their device of the inquisition, which is a bulwark against the entrance of the truth of God; having, in recompense of their new purchase of Portugal, lost a great part of their ancient patrimonies of the low countries (being of far greater commodity and value), or, at the least, holding part thereof in such sort as most of their other revenues are spent there upon their own; having lately, with much difficulty, rather smoothed and skinned over, than healed and extinguished the commotions of Arragon; having rather sowed troubles in France, than reaped assured fruit thereof unto themselves; having, from the attempt of England, received scorn and disreputation, being at this time with the states of Italy rather suspected than either loved or feared; having, in Germany and elsewhere, rather much prac-

tice than any sound intelligence or amity ; having no such clear succession as they need object and reproach, the uncertainty thereof unto another nation, have, in the end, won a reputation rather of ambition than justice, and in the pursuit of their ambition, rather of much enterprising than of fortunate achieving, and in their enterprising rather of doing things by treasure and expense than by forces and valour. . . . .

And as for those which we call Brownists, being, when they were at the most, a very small number of very silly and base people here and there, in corners, dispersed ; they are now (thanks be to God) by the good remedies that have been used, suppressed and worn out, so as there is scarce any news of them. Neither had they been much known at all had not Brown, their leader, written a pamphlet, wherein, as it came into his head, he inveighed more against logic and rhetoric than against the state of the church (which writing was much read) ; and had not also one Barrow (being a gentleman of a good house, but one that lived in London at ordinaries, and there learned to argue in table-talk, and so was very much known in the city and abroad) made a leap from a vain and libertine youth to a preciseness in the highest degree, the strangeness of which alteration made him very much spoken of, the matter might long before have breathed out. And here I note an honesty and discretion in the libeller which I note no where else ; in that he did forbear to lay to our charge the sect of the Family of Love ; for about twelve years since there was creeping, in some secret places of the realm indeed, a very great heresy derived from the Dutch, and named as before was said ; which since, by the good blessing of God and by the good strength of our church is banished and extinct. But so much we see that the diseases, wherewith our church hath been visited, whatsoever these men say, have either not been malign and dangerous, or else they have been as blisters in some small ignoble part of the body, which have soon after fallen and gone away. For such also was the phrenetical and fanatical (for I mean not to determine it) attempt of Hackett, who must needs have been thought a very dangerous heretic that could never get but two disciples, and those, as it should seem, perished in their brain ; and a dangerous commotioner that in so great and populous a city as London is, could draw but those same two fellows, whom the people rather laughed at, as a May-game, than took any heed of what they did or said ; so as it was very true that an honest

poor woman said, when she saw Hackett, out of a window, pass to his execution: said she to herself, "It was foretold that, in the latter days, there should come those that have deceived many; but, in faith, thou hast deceived but a few." . . . . .

But, nevertheless, to follow this man in his own steps: first, concerning the nobility; it is true that there have been in ages past noblemen (as I take it) both of greater possessions and of greater command and sway than any are at this day. One reason why the possessions are less, I conceive to be because certain sumptuous veins and humours of expense (as apparel, gaming, maintaining a kind of followers, and the like) do reign more than they did in times past. Another reason is, because noblemen now-a-days do deal better with their younger sons than they were accustomed to do heretofore, whereby the principal house receiveth many abatements. Touching the command, which is not indeed so great as it hath been, I take it rather to be a commendation of the time than otherwise: for men were wont factiously to depend upon noblemen, whereof ensued many partialities and divisions, besides much interruption of justice, while the great ones did seek to bear out those that did depend upon them. So, as the kings of this realm finding long since that kind of commandment in noblemen unsafe unto their crown, and inconvenient unto their people, thought meet to restrain the same by provision of laws, whereupon grew the Statute of Retainers; so as men now depend upon the prince and the laws and upon no other: a matter which hath also a congruity with the nature of the time, as may be seen in other countries: namely, in Spain, where the grandees are nothing so potent and so absolute as they have been in times past; but otherwise, it may be truly affirmed that the rights and pre-eminences of the nobility were never more duly and exactly preserved unto them than they have been in her Majesty's times; the precedence of knights given to the younger sons of barons: no subpoenas awarded against the nobility out of the Chancery, but letters: no answer upon oath, but upon honour; besides a number of other privileges in Parliament, court, and country. So, likewise for the countenance of her Majesty and the State, in lieutenantancies, commissions, offices, and the like, there was never a more honourable and graceful regard had of the nobility; neither was there ever a more faithful remembrancer and exacter of all these particular pre-eminences unto them; nor a more diligent searcher and register of their pedigrees, alliances, and all memorials of honour

than that man whom he chargeth to have overthrown the nobility, because a few of them, by immoderate expense are decayed, according to the humour of the time, which he hath not been able to resist, no not in his own house. And as for attainders, there have been in thirty-five years but five of any of the nobility, whereof but two came to execution; and one of them was accompanied with restitution of blood in the children: yea, all of them, except Westmorland, were such as, whether it were by favour of law or government, their heirs have, or are like to have, a great part of their possession; and so much for the nobility. . . . .

The states, then, which answered to these two [Spain and England] now were Macedon and Athens. Consider, therefore, the resemblance between the two Philips of Macedon and Spain. He of Macedon aspired to the monarchy of Greece, as he of Spain doth of Europe, but more apparently than the first, because that design was discovered in his father, Charles the Fifth, and so left him by descent; whereas, Philip of Macedon was the first of the kings of that nation which fixed so great conceits in his breast. The course which this king of Macedon held was not so much by great armies and invasions (though these wanted not when the case required), but by practice, by sowing of factions in states, and by obliging sundry particular persons of greatness. The state of opposition against his ambitious proceedings was only the state of Athens, as now is the state of England against Spain; for Lacedemon and Thebes were both low, as France is now, and the rest of the states of Greece were, in power and territories, far inferior. The people of Athens were exceedingly affected to peace and weary of expense. But the point which I chiefly make the comparison was that of the orators, which were as counsellors to a popular state: such as were sharpest-sighted and looked deepest into the projects and spreading of the Macedonians (doubting still that the fire, after it licked up the neighbour states, and made itself opportunity to pass, would at last take hold of the dominions of Athens with so great advantages as they should not be able to remedy it) were ever charged, both by the declarations of the king of Macedon, and by the imputation of such Athenians as were corrupted, to be of his faction, as the kindlers of troubles and disturbers of the peace and leagues; but as that party was, in Athens, too mighty, so as it discountenanced the true counsels of the orators, and so bred the ruin of that state, and accomplished the ends of that Philip.

So it is to be hoped that in a monarchy, where there are commonly better intelligences and resolutions than in a popular state, those plots as they are detected already; so they will be resisted and made frustrate. . . . .

But above all the rest, it is a strange fancy in the libeller that he maketh his lordship to be the *primum mobile* in every action without distinction; that to him her Majesty is accountable of her resolutions; that to him the Earl of Leicester and Mr. Secretary Walsingham, both men of great power and of great wit and understanding, were but as instruments; whereas, it is well known, that as to her Majesty there was never a counsellor of his lordship's long continuance that was so applicable to her Majesty's princely resolutions, endeavouring always after faithful propositions and remonstrances, and these in the best words and the most grateful manner, to rest upon such conclusions as her Majesty in her own wisdom determineth, and them to execute to the best; so far hath he been from contestation or drawing her Majesty into any of his own courses; and as for the forenamed counsellors and others, with whom his lordship hath consorted in her Majesty's service, it is rather true that his lordship, out of the greatness of his experience and wisdom, and out of the coldness of his nature, hath qualified generally all hard and extreme courses, as far as the service of her Majesty, and the safety of the state, and the making himself compatible with those with whom he served, would permit; so far hath his lordship been from inciting others, or running a full course with them in that kind. But yet it is more strange that this man should be so absurdly malicious as he should charge his lordship not only with all actions of state, but also with all the faults and vices of the times, as if curiosity and emulation have bred some controversies in the church; though (thanks be to God) they extend but to outward things: as if wealth and the cunning of wits have brought forth multitudes of suits in law; as if excess in pleasures and in magnificence, joined with the unfaithfulness of servants, and the greediness of monied men, have decayed the patrimony of many noble men and others; that all these and such like conditions of the time should be put on his lordship's account, who hath been, as far as to his place appertaineth, a most religious and wise moderator in church matters, to have unity kept; who with great justice hath dispatched infinite causes in law that have orderly been brought before him; and, for his own example, may say that which few men can



say, but was sometimes said by Cephalus, the Athenian, so much renowned in Plato's works, who, having lived near to the age of an hundred years, and in continual affairs and business, was wont to say of himself, "That he never sued any, neither had been sued by any;" who, by reason of his office, hath preserved many great houses from overthrow by relieving sundry extremities towards such, as in their minority, have been circumvented; and towards all such as his lordship might advise did ever persuade sober and limited expense. Nay, to make proof, further, of his contented manner of life, free from suits and covetousness, as he never sued any man, so did he never raise any rent or put out any tenant of his own, nor ever gave consent to have the like done to any of the queen's tenants; matters singularly to be noted in this age.

But, however, by this fellow, as in a false artificial glass, which is able to make the best face deformed, his lordship's doings be set forth; yet, let his proceedings (which be, indeed, his own) be indifferently weighed and considered, and let men call to mind that his lordship was never a violent and transported man in matters of state, but ever respective and moderate; that he was never man in his particular a breaker of necks, no heavy enemy, but ever placable and mild; that he was never a brewer of holy water in court, no dallier, no abuser, but ever real and certain; that he was never a bearing-man, nor carrier of causes, but ever gave way to justice and course of law; that he was never a glorious, wilful, proud man, but ever civil and familiar, and good to deal withal; that in the course of his service he hath rather sustained the burthen, than sought the fruition of honour or profit, scarcely sparing any time from his cares and travails to the sustentation of his health. That he never had nor sought to have for himself and his children any pennyworth of land or goods that appertained to any attainted of any treason, felony, or otherwise; that he never had or sought any kind of benefit by any forfeiture to her Majesty; that he was never a factious commander of men, as he that intended any ways to besiege her, by bringing in men at his devotion, but was ever a true reporter unto her Majesty of every man's deserts and abilities; that he never took the course to unquiet or offend, no, nor exasperate her Majesty, but to content her mind and mitigate her displeasure; that he ever bare himself reverently and without scandal in matters of religion, and without blemish in his private course of life; let men, I say, without passionate

malice, call to mind these things; and they will think it reason, that though he be not canonized for a saint in Rome, yet he is worthily celebrated as a *pater patriae*, in England; and though he be libelled against by fugitives, yet he is prayed for by a multitude of good subjects; and lastly, though he be envied, whilst he liveth, yet he shall be deeply wanted when he is gone. And assuredly, many princes have had many servants of trust, name, and sufficiency; but where there have been great parts, there hath often wanted temper of affection; where there have been both ability and moderation, there have wanted diligence and love of travail; where all three have been, there have, sometimes, wanted faith and sincerity; where some few have had all these four, yet they have wanted time and experience; but where there is a concurrence of all these, there is no marvel though a prince of judgment be constant in the employment and trust of such a servant. . . . .

Page 9 he saith, "That his lordship could neither by the greatness of his beads, creeping to the cross, nor exterior show of devotion before the high altar, find his entrance into high dignity in Queen Mary's time;" all which is a mere fiction at pleasure; for Queen Mary bare that respect unto him, in regard of his constant standing for her title, as she desired to continue his service, the refusal thereof growing from his own part. He enjoyed, nevertheless, all other liberties and favours of the time: save only that it was put into the Queen's head that it was dangerous to permit him to go beyond the sea, because he had a great wit of action, and had served in so principal a place, which, nevertheless, after, with Cardinal Poole, he was suffered to do.

Page *eadem*, he saith: "Sir Nicholas Bacon, that was Lord Keeper, was a man of exceeding crafty wit; which sheweth that this fellow, in his slanders, is no good marksman, but throweth out his words of defaming without all level. For all the world noted Sir Nicholas Bacon to be a man plain, direct, and constant, without all fineness and doubleness, and one that was of the mind that a man, in his private proceedings and estate, and in the proceedings of state, should rest upon the soundness and strength of his own courses and not upon practice, to circumvent others; according to the sentence of Solomon: "*Vir prudens advertit ad Gressus suos, stultus autem divertit ad Dolos;*" insomuch, that the Bishop of Rosse, a subtile and observing man, said of him, "That he could fasten no words upon him, and that it was impossible to come within

him, because he offered no play ;” and the Queen-mother of France, a very politic princess, said of him, “ That he should have been of the council of Spain, because he despised the occurrents and rested upon the first plot.” So that if he were crafty, it is hard to say who is wise. . . . .

He saith, “ He hath brought in his second son, Sir Robert Cecil, to be of the council, who hath neither wit nor experience. Which speech is as notorious an untruth as is in all the libel ; for it is confessed by all men that know that gentleman, that he hath one of the rarest and most excellent wits of England, with a singular delivery and application of the same : whether it be to use a continued speech, or to negotiate, or to touch in writing, or to make report, or discreetly to consider of the circumstances, and aptly to draw things to a point ; and all this joined with a very good nature, and a great respect to all men, as is daily more and more revealed. And for his experience it is easy to think that his training and helps hath made it already such, as many that have served long prentis- hood for it, have not attained the like. So as, if that be true, “ *Qui beneficium digno dat omnes obligat,*” not his father only, but the state, is bound unto her Majesty for the choice and employment of so sufficient and worthy a gentleman. . . . .

These men are grown to a singular spirit and faculty in lying and abusing the world ; such, as it seemeth, although they are to purchase a particular dispensation for all other sins, yet they have a dispensation dormant to lie for the Catholic cause ; which moveth me to give the reader a taste of their untruths, such as are written and are not merely gross and palpable ; desiring him, out of their own writings, when any shall fall into his hands, to increase the roll at least in his own memory.

We retain in our calendars no other holy-days but such as have their memorials in the Scriptures ; and, therefore, in the honour of the Blessed Virgin we only receive the feasts of the Annunciation and the Purification, omitting the other of the Conception and the Nativity, which Nativity was used to be celebrated upon the 8th of September, the vigil whereof happened to be the nativity of our Queen, which, though we keep not holy, yet we use therein certain civil customs of joy and gratulation, as ringing of bells, bonfires, and such like ; and likewise make a memorial of the same day in our calendar, whereupon they have published, that we have expunged the nativity of the Blessed Virgin, and put instead thereof t<sup>1</sup>

nativity of our Queen; and further, that we sing certain hymns unto her, used to be sung unto our Lady.

It happened, that upon some bloodshed in the Church of Paul's, according to the canon law yet with us in force, the said church was interdicted, and so the gates shut up for some few days; whereupon, they published that, because the same church is a place where people used to meet to walk and confer, the Queen's Majesty, after the manner of the ancient tyrants, had forbidden all assemblies and meetings of people together; and for that reason, upon extreme jealousy, did cause Paul's gates to be shut up.

