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Francis Bacon: Knowledge is Power¹

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Abstract

If Renaissance philosophy constitutes a transition between medieval theology and modern humanism, then Francis Bacon (1561-1626) represents the Renaissance's great prophet of modernity. His work offers the earliest and most eloquent statement of science, not as the contemplation of eternal truths, but as an instrument for achieving mastery over nature. Bacon's writings, which include works in natural and moral philosophy, political history, and legal reform, suggest his commitment to science as a comprehensive, cooperative, and practical endeavor, one articulated as early as 1605 in *Of the Advancement of Learning*, the most accessible of Bacon's books, and one of his few major works to be written originally in English. His philosophical project aims at nothing less than a new classification of knowledge, embracing the theoretical and the practical sciences alike, and a new method for collecting it. The "Baconian Method" casts itself as a new *modus operandi* for the understanding, one that steers it on a middle path between the rational and the experimental. For this method to succeed, however, it must overcome the dogmas and prejudices of human culture and human nature: what Bacon, in *Of the Advancement of Learning*, calls the "Idols which beset men's minds." Bacon's doctrine of the idols is arguably his most famous piece of writing; not because of the theory it offers, but because of the way in which it communicates it: through a series of memorable tropes and arresting images. In general, critical discussions of the idols fail to take them seriously, treating them as gaudy ornaments, figures of speech for the real matter at hand: the launching of a scientific or inductive method. According to the critics, in the doctrine of the idols Bacon the poet eclipses Bacon the philosopher. It is as if to take this doctrine seriously would be to succumb to the idolatrous force of its seductive imagery, and thereby abandon the true path of "science." And yet it is worth taking the doctrine of the idols seriously: as philosophy, as well as poetry.

Keywords: Bacon, Aristotle, science, experimental method, induction, syllogism, idol, dogma

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Francis Bacon: Bilgi Güçtür

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Özet

Eğer Rönesans felsefesi ortaçağ teolojisi ve modern hümanizm arasındaki geçişi oluşturuyor dersek, o zaman Francis Bacon (1561-1626) da Rönesans'ın müthiş öncüsüdür. Bacon'da bilimin en güzel ifadesi yer alır, sadece evrensel gerçeklerin yansımaları olduğu için değil, doğaya hakim olabilmek adına bir ışık oluşturduğu için. Bacon'un çalışmaları bilime karşı ciddi bir adanmışlık içerir; yapıtları doğa ve ahlak felsefesi, politik tarih, ve hukuki reform konularını ele alır. Bacon'un bilime olan bağlılığı kapsamlı, müşterek ve uygulanabilir bir yaklaşım sağlar; 1605 tarihi kadar erken bir zamanda yazılmış *Of the Advancement of Learning* eseri buna iyi bir örnektir ve orijinal dili İngilizcede yazılmış az sayıda eserinden biridir. Bacon'un felsefi projesi bilgiye yeni bir sınıflandırma sağlamaktır, ve bunu yaparken de hem teorik hem pratik bilimleri dahil eder. Bacon metodu denilen metod rasyonel olan ile deneysel olan arasındaki yolu temsil eder. Bu metodun başarılı olabilmesi için Bacon'un *Of the Advancement of Learning* eserinde "İnsanoğlunun aklına yerleşen putlar" olarak hitap ettiği insan doğasının ve kültürünün dogma ve önyargılarından arınması gerekmektedir. Bacon'un putlar (idoller) doktrini en önemli çalışması sayılır. Bunun sebebi ise sunduğu kuram değil de daha çok bu kuramları aktarılış biçimidir: unutulması mümkün olmayan mecazları ve etkileyici imgeleriyle. Genel olarak eleştirel tartışmalar Bacon'un putlarını yeterince ciddiye almaz; bilimsel bir metodun doğuşundan ziyade gösterişli dil kullanımları olarak algılanır. Eleştirmenlere göre putlar doktrininde şair Bacon, filozof Bacon'u gölgede bırakır. Sanki putlar kuramını ciddiye almak demek bilime uzanan gerçek yoldan sapmak ve imgelerin cazibeli gücüne kapılmak demek. Halbuki putlar doktrini hem felsefe olarak hem şiir olarak ciddiye almaya değer.

