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## Introduction

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Francis Bacon has always had a central but controversial place in historical accounts of early modern philosophy. For some, he was the first spokesman of modern science in general and the father of its inductive method in particular. For others, he was an immoral charlatan who had nothing original to say. In the seventeenth and especially in the eighteenth century, when Bacon's reputation was at its peak, he was widely seen as the originator of modern science and philosophy. In the middle of the nineteenth century William Whewell could still bestow fulsome praise on Bacon – “the supreme Legislator of the modern Republic of Science.” The tide, however, was turning apace, and it soon became a commonplace to ridicule Bacon's philosophy and criticize his moral outlook.

Both of these negative assessments have proven surprisingly tenacious. While moral denunciation continues,<sup>1</sup> the main contemporary criticism of Bacon concerns the shortcomings of his grand philosophical schemes and methodological views. But there has been little consensus as to where precisely Bacon's philosophical failure lay. For some present-day epistemologists, Bacon was a spokesman for a hopelessly naive induction by enumeration, and had thus nothing to do with the development of modern science. In striking contrast, the Frankfurt School criticized Bacon for being the very epitome of the modern scientific domination of nature and humankind.<sup>2</sup> However, although these censures are still occasionally repeated, tremendous strides have been made in Bacon scholarship. New and important material has been turned up and anachronistic criteria for assessing Bacon's philosophy have been abandoned. Sev-

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eral ghosts of nineteenth-century interpretation have been exorcised and a new detailed account of Bacon's philosophy has started to emerge. There has been, in fact, something of a transformation in Bacon studies during the last few decades.

This transformation has first of all meant that new areas of Bacon's philosophy have come under close scrutiny. His moral, political, and legal philosophy as well as his conception of rhetoric, for instance, have recently attracted some of the attention they deserve. Similarly, his speculative philosophy has been thoroughly excavated. But the transformation of Bacon scholarship has also meant that his importance in early modern philosophy has been restored. His plan of scientific reform has been given a central place in historical accounts of the birth of the new science. Bacon declared that a new era in the history of humankind was at hand and that therefore traditional philosophy should be refuted. By replacing contemplative science, interested in words rather than works, with an active or operative science, humankind would have power to produce effects and thus to transform its conditions.

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Bacon's life was integrally linked to the political, courtly, and cultural elite of late-sixteenth- and early-seventeenth-century England and London. Apart from his youthful stay in Paris, he rarely left the world of privilege and position into which he was born at York House, in London on 22 January 1561. His father, Sir Nicholas Bacon, Lord Keeper of the Great Seal, had come from a modest social background, but had made his way to the uppermost rungs of Elizabethan society. Francis's mother, Sir Nicholas's second wife, Ann Cooke, was a well-educated Calvinist who tried to guide her two sons (Francis and his elder brother Anthony) with a firm hand. She was the sister-in-law of William Cecil, Lord Burghley. The most powerful statesman in Elizabethan England was thus Bacon's uncle.

Little is known of Francis's early life. He seems to have been precocious though fragile of body. He received his early education at home, where he and his elder brother Anthony were tutored by John Walsall.<sup>3</sup> It has been suggested that Sir Nicholas's household, where work and public service as well as political and religious reform were emphasized, must have had a profound effect on Francis's later

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thought.<sup>4</sup> In 1573 Sir Nicholas sent Anthony and Francis to his own college, Trinity College, Cambridge, where they were put under the personal tutelage of the Master, Dr John Whitgift, the future archbishop of Canterbury. They resided there until Christmas 1575 (with an interval from August 1574 to March 1575 occasioned by an outbreak of the plague). The education Bacon received was largely in Latin language and in the medieval curriculum, consisting of the trivium (grammar, rhetoric, and dialectic), quadrivium (arithmetic, geometry, astronomy, and music), and the three philosophies (moral, natural, and metaphysical). But the impact of humanism had drastically changed the way in which this curriculum was taught. A particular emphasis was placed on practical problems at the expense of logical subtlety. Indeed, just at the time Bacon arrived in Cambridge, Petrus Ramus's attack on Aristotle's philosophy was being fiercely debated. We have Bacon's later literary secretary and first biographer Dr William Rawley's evidence of the impact of this humanist culture on Bacon. At Cambridge, he wrote, Bacon "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" (I, 2).<sup>5</sup>