The gate of London, called Lud-Gate, being in decay was pulled down and built anew; and on the one side was set up the image of King Lud and his two sons, who, according to the name, was thought to be the first founder of that gate, and on the other side the image of her Majesty, in whose time it was re-edified; whereupon, they published that her Majesty, after all the images of the saints were long beaten down, had now at last set up her own image upon the principal gate of London to be adored, and that all men were forced to do reverence to it as they passed by, and a watch there placed for that purpose.

Mr. Jewell, the Bishop of Salisbury, who, according to his life, died most godly and patiently, at the point of death used the versicle of the hymn *Te Deum*, "O Lord, in thee have I trusted; let me never be confounded." Whereupon, suppressing the rest, they published that the principal champion of the heretics, in his very last words, cried, he was confounded.

In the Act of Recognition of Primo, whereby the right of the crown is acknowledged by Parliament to be in her Majesty (the like whereof was used in Queen Mary's time), the words of limitation are, "In the Queen's Majesty, and the natural heirs of her body, and her lawful successors." Upon which word *natural* they do maliciously, and indeed villainously gloss; that it was the intention of the Parliament, in a cloud, to convey the crown to any issue of her Majesty's that were illegitimate; whereas, the word *heir* doth, with us, so necessarily and pregnantly import lawfulness; as it had been indecorum and uncivil speaking of the issues of a prince to have expressed it.

They set forth, in the year —, a book, with tables and pictures of the persecutions against Catholics, wherein they

have not only stories of fifty years old to supply their pages, but also taken all the persecutions of the primitive church under the heathen, and translated them to the practice of England; as that of worrying priests, under the skins of bears, by dogs, and the like.

I conclude then that I know not what to make of this excess in avouching untruths, save this: that they may truly chaunt in their quires "Linguam nostram magnificabimus, labia nostra nobis sunt;" and that they that have long ago forsaken the truth of God, which is the touch-stone, must now hold by the whet-stone; and that their ancient pillar of lying wonders being decayed, they must now hold by lying slanders, and make their libels successors to their legend.

There is a remarkable coincidence in design and character between this first political performance of Bacon's and the pamphlet with which Burke, at a somewhat more advanced age, commenced his career as a political writer, his 'Observations on a late publication entitled 'The Present State of the Nation,' published in 1769.

In the modern editions there are attached to these 'Observations' a few sentences entitled 'The First Copy of my Discourse touching the Safety of the Queen's Person,' and two short paragraphs entitled 'The First Fragments of a Discourse, touching Intelligence and the Safety of the Queen's Person.' These additions were first printed in Stephens's Second Collection (1734) from the originals in the Archbishop's Library at Lambeth.

The next piece is also contained in the First Part of the *Resuscitatio*;—'A True Report of the Detestable Treason intended by Doctor Roderigo Lopez, a Physician attending upon the Person of the Queen's Majesty, whom he, for a sum of money promised to be paid him by the King of Spain, did undertake to have destroyed by poison; with certain circumstances both of the plotting and detecting of the said treason; penned during the Queen's life.' Lopez was executed on the 7th of June, 1594; and this account appears to have been drawn up immediately after he had been condemned.

Then follow several pieces relating to the unfortunate Earl of Essex. Bacon's early connexion with Essex,

dating from about the year 1590, and the earl's steady, active, and generous friendship, have been already noticed.\* In 1598, on occasion of a dispute which had taken place in the Council between the supporters of the war with Spain and the advocates for a peace, Essex defended his own views in a Letter addressed to Bacon's brother Anthony, under the title of 'An Apology of the Earl of Essex against those who jealously and maliciously tax him to be the hinderer of the peace and quiet of his country.' This Letter, which was first printed in 1603, is republished in the edition of Bacon's Works, in 3 vols. folio, 1753, as having been of his composition; but it is now universally admitted to have been written by Essex himself. Another paper, entitled 'The Proceedings of the Earl of Essex,' first published in Stephens's Second Collection (1734), is little more than a rough sketch of part of an elaborate account, which Bacon was employed to draw up immediately after the trial and execution of Essex, in February, 1601, and which was published by the government in the same year, with the title of 'A Declaration of the Practices and Treasons attempted and committed by Robert late Earl of Essex and his complices, against her Majesty and her Kingdoms; and of the Proceedings, as well at the arraignments and convictions of the said late earl and his adherents, as after; together with the very confessions, and other parts of the evidence, themselves, word for word, taken out of the originals.' The following short passage will sufficiently show the spirit and manner in which Bacon, who had previously appeared at the trial as one of the counsel for the crown, now performed the task he undertook of describing the character and conduct of his deceased friend:—

The most partial will not deny but that Robert late Earl of Essex was, by her Majesty's manifold benefits and graces besides oath and allegiance, as much tied to her Majesty as the subject could be to the sovereign; her Majesty having heaped upon him both dignities, offices, and gifts in such manner as within the circle of twelve years or more there was scarcely a

\* See *ante*, Vol. I. pp. 14-16.

year of rest, in which he did not obtain at her Majesty's hands some notable addition, either of honour or profit.

But he, on the other side, making these her Majesty's favours nothing else but wings for his ambition, and looking upon them not as her benefits but as his advantages, supposing that to be his own metal which was but her mark and impression, was so given over by God, who often punisheth ingratitude by ambition, and ambition by treason, and treason by final ruin, as he had long ago plotted it in his heart to become a dangerous supplanter of that seat whereof he ought to have been a principal supporter; in such sort as now every man of common sense may discern not only his last actual and open treasons, but also his former more secret practices and preparations towards those his treasons, and that without any gloss or interpreter, but himself and his own doings.

For first of all the world can now expound why it was that he did aspire, and had almost attained unto a greatness like unto the ancient greatness of the "præfectus prætorio" under the emperors of Rome, to have all men of war to make their sole and particular dependence upon him; that with such jealousy and watchfulness he sought to discountenance any one that might be a competitor to him in any part of that greatness, that with great violence and bitterness he sought to suppress and keep down all the worthiest martial men which did not appropriate their respects and acknowledgements only towards himself. All which did manifestly detect and distinguish, that it was not the reputation of a famous leader in the wars which he sought, as it was construed a great while, but only power and greatness to serve his own ends, considering he never loved virtue nor valour in another but where he thought he should be proprietary and commander of it, as referred to himself.

So likewise those points of popularity which every man took notice and note of, as his affable gestures, open doors, making his table and his bed so popularly places of audience to suitors, denying nothing when he did nothing, feeding many men in their discontentments against the queen and the state, and the like; as they were ever since Absalom's time the forerunners of treasons following, so in him they were either the qualities of a nature disposed to disloyalty, or the beginnings and conceptions of that which afterwards grew to shape and form.

But as it were a vain thing to think to search the roots and first motions of treasons, which are known to none but God that

discerns the heart, and the devil that gives the instigation ; so it is more than to be presumed, being made apparent by the evidence of all the events following, that he carried into Ireland a heart corrupted in his allegiance, and pregnant of those or the like treasons which afterwards came to light.

For being a man of a high imagination, and a great promiser to himself as well as to others, he was confident that if he were once the first person in a kingdom, and a sea between the queen's seat and his, and Wales the nearest land from Ireland, and that he had got the flower of the English forces into his hands, which he thought so to intermix with his own followers, as the whole body should move by his spirit ; and if he might have also absolutely into his own hands, "*potestatem vitæ et necis et arbitrium belli et pacis*," over the rebels of Ireland, whereby he might entice and make them his own, first by pardons and conditions, and after by hopes to bring them in place where they should serve for hope of better booties than cows, he should be able to make that place of lieutenancy of Ireland as a rise or step to ascend to his desired greatness in England.

And although many of these conceits were windy, yet neither were they the less like to his ; neither are they now only probable conjectures or comments upon these his last treasons, but the very preludes of actions almost immediately subsequent, as shall be touched in due place.

But first it was strange with what appetite and thirst he did affect and compass the government of Ireland, which he did obtain. For although he made some formal shows to put it from him, yet in this as in most things else, his desires being too strong for his dissimulations, he did so far pass the bounds of decorum, as he did in effect name himself to the queen by such description and such particularities as could not be applied to any other but himself ; neither did he so only, but farther, he was still at hand to offer and urge vehemently and peremptorily exceptions to any other that was named.

Then after he once found that there was no man but himself, who had other matters in his head, so far in love with that charge as to make any competition or opposition to his pursuit, whereby he saw it would fall upon him, and especially after himself was resolved upon ; he began to make propositions to her Majesty by way of taxation of the former course held in managing the actions of Ireland, especially upon three points ; the first, that the proportions of forces which had been there



maintained and continued by supplies, were not sufficient to bring the prosecutions there to period. The second, that the axe had not been put to the root of the tree, in regard there had not been made a main prosecution upon the arch-traitor Tyrone in his own strength, within the province of Ulster. The third, that the prosecutions before time had been intermixed and interrupted with too many temporizing treaties, whereby the rebel did ever gather strength and reputation to renew the war with advantage. All which goodly and well-sounding discourses, together with great vaunts that he would make the earth tremble before him, tended but to this, that the queen should increase the list of her army, and all proportions of treasure and other furniture, to the end his commandment might be the greater. For that he never intended any such prosecution may appear by this, that even at the time before his going into Ireland, he did open himself so far in speech to blunt his inwardest counsellor, "That he did assure himself that many of the rebels in Ireland would be advised by him:" so far was he from intending any prosecution towards those in whom he took himself to have interest. But his ends were two; the one to get great forces into his hands; the other to oblige the heads of the rebellion unto him, and to make them of his party. These two ends had in themselves a repugnancy; for the one imported prosecution, and the other treaty; but he that meant to be too strong to be called to account for anything, and meant besides, when he was once in Ireland, to engage himself in other journeys that should hinder the prosecution in the north, took things in order as they made for him: and so first did nothing, as was said, but trumpet a final and utter prosecution against Tyrone in the north, to the end to have his forces augmented.

And in the same strain the account proceeds to the close. For example, in the narrative of the misguided earl's last insane attempt in London, which brought him to the scaffold, we are told that he and his adviser Cuffe had "set down between them the ancient principle of traitors and conspirators, which was to prepare many and to acquaint few; and, after the manner of miners, to make ready their powder, and place it, and then give fire but in the instant." And all Essex's movements are throughout set in the most unfavourable light, and the worst construction put upon them.

The odium which he drew upon himself by the part which he had taken in this affair induced Bacon sometime afterwards to write a defence of his conduct, in the form of a Letter 'To the Right Honourable his very good lord, the Earl of Devonshire, Lord Lieutenant of Ireland.' This was Essex's friend, Charles Blount, previously Baron Mountjoy, who was created Earl of Devonshire, or rather of Devon, by James I. in July, 1603. The Letter, therefore, must have been written after that date.\* It was immediately sent to the press, probably by Bacon himself; there are editions of it in 16mo. of the dates of 1604 and 1605; and it was reprinted in 4to. in 1642, and again in 16mo. in 1651. It is included in the Second Part of the *Resuscitatio* (1670), with the title of 'The Apology of Sir Francis Bacon, Knt., in certain Imputations concerning the late Earl of Essex.' It sets out thus:—

It may please your good Lordship, I cannot be ignorant, and ought to be sensible of the wrong which I sustain in common speech, as if I had been false or unthankful to that noble but unfortunate Earl, the Earl of Essex; and for satisfying the vulgar sort, I do not so much regard it, though I love a good name, but yet as an handmaid and attendant of honesty and virtue. For I am of his opinion that said pleasantly, that it was a shame to him that was a suitor to the mistress, to make love to the waiting-woman, and therefore to woo or court common fame otherwise than it followeth on honest courses, I for my part find not myself fit or disposed. But, on the other side, there is no worldly thing that concerneth myself which I hold more dear than the good opinion of certain persons, among which there is none I would more willingly give satisfaction unto than to your Lordship. First, because you loved my Lord of Essex, and therefore will not be partial towards me; which is part of that I desire; next, because it hath ever pleased you to show yourself to me an honourable friend, and so no baseness in me to seek to satisfy you; and lastly, because I know your Lordship is excellently grounded in the true rules and habits of duties and moralities, which

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\* The statement in Vol. I. p. 89, that it was written and probably printed by Bacon in 1601, is incorrect.

must be they which shall decide this matter, wherein, my Lord, my defence needeth be but simple and brief; namely, that whatsoever I did concerning that action and proceeding, was done in my duty and service to the queen and the state, in which I would not show myself false-hearted, nor faint-hearted, for any man's sake living. For every honest man that hath his heart well planted will forsake his king rather than forsake God; and forsake his friend rather than forsake his king, and yet will forsake any earthly commodity, yea, and his own life in some cases, rather than forsake his friend. I hope the world hath not forgotten these degrees, else the heathen saying, "Amicus usque ad aras," shall judge them.

And the following are the most interesting passages in the rest of the Letter:—

It is well known how I did many years since dedicate my travels and studies to the use and, as I may term it, service of my Lord of Essex, which, I protest before God, I did not, making election of him as the likeliest mean of my own advancement, but out of the humour of a man, that ever, from the time I had any use of reason (whether it were reading upon good books, or upon the example of a good father, or by nature), I loved my country more than was answerable to my fortune, and I held at that time my Lord to be the fittest instrument to do good to the state; and therefore I applied myself to him in a manner which I think happeneth rarely among men; for I did not only labour carefully and industriously in that he set me about, whether it were matter of advice or otherwise, but neglecting the queen's service, mine own fortune, and in a sort my vocation, I did nothing but advise and ruminare with myself to the best of my understanding, propositions, and memorials of anything that might concern his Lordship's honour, fortune, or service. And when, not long after I entered into this course, my brother, Mr. Anthony Bacon, came from beyond the seas, being a gentleman whose ability the world taketh knowledge of for matters of state, especially foreign, I did likewise knit his service to be at my Lord's disposing. And on the other side, I must and will ever acknowledge my Lord's love, trust, and favour towards me; and last of all his liberality having infeoffed me of land which I sold for eighteen hundred pounds to Master Reynold Nicholas, which I think was more worth, and that at such a time and with so kind and noble circumstances, as the manner was as much as

the matter; which though it be but an idle digression, yet, because I am not willing to be short in commemoration of his benefits, I will presume to trouble your Lordship with relating to you the manner of it. After the queen has denied me the solicitor's place, for the which his Lordship had been a long and earnest suitor on my behalf, it pleased him to come to me from Richmond to Twickenham Park, and brake with me, and said, Mr. Bacon, the queen hath denied me the place for you, and hath placed another. I know you are the least part of your own matter, but you fare ill, because you have chosen me for your mean and dependance; you have spent your time and thoughts in my matters; I die (these were his very words) if I do not somewhat towards your fortune. You shall not deny to accept a piece of land, which I will bestow upon you. My answer I remember was, that for my fortune it was no great matter; but that his Lordship's offer made me call in mind what was wont to be said when I was in France of the Duke of Guise, that he was the greatest usurer in France, because he had turned all his estate into obligations, meaning that he had left himself nothing, but only had bound numbers of persons to him. Now my Lord, said I, I would not have you imitate his course, nor turn your state thus by great gifts into obligations, for you will find many bad debtors. He bad me take no care for that, and pressed it; whereupon I said, My Lord, I see I must be your homager, and hold land of your gift, but do you know the manner of doing homage in law? Always it is with a saving of his faith to the king and his other Lords, and therefore my Lord, said I, I can be no more yours than I was, and it must be with the ancient savings; and if I grow to be a rich man, you will give me leave to give it back again to some of your unrewarded followers. . . . After this, during the while since my Lord was committed to my Lord Keeper's, I came divers times to the queen, as I had used to do, about causes of her revenue and law business, as is well known; by reason of which accesses, according to the ordinary charities of court, it was given out that I was one of them that incensed the queen against my Lord of Essex. These speeches I cannot tell, nor I will not think that they grew any way from her Majesty's own speeches, whose memory I will ever honour; if they did she is with God, and "*Miserum est ab illis laedi, de quibus non possis queri.*" But I must give this testimony to my Lord Cecil, that one time in his house at the Savoy, he dealt with me directly, and said to me, Cousin, I hear it, but