Anahtar Kelimeler: Bacon, bilim, deneysel metod, başlatım (indüksiyon), kıyas, idol, put, dogma

Introduction: Knowledge is Power

If Renaissance philosophy constitutes a transition between a medieval perspective that is essentially theological (with God at its center), and a modern worldview that is largely humanist (man in the place where God used to be), then Francis Bacon (1561-1626) represents the Renaissance's great prophet of modernity. No student of the period can afford to ignore his work, which offers the earliest and most eloquent statement of science, not as the contemplation of eternal truths, but as an instrument for achieving mastery over nature. To the extent we believe that "knowledge is power,"² we are the descendants of Bacon.³

All knowledge is power. It is worth dwelling, for a moment, on Bacon's career, which seems a lifelong effort to prove that maxim true: a splendid illustration of the *vita activa* (the *active life*), or more precisely, the *vita activa* as part and parcel with the *vita contemplativa* (the *contemplative life*).⁴ Bacon would have never regarded himself as merely an author: his writings—moral, legal, literary, historical, philosophical—are an integral part of his work as a public servant and politician. His career as a lawyer and parliamentarian was a long and illustrious one. After a steady rise within the ranks of power, the succession of James I guarantees Bacon's political ascendancy: he is made Solicitor-General in 1607, Attorney General in 1613 and, in 1618, Lord Chancellor—the highest political position in the realm. In that same year Bacon is knighted, and bestowed the title Baron Ferula; in 1621 he is made Viscount St Alban. But that same year, which represents the apex of Bacon's career, also marks Bacon's fall from grace: charged with corruption, he is imprisoned (albeit briefly) in the Tower of London, and forced to renounce public office. Yet neither Bacon's abrupt turn of fortunes nor his retreat from the public realm diminishes the prodigious output of publications which continue to flow from his pen.

² A favorite aphorism of the *pragmatic* philosophers. *Pragmatism*: a branch of philosophy, founded by American philosophers Charles Sanders Peirce (1839-1914), William James (1842-1910), and John Dewey (1859-1952). Pragmatism argues, in essence, that truth is something to be measured by way of practical consequences in the real world.

³ "Knowledge is power" is a rendering of the Latin "scientia potestas est"; although nowhere explicitly found in his writings, the aphorism is almost universally attributed to Bacon.

⁴ A venerable distinction in classical philosophy, made newly relevant by German philosopher Hannah Arendt (1906-1975) in *The Human Condition* (1958), where Arendt champions the *vita activa* over the *vita contemplativa*.

Thus the vast diversity of Bacon's writings, which include works in natural and moral philosophy, political history, and legal reform, is not just a sign of a man, typical of the time, interested in many things: it is a function of Bacon's commitment to science as a comprehensive, cooperative, and practical endeavor.⁵ That endeavor is articulated as early as 1605 in *Of the Advancement of Learning*, the most accessible of Bacon's books, and one of his few major works (along with *The Essays* [1597; final edition 1625] and the *New Atlantis* [1627]) to be written originally in English.⁶ (That the bulk of Bacon's writings, like those of his contemporaries, are in Latin, suggests the extent to which humanist culture remained closely bound to the classical past and to the authority of the Church: Latin, after all, was the language of both.) If the most cogent statement of this endeavor is the *De augmentis scientiarum* (*Partitions of the Sciences*; 1623; a translation, in essence, of *Of the Advancement of Learning*), its most complete and comprehensive demonstration is the *Novum organum* (*The New Method*; 1620), the title of which refers back to Aristotle's *Organon*, comprising the ancient Greek philosopher's six works on logic⁷—thereby suggesting at once Bacon's investment in classical philosophy, and his intention to supersede it. The *Novum organum* is undoubtedly Bacon's most influential text; its complete title (in English) is *New Organon: True Directions Concerning the Interpretation of Nature*. Here the old Aristotelian logic, with its special emphasis on reason, is to be replaced by the new Baconian logic, which partners reason to experience – both now essential in the effort to understand, and master, nature. Note that both the *De augmentis* and the *Novum organum* are, in fact, only the first two parts of a larger, never completed work, the magisterial *Instauratio magna* (the *Great Instauration*; *instauration* meaning *renovation* or *restoration*), the very title of which suggests the vast scope of Bacon's philosophical project, which aims at nothing less than a new

⁵ Peltonen sees in Bacon's work the triumph of "operative" over "contemplative" science (i.e., metaphysics) (Markku Peltonen, "Introduction," in *The Cambridge Companion to Bacon*, ed. Peltonen [Cambridge: Cambridge University Press, 1996], 2). Philosophy is no longer to be a speculative enterprise, but a utilitarian one.