As Sir Nicholas had designed his sons' education to be suitable for a public career, the next step was entrance to Gray's Inn. Before assuming his studies, however, Francis was sent to serve with Sir Amyas Paulet, ambassador to France. He stayed in Paris for almost three years, and there has been some speculation of the possible impact on his intellectual development of the French courtly *académie* and of Bernard Palissy (an apprentice potter whose experiments on ceramics brought him brief renown), whose public lectures on agriculture, mineralogy, and geology Bacon could have attended.

Francis returned to England after his father's death in February 1579. Without a position or income, he commenced the study of law at Gray's Inn, where he made rapid progress: he was admitted to the bar as an utter barrister in 1582, became bencher in 1586, reader in 1588, and double reader in 1600. Although he professed the law, "his heart and affection was more carried after the affairs and places of estate," as Rawley put it (I, 6). Accordingly, in the by-elections of 1581, at the tender age of twenty, Bacon was returned to Parliament for Bossiney, Cornwall. Three years later in 1584, he was returned to Parliament, and in this period he wrote his earliest political tract –

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“A letter of Advice to the Queen” – where he discussed the danger of the Catholic population of England and pondered political alliance with other enemies of Spain. Bacon’s political star was clearly rising: he was employed in investigating of English Catholics and was visible for the first time in the parliament of 1586–7; in 1588, at the age of twenty-seven, he was appointed to a committee of lawyers which was to review existing statutes; in 1589 he was an active participant in the Commons, appearing as a reporter of committee business and drawing up a political treatise, “An Advertisement Touching the Controversies of the Church of England,” where he exhibited moderate views in support of the government.

Early in the next decade, Bacon was drawn close to the young earl of Essex, and they soon struck up an intimate friendship. Essex tried to secure first the Attorney Generalship and, failing this, the Solicitor Generalship for Bacon. Both suits were prolonged and exhausting, but they came to naught, partly because of Bacon’s opposition to the subsidy bill in 1593, which had offended the queen, and partly because of Essex’s perseverance, which had annoyed her. Yet, although the queen did not give Bacon a significant office, she employed him as a member of her legal counsel.

Important as Bacon’s friendship with Essex is from a biographical point of view and for accounts of Bacon’s supposed moral failure (Bacon was made to act as a prosecutor in his onetime patron’s trial), for our present purposes the most important development of Bacon’s career in the early 1590s is his intellectual gestation. For, at the beginning of the 1590s, Bacon quite suddenly broached two topics which would preoccupy him for the rest of his life. First, as befitted a precocious and aspiring lawyer, he began to ponder the idea of reform of English law. In a 1593 parliament speech he noted that “[t]he Romans appointed ten men who were to correct and recall all former laws, and set forth their Twelve Tables, so much of all men to be commended” (VIII, 214). This concern was also evident in a masque he wrote for the Christmas festivities at Gray’s Inn in 1594, where Bacon had the counselor advising the prince in “Virtue and a gracious Government” assert: “purge out multiplicity of laws, clear the uncertainty of them, repeal those that are snaring, and press the execution of those that are wholesome and necessary” (VIII, 339). Two years later Bacon wrote his *Maxims of the Law* which was meant as an example of how English law should be restructured.