I believe it not, that you should do some ill office to my Lord of Essex; for my part, I am merely passive and not active in this action, and I follow the queen, and that heavily, and I lead her not; my Lord of Essex is one that in nature I could consent with as well as any one living; the queen indeed is my sovereign, and I am her creature, I may not lose her, and the same course I would wish you to take; whereupon I satisfied him how far I was from any such mind. And as sometimes it cometh to pass that men's inclinations are opened more in a toy than in a serious matter; a little before that time, being about the middle of Michaelmas term, her Majesty had a purpose to dine at my lodge at Twickenham Park, at which time I had (though I profess not to be a poet) prepared a sonnet directly tending and alluding to draw on her Majesty's reconcilment to my Lord, which I remember also, I showed to a great person, and one of my Lord's nearest friends, who commended it; this though it be, as I said, but a toy, yet it showed plainly in what spirit I proceeded, and that I was ready not only to do my Lord good offices, but to publish and declare myself for him; and never was I so ambitious of any thing in my lifetime, as I was to have carried some token or favour from her Majesty to my Lord, using all the art I had both to procure her Majesty to send, and myself to be the messenger. . . . And I was never better welcome to the queen, nor more made of than when I spake fullest and boldest for him; in which kind the particulars were exceeding many, whereof for an example I will remember to your Lordship one or two; as at one time I call to mind, her Majesty was speaking of a fellow that undertook to cure, or at least to ease, my brother of his gout, and asked me how it went forward; and I told her Majesty that at first he received good by it; but after in the course of his cure he found himself at a stay or rather worse; the queen said again, I will tell you, Bacon, the error of it; the mauner of these physicians, and especially these empirics, is to continue one kind of medicine, which at the first is proper, being to draw out the ill humour; but after they have not the discretion to change the medicine, but apply still drawing medicines, when they should rather intend to cure and corroborate the part. Good Lord, Madam, said I, how wisely and aptly can you speak and discern of physic ministered to the body, and consider not that there is the like occasion of physic ministered to the mind, as now in the case of my Lord of Essex, your princely word ever was that you intended ever to reform his mind, and not ruin his fortune

know well you cannot but think that you have drawn the humour sufficiently, and therefore it were more than time, and it were but for a doubt of mortifying or exulcerating, that you did apply and minister strength and comfort unto him, for these same gradations of yours are fitter to corrupt than correct any mind of greatness; and another time I remember she told me for news, that my Lord had written unto her some very dutiful letters, and that she had been moved by them, and when she took it to be the abundance of his heart, she found it to be but a preparative to a suit for the renewing of his farm of sweet winès; whereunto I replied, O Madam, how doth your Majesty construe these things, as if these two could not stand well together, which indeed nature hath planted in all creatures. For there are but two sympathies, the one towards perfection, the other towards preservation; that to perfection as the iron tendeth to the loadstone, that to preservation as the vine will creep towards a stake or prop that stands by it, not for any love to the stake, but to uphold itself. And therefore, Madam, you must distinguish: my Lord's desire to do you service is, as to his perfection, that which he thinks himself to be born for; whereas his desire to obtain this thing of you is but for a sustentation.

At the end we have Bacon's own distinct admission that he was the writer of the 'Declaration':—

The troth is, that the issue of his dealing grew to this, that the queen by some slackness of my lord's, as I imagine, liked him worse and worse, and grew more incensed towards him. Then she, remembering belike the continual and incessant and confident speeches and courses, that I had held on my lord's side, became utterly alienated from me, and for the space of at least three months, which was between Michaelmas and new-year's tide following, would not so much as look on me, but turned away from me with express and purpose-like discountenance wheresoever she saw me, and at such times as I desired to speak with her about law business, ever sent me forth very slight refusals, insomuch as it is most true, that immediately after new-year's tide I desired to speak with her, and being admitted to her, I dealt with her plainly and said, Madam, I see you withdraw your favour from me, and now I have lost many friends for your sake, I shall lose you too; you have put me like one of those that the Frenchmen call *enfants perdus*, 'hat serve on foot before horsemen, so have you put me into

matters of envy without place, or without strength; and I know at chess a pawn before a king is ever much played upon. A great many love me not, because they think I have been against my Lord of Essex, and you love me not because you know I have been for him; yet will I never repent me that I have dealt in simplicity of heart towards you both, without respect of cautions to myself, and therefore, *vivus vidensque pereo*. If I do break my neck, I shall do it in a manner as Master Dorrington did it, which walked on the battlements of the church many days, and took a view and survey where he should fall; and so, Madam, said I, I am not so simple but that I take a prospect of mine overthrow, only I thought I would tell you so much that you may know that it was faith, and not folly, that brought me into it, and so I will pray for you. Upon which speeches of mine, uttered with some passion, it is true her Majesty was exceedingly moved, and accumulated a number of kind and gracious words upon me, and willed me to rest upon this, *Gratia mea sufficit*, and a number of other sensible and tender words and demonstrations, such as more could not be, but as touching my Lord of Essex, *ne verbum quidem*. Whereupon I departed, resting, then determined to meddle no more in the matter, as that I saw would overthrow me, and not be able to do him any good. . . . It is very true also, about that time her Majesty taking a liking of my pen, upon that which I formerly had done concerning the proceeding at York House, and likewise upon some other declarations, which in former times by her appointment I put in writing, commanded me to pen that book which was published for the better satisfaction of the world, which I did, but so as never secretary had more particular and express directions and instructions in every point how to guide my hand in it; and not only so, but after that I had made a first draught thereof, and propounded it to certain principal councillors, by her Majesty's appointment it was perused, weighed, censured, altered, and made almost anew, writing according to their Lordships' better consideration; wherein their Lordships and myself were both as religious and curious of truth as desirous of satisfaction, and myself indeed gave only words and form of style in pursuing their direction. And after it had passed their allowance, it was again exactly perused by the queen herself, and some alterations made again by her appointment: nay, and after it was set to print, the queen, who, as your Lordship knoweth, as she was ex-

cellent in great matters, so she was exquisite in small, and noted that I could not forget my ancient respect to my Lord of Essex, in terming him ever my Lord of Essex, my Lord of Essex, almost in every page of the book, which she thought not fit, but would have it made Essex, or the late Earl of Essex; whereupon of force it was printed *de novo*, and the first copies suppressed by her peremptory commandment.

The mere existence of this Letter precludes us from giving much weight to one plea which has been urged on Bacon's behalf. A late writer, to whom we are indebted for by far the fullest and most learned and exact account that we possess of the trial of the Earl of Essex, observes:—"The conduct of Bacon, in taking so active a share in a proceeding which involved the life of his patron and benefactor, has often been the subject of severe animadversion, and has justly been considered as one of the many dark shades in the character of this 'greatest, brightest, *meanest* of mankind.' Bacon was bound to the Earl of Essex by the strongest obligations; the earl had been, from the commencement of his fortunes, his steady friend and munificent patron; he had been instant with the queen, in season and out of season, in urging his promotion, and, when disappointed of the office of Solicitor-General, had presented him with a considerable estate. Without intending wholly to excuse him, however, it may be questioned, whether the circumstances in which Bacon was placed with reference to this trial have been sufficiently considered; and whether his conduct has not been judged rather by our modern and improved notions of delicacy and propriety than by the standard according to which the actions and feelings of men were regulated two centuries ago." \* But here, in this 'Apology,' we have it under Bacon's own hand, that in the common speech of his own day his conduct was represented as false or unthankful; and he admits, by the very fact of defending himself, that such imputations were thrown upon him by more than "the vulgar sort,"—by some persons of whom he avows that

\* Criminal Trials, by David Jardine, Esq. (in *Library of Entertaining Knowledge*). Lond. 1832. Vol. I. p. 385.



there is no worldly thing concerning himself which he holds more dear than their good opinion. The ground that he himself takes his stand upon, as we have seen, is, that whatever he had done was done in his duty and service to the queen and the state. Now, let us admit, for the sake of the argument, that the claims of the state are paramount to all other claims. Still, such claims must be clearly established, before they can be allowed to set aside all others. In a case of state necessity it might perhaps have been Bacon's duty actually, at the queen's bidding, to perform execution upon Essex with his own hand. But where was the state necessity in the present case? Bacon was one of the queen's counsel learned in the law at a time when his friend was about to be brought to trial on a charge affecting his life; what made it necessary that he of all men should take part in conducting the prosecution? Would he have done so if the prisoner had been his father or his brother? Would any ill consequences whatever have followed to the state if he had declined doing so? Would not the only injury or risk have been to his own professional advancement? And must it not, therefore, have been a regard to that, and not his duty and service to the queen and the state, which made him do what he did? If he had been the only lawyer in England that could have been got to conduct the prosecution, believing, as he lets us understand that he did, in the guilt of Essex up to the extreme point charged in the indictment, it might have been his duty not to refuse his services; but, as the case stood, any such pretence was ludicrous. The world, therefore, naturally expected that a sense of decency, if not any feeling of gratitude, would have withheld him from even giving so much as his presence and countenance to a proceeding by which it was sought to take the life of one to whom he had been so much indebted as he had been to Essex. It was thought that he ought no more to have appeared as one of the counsel for the crown against such a friend, than he ought to have done so against his own brother. He boasts that he would not show himself either false-hearted or faint-hearted:

in reality he showed himself both. Most probably the selfish fears which urged him to take the part he did were quite visionary, and, instead of hurting his fortunes, he might have done the very reverse by adopting an opposite course. It is not likely, indeed, that, situated as he was, he would ever have been asked to give his assistance towards the conviction of Essex if he had evinced any disinclination to do so. We are entitled to presume, from his own showing, that he must rather have proffered it. We may venture at any rate to doubt whether any really high-minded man was ever either reduced or induced to act as Bacon did here. Does the whole history of the legal profession, in England and in all other countries, afford another instance of such conduct which the opinion of mankind has not been unanimous in condemning? But still worse than Bacon's appearance as counsel at the trial was his writing the *Declaration* afterwards. The queen, he says, had taken a liking to his pen, and he had particular and express directions and instructions in every point how to guide his hand, and he gave only words and form of style; and this is his apology for consenting to apply all the powers of his eloquence to blacken the memory of his friend and benefactor! Whether it was subserviency or vanity that actuated him, such prostitution is equally despicable. But Mr. Jardine's researches have detected something more in the service that Bacon rendered on this occasion than even his own confession admits. The *Declaration* professes to give the evidences themselves on which Essex was convicted, "word for word, taken out of the originals;" these originals still exist in the State-Paper Office, but upon examination they are found by no means to agree exactly with the depositions as published along with the *Declaration*; there are numerous omissions in the latter; and in every instance the passages omitted are marked in the original papers with the letters *Om.* in Bacon's handwriting. In every instance also the intention of the omission is obvious; they are all clearly designed and artfully contrived to support the government view of the case and to give a darker colour

to the criminality of the prisoner.\* This, it must be acknowledged, was following directions, and leaving everything else out of sight, a very long way.

In an unfinished discourse, entitled 'Of the True Greatness of the Kingdom of Britain,' addressed 'to King James,' and first published in Stephens's Second Collection (1734), Bacon proposes to consider the general subject of the real force and power of a state, "first, by confuting the errors, or rather correcting the excesses, of certain immoderate opinions, which ascribe too much to some points of greatness, which are not so essential, and by reducing those points to a true value and estimation; then, by propounding and confirming those other points of greatness which are more solid and principal, though in popular discourse less observed; and, incidently, by making a brief application, in both these parts, of the general principles and positions of policy unto the state and conditions of these your Kingdoms." He then proceeds:—

Of these the former part will branch itself into these articles:—

First, That in the measuring or balancing of greatness, there is commonly too much ascribed to largeness of territory.

Secondly, That there is too much ascribed to treasure or riches.

Thirdly, That there is too much ascribed to the fruitfulness of the soil, or affluence of commodities.

And, fourthly, That there is too much ascribed to the strength and fortification of towns or holds.

The latter will fall into this distribution:—

First, That true greatness doth require a fit situation of the place or region.

Secondly, That true greatness consisteth essentially in population and breed of men.

Thirdly, That it consisteth also in the value and military disposition of the people it breedeth, and in this that they make profession of arms.

Fourthly, That it consisteth in this point, that every common

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\* See Criminal Trials, I. 332, 333, *note*.

subject by the poll be fit to make a soldier, and not only certain conditions or degrees of men.

Fifthly, That it consisteth in the temper of the government fit to keep the subjects in good heart and courage, and not to keep them in the condition of servile vassals.<sup>5</sup>

And, sixthly, That it consisteth in the commandment of the sea.

And let no man so much forget the subject propounded as to find strange that here is no mention of religion, laws, or policy. For we speak of that which is proper to the amplitude and growth of states, and not of that which is common to their preservation, happiness, and all other points of well-being.