⁶ Even prior to *Of the Advancement of Learning*, however, in a work written in the early 1590s, "Of Tribute or Giuing [*sic*] That which Is Due," Bacon praises recent technological innovations with eminently practical applications, from artillery to the printing press; in a literary masque from the same period Bacon lauds "the conquest of the works of nature" which such inventions make possible (qtd. in Peltonen, "Introduction," 5).

⁷ Namely: *Categories*, *On Interpretation*, *Prior Analytics*, *Posterior Analytics*, *Topics* and *On Sophistical Refutations*.

classification of knowledge—one joining the theoretical and the practical sciences—and a new method for collecting it.⁸

The Baconian Method

The “Baconian Method” represents itself as a new *modus operandi* for the understanding, one that steers it on a middle path between the theoretical and the practical, or the rational and the experimental. As Bacon proclaims in the preface to *De augmentis*, “Our method is continually to dwell among things soberly . . . to establish for ever a true and legitimate union between the experimental and rational faculty.”⁹ But what does this mean, exactly? In the *Novum organum* Bacon explains:

Those who have handled sciences have been either men of experiment or men of dogmas. The men of experiment are like the ant; they only collect and use: the reasoners resemble spiders, who make cobwebs out of their own substance. But the bee takes a middle course; it gathers its material from the flowers of the garden and the field, but transforms and digests it by a power of its own. Not unlike this is the true business of philosophy; for it neither relies solely or chiefly on the powers of the mind, nor does it take the matter which it gathers from natural history and mechanical experiments and lay it up in the memory whole as it finds it; but lays it up in the understanding altered and digested. Therefore from a closer and purer league between these two faculties, the experimental and the rational (such as has never yet been made), much may be hoped. (4: 92-93)¹⁰

⁸ Note the frontispiece to the 1640 edition of the *De augmentis*, which depicts a ship sailing through the pillars of Hercules, the columns at the Strait of Gibraltar which were long imagined to mark the limits of the civilized world. Bacon is writing, after all, in the latter part of the Age of Discovery, and thus it is not surprising, perhaps, that his program for a new science is represented as an audacious venture into uncharted realms. Below this illustration appears the following inscription: *Multi pertransibunt et augebitur scientia* (“Many will pass beyond and knowledge will increase”). The image of this frontispiece is reproduced at the beginning of *The Cambridge Companion to Bacon* (Peltonen, xviii).

⁹ Trans. Bohn; qtd. in Basel Willey, “Bacon and the Rehabilitation of Nature,” in *The Seventeenth-Century Background: Studies in the Thought of the Age in Relation to Poetry and Religion* (Garden City, New York: Doubleday, 1955), 33.

¹⁰ *The Works of Francis Bacon*, ed. and trans. James Spedding, Robert L. Ellis and Douglas D. Heath (London: Longman, 1857-74, 14 vols.). All references to Bacon are by volume and page number of this edition, unless otherwise stated.

This *new method*, this *novum organum*, can be reduced, in essence, to the principle of *induction*. The *Novum organum*, Bacon declares in a letter written in 1620 to James I, “is no more but a new logic, teaching to invent and judge by induction (as finding syllogism incompetent for sciences of nature), and thereby to make philosophy and sciences both more true and more active” (14: 119-20). Bacon’s championing of induction is inseparable from his embrace of both experimental and speculative philosophy. Induction may be defined, after all, as a form of thinking which proceeds from particulars to generalities; as opposed to *deduction*, which moves (as in the Aristotelian syllogism) *inferentially*, from generalities to particulars.

Some clarification is required, here, regarding the reference to the *syllogism*, which Bacon roundly rejects as a legitimate instrument of scientific knowledge. For Aristotle, as for his followers (including the medieval *scholastics*, whom Bacon condemns, in the citation above, as “men of dogmas”), the syllogism constituted the essential unit of deductive reasoning: an infallible method for arriving at irrefutable conclusions. As Aristotle puts it in the *Prior Analytics*: “A syllogism is discourse in which, certain things being stated, something other than what is stated follows of necessity from their being so.”¹¹ The traditional Aristotelian syllogism (sometimes referred to as the *categorical syllogism*) is comprised of three propositions: two premises which, if true, lead necessarily to a conclusion. Thus, to use a famous example: (a) All men are mortal; (b) Socrates is a man; therefore, (c) Socrates is mortal. For Bacon, the syllogism stood for the fatal flaw in the logic inherited from classical antiquity and dogmatically received by the medieval schoolmen: the excessive reliance on speculative reasoning independent of empirical observation.