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Secondly, and more importantly, from the early 1590s we have the first proper evidence that Bacon had grand schemes of philosophical reform in mind. In 1592 he wrote his oft-quoted letter to Lord Burghley: "I wax now somewhat ancient; one and thirty years is a great deal of sand in the hour-glass" (VIII, 108). He expressed a youthful determination to serve the queen, not as a soldier, nor a statesman, but as a philosopher. Eloquently, Bacon wrote:

I confess that I have taken all knowledge to be my province; and if I could purge it of two sorts of rovers, whereof the one with frivolous disputations, confutations, and verbosities, the other with blind experiments and auricular traditions and impostures, hath committed so many spoils, I hope I should bring in industrious observations, grounded conclusions, and profitable inventions and discoveries; the best state of that province. This, whether it be curiosity, or vain glory, or nature, or (if one take it favourably) *philanthropia*, is so fixed in my mind as it cannot be removed. And I do easily see, that place of any reasonable countenance doth bring commandment of more wits than of a man's own, which is the thing I greatly affect. (VIII, 109)

At approximately the same time Bacon composed a masque in which it was argued that "[a]ll the Philosophie of nature" is governed either by "the Gretians," who focus on "words" and "disputacons," or by "the Alchemists," whose arguments are governed by "imposture . . . auricular tradicons, and obscuritie." In contrast, Bacon acknowledged "[t]he in[dustrie of] artificers" which had made "some smale improuments of things invent[ed]," and listed printing, artillery, and the compass as the most important inventions (VIII, 123–6).<sup>6</sup> Two years later in the masque for the Christmas festivities at Gray's Inn, Bacon spoke about "the conquest of the works of nature" (VIII, 334–5).

These briefly expressed opinions, appearing within two years of one another, are of great importance, for they sketch so many of Bacon's philosophical themes. He argued against the barrenness of scholastic philosophy and against the preposterous claims of alchemy. He promised to form a new method, which would replace both exploded schools, and produce not just words but works. He pointed to the mechanical artificers, who created printing, artillery, and the compass, as his forerunners, and expressed his confidence that, once his method was applied, it would enable men to make new discoveries that would benefit humankind. It is extremely sig-

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nificant that Bacon called knowledge “the worthiest power,” since it shows that he was already, at the beginning of the 1590s, making his novel link between science and power: science could become an operative action. Finally, his letter to Lord Burghley and his masque of 1594 reveal the idea that science is not a task for a solitary *magus*. Cooperation was the only way in which Bacon’s scientific schemes could be put into practice, and they needed the help of political authorities if they were to materialize.

Several scholars have rightly emphasized the fact that all these writings occurred in a political rather than in a philosophical context.<sup>7</sup> But this was inevitable, since Bacon needed patrons, and patronage could only be attracted via the court. In other words, this political context should not prompt us to belittle the historical and philosophical importance of Bacon’s plans. Despite the fact that they were presented for the first time in a political context, they contained a number of philosophical novelties, which represented a radical break with received traditions.

Although the appearance of both these themes – law reform and science – during the 1590s is of great importance to our understanding of Bacon’s thought and its development, his first venture into print was a modest collection of the *Essays* (together with *Religious Meditations* and *Places of Perswasion and Disswasion*) printed in 1597. The slim volume was dedicated to his brother Anthony, and its ten essays treated personal and courtly issues in a terse, aphoristic style, which Bacon conceived as a genre setting down discrete observations on life, and aspiring to some kind of objective validity.

In 1603, James VI, the king of Scotland, ascended the English throne, and Bacon made a strenuous effort to gain his favor. He wrote to several Scottish gentlemen who were likely to be influential with the new king, went to meet James before he arrived in London and, like many others, published a treatise on the designed union between England and Scotland – *A Brief Discourse Touching the Happy Union of the Kingdoms of England and Scotland*. Bacon’s efforts quickly bore fruit. In July 1603 he was knighted, though, to his great disappointment, so were three hundred others. He was immediately involved in the scheme for the union of the two kingdoms, appearing as the crown’s advocate of the union in the several sessions of the Parliament which met for the first time in 1604. At the same time Bacon advised James on religious problems and pub-

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lished a tract – *Certain Considerations Touching the better Pacification and Edification of the Church of England* – in which he reiterated his former views on religion and church government. In 1607 Bacon was appointed Solicitor General.