The following is the commencement of what is said under the second article of the first head, "That there is too much ascribed to treasure or riches in the balancing of greatness :"—

Wherein no man can be ignorant of the idolatry that is generally committed in these degenerate times to money, as if it could do all things public and private; but, leaving popular errors, this is likewise to be examined by reason and examples, and such reason as is no new conceit or invention, but hath formerly been discerned by the sounder sort of judgments. For we see that Solon, who was no contemplative wise man, but a statesman and a lawgiver, used a memorable censure to Croesus, when he showed him great treasures and store of gold and silver that he had gathered, telling him that whensoever another should come that had better iron than he, he would be master of all his gold and silver. Neither is the authority of Machiavel to be despised, specially in a matter whereof he saw the evident experience before his eyes in his own times and country, who derideth the received and current opinion and principal of estate, taken first from a speech of Mutianus, the lieutenant of Vespasian, that money was the sinews' of war, affirming that it is a mockery, and that there are no other true sinews of war but the sinews and muscles of men's arms; and that there never was any war wherein the more valiant people had to deal with the more wealthy, but that the war, if it were well conducted, did nourish and pay itself. And had he not reason so to think when he saw a needy and ill-provided army of the French, though needy rather by negligence than want of means, as the French manner oftentimes is, make their passage only by the repu-

tation of their swords by their sides undrawn, through the whole length of Italy, at that time abounding in wealth after a long peace, and that without resistance, and to seize and leave what countries and places it pleased them? But it was not the experience of that time alone, but the records of all times that do concur to falsify that conceit, that wars are decided not by the sharpest sword, but by the greatest purse. And that very text or saying of Mutianus, which was the original of this opinion, is misvouched: for his speech was, "*Pecuniae sunt nervi belli civilis,*" which is true, for that civil wars cannot be between people of differing valour: and again, because in them men are as oft bought as vanquished; but in case of foreign wars you shall scarcely find any of the great monarchies of the world, but have had their foundations in poverty and contemptible beginnings, being in that point also conform to the heavenly kingdom, of which it is pronounced, "*Regnum Dei non venit cum observatione.*" Persia, a mountainous country, and a poor people in comparison of the Medes and other provinces which they subdued. The state of Sparta, a state wherein poverty was enacted by law and ordinance, all use of gold and silver and rich furniture being interdicted. The state of Macedonia, a state mercenary and ignoble until the time of Philip. The state of Rome, a state that had poor and pastoral beginnings. The state of the Turks, which hath been since the terror of the world, founded upon a transmigration of some bands of Sarmatian Scythes that descended in a vagabond manner upon the province that is now termed Turcomania: out of the remnants whereof, after great variety of fortune, sprang the Ottoman family. But never was any position of estate so visibly and substantially confirmed as this touching the pre-eminence, yea, and predominancy of valour above treasure, as by the two descents and inundations of necessitous and indigent people, the one from the east and the other from the west, that of the Arabians or Saracens, and that of the Goths, Vandals, and the rest, who, as if they had been the true inheritors of the Roman empire then dying, or at least grown impotent and aged, entered upon Egypt, Asia, Graecia, Afrik, Spain, France, coming to these nations not as to a prey but as to a patrimony, not returning with spoil but seating and planting themselves in a number of provinces, which continue their progeny and bear their names till this day. And all these men had no other wealth but their adventures; nor no other title but their swords, nor no other press but their

poverty. For it was not with most of these people as it is in countries reduced to a regular civility, that no man almost marieth except he see he have means to live; but population went on, howsoever sustenation followed, and taught by necessity, as some writers report, when they found themselves surcharged with people, they divided their inhabitants into three parts, and one third, as the lot fell, was sent abroad and left to their adventures. Neither is the reason much unlike, though the effect hath not followed in regard of a special diversion in the nation of the Swisses inhabiting a country, which, in regard of the mountainous situation and the popular estate, doth generate faster than it can sustain. In which people it well appeared what an authority iron hath over gold at the battle of Granson, at what time one of the principal jewels of Burgundy was sold for twelve pence by a poor Swiss that knew no more a precious stone than did Æsop's cock. And although this people have made no plantations with their arms, yet we see the reputation of them such as not only their forces have been employed and waged, but their alliance sought and purchased by the greatest kings and states of Europe. So, as though fortune, as it fares sometimes with princes to their servants, hath denied them a grant of lands, yet she hath granted them liberal pensions, which are made memorable and renowned to all posterity by the event which ensued to Louis the Twelfth, who, being pressed uncivilly by message from them for the enhancing their pensions, entered into choler and broke out into these words, "What! will these villains of the mountains put a tax upon me?" which words cost him his duchy of Milan, and utterly ruined his affairs in Italy. Neither were it indeed possible at this day that that nation should subsist without descents and impressions upon their neighbours, were it not for the great utterance of the people which they make into the services of foreign princes and estates, thereby discharging not only number, but in that number such spirits as are most stirring and turbulent.

The fragment contains no discussion of the third article of the first head, and only a few sentences about the first of the affirmative articles.

From 'A Brief Discourse of the Happy Union of the Kingdoms of England and Scotland, Dedicated in private to his Majesty,' which is published in the First

Part of the *Resuscitatio* (1657), the following are extracts:—

I do not find it strange, excellent king, that when Heraclitus (he that was surnamed the Obscure) had set forth a certain book (which is not now extant), many men took it for a discourse of nature, and many others took it for a treatise of policy; for there is a great affinity and consent between the rules of nature and the true rules of policy: the one being nothing else but an order in the government of the world, and the other an order in the government of an estate; and, therefore, the education and erudition of the kings of Persia was in a science which was termed by a name then of great reverence, but now degenerate and taken in the ill part; for the Persian magic, which was the secret literature of their kings, was an application of the contemplations and observations of nature unto a sense politic, taking the fundamental laws of nature and the branches and passages of them as an original, or first model, whence to take and describe a copy and imitation for government.

After this manner the foresaid instructors set before their kings the examples of the celestial bodies, the sun, the moon, and the rest, which have great glory and veneration, but no rest or intermission, being in a perpetual office of motion for the cherishing, in turn and in course, of inferior bodies, expressing likewise the true manner of the motions of government, which, though they ought to be swift and rapid, in respect of dispatch and occasions, yet are they to be constant and regular, without wavering or confusion.

So did they represent unto them how the heavens do not enrich themselves by the earth and the seas, nor keep no dead stock nor untouched treasures of that they draw to them from below: but whatsoever moisture they do levy and take from both elements in vapours, they do spend and turn back again in showers, only holding and storing them up for a time, to the end to issue and distribute them in season. . . . .

Now, to speak briefly of the several parts of that form, whereby states and kingdoms are perfectly united, they are (besides the sovereignty itself) four in number, union in name, union in language, union in laws, union in employments.

For name, though it seem but a superficial and outward matter, yet it carrieth much impression and enchantment. The general and common name of *Graecia* made the Greeks

always apt to unite (though otherwise full of divisions amongst themselves) against other nations, whom they called barbarous. The Helvetian name is no small band to knit together their leagues and confederacies the faster. The common name of Spain, no doubt, hath been a special means of the better union and conglutination of the several kingdoms of Castile, Aragon, Granada, Navarre, Valentia, Catalonia, and the rest, comprehending also now lately Portugal.

For language, it is not needful to insist upon it, because both your Majesty's kingdoms are of one language, though of several dialects, and the difference is so small between them, as promiseth rather an enriching of one language than a continuance of two.

For laws, which are the principal sinews of government, they be of three natures: *jura*, which I will term freedoms, or abilities, *leges*, and *mores*.

For abilities and freedoms, they were, amongst the Romans, of four kinds, or rather degrees: *jus connubii*, *jus civitatis*, *jus suffragii*, and *jus petitionis*, or *honorum*. *Jus connubii* is a thing in these times out of use, for marriage is open between all diversities of nations. *Jus civitatis* answereth to that we call denization or naturalization. *Jus suffragii* answereth to the voice in parliament. *Jus petitionis* answereth to the place in counsel or office; and the Romans did many times sever these freedoms, granting *jus connubii*, *sine civitate*; and *civitatem*, *sine suffragio*; and *suffragium*, *sine jure petitionis*, which was commonly with them the last.

For those we call *leges*, it is a matter of curiosity and inconvenience to seek either to extirpate all particular customs, or to draw all subjects to one place or resort of judicature and session. It sufficeth there be a uniformity in the principal and fundamental laws, both ecclesiastical and civil: for in this point the rule holdeth which was pronounced by an ancient father touching the diversity of rites in the Church; for, finding the vesture of the queen in the Psalm (which did prefigure the Church) was of divers colours, and finding again that Christ's coat was without a seam, he concluded well, "In veste varietas sit, scissura non sit."

For manners, a consent in them is to be sought industriously, but not to be enforced: for nothing amongst a people breedeth so much pertinacity in holding their customs, as sudden and violent offer to remove them.



And as for employments, it is no more but in indifferent hand, and execution of that verse:—

“Tros Tyriusque mihi nullo discrimine agetur.”

Another paper relating to the same subject, and also contained in the First Part of the *Resuscitatio*, is entitled ‘Certain Articles or Considerations touching the Union of the Kingdoms of England and Scotland; collected and dispersed for his Majesty’s better service.’ It commences as follows:—

Your Majesty being, I doubt not, directed and conducted by a better oracle than that which was given for light to Æneas, in his peregrination (*antiquam exquirite matrem*), hath a royal, and, indeed, an heroical, desire to reduce these two kingdoms of England and Scotland into the unity of their ancient mother kingdom of Britain. Wherein, as I would gladly applaud unto your Majesty, or sing aloud that hymn or anthem “*Sic itur ad astra;*” so, in a more soft and submissive voice, I must necessarily remember unto your Majesty that warning or caveat, “*ardua, quae pulchra:*” it is an action that requireth, yea, and needeth much, not only of your Majesty’s wisdom, but of your felicity. In this argument I presumed, at your Majesty’s first entrance, to write a few lines indeed scholastically and speculatively, and not actively or politically, as I held it fit for me at that time, when neither your Majesty was, in that your desire, declared, nor myself in that service used or trusted. But now that both your Majesty hath opened your desire and purpose with much admiration, even of those who gave it not so full an approbation; and that myself was, by the Commons graced with the first vote of all the Commons, selected for that cause: not in any estimation of my ability (for therein so wise an assembly could not be so much deceived), but in an acknowledgment of my extreme labours and integrity in that business, I thought myself every way bound both in duty to your Majesty, and in trust to that House of Parliament, and in consent to the matter itself, and in conformity to mine own travails and beginnings, not to neglect any pains that may tend to the furtherance of so excellent a work; wherein I will endeavour that that which I shall set down be *nihil minus quam verba*: for length and ornament of speech are to be used for persuasion of multitudes, and not for information of kings: especially such a king as is the only

instance that ever I knew to make a man of Plato's opinion, that all knowledge is but remembrance; and that the mind of man knoweth all things, and demandeth only to have her own notions excited and awaked; which your Majesty's rare, and indeed singular, gift and faculty of swift apprehension and infinite expansion or multiplication of another man's knowledge by your own, as I have often observed, so I did extremely admire in Goodwin's cause; being a matter full of secrets and mysteries of our laws merely new unto you, and quite out of the path of your education, reading, and conference: wherein, nevertheless, upon a spark of light given, your Majesty took in so dexterously and profoundly as if you had been indeed *anima legis*, not only in execution but in understanding; the remembrance whereof, as it will never be out of my mind, so it will always be a warning to me to seek rather to excite your judgment briefly than to inform it tediously: and if in a matter of that nature, how much more in this, wherein your princely cogitations have wrought themselves and been conversant, and wherein the principal light proceeded from yourself.

Afterwards it is observed that the points wherein the two nations of England and Scotland stand already united are, 1. In Sovereignty; 2. In Subjection; 3. In Religion; 4. In Continent; 5. In Language; 6. In Leagues and Confederacies with foreign powers, "now, by the peace concluded with Spain"—an expression which determines the date of the paper to have been subsequent to August, 1604. "Yet notwithstanding," it is added, "there is none of the six points wherein the union is perfect and consummate; but every of them hath some scruple or rather grain of separation inwrapped and included in them." And then the exposition proceeds:—

For the sovereignty, the union is absolute in your Majesty and your generation; but if it should be so (which God, of his infinite mercy, defend), that your issue should fail, then the descent of both realms doth resort to the several lines of the several bloods royal.

For subjection, I take the law of England to be clear (what the law of Scotland is, I know not), that all Scottishmen, from the very instant that your Majesty's reign begun, are become

denizens, and the post-nati are naturalized subjects of England for the time forwards; for, by our laws, none can be an alien but he that is of another allegiance than our Sovereign Lord the King's. For there be but two sorts of aliens whereof we find mention in our law: an alien ami, and an alien enemy; whereof, the former is a subject of a state in amity with the king, and the latter a subject of a state in hostility; but whether he be one or other, it is an essential difference unto the definition of an alien if he be not of the King's allegiance: as we see it evidently in the precedent of Ireland, who, since they were subjects to the crown of England, have ever been inheritable and capable as natural subjects, and yet not by any statute or act of Parliament, but merely by the common law and the reason thereof. So, as there is no doubt, that every subject of Scotland was and is in like plight and degree, since your Majesty's coming in, as if your Majesty had granted particularly your letters of denization or naturalization to every of them, and the post-nati wholly natural. But then, on the other side, for the time backwards, and for those that were ante-nati, the blood is not by law naturalized, so as they cannot take it by descent from their ancestors without act of parliament. And therefore, in this point, there is a defect in the union of subjection.

For matter of religion, the union is perfect in points of doctrine; but in matter of discipline and government it is imperfect.

For the continent, it is true there are no natural boundaries of mountains, or seas, or navigable rivers; but yet there are badges and memorials of borders, of which point I have spoken before.

For the language, it is true the nations are unius labii, and have not the first curse of disunion, which was confusion of tongues, whereby one understood not another; but yet the dialect is differing, and it remaineth a kind of mark of distinction. But for that, *tempori permittendum*, it is to be left to time; for considering that both languages do concur in the principal office and duty of a language, which is to make a man's self understood, for the rest it is rather to be accounted, as was said, a diversity of dialect than of language; and, as I said in my first writing, it is like to bring forth the enriching of one language by compounding and taking in the proper and significant words of either tongue, rather than a continuance of two languages.

For leagues and confederacies, it is true that neither nation is now in hostility with any state wherewith the other nation is in amity, but yet so as the leagues and treaties have been concluded with either nation respectively, and not with both jointly, which may contain some diversity of articles of straitness of amity with one more than with the other.

But many of these matters may, perhaps, be of that kind as may fall within that rule, *In veste varietas sit, scissura non sit.*

There is also in Stephens's Second Collection the commencement of a paper entitled 'The most humble Certificate of Return of the Commissioners of England and Scotland authorized to treat of an Union for the weal of both Realms, 2 Jac. I. [Prepared, but Altered.]' Bacon was in 1604 appointed one of the Commissioners for the Commons under the stat. 1 Jac. I. c. 2, to treat concerning a Union of the two kingdoms with other commissioners to be appointed by the parliament of Scotland;—a project, however, which came to no result at that time.

Along with these papers respecting a Union with Scotland may be mentioned another, also in the First Part of the *Resuscitatio*, entitled 'Certain Considerations touching the Plantation in Ireland, Presented to his Majesty, 1606.' The date, however, ought certainly to be at least a year later; for Bacon speaks of himself as being now Solicitor-General, which he was not till June, 1607. After some introductory observations, the subject of the Plantation or Colonization of Ireland is thus taken up:—

For the excellency of the work, I will divide it into four noble and worthy consequences that will follow thereupon. The first of the four is honour, whereof I have spoken enough already, were it not that the harp of Ireland puts me in mind of that glorious emblem or allegory wherein the wisdom of antiquity did figure and shadow out works of this nature. For the poets feigned that Orpheus, by the virtue and sweetness of his harp, did call and assemble the beasts and birds of their nature wild and savage, to stand about him as in a theatre, forgetting their affections of fierceness of lust and of prey, and

listening to the tunes and harmonies of the harp; and soon after called likewise the stones and the woods to remove and stand in order about him: which fable was auciently interpreted of the reducing and plantation of kingdoms, when people of barbarous manners are brought to give over and discontinue their customs of revenge and blood, and of dissolute life, and of theft, and of rapine, and to give ear to the wisdom of laws and governments: whereupon, immediately followeth the calling of stones for building and habitation, and of trees for the seats of houses, orchards, and enclosures, and the like.