Over and against this old, deductive logic, Bacon’s new method champions *induction*. Inductive reasoning relies, as the ant does, on the careful collection of empirical data. It does so, however, not for its own sake, but in order to spin, spider-like, an ever more expansive and comprehensive web of knowledge. To bee or not to bee, then, that is the question (if I may be allowed a very bad Shakespearean pun); for only the bee both borrows its raw material from nature and transforms that material into something of a higher order. Bacon’s scientist begins with the raw data of experience; but his goal is the progressive understanding of nature’s first and most fundamental principles.

These are, in effect, the principles Plato referred to as the universal *forms* or *ideas*. But for Plato the knowledge of such forms or ideas was something to be won entirely through speculative means, in other words, through the operations of the intellect independent of the senses. Indeed, for Plato, the senses could

¹¹ 1.1, 24b18-20; trans. A. J. Jenkinson, in Aristotle, *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1941), 66.

only be an obstacle to such knowledge. Plato's student Aristotle, on the other hand, grounded Plato's rationalist philosophy (i.e., a philosophy based on reason) in the experience provided by the senses, without which knowledge of first principles or causes was impossible. But Aristotle's philosophy remains "corrupted" by its reliance on "logic"; that is to say, a tendency towards speculative reasoning (evidenced above all in the syllogism) divorced from the observation of nature. For almost a thousand years Aristotle's philosophy was given the status of gospel—except where it was contradicted by the Gospels themselves. It was against this dogmatism (a dogmatism Bacon regularly associates, we have seen, with medieval scholasticism) that Bacon is reacting in his efforts to fashion a new kind of scientific method. More specifically, Bacon believed Aristotelian logic was too precipitate in its leap from empirical particulars to general principles; Baconian logic will rectify this tendency. This is the point of the following passage from the *Novum organum*:

The understanding must not however be allowed to jump and fly from particulars to remote axioms and of almost the highest generality (such as the first principles, as they are called, of arts and things), and taking stand upon them as truths that cannot be shaken, proceed to prove and frame the middle axioms by reference to them; which has been the practice hitherto; the understanding being not only carried that way by a natural impulse, but also by the use of syllogistic demonstration trained and inured to it. But then, and only then, may we hope well of the sciences, when in a just scale of ascent, and by successive steps not interrupted or broken, we rise from particulars to lesser axioms; and then to middle axioms, one above the other; and last of all to the most general . . . The understanding must not therefore be supplied with wings, but rather hung with weights, to keep it from leaping and flying. (4: 97)

In Aristotle the marriage between rationalism and empiricism was incomplete; Bacon will finish, now, what Aristotle only started. Bacon is sometimes regarded as one of the founding fathers of modern empiricism (remember the image of the bee); but he is as critical of empiricism (the method of the ant) as an absolute principle as he is of rationalism (the method of the spider). This is a point, one has to admit, almost lost in the sheer power of the poetry by which Bacon expresses it (as in the conceit of the understanding laden with weights rather than lifted by wings). This is not the last time we will see Bacon as a victim of his own rhetoric.

It is above all in this refusal of dogmatism, a tendency towards skepticism and self-criticism, that Bacon shows himself to be a modern thinker. For if Baconian induction relies on the observation of natural phenomena, it also acknowledges that the essential instrument required for carrying out that

observation—namely, the human mind—is unreliable, and prone to error. Hence the lineage often drawn between Bacon and the great British empirical skeptics such as John Locke and David Hume.

Meanwhile the end of this new science, like its methods of inquiry, is at once theoretical *and* practical: philosophy, as Bacon proclaims in the *De augmentis*, is now to attend to *both* “the Inquiry of Causes” (a speculative matter) *and* “the Production of Effects” (one that can be studied empirically) (4: 346).

Science as Religion

The success of this new science depends upon the eradication of old errors: “false notions,” as Bacon puts it in the *Novum organum* (4: 53), which prevent the mind from achieving a correct understanding of the external world. In the *Novum organum* Bacon calls these false notions *idols*, implicitly suggesting that the obstacles to the new science constitute a form of heresy to what is, in effect, a new religion. Although Bacon everywhere condemns the medieval scholastics (as when he rails against the “Schoolmen” in his essay “Of Superstition,”¹² Bacon’s philosophical program constitutes less a break with medieval scholasticism than its revision. Bacon’s science, ironically enough, is presented by his contemporaries, and, indeed, presents itself as a new kind of faith or mystery, articulated with all the fervor of religious discourse.¹³