Bacon's active involvement in politics during the first decade of the seventeenth century was channeled into two somewhat different intellectual pursuits. On the one hand, he continued to work for legal reform, which was closely linked with the plan to unify English and Scottish laws. On the other hand, from this period came Bacon's first serious writings on political theory. As a close counselor to James, he was involved in several ideological disputes on behalf of the king. More importantly, the union debate prompted Bacon to explore the theme of civic greatness. This theme also surfaced in his second edition of the *Essays*, published in 1612, as well as in some of his writings of the early 1620s. It is no exaggeration to argue that it formed a central theme in Bacon's political philosophy.

The first decade of the new century turned out to be one of the most productive periods in Bacon's entire life. Political business started to pile up; he developed his ideas on law reform and composed important tracts on political theory. On top of all this, Bacon wrote a number of philosophical treatises. If his general idea of a new, productive natural science had started to take shape in the early 1590s, it was a decade later that its final form appeared in outline.

From these productive years comes *The Advancement of Learning*, published in 1605. It was Bacon's first published philosophical work, and the only one which he published in English. All the other published philosophical works were written in Latin – an indication of the international scope of his project. *The Advancement of Learning* was divided into two books. The first was an eloquent defense of the importance of learning to every field of life. The second book, much longer and more important, was a general survey of the contemporary state of knowledge, pointing out deficiencies in contemporary knowledge and supplying Bacon's broad suggestions for the ways of improvement. The importance of *The Advancement of Learning* (and its expanded edition in Latin, the *De dignitate et augmentis scientiarum* [1623]) is that it presents Bacon's views on many philosophical issues and also serves as a central source for his views on history, rhetoric, moral philosophy, and civil philosophy.



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More generally, it is an exposition of Bacon's classification of knowledge. Another work from this tremendously productive period is the *De sapientia veterum*, published in 1609, a collection of ancient fables complete with Bacon's interpretations. Although traditionally listed under literary works, the *De sapientia veterum* treats various philosophical issues and has more recently been seen as an important contribution to both his natural and civil philosophy.

At the same time that Bacon composed and published these two works, he was engaged in writing several other philosophical pieces, all published only after his death. These include: *De interpretatione naturae proemium*, *Temporis partus masculus*, *Valerius Terminus of the Interpretation of Nature*, *Cogitationes de scientia humana*, *Cogitata et visa*, *Partis instaurationis secundae delineatio et argumentum* and *Redargutio philosophiarum*. The exact dates of these writings are difficult to ascertain (the chronological list of the principal events of Bacon's life at the beginning of the present volume gives the most probable, though by no means conclusive dates for all these writings). But even if their exact dates of composition are in doubt, their general significance cannot be questioned. They show that by the beginning of the seventeenth century Bacon had a definitive picture of his scheme of the *Instauration magna* ("Great Instauration").

*De interpretatione naturae proemium* ("A Preface to the Interpretation of Nature") was a short tract in which Bacon asserted his grandiose plans: "Now among all the benefits that could be conferred upon mankind, I found none so great as the discovery of new arts, endowments, and commodities for the bettering of man's life" (X, 84). He expressed his disappointment that his former attempts – his "zeal" – to acquire political backing for his philosophical schemes had been "mistaken for ambition" (X, 85). In the *Temporis partus masculus* ("The Masculine Birth of Time"), Bacon summoned all the schools of ancient and modern philosophy to the bar and heaped scorn on them. A similar discussion was repeated in the *Cogitata et visa* ("Thoughts and Conclusions") and in the *Redargutio philosophiarum* ("The Refutation of Philosophies"), where Aristotle and Plato were roundly criticized; a more favorable account was given of Empedocles, Heraclitus, and Democritus. At the same time, Bacon criticized traditional philosophy for its sterility, for its uncooperative nature, and for its lack of proper method. To remedy all this, he expounded his ideas of an



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operative science. Moreover, Bacon attempted to offer a historical explanation for the failures of natural philosophy in earlier civilizations. The *Valerius Terminus of the Interpretation of Nature* – yet another plea for an active science – offered an exposition of Bacon’s famous doctrine of idols and formulated his scientific method, while the *Cogitationes de scientia humana* provided first signs of the centrality of natural and experimental histories to Baconian science.