This work, therefore, of all other most memorable and honourable your Majesty hath now in hand, specially if your Majesty join the harp of David, in casting out the evil spirit of superstition, with the harp of Orpheus in casting out desolation and barbarism.

The second consequence of this enterprize is the avoiding of an inconvenience which commonly attendeth upon happy times, and is an evil effect of a good cause. The revolution of this present age seemeth to incline to peace almost generally in these parts; and your Majesty's most Christian and virtuous affections do promise the same more specially to these your kingdoms. An effect of peace in fruitful kingdoms (where the stock of people, receiving no consumption nor diminution by war, doth continually multiply and increase) must, in the end, be a surcharge or overflow of people more than the territories can well maintain; which, many times insinuating a general necessity and want of means into all estates, doth turn external peace into internal troubles and seditions; now what an excellent diversion of this inconvenience is ministered by God's providence to your Majesty in this plantation of Ireland, wherein so many families may receive sustentation and fortunes; and the discharge of them also out of England and Scotland may prevent many seeds of future perturbations. So that it is as if a man were troubled for the avoidance of water from the place where he hath built his house, and afterwards, should advise with himself to cast those waters, and to turn them into fair pools or streams for pleasure, provision, or use. So shall your Majesty, in this work, have a double commodity in the avoidance of people here and in making use of them there.

The third consequence is, the great safety that is like to grow to your Majesty's estate in general by this act, in discomfiting all hostile attempts of foreigners, which the weakness of

that kingdom hath heretofore invited, wherein I shall not need to fetch reasons afar off, either for the general or particular; for the general, because nothing is more evident than that which one of the Romans said of Peloponnesus: *Testudo intra tegumen tuta est*; the tortoise is safe within her shell: but if she put forth any part of her body, then it endangereth not only the part that is so put forth, but all the rest; and so we see in armour, if any part be left naked, it puts in hazard the whole person; and in the natural body of man, if there be any weak or affected part, it is enough to draw rheums or malign humours unto it, to the interruption of the health of the whole body.

And for the particular, the example is too fresh that the indisposition of that kingdom hath been a continual attractive of troubles and infestations upon this estate; and though your Majesty's greatness doth, in some sort, discharge this fear, yet, with your increase of power, it cannot be but envy is likewise increased.

The fourth and last consequence is, the great profit and strength which is like to redound to your crown by the working upon this unpolished part thereof, whereof your Majesty (being in the strength of your years) are like, by the good pleasure of Almighty God, to receive more than the first fruits, and your posterity a growing and springing vein of riches and power. For this island being another Britain, as Britain was said to be another world, is endowed with so many dowries of nature (considering the fruitfulness of the soil, the ports, the rivers, the fishings, the quarries, the woods, and other materials; and especially the race and generation of men, valiant, hardy, and active), as it is not easy, no, not upon the Continent, to find such confluence of commodities, if the hand of man did join with the hand of nature. So, then, for the excellency of the work in point of honour, policy, safety, and utility, here I cease.

Under the second head, of the Means, the following observations are made respecting the buildings to be erected by the undertakers, as the persons were called who were to be induced to advance the necessary funds for the plantation:—

My opinion is, that the building be altogether in towns, to be compounded as well of husbandries as of arts. My reasons are:

First, when men come into a country vast and void of all things necessary for the use of man's life, if they set up together in a place, one of them will the better supply the wants of another: work-folks of all sorts will be the more continually on work without loss of time; when, if work fail in one place, they may have it fast by; the ways will be made more passable for carriages to those seats or towns than they can be to a number of dispersed solitary places, and infinite other helps and easements scarcely to be comprehended in cogitation, will ensue in vicinity and society of people; whereas, if they build scattered, as is projected, every man must have a cornucopia in himself for all things he must use, which cannot but breed much difficulty and no less waste.

Secondly, it will draw out of the inhabited country of Ireland provisions and victuals, and many necessaries, because they shall be sure of utterance; whereas, in the dispersed habitations, every man must reckon only upon that that he brings with him, as they do in provisions of ships.

Thirdly, the charge of bawnes, as they call them, to be made about every castle or house, may be spared when the habitations shall be congregated only into towns.

And lastly, it will be a means to secure the country against future perils in case of any revolt and defection. For, by a slight fortification, of no great charge, the danger of any attempts of kierns and swordmen may be prevented: the omission of which point, in the last plantation of Munster, made the work of years to be but the spoil of days. And if any man think it will draw people too far off from the grounds they are to labour, it is to be understood that the number of the towns be increased accordingly, and likewise the situation of them be as in the centre, in respect of the portions assigned to them. For in the champaign countries of England, where the habitation useth to be in towns and not dispersed, it is no new thing to go two miles off to plough part of their grounds; and two miles compass will take up a good deal of country.

Another paper published in the First Part of the *Resuscitatio* is entitled 'Advice to the King touching Mr. Sutton's Estate.' Its object is to make out the impolicy of permitting the erection of the Charter-House, to which purpose Sutton had devoted his large fortune. It was probably written subsequently to the death of Sutton, which happened in 1611, after he had obtained

mere and naked poor should be sustained, but also that the honest person which hath hard means to live, upon whom the poor are now charged, should be in some sort eased. For that were a work generally acceptable to the kingdom, if the public hand of alms might spare the private hand of tax. And therefore, of all other employments of that kind I commend most houses of relief and correction, which are mixed hospitals, where the impotent person is relieved and the sturdy beggar buckled to work; and the unable person also not maintained to be idle (which is ever joined with drunkenness and impurity), but is sorted with such work as he can manage and perform, and where the uses are not distinguished, as in other hospitals; whereof some are for aged and impotent, and some for children, and some for correction of vagabonds; but are general and promiscuous, so that they may take off poor of every sort from the country as the country breeds them. And thus the poor themselves shall find the provision, and other people the sweetness, of the abatement of the tax. Now if it be objected that houses of correction in all places have not done the good expected (as it cannot be denied but in most places they have done much good), it must be remembered that there is a great difference between that which is done by the distracted government of justices of peace, and that which may be done by a settled ordinance, subject to a regular visitation as this may be; and besides the want hath been, commonly, in houses of correction, of a competent and certain stock for the materials of the labour, which in this case may be likewise supplied.

Upon the subject of this paper Tenison, after observing that the event had showed that Bacon was mistaken when he called Sutton's scheme "a sacrifice without salt," adds:—"He proposed four other ends of that great heap of alms to the King's majesty. As first, the erection of a college for controversies for the encountering and refuting of papists. Secondly, the erection of a Receipt (for the word Seminary he refused to make use of) for converts from the persuasions of Rome to the Reformed religion. Thirdly, a settlement of stipends for itinerary preachers in places which needed them; as in Lancashire, where such care had been taken by Queen Elizabeth. And lastly, an increase of salary to the Professors in either University of this land. Where-



fore, his lordship manifesting himself not against the charity, but the manner of disposing it, it was not well done of those who have publicly defamed him by declaring their jealousies of bribery by the heir."

Respecting the very remarkable piece known as Bacon's 'Advice to Sir George Villiers,' Blackbourne says:—"I am to acquaint the reader that there are several copies of this performance:—the first, in 4to., as a single pamphlet, printed in 1661; the second, printed in Lloyd's *Worthies*, under the title of Buckingham, in the year 1670; and the third, in the *Cabala*. The second and third vary very little, inasmuch as they appear to be only two transcripts of one original; though they differ vastly from the first. But the worst circumstance in which they all agree is, that they are incorrect." As the copy in the *Cabala*, however, appeared in the second edition of that Collection published in 1663, as well as in the third published in 1691 (though not in the first published in 1654), it takes precedence over that given in Lloyd's *Worthies*. The title in the *Cabala* is, at full length:—"The Copy of a Letter conceived to be written to the late Duke of Buckingham when he first became a favourite to King James, by Sir Francis Bacon, afterwards Lord Verulam and Viscount St. Alban; containing some advices unto the Duke for his better direction in that eminent place of the Favourite; drawn from him at the entreaty of the Duke himself by much importunity." Blackbourne is puzzled by a passage which he conceives would imply that the paper had been written after the death of the Queen (in March, 1619); but the expression to which he refers—"when there is no queen or princess, *as now*"—may evidently be taken in two senses. The manner and substance, as well as the title, of the Letter show that it must have been addressed to Villiers in the early part of his career at court, or probably in 1615. It is upon the internal evidence, also, it must be confessed, that we are chiefly dependent in respect to the authorship; but it may be regarded as conclusive. Both the matter and the style have all the characteristics of

Bacon's mind and pen. Nor, unless we are to take exception to the mere recognition of such a place or office as that of the royal favourite, is there anything in the advice which Bacon here gives Villiers that can fairly be considered as discreditable to either. Among the most remarkable passages are some that occur only in the edition of 1661. One of these is:—"Remember, then, what your true condition is; the King himself is above the reach of his people, but cannot be above their censures; and you are his shadow, if either he commit an error, and is loth to avow it, but excuses it upon his ministers, of which you are first in the eye, or you commit the fault and have willingly permitted it, and must suffer for it: and so perhaps you may be offered a sacrifice to appease the multitude." Afterwards Villiers is thus addressed:—"You are as a new-risen star, and the eyes of all men are upon you; let not your own negligence make you fall like a meteor." And then the original edition of 1661 proceeds as follows:—

Remember well the great trust you have undertaken, you are as a continual sentinel always to stand upon your watch to give him true intelligence. If you flatter him you betray him; if you conceal the truth of those things from him, which concern his justice or his honour, although not the safety of his person, you are as dangerous a traitor to his state as he that riseth in arms against him. A false friend is more dangerous than an open enemy: kings are styled gods upon earth, not absolute, but *dixi, dii estis*; and the next words are *sed morimini sicut homines*, they shall die like men, and then all their thoughts perish. They cannot possibly see all things with their own eyes nor hear all things with their own ears; they must commit many great trusts to their ministers. Kings must be answerable to God Almighty, to whom they are but vassals, for their actions and for their negligent omissions; but the ministers to kings, whose eyes, ears, and hands they are, must be answerable to God and man for the breach of their duties, in violation of their trusts, whereby they betray them. Opinion is a master-wheel in these cases: that courtier who obtained a boon of the emperor, that he might every morning at his coming into his presence humbly whisper him in the ear and say nothing, asked no unprofitable suit for himself, but

such a fancy raised only by opinion cannot be long lived, unless the man have solid worth to uphold it; otherwise, when once discovered, it vanisheth suddenly. But when a favourite in court shall be raised upon the foundation of merits, and together with the care of doing good service to the king shall give good dispatches to the suitors, then can he not choose but prosper.

The following passage is retained in the two later editions, that in the *Cabala* and that given by Lloyd:—

V. For peace and war, and those things which appertain to either; I in my own disposition and profession am wholly for peace, if please God to bless this kingdom therewith as for many years past he hath done; and,

1. I presume I shall not need to persuade you to the advancing of it, nor shall you need to persuade the king your master therein, for that he hath hitherto been another Solomon in this our Israel, and the motto which he hath chosen, *Beati pacifici*, shows his own judgment: but he must use the means to preserve it, else such a jewel may be lost.

2. God is the God of peace; it is one of his attributes, therefore by him alone we must pray, and hope to continue it: there is the foundation.

3. And the king must not neglect the just ways for it; justice is the best protector of it at home, and providence for war is the best prevention of it from abroad.

4. Wars are either foreign or civil; for the foreign war by the king upon some neighbour nation, I hope we are secure; the king in his pious and just disposition is not inclinable thereunto; his empire is long enough, bounded with the ocean, as if the very situation thereof had taught the king and people to set up their rests, and say *ne plus ultra*.

5. And for a war of invasion from abroad; only we must not be over-secure; that is the way to invite it.

6. But if we be always prepared to receive an enemy, if the ambition or malice of any should incite him, we may be very confident we shall long live in peace and quietness, without any attempts upon us.

7. To make the preparations hereunto the more assured: in the first place I will recommend unto you the case of our out-works, the navy royal and shipping of our kingdom, which are the walls thereof, and every great ship is an impregnable fort;

and our many safe and commodious ports and havens, in every of these kingdoms, are as the redoubts to secure them.

8. For the body of the ships, no nation of the world doth equal England for the oaken timber wherewith to build them; and we need not borrow of any other iron for spikes or nails to fasten them together; but there must be a great deal of providence used that our ship timber be not unnecessarily wasted.

9. But for tackling, as sails and cordage, we are beholden to our neighbours for them, and do buy them for our money; that must be foreseen and laid up in store against a time of need, and not sought for when we are to use them; but we are much to blame that we make them not at home; only pitch and tar we have not of our own.

10. For the true art of building of ships for burden and service both, no nation in the world exceeds us; ship-wrights and all other artisans belonging to that trade must be cherished and encouraged.

11. Powder and ammunition of all sorts we can have at home, and in exchange for other home commodities we may be plentifully supplied from our neighbours, which must not be neglected.

12. With mariners and seamen this kingdom is plentifully furnished; the constant trade of merchandising will furnish us at a need; and navigable rivers will repair the store, both to the navy royal and to the merchants, if they be set on work, and well paid for their labour.

13. Sea-captains, and commanders, and other officers must be encouraged, and rise by degrees, as their fidelity and industry deserve it.

The unfinished Dialogue entitled 'An Advertisement touching an Holy War, written in the year 1622,' was first published in the Second Part of the *Resuscitatio* (1670). It is preceded by an interesting Letter addressed 'To the Right Reverend Father in God, Lancelot Andrews, Lord Bishop of Winchester, and Counsellor of Estate to his Majesty,' which commences as follows:—

My Lord, Amongst consolations it is not the least to represent to a man's self like examples of calamity in others. For examples give a quicker impression than arguments, and besides, they certify us that which the Scripture also tendereth for satisfaction; that no new thing is happened unto us. This

they do the better, by how much the examples are liker in circumstances to our own case, and more especially, if they fall upon persons that are greater or worthier than ourselves. For as it savoureth of vanity to match ourselves highly in our own conceit, so on the other side it is a good sound conclusion, that if our betters have sustained the like events, we have the less cause to be grieved.

In this kind of consolation I have not been wanting to myself, though as a Christian I have tasted (through God's great goodness) of higher remedies. Having therefore, through the variety of my reading, set before me many examples both of ancient and later times, my thoughts, I confess, have chiefly stayed upon three particulars as the most eminent and the most resembling. All three persons that had held chief place of authority in their countries, all three ruined not by war or by any other disaster, but by justice and sentence as delinquents and criminals; all three famous writers, insomuch as the remembrance of their calamity is now as to posterity but as a little picture of night-work, remaining amongst the fair and excellent tables of their acts and works. And all three (if that were anything to the matter) fit examples to quench any man's ambition of rising again; for that they were every one of them restored with great glory, but to their further ruin and destruction, ending in a violent death. The men were Demosthenes, Cicero, and Seneca, persons that I durst not claim affinity with, except the similitude of our fortunes had contracted it. When I had cast mine eyes upon these examples, I was carried on further to observe how they did bear their for unes, and principally how they did employ their times, being banished and disabled for public business; to the end that I might learn by them, and that they might be as well my counsellors as my comforters. Whereupon I happened to note how diversely their fortunes wrought upon them, especially in that point at which I did most aim, which was the employing of their times and pens. In Cicero I saw that during his banishment, which was almost two years, he was so softened and dejected as he wrote nothing but a few womanish epistles. And yet, in mine opinion, he had least reason of the three to be discouraged; for that although he was judged, and judged by the highest kind of judgment, in form of statute or law, that he should be banished, and his whole estate confiscated and seized, and his houses pulled down, and that it should be highly penal for any man to propound a repeal, yet his case

even then had no great blot of ignominy, for it was but a tempest of popularity which overthrew him. Demosthenes, contrarywise, though his case was foul, being condemned for bribery, and not simple bribery, but bribery in the nature of treason and disloyalty, yet nevertheless took so little knowledge of his fortune, as during his banishment he did much busy himself and intermeddle with matters of state, and took upon him to counsel the state (as if he had still been at the helm) by letters, as appears by some epistles of his which are extant. Seneca indeed, who was condemned for many corruptions and crimes, and banished into a solitary island, kept a mean, and though his pen did not freeze, yet he abstained from intruding into matters of business, but spent his time in writing books of excellent argument and use for all ages, though he might have made better choice sometimes of his dedications.

These examples confirmed me much in a resolution (whereunto I was otherwise inclined) to spend my time wholly in writing, and to put forth that poor talent, or half talent, or what it is, that God hath given me, not as heretofore to particular exchanges, but to banks or mounts of perpetuity which will not break.

Most of the remainder of the Letter we have already had occasion to quote or refer to. Bacon goes on to state that, having not long since set forth a part of his *Instauration*, which is that one of his works that he most esteems, he thinks "to proceed in some new parts thereof." He had received from foreign countries many testimonies respecting that work going as far as he could expect at the first in so abstruse an argument; nevertheless he had just cause to doubt that it flew too high over men's heads; his purpose, therefore, was, though he should break the order of time, "to draw it down to the sense by some patterns of a Natural Story and Inquisition." He had also thought it good to procure a translation of his *Advancement of Learning* into the general language, that is, Latin, that it might serve as some preparative or key for the better opening of the *Instauration*, "because," as he explains, "it exhibits a mixture of new conceits and old, whereas the *Instauration* gives the new unmixed, otherwise than with

some little aspersion of the old for taste's sake." This translation, which was not without great and ample additions, and enrichment of the original English, especially in the Second Book, might stand, he held, in lieu of the First Part of the *Instauration*, and acquit the promise he had made in regard to that portion of the work. "Again," he continues, "because I cannot altogether desert the civil person [i.e. character] that I have borne; which if I should forget enough would remember; I have also entered into a work touching Laws, propounding a character of justice in a middle term between the speculative and reverend discourses of philosophers and the writings of lawyers, which are tied and obnoxious to their particular law." He has left no work, however, either completed or even commenced, to which this description is applicable. The purpose that he had once had, he says, of making a particular digest, or reconciliation, of the laws of his own nation, he had laid aside, as being a work not to be accomplished by his own unaided forces and pen. He had thought also that he owed in duty something to his country, which he had ever loved; "insomuch," he says, "as, although my place hath been far above my desert, yet my thoughts and cares concerning the good thereof were beyond and over and above my place;" so now, being as he was, no more able to do his country service, it remained to him to do it honour; and that he had endeavoured to do in his *History of King Henry the Seventh*. As for his *Essays*, and some other pieces of that nature, he counted them but as the recreations of his other studies, and as such it was his purpose to continue them; "though I am not ignorant," he adds, "that those kind of writings would, with less pains and embracement perhaps, yield more lustre and reputation to my name than those other which I have in hand." The Letter concludes thus:—"But, revolving with myself my writings, as well those which I have published as those which I have in hand, methought they went all into the city, and none into the temple; where, because I have found so great consolation, I

desire likewise to make some poor oblation. Therefore I have chosen an argument mixed of religious and civil considerations; and likewise mixed between contemplative and active. For who can tell whether there may not be an *Exoriare aliquis?*\* Great matters, especially if they be religious, have, many times, small beginnings: and the platform may draw on the building. This work, because I was ever an enemy to flattering dedications, I have dedicated to your lordship, in respect of our ancient and private acquaintance; and because amongst the men of our times I hold you in special reverence. Your Lordship's loving friend, FR. ST. ALBAN."

By a holy war Bacon means a war or crusade against the Turks. The persons by whom the discussion is carried on are six in number; namely, Eusebius, a moderate divine; Gamaliel, a Protestant zealot; Zebedaeus, a Roman Catholic zealot; Martius, a military man; Eupolis, a politician; Pollio, a courtier. The most interesting part of the dialogue, so far as it goes, is the earlier part of it, which is as follows:—

There met at Paris, in the house of Eupolis, Eusebius, Zebedaeus, Gamaliel, Martius, all persons of eminent quality, but of several dispositions. Eupolis himself was also present, and while they were set in conference Pollio came in to them from court, and as soon as he saw them, after his witty and pleasant manner, he said:

*Pollio.*—Here be four of you, I think, were able to make a good world, for you are as differing as the four elements, and yet you are friends. As for Eupolis, because he is temperate and without passion, he may be the fifth essence.

*Eupolis.*—If we five, Pollio, make the great world, you alone make the little, because you profess and practise both to

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\* In allusion to the dying imprecation of Dido, in the Fourth *Æneid*—

“*Exoriare aliquis nostris ex ossibus ultor,*” &c.

“Rise some avenger of our Libyan blood;  
With fire and sword pursue the perjured brood.”

*Dryden.*



refer all things to yourself. *Pollio*.—And what do they that practise it and profess it not? *Eupolis*.—They are the less hardy and the more dangerous. But come and sit down with us, for we were speaking of the affairs of Christendom at this day, wherein we would be glad also to have your opinion.

*Pollio*.—My Lords, I have journeyed this morning, and it is now the heat of the day, therefore your Lordship's discourses had need content my ears very well, to make them entreat mine eyes to keep open. But yet if you will give me leave to awake you when I think your discourses do but sleep, I will keep watch the best I can. *Eupolis*.—You cannot do us a greater favour. Only I fear you will think all our discourses to be but the better sort of dreams, for good wishes without power to effect are not much more. But, sir, when you came in, Martius had both raised our attentions and affected us with some speech he had begun, and it falleth out well to shake off your drowsiness, for it seemed to be the trumpet of a war. And therefore, Martius, if it please you begin again, for the speech was such as deserveth to be heard twice, and I assure you your auditory is not a little amended by the presence of Pollio. *Martius*.—When you came in, Pollio, I was saying freely to these lords, that I had observed how, by the space now of half a century of years, there had been (if I may speak it) a kind of meanness in the designs and enterprises of Christendom. Wars with subjects, like an angry suit for a man's own that might be better ended by accord. Some petty acquests of a town, or a spot of territory, like a farmer's purchase of a close or nook of ground that lay fit for him. And although the wars had been for a Naples, or a Milan, or a Portugal, or a Bohemia, yet these wars were but the wars of heathens (of Athens, or Sparta, or Rome) for secular interest or ambition, not worthy the warfare of Christians. The Church, indeed, maketh her missions into the extreme parts of the nations and isles, and it is well; but this is *ecce unus gladius hic*. The Christian princes and potentates are they that are wanting to the propagation of the faith by their arms. Yet our Lord that said on earth to the disciples, *Ite et praedicate*, said from heaven to Constantine, *In hoc signo vince*. What Christian soldier is there that will not be touched, with a religious emulation to see an order of Jesus, or of Saint Francis, or of Saint Augustine, do such service for enlarging the Christian borders, and an order of Saint Jago, or Saint Michael, or Saint George, only to robe and feast, and perform rites and ob-

servances? Surely the merchants themselves shall rise in judgment against the princes and nobles of Europe, for they have made a great path in the seas, unto the ends of the world, and set forth ships and forces of Spanish, English, and Dutch, enough to make China tremble, and all this for pearl or stone, or spices, but for the pearl of the kingdom of heaven, or the stones of the heavenly Hierusalem, or the spices of the Spouse's garden, not a mast hath been set up. Nay, they can make shift to shed Christian blood, so far off amongst themselves, and not a drop for the cause of Christ. But let me recall myself; I must acknowledge that within the space of fifty years, whereof I spake, there have been three noble and memorable actions upon the infidels, wherein the Christian hath been the invader. For where it is upon the defensive, I reckon it a war of nature and not of piety. The first was that famous and fortunate war by sea, that ended in the victory of Lepanto, which hath put a hook into the nostrils of the Ottomans to this day, which was the work chiefly of that excellent pope, Pius Quintus, whom I wonder his successors have not declared a saint. The second was the noble, though unfortunate expedition of Sebastian, King of Portugal, upon Afric, which was achieved by him alone, so alone, as left somewhat for others to excuse. The last was the brave incursion of Sigismund, the Transylvanian prince, the thread of whose prosperity was cut off by the Christians themselves, contrary to the worthy and paternal monitories of Pope Clement the Eighth. More than these I do not remember. *Pollio*.—No! What say you to the extirpation of the Moors of Valentia? At which sudden question Martius was a little at a stop, and Gamaliel prevented him, and said: *Gamaliel*.—I think Martius did well in omitting that action, for I, for my part, never approved it, and it seems God was not well pleased with that deed, for you see the King in whose time it passed (whom you Catholics count a saint-like and immaculate prince) was taken away in the flower of his age, and the author and great counsellor of that rigour (whose fortunes seem to be built upon the rock) is ruined; and it is thought by some, that the reckonings of that business are not yet cleared with Spain; for that numbers of those supposed Moors, being tried now by their exile, continue constant in the faith, and true Christians in all points save in the thirst of revenge. *Zebadæus*.—Make not hasty judgment, Gamaliel, of that great action which was as Christ's fan in those countries, except you

could show some such covenant from the crown of Spain as Joshua made with the Gibeonites, that that cursed seed should continue in the land. And you see it was done by edict, not tumultuously; the sword was not put into the people's hands.

*Eupolis.*—I think Martius did omit it not as making any judgment of it either way, but because it sorted not aptly with action of war, being upon subjects, and without resistance. And let us, if you think good, give Martius leave to proceed in his discourse, for methought he spake like a divine in armour.

*Martius.*—It is true, Eupolis, that the principal object which I have before mine eyes in that whereof I speak is piety and religion. But nevertheless, if I should speak only as a natural man, I should persuade the same thing. For there is no such enterprise at this day for secular greatness and terrene honour as a war upon infidels. Neither do I in this propound a novelty or imagination, but that which is proved by late examples of the same kind, though perhaps of less difficulty. The Castilians, the age before that wherein we lived, opened the new world, and subdued and planted Mexico, Peru, Chili, and other parts of the West Indies. We see what floods of treasure have flowed into Europe by that action, so that the cense or rates of Christendom are raised since ten times, yea, twenty times told. Of this treasure, it is true, the gold was accumulate and store treasure for the most part, but the silver is still growing. Besides infinite is the access of territory and empire by the same enterprise. For there was never an hand drawn that did double the rest of the habitable world before this, for so a man may truly term it, if he shall put to account as well that that is, as that which may be hereafter by the further occupation and colonizing of those countries. And yet it cannot be affirmed (if one speak ingenuously) that it was the propagation of the Christian faith that was the adamant of that discovery, entry, and plantation, but gold and silver, and temporal profit, and glory, so that what was first in God's providence was but second in man's appetite and intention. The like may be said of the famous navigations and conquests of Emanuel, King of Portugal, whose arms began to circle Afric and Asia, and to acquire not only the trade of spices, and stores, and musk, and drugs, but footing and places in those extreme parts of the East. For neither in this was religion the principal, but amplification and enlargement of riches and dominion. And the effect of these two enterprises is now such that both the East and the West Indies being met in

the crown of Spain, it is come to pass that as one saith in a brave kind of expression, the sun never sets in the Spanish dominions, but ever shines upon one part or other of them, which to say truly, is a beam of glory, though I cannot say it is so solid a body of glory wherein the crown of Spain surpasseth all the former monarchies. So as to conclude, we may see that in these actions upon Gentiles or Infidels, only or chiefly, both the spiritual and temporal, honour and good, have been in our pursuit and purpose conjoined. *Pollio*.—Methinks, with your favour, you should remember, *Martius*, that wild and savage people are like beasts and birds, which are *ferae naturae*, the property of which passeth with the possession, and goeth to the occupant, but of civil people it is not so. *Martius*.—I know no such difference amongst reasonable souls, but that whatsoever is in order to the greatest and most general good of people may justify the action, be the people more or less civil. But, *Eupolis*, I shall not easily grant that the people of Peru or Mexico were such brute savages as you intend, or that there should be any such difference between them and many of the infidels which are now in other parts. In Peru, though they were unparalleled people, according to the clime, and had some customs very barbarous, yet the government of the Incas had many parts of humanity and civility. They had reduced the nations from the adoration of a multitude of idols and fancies to the adoration of the sun. And as I remember, the Book of Wisdom noteth degrees of idolatry, making that of worshipping petty and vile idols more gross than simply the worshipping of the creature. And some of the prophets, as I take it, do the like in the metaphor of more ugly and bestial fornication. The Peruvians also, under the Incas, had magnificent temples of their superstition, they had strict and regular justice, they bare great faith and obedience to their kings, they proceeded in a kind of martial justice with their enemies, offering them their law, as better for their own good, before they drew their sword. And much like was the state of Mexico, being an elective monarchy. As for those people of the East (Goa, Calacute, Malacca), they were a fine and dainty people, frugal and yet elegant, though not military. So that if things be rightly weighed, the empire of the Turks may be truly affirmed to be more barbarous than any of these. A cruel tyranny, bathed in the blood of their emperors upon every succession, a heap of vassals and slaves, no nobles, no gentlemen, no free men, no inheritance of land,

no stirp or ancient families, a people that is without natural affection, and, as the Scripture saith, that regardeth not the desires of women, and without piety or care towards their children, a nation without morality, without letters, arts, or sciences, that can scarce measure an acre of land, or an hour of the day, base and sluttish in buildings, diets, and the like, and in a word a very reproach of human society, and yet this nation hath made the garden of the world a wilderness, for that, as it is truly said concerning the Turks, where Ottoman's horse sets his foot people will come up very thin.