On the whole, these tracts show that Bacon’s thinking about science had developed considerably since the early 1590s. Not only are many of his central ideas present, but he put them forward in a manner which makes it possible to call these writings the origins of his most famous philosophical work, the *Novum organum* (1620) (though he called the methodological part of his work at this time “*Clavis interpretationis*” – “The Key of Interpretation”) (XI, 64). Sending a copy of the *Cogitata et visa* to Lancelot Andrewes in 1609, Bacon pointed out that he was about to write “a just and perfect volume of philosophy” (XI, 141). In the *Partis instaurationis secundae delineatio et argumentum*, an overall description of his plan for the interpretation of nature (possibly written in 1607), Bacon talks about his whole philosophical plan as consisting of six parts.

There has been much scholarly discussion about the exact relationship between Bacon’s published works and his manuscript treatises: why, for example, did he publish *The Advancement of Learning* and the *De sapientia veterum*, but decide to leave the other works of this period unpublished? Some scholars have sought an explanation in the historical context in which these writings were produced. By the turn of the century, they have argued, Bacon had become disenchanted with the possibility of advancing his philosophical plans through a political medium. He thus divorced his philosophical ambitions from politics, became an obsequious politician and, employing an enigmatic style, confined his philosophical message to an exclusive audience.<sup>8</sup> Bacon himself hinted that whilst he would publish those parts of his work “which have it for their object to find out and bring into correspondence such minds as are prepared and disposed for the argument, and to purge the floors of men’s understandings,” some other parts he would just pass “from hand to hand, with selection and judgment” (X, 87).

Another and equally imaginative solution to the same problem

has recently been located in Bacon's "social circumstances" (as opposed to his "intellectual interests"). Underlying this explanation is the conviction that the form of writing (whether in manuscript or in print) was used as "social self-definition." To publish was to act as a professional author. From an aristocratic point of view, this was too degrading. For an aristocrat, the only respectable means of publicizing was to circulate a manuscript privately. Bacon's manuscript treatises can, according to this interpretation, be seen as an indication of a "gentlemanly disdain of professional authorship." But when he ventured into print with *The Advancement of Learning*, he assumed "a new social stance" and appealed "to a new audience, 'times succeeding,' posterity, rather than the immediately accessible figures of the court."<sup>9</sup>

Ingenious as both of these explanations are, we should bear in mind the fact that philosophy, though clearly important to Bacon, was only one facet of his life. It follows that his philosophical writings were the product of his spare time. This might account for the unfinished character of many of Bacon's writings, as well as for his habit of constantly revising them. Perhaps he simply did not find some of these treatises polished enough to be published.

If the decade from 1603 to 1612 (when Bacon published the much enlarged second edition of his *Essays*) was extremely productive, after 1613 (when he was appointed Attorney General) the amount of public business began to take a heavy toll. After the death of his cousin, Robert Cecil, the earl of Salisbury, in 1612, Bacon became one of James's most important advisors, and the increased amount of advisory work is evident from the growing number of letters and memoranda written to James. As an indication of his importance, Bacon became a member of the Privy Council in 1616, and was appointed Lord Keeper of the Great Seal, which made him head of the Court of Chancery in 1617. A year later he was granted the title of Lord Chancellor, which was the highest legal position under the crown. At the same time he was elevated to the House of Lords as Baron Verulam. When Bacon turned sixty in January 1621, he was created Viscount St. Albans. As Attorney General and Lord Chancellor, he took part in several state prosecutions for treason as well as in many minor trials. In Chancery, he worked hard to reduce the backlog of cases he inherited.