Attached to this dialogue is a short fragment printed by Tenison in the *Baconiana*, entitled 'The Lord Bacon's Questions about the Lawfulness of a War for the Propagation of Religion.' Bacon's own heading of the paper appears to have been, 'Questions wherein I desire opinion, joined with arguments and authorities.'

Perhaps the most spirited and eloquent of all Bacon's political writings is his last, entitled 'Considerations concerning a War with Spain, inscribed to Prince Charles, anno 1624.' It is printed in the Second Part of the *Resuscitatio*. The war with Spain, into which he succeeded in plunging the country as soon as Charles became King in the beginning of the following year, was at this moment the great object upon which Buckingham was bent; and the present tract was probably prepared at the instigation of the favourite, or at least with the view of aiding and gratifying him. But, whatever we may think either of the motives by which Bacon may have been actuated or of the wisdom or true patriotism of the policy which he recommends, it is impossible to read the present paper without admiration of its brilliancy as a piece of writing, and of the vital force and buoyancy with which the old man has filled it. "Your Highness," it gracefully begins, "hath an imperial name. It was a Charles that brought the empire first into France; a Charles that brought it first into Spain: why should not Great Britain have its turn?" He then sets himself in the first place to maintain the justice of the proposed war. It will be waged, he contends, not for the Palatinate only, though that may

be the more immediate object, "but for England, Scotland, Ireland, our King, our prince, our nation, all that we have." It is the overgrowing greatness of the Spaniards that is its true cause and justification:—

And to say truth, if one mark it well, this was in all memory the main piece of wisdom in strong and prudent counsels, to be in perpetual watch that the states about them should neither by approach, nor by increase of dominion, nor by ruining confederates, nor by blocking of trade, nor by any the like means, have it in their power to hurt or annoy the states they serve, and whensoever any such cause did but appear straightways to buy it out with a war, and never take up peace at credit and upon interest. It is so memorable, as it is yet as fresh as if it were done yesterday, how that triumvirate of kings, Henry VIII. of England, Francis I. of France, and Charles V. Emperor and King of Spain, were in their times so provident as scarce a palm of ground could be gotten by either of the three, but that the other two would be sure to do their best to set the balance of Europe upright again.

And the like diligence was used in the age before by that league wherewith Guiccardine beginneth his story, and maketh it as it were the calendar of the good days of Italy, which was contracted between Ferdinando, King of Naples, Lorenzo of Medici, Potentate of Florence, and Ludovico Sforza, Duke of Milan, designed chiefly against the growing power of the Venetians, but yet so as the confederates had a perpetual eye one upon another that none of them should overtop. To conclude therefore, howsoever some schoolmen (otherwise reverend men, yet fitter to guide penknives than swords) seem precisely to stand upon it that every offensive war must be *ultio*, a revenge that presupposeth a precedent assault or injury, yet neither do they descend to this point which we now handle of a just fear, neither are they of authority to judge this question against all the precedents of time. For certainly as long as men are men (the sons, as the poets allude, of Prometheus, and not of Epimetheus), and as long as reason is reason, a just fear will be a just cause of a preventive war, but especially if it be part of the case that there is a nation that is manifestly detected to aspire to monarchy and new acquests, then other states assuredly cannot be justly accused for not staying for the first blow, or for not accepting Polyphemus' courtesy to be the last that shall be eaten up. . . .

Is it nothing that the crown of Spain hath enlarged the bounds thereof within the last six score years much more than the Ottomans? I speak not of matches or unions, but of arms, occupations, invasions. Granada, Naples, Milan, Portugal, the East and West Indies, all these are actual additions to that crown. They had a mind to French Britain, the lower part of Picardy and Piedmont, but they have let fall their bit. They have to this day such a hovering possession of the Valtoline, as an hobby hath over a lark, and the Palatinate is in their talons, so that nothing is more manifest than that this nation of Spain runs a race still of empire, when all other states of Christendom stand in effect at a stay. Look then a little further into the titles whereby they have acquired and do now hold these new portions of their crown, and you will find them of so many varieties, and such natures, to speak with due respect, as may appear to be easily minted, and such as can hardly at any time be wanting. And therefore so many new conquests and purchases, so many strokes of the alarm-bell of fear, and awaking to other nations, and the facility of the titles which hand over head have served their turn, doth ring the peal so much the sharper and the louder.

Afterwards passing to the second part of his argument, he contends that, in every instance hitherto in which the two nations had encountered, England had come off with the advantage;—in the Netherlands in the year 1578, on that famous Lammas-day when the reputation of Don John of Austria was overthrown and buried, chiefly by the prowess and virtue of the English and Scottish troops under the conduct of Sir John Norris and Sir Robert Stuart; in 1580, when they were driven out of Ireland by Lord Grey, and the garrison which they had placed there in their Fort del Or compelled to yield themselves prisoners; in 1582, when Sir John Norris effected his memorable retreat from Ghent in spite of the opposition of the Prince of Parma and the entire Spanish army; in the expedition of Drake and Carlisle to the West Indies in 1585; in Drake's expedition to Cadiz in 1587—which last enterprise, Bacon says, he remembers, Drake, in the vaunting style of a soldier, would call the singeing of the King of Spain's beard. Then he proceeds:—

The enterprize of eighty-eight deserveth to be stood upon a little more fully, being a miracle of time. There armed from Spain in the year 1588 the greatest navy that ever swam upon the sea. For though there have been far greater fleets for number, yet for the bulk and building of the ships, with the furniture of great ordnance and provisions, never the like. The design was to make not an invasion only, but an utter conquest of this kingdom. The number of vessels were one hundred and thirty, whereof galliases and galleons seventy-two, goodly ships like floating towers or castles, manned with thirty thousand soldiers and mariners. This navy was the preparation of five whole years at the least. It bare itself also upon divine assistance, for it received special blessing from Pope Sixtus, and was assigned as an Apostolical mission, for the reducement of this kingdom to the obedience of the see of Rome. And in further token of this holy warfare, there were amongst the rest of these ships twelve called by the name of the twelve Apostles. But it was truly conceived that this kingdom of England could never be overwhelmed, except the land waters came in to the sea-tides. Therefore was there also in readiness, in Flanders, a mighty strong army of land-forces to the number of fifty thousand veteran soldiers, under the conduct of the Duke of Parma, the best commander next the French King, Henry the Fourth, of his time. These were designed to join with the forces at sea, there being prepared a number of flat-bottomed boats to transport the land-forces under the wing and protection of the great navy. For they made no account but that the navy should be absolute master of the seas. Against these forces there were prepared on our part to the number of near one hundred ships, not so great of bulk, indeed, but of a more nimble motion and more serviceable, besides a less fleet of thirty ships for the custody of the narrow seas. There were also in readiness at land two armies, besides other forces, to the number of ten thousand, dispersed amongst the coast towns in the southern parts. The two armies were appointed, one of them consisting of twenty-five thousand horse and foot, for the repulsing of the enemy at their landing, and the other twenty-five thousand for safeguard and attendance about the court and the Queen's person. There were also other dormant musters of soldiers throughout all parts of the realm, that were put in readiness but not drawn together. The two armies were assigned to the leading of two generals, noble persons, but both of them rather courtiers and assured



to the state, than martial men, yet lined and assisted with subordinate commanders of great experience and valour. The fortune of the war made this enterprize at first a play at base. The Spanish navy set forth out of the Groyne in May, was dispersed and driven back by weather. Our navy set forth somewhat later out of Plymouth, and bare up towards the coast of Spain to have fought with the Spanish navy, and partly by reason of contrary winds, partly upon advertisement that the Spaniards were gone back, and upon some doubt also that they might pass by towards the coast of England whilst we were seeking them afar off, returned likewise into Plymouth about the middle of July. At that time came more confident advertisement, though false, not only to the Lord Admiral but to the court, that the Spaniards could not possibly come forward that year, whereupon our navy was upon the point of disbanding, and many of our men gone ashore. At which very time the Invincible Armada (for so it was called in a Spanish ostentation throughout Europe) was discovered upon the western coast. It was a kind of surprise, for that, as was said, many of our men were gone to land, and our ships ready to depart. Nevertheless the Admiral, with such ships only as could suddenly be put in readiness, made forth towards them, insomuch as of one hundred ships there came scarce thirty to work. Howbeit with them and such as came daily in, we set upon them and gave them the chace. But the Spaniards, for want of courage, which they call commission, declined the fight, casting themselves continually into roundels, their strongest ships walling in the rest, and in that manner they made a flying march towards Calais. Our men by the space of five or six days followed them close, fought with them continually, made great slaughter of their men, took two of their great ships, and gave divers others of their ships their death's wounds, whereof soon after they sank and perished, and in a word distressed them almost in the nature of a defeat, we ourselves in the meantime receiving little or no hurt. Near Calais the Spaniards anchored, expecting their land forces, which came not. It was afterwards alleged that the Duke of Parma did artificially delay his coming. But this was but an invention and pretension given out by the Spaniards, partly upon a Spanish envy against that duke being an Italian, and his son a competitor to Portugal, but chiefly to save the monstrous scorn and disreputation which they and their nation received by the success of that enterprize. Therefore their colours and

excuse forsooth were, that their general by sea had a limited commission not to fight until the land forces were come in to them, and that the Duke of Parma had particular reaches and ends of his own, underhand, to cross the design. But it was both a strange commission and a strange obedience to a commission for men in the midst of their own blood, and being so furiously assailed, to hold their hands contrary to the laws of nature and necessity. And as for the Duke of Parma, he was reasonably well tempted to be true to that enterprise by no less promise than to be made a feudatory or beneficiary king of England, under the seignory in chief of the Pope, and the protection of the King of Spain. Besides, it appeared that the Duke of Parma held his place long after in the favour and trust of the King of Spain by the great employments and services that he performed in France; and again it is manifest that the duke did his best to come down and to put to sea: the truth was, that the Spanish navy, upon those proofs of fight that they had with the English, finding how much hurt they received, and how little hurt they did, by reason of the activity and low building of our ships and skill of our seamen, and being also commanded by a general of small courage and experience, and having lost at the first two of their bravest commanders at sea, Pedro de Valdez and Michael de Oquenda, durst not put it to a battle at sea, but set up their res<sup>o</sup> wholly upon the land enterprise. On the other side, the transporting of the land forces failed in the very foundation; for, whereas the Council of State made full account that their navy should be master of the sea, and therefore able to guard and protect the vessels of transportation, when it fell out to the contrary that the great navy was distressed, and had enough to do to save itself; and again, that the Hollanders impounded their land forces with a brave fleet of thirty sail, excellently well appointed;—things, I say, being in this state, it came to pass that the Duke of Parma must have flown if he would have come into England, for he could get neither bark nor mariner to put to sea; yet certain it is that the duke looked still for the coming back of the Armada, even at that time, when they were wandering and making their perambulation upon the northern seas. But, to return to the Armada, which we left anchored at Calais: from thence, as Sir Walter Raleigh was wont prettily to say, they were suddenly driven away with squibs, for it was no more but a stratagem of fire-boats, manless, and sent upon them by the favour of the wind in the night time,

that did put them in such terror as they cut their cables and left their anchors in the sea. After, they hovered some two or three days about Graveling, and there again were beaten in a great fight, at what time our second fleet, which kept the narrow seas, was come in and joined to our main fleet. Thereupon, the Spaniards entering into further terror, and finding also divers of their ships every day to sink, lost all courage, and, instead of coming up into the Thames mouth for London, as their design was, fled on towards the north to seek their fortunes, being still chased by the English navy at the heels, until we were fain to give them over for want of powder. The breath of Scotland the Spaniards could not endure, neither durst they as invaders land in Ireland, but only ennobled some of the coasts thereof with shipwrecks; and so going northwards as long as they had any doubt of being pursued, at last, when they were out of reach, they turned and crossed the ocean to Spain, having lost fourscore of their ships and the greater part of their men. And this was the end of that sea-giant, the Invincible Armada, which, having not so much as fired a cottage of ours at land, nor taken a cock-boat of ours at sea, wandered through the wilderness of the northern seas, and, according to the curse in the Scriptures, came out against us one way and fled before us seven ways: serving only to make good the judgment of an astrologer long before given, *octogesimus octavus mirabilis annus*, or rather to make good, even to the astonishment of all posterity, the wonderful judgments of God poured down commonly upon vast and proud aspirings. . . . .

In the year 1591 was that memorable fight of an English ship called the *Revenge*, under the command of Sir Richard Grenvil, memorable, I say, even beyond credit, and to the height of some heroical fable. And though it were a defeat, yet it exceeded a victory, being like the act of Samson that killed more men at his death than he had done in the time of all his life. This ship for the space of fifteen hours sat like a stag among hounds at the bay, and was seized and fought with in turn by fifteen great ships of Spain, part of a navy of fifty-five ships in all; the rest, like abettors, looking on afar off. And amongst the fifteen ships that fought, the great *St. Philip* was one, a ship of fifteen hundred ton, prince of the twelve sea-apostles, which was right glad when she was shifted off from the *Revenge*. This brave ship, the *Revenge*, being manned only with two hundred soldiers and mariners, whereof eighty lay

sick, yet nevertheless, after a fight maintained, as was said, of fifteen hours, and two ships of the enemy sunk by her side, besides many more torn and battered, and great slaughter of men, never came to be entered, but was taken by composition; the enemies themselves having in admiration the virtue of the commander and the whole tragedy of that ship. . . . .

In the year 1601 followed the battle of Kinsale in Ireland. By this Spanish invasion of Ireland, which was in September that year, a man may guess how long time a Spaniard will live in Irish ground, which is a matter of a quarter of a year, or four months at most; for they had all the advantages in the world, and no man could have thought, considering the small forces employed against them, that they could have been driven out so soon. They obtained, without resistance, in the end of September the town of Kinsale; a small garrison of 150 English leaving the town upon the Spaniards' approach, and the townsmen receiving the foreigners as friends. The number of Spaniards that put themselves into Kinsale was 2000 men, soldiers of old bands, under the command of Don Juan d'Aquila, a man of good valour. The town was strong of itself, neither wanted there any industry to fortify it on all parts, and make it tenable according to the skill and discipline of Spanish fortification. At that time the rebels were proud, being encouraged upon former successes; for though the then deputy, the Lord Mountjoy, and Sir George Carew, President of Munster, had performed divers good services to their prejudice, yet the defeat they had given the English at Blackwater not long before, and their treaty, too much to their honour, with the Earl of Essex, was yet fresh in their memory. The Deputy lost no time, but made haste to have recovered the town before new succours came, and sat down before it in October, and laid siege to it by the space of three winter months or more, during which time sallies were made by the Spaniards, but they were beaten in with loss. In January came fresh succours from Spain, to the number of 2000 more, under the conduct of Alonzo d'Ocampo. Upon the comforts of these succours Tyrone and Odonnell drew up their forces together to the number of 7000, besides the Spanish regiments, and took the field, resolved to rescue the town and to give the English battle. So here was the case: an army of English of some 6000, wasted and tried with a long winter siege, engaged in the midst between an army of a greater number than themselves, fresh and in vigour, on the one side, and a town strong

in fortification and strong in men on the other. But what was the event? This, in few words: that after the Irish and Spanish forces had come on and showed themselves in some bravery, they were content to give the English the honour as to charge them first; and when it came to the charge, there appeared no other difference between the valour of the Irish rebels and the Spaniards, but that the one ran away before they were charged, and the other straight after. And again, the Spaniards that were in the town had so good memories of their losses in their former sallies, as the confidence of an army which came for their deliverance could not draw them forth again. To conclude, there succeeded an absolute victory for the English, with the slaughter of above 2000 of the enemy, the taking of nine ensigns, whereof six Spanish, the taking of the Spanish general d'Ocampo prisoner, and this with the loss of so few of the English as is scarce credible, being, as hath been rather confidently than credibly reported, but of one man, the cornet of Sir Richard Graeme, though not a few hurt. There followed immediately after the defeat a present yielding up of the town by composition, and not only so, but an avoiding, by express articles of treaty accorded, of all other Spanish forces throughout all Ireland, from the places and nests where they had settled themselves in greater strength, as in regard of the natural situation of the places, than that was of Kinsale; which were Castlehaven, Baltimore, and Beerhaven. Indeed they went away with sound of trumpet, for they did nothing but publish and trumpet all the reproaches they could devise against the Irish land and nation, insomuch as d'Aquila said in open treaty, that, when the Devil upon the mount did show Christ all the kingdoms of the earth and the glory of them, he did not doubt but the Devil left out Ireland, and kept it for himself.

There is a short paper in Stephens's Second Collection entitled 'Notes of a Speech concerning a War with Spain,' which appears in the greater part to be only a rough draught of the 'Considerations;' but the following rapid summary is distinguished both by its spirit and its finish:—

You do not find that for this age, take it for a hundred years, there was ever any encounter between Spanish and English of importance, either by sea or land, but the English came off with the honour: witness, the Lammas-day, the

retreat of Gaunt, the battle of Nieuport, and some others : but there have been some actions, both by sea and land, so memorable as scarce suffer the less to be spoken of. By sea, that of eighty-eight, when the Spaniards, putting themselves most upon their stirrups, sent forth that invincible armada which should have swallowed up England quick ; the success whereof was, that, although that fleet swam like mountains upon our seas, yet they did not so much as take a cock-boat of ours at sea, nor fire a cottage at land, but came through our channel, and were driven, as Sir Walter Raleigh says, by squibs (fire-boats he means) from Calais, and were soundly beaten by our ships in fight, and many of them sunk ; and finally durst not return the way they came, but made a scattered perambulation, full of shipwrecks, by the Irish and Scottish seas, to get home again : just according to the curse of the Scripture, "that they came out against us one way, and fled before us seven ways." By land, who can forget the two voyages made upon the continent itself of Spain, that of Lisbon, and that of Calais ; when, in the former, we knocked at the gates of the greatest city either of Spain or Portugal, and came off without seeing an enemy to look us in the face ? And though we failed in our foundation, for that Antonio, whom we thought to replace in his kingdom, found no party at all, yet it was a true trial of the gentleness of Spain which suffered us to go and come without any dispute. And for the latter, of Calais, it ended in victory ; we ravished a principal city of wealth and strength in the high countries, sacked it, fired the Indian fleet that was in the port, and came home in triumph ; and yet to this day were never put in suit for it, nor demanded reasons for our doings. You ought not to forget the battle of Kinsale, in Ireland, what time the Spanish forces were joined with the Irish—good soldiers as themselves, or better—and exceeded us far in numbers, and yet they were soon defeated, and their general, d'Avila, taken prisoner ; and that war, by that battle, quenched and ended.

And it is worthy to be noted how much our power in those days was inferior to our present state. Then, a lady old and owner only of England, entangled with the revolt of Ireland, and her confederates of Holland much weaker and in no conjuncture. Now, a famous king, and strengthened with a prince of singular expectation, and in the prime of his years, owner of the entire isle of Britain, enjoying Ireland populate and quiet, and infinitely more supported by confederates of

the Low Countries, Denmark, divers of the princes of Germany, and others. As for the comparison of Spain, as it was then and as it is now, you will for good respects forbear to speak ; only you will say this, that Spain was then reputed to have the wisest council of Europe, and not a council that will come at the whistle of a favourite.

The remaining pieces that come under the head of Bacon's Political Writings are the following :—‘ Speech in Parliament, 39 of Elizabeth [1597], upon the motion of Subsidy,’ printed in the First Part of the *Resuscitatio* (1657) ; ‘ A Proclamation drawn for his Majesty's First Coming in [1603], prepared but not used,’ in Stephens's Second Collection (1734) ; ‘ A Draught of a Proclamation touching his Majesty's Style, 2do Jacobi [1604], prepared, not used,’ in Stephens's Second Collection ; ‘ A Speech made by Sir Francis Bacon, Knight, chosen by the Commons to present a Petition touching Purveyors ; delivered to his Majesty in the Withdrawing-Chamber at Whitehall, in the Parliament held 1mo et 2do Jacobi [1603], the First Session,’ in the First Part of the *Resuscitatio* ; ‘ A Speech used by Sir Francis Bacon, Knight, in the Honourable House of Commons, 5to Jacobi [Feb. 14th, 1607], concerning the article of the General Naturalization of the Scottish Nation,’ in the First Part of the *Resuscitatio* ; ‘ A Speech used by Sir Francis Bacon, Knight, in the Lower House of Parliament, by occasion of a motion concerning the Union of Laws’ [1606 or 1607 ?], in the First Part of the *Resuscitatio* ; ‘ A Report made by Sir Francis Bacon, Knight, in the House of Commons, of a Speech delivered by the Earl of Salisbury, and another Speech delivered by the Earl of Northampton, at a Conference concerning the Petition of the Merchants upon the Spanish Grievances, Parliament 5to Jacobi’ [1607], in the First Part of the *Resuscitatio* ; ‘ A Certificate to his Majesty, touching the Projects of Sir Stephen Proctor relating to the Penal Laws,’ in Stephens's Second Collection ; ‘ A Speech used to the King by his Majesty's Solicitor, being chosen by the Commons as their mouth and messenger for the presenting to his Majesty the Instrument or Writing of their

Grievances, in the Parliament 7 Jacobi' [1609], in the First Part of the *Resuscitatio*; 'A Speech of the King's Solicitor, used unto the Lords at a Conference, by commission from the Commons, moving and persuading the Lords to join with the Commons in Petition to the King to obtain liberty to treat of a Composition with his Majesty for Wards and Tenures, in the Parliament 7 Jacobi' [1609], in the First Part of the *Resuscitatio*; 'A Frame of Declaration for the Master of the Wards at his First Sitting,' in Stephens's Second Collection; 'Directions for the Master of the Wards to observe for his Majesty's better service and the general good' [issued after February 1611], in Stephens's Second Collection; 'A Speech of the King's Solicitor, persuading the House of Commons to desist from farther question of receiving the King's Messages by their Speaker, and from the body of the Council, as well as from the King's person, in the Parliament 7 Jacobi' [1609], in the First Part of the *Resuscitatio*; 'An Argument of Sir Francis Bacon, the King's Solicitor, in the Lower House of Parliament, proving the King's Right of Impositions on Merchandises Imported and Exported' [must have been delivered in 1610, but evidently imperfect], in Stephens's Second Collection; 'A Brief Speech in the end of the Session of Parliament 7 Jacobi [1609], persuading some supply to be given to his Majesty, which seemed then to stand upon doubtful terms, and passed upon this Speech,' in the First Part of the *Resuscitatio*; 'A Certificate to the Lords of the Council, upon information given touching the Scarcity of Silver at the Mint, and reference to the two Chancellors and the King's Solicitor' [between A.D. 1607 and 1612], in Stephens's Second Collection; 'A Speech delivered by the King's Attorney, Sir Francis Bacon, in the Lower House, when the House was in great heat, and much troubled about the Undertakers; which were thought to be some able and forward gentlemen, who, to ingratiate themselves with the King, were said to have undertaken that the King's business should pass in that House as his Majesty could wish; in the Parliament 12 Jacobi' [1614], in the First Part of the *Resus-*



*citatio*; 'His Lordship's Speeches in the Parliament, being Lord Chancellor, to the Speaker's Excuse, and to the Speaker's Oration' [1621], in the First Part of the *Resuscitatio*.

Most of these Speeches are strongly marked with the impression of Bacon's peculiar intellect, and there is scarcely one of them that does not contain something interesting or striking; but the limits to which we are confined make any further account of them impossible in the present work.

Nor with regard to Bacon's LETTERS can we do more than merely enumerate the several published collections of them in the order of their appearance. All Bacon's Letters that have yet seen the light have been originally given, we believe, in the following publications:—1. 'Cabala, sive Scrinia Sacra,' Part I., 4to. Lon. 1654; 2. The Same, Part II., 4to. Lon. 1654; 3. 'Resuscitatio,' Part I., fol. Lon. 1657; 4. 'A Collection of Letters made by Sir Tobie Mathews, Knt.,' 8vo. Lon. 1660; 5. 'Cabala,' Second Edition, fol. Lon. 1663; 6. 'Resuscitatio,' Part II., fol. Lon. 1670 and 1671; 7. 'Baconiana,' 8vo. Lon. 1679; 8. 'Cabala,' Third Edition, folio. Lon. 1691; 9. Stephens's First Collection, 4to. Lon. 1702; 10. Stephens's Second Collection, 4to. Lon. 1734; 11. 'Letters, Speeches, Charges, Advices, &c., of Francis Bacon, Lord Viscount St. Alban, Lord Chancellor of England; by Thomas Birch, D.D.,' 8vo. Lon. 1763. The Letters that have been collected from these various sources may amount to somewhere about seven hundred in all; but many others still remain in manuscript. Bacon's Letters are all deserving of preservation, either for the worth of the matter in them on its own account, or for the illustration they throw upon his other writings, upon the character of his mind, upon the history of his life, or upon that of his age; and we have reason to believe that the world may ere long expect an edition of all of them that can now be recovered, from a gentleman in the highest degree qualified to do justice to the task he has undertaken. That publication

we have no doubt, will be recognised when it appears as by far the most important contribution that has yet been made to the biography of Bacon; while it will also furnish an example, the first we have yet had, of the manner in which his writings ought to be edited.

Bacon left no descendants. "Children," says his chaplain Rawley, "he had none; which, though they be the means to perpetuate our names after our deaths, yet he had other issues to perpetuate his name, the issues of his brain; in which he was ever happy and admired, as Jupiter was in the production of Pallas. Neither did the want of children detract from the good usage of his consort during the intermarriage, whom he prosecuted with much conjugal love and respect, with many rich gifts and endowments, besides a robe of honour which he invested her withal, which she wore unto her dying day, being twenty years and more after his death." In the Latin this last statement is—"Addita etiam trabea honoraria maritali, quam viginti plus annos post obitum ejus gestavit; totidem enim annis honoratissimo marito superstes fuit." The phraseology is somewhat ambiguous; but what the worthy chaplain designates the robe of honour with which Bacon invested his wife, and which he adds she wore to her dying day, must be, we suppose, the rank of a peeress to which she was raised by her marriage. It deserves to be noticed that Rawley, in this sketch which he gives of the life of his illustrious patron, passes over what is called his fall without so much as an allusion to anything of the kind having ever happened; evincing much more delicacy and sensibility upon that point than Bacon himself. And it is remarkable that Bayle, writing nearly a century after it occurred, had not with all his inquisitiveness heard of the catastrophe that terminated the political career of the "Great Lord Chancellor of Learning as well as of Law;"\* so

\* Who was the original author of this often-repeated expression? In a preface of considerable length, prefixed to a little volume entitled 'The Felicity of Queen Elizabeth and her Times, with other Things, by the Right Honourable Francis Lord Bacon, Viscount St. Alban,' 12mo, Lon.,

completely, out of his own country, had his philosophical renown filled the ears of men to the exclusion of all other speech respecting him. On the subject of Bacon's relations with his wife Rawley would seem to have practised something of the same affectionate and reverential *reticence* as on that of his delinquencies as a politician. At least it would appear from his will that the conjugal love and respect with which he prosecuted his consort during their intermarriage must have received some very decided shock before he left the world. In the beginning of the will he heaps devises and legacies upon his "loving wife,"—"all which," he says, characteristically, "I here set down, not because I think it too much, but because others may not think it less than it is;" but in the end we are suddenly startled by the following emphatic intimation of a change of mind:—"Whatsoever I have given, granted, confirmed, or appointed to my wife in the former part of this my will, I do now, for just and great causes, utterly revoke and make void, and leave her to her right only." It has not been generally noticed that Lady Bacon was a sister of the first wife of Mervin, fourteenth Baron Audley and second Earl of Castlehaven, who suffered death as a felon in 1631, and whose story makes one of the darkest and most revolting pages of our criminal history. They were both daughters and co-heirs of Benedict Barnham, Esq., Alderman of London.

The most memorable bequest in this last will of Bacon's is the following:—"For my name and memory I leave it to men's charitable speeches, and to foreign nations, and the next ages." A modest yet withal lofty appeal; and one which has not been made in vain.

1651, we find it quoted from 'The Preface to Lessius Hygiasticon;' that is, the 'Hygiasticon, seu vera ratio valetudinis Bonæ Vitæ,' of Leonard Lessius, the learned Jesuit and professor of theology at Louvaine, who was a contemporary of Bacon's, having died, at the age of sixty nine, in 1623.

THE END.

## ADDITIONS AND CORRECTIONS.

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Vol. I. p. 16, l. 24, for "appeared Bacon's first publication, as far as is known," read "Bacon wrote a tract, which, however, is not known to have been then published, entitled."

———— l. 1 of *note*, for "B. Brit.," read "Biog. Brit."

———— p. 89, l. 9, for "probably in the same year," read "some short time after."

———— p. 113, line 5 from foot, for "three hundred," read "these hundred."

———— p. 116, l. 2 of *note*, *dele* "here" before "quotes."

———— p. 213, l. 24, for "very short, and can scarcely be all that was prepared," read "extends to only a single paragraph."

———— l. 26, after "fragment," insert "first published in the First Part of the *Resuscitatio*."

———— p. 220, at the end, add "The piece entitled 'The Praise of Henry Prince of Wales' (*In Henricum Principem Walliæ Elogium Francisci Baconi*) was first published, in the original Latin, by Birch, along with an English translation of his own, in his 'Letters, Speeches, &c., of Francis Bacon,' 1763."

Vol. II. p. 7, l. 2 from foot, in *note*, for "Tennison" read "Tenison."

———— p. 24, l. 11 from foot, after "Copernicus;" insert, "with no great respect of those of Galileo;"

———— p. 170, l. 26, insert comma after "Leucippus."

———— p. 200, *note*, for "p. 9," read "p. 89."

———— p. 203, l. 14, for "escape" read "escapes."

———— p. 210, l. 9 from foot, for "1651," read "1670."

———— p. 218, l. 5; for "callendar," read "calendar."