Consider the ode, “To the Royal Society” by the great Restoration poet Abraham Cowley (1618-67).¹⁴ This poem was written, significantly, as an introduction to Thomas Sprat’s 1667 *History of the Royal Society*—an institution, we will see, with which Bacon was closely associated in the public imagination. Cowley took an active interest in the new science; he himself was a member of the Royal Society, having joined in its founding year (1662); the previous year he had already published a short polemic entitled *Advancement of Experimental Philosophy*. We should hardly be surprised, then, that Bacon is cast in the role of the hero of “To the Royal Society”; what is worth remarking here is the way that heroism is lent religious trappings. Bacon is celebrated as a second Moses who vanquishes the “Monstrous God” (line 50), “Authority” (*sic*) (41) and, “like Moses, led us forth at last” (93) out of the “barren Wilderness” (94) of “Errors” (89) to the “promis’d Land” (96) of truth.

¹² Bacon, *The Essays*, ed. John Pitcher (London: Penguin, 1985), 111.

¹³ By the middle of the 17th century, Achsah Guibbory writes in “Imitation and Originality: Cowley and Bacon’s Vision of Progress,” Bacon’s “plan for advancing science had become virtually a ‘second gospel’” (*Studies in English Literature, 1500-1900* 29, no.1 [Winter, 1989], 99).

¹⁴ Abraham Cowley, *The English Writings of Abraham Cowley*, ed. A. R. Waller (Cambridge: Cambridge University Press, 1905-1906, 2 vols.), 1: 448-53.

But there is more at work here than a reflexive reliance on traditional religious rhetoric. The new science does not oppose itself to the old religion; on the contrary, Bacon's experimental program is represented as a way of ratifying Scripture and the divine order. This is a point made repeatedly in Bacon's work, as in the essay "Of Atheism," where Bacon famously asserts:

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.¹⁵

If Bacon can opine, in *The Advancement of Learning*, "that God worketh nothing in nature but by second causes" (3: 267), then to attend to such causes is to affirm the existence of the divine as *first cause*—precisely how Thomas Aquinas (1225-74), greatest of the scholastic philosophers, had defined God, in classic Aristotelian fashion, in the *Summa theologiae* (1265-1274).¹⁶ Science and religion, then, for Bacon, are less enemies than uneasy allies. The world studied by the scientist is still God's creation, a manifestation of his glory. The very goal of the New Science, and the power it promises man, suggests a long-awaited fulfillment of the divine order; thus in *Of the Interpretation of Nature*, the language of which is everywhere suffused with religious imagery and fervor, Bacon declares that "the true ends of knowledge" are "a restitution and reinvesting . . . of man to the sovereignty and power . . . which he had in his first state of creation" (3: 222).

Philosophy as Poetry

But, like Moses, Bacon leads his people to the promised land but cannot enter it. Bacon, as Cowley expresses it in "To the Royal Society," "Did on the very Border stand / Of the blest promis'd Land, / And from the Mountains Top of his Exalted Wit, / Saw it himself, and shew'd us it. / But Life did never to one Man allow / Time to Discover Worlds, and Conquer too" (95-100). Bacon's efforts to construct a grand philosophical scheme, one that would supersede the venerable systems of antiquity, remain inchoate. The last three parts of the grandiose six-part plan proposed in the *Instauratio magna* are never completed; part six, the very goal towards which the first five parts are intended to lead, the

¹⁵ Bacon, *The Essays*, 108.

¹⁶ Culminating achievement of scholastic philosophy, the *Summa theologiae* constituted nothing less than an effort to reconcile philosophy and faith, Aristotle and Holy Scripture.

realization of the “New Philosophy,” or “Active Science” is, Bacon tells us in the “Plan of the Work” of *The Great Instauration*, “a thing both above my strength and beyond my hopes” (4: 32).

It follows that Bacon’s real impact upon the development of a new philosophical method is debatable. The Baconian method is largely ignored by the British empiricists, just as it is by the Continental rationalists (philosophers, such as Descartes, who seek truth not in experience but in the mind). Bacon’s legacy, in the end, is less a new logic than a new *rhetoric* of science.¹⁷ Bacon is, in short, not so much the theorist of modern science as its *propagandist*, or *prophet* or *poet*.¹⁸ Early on in his career Bacon understood the importance of rhetoric as an instrument to steer reason; it was, after all, an essential component of the medieval liberal arts curriculum still being taught (in Latin, of course) at Cambridge (where Bacon was a student from 1573-75),¹⁹ even if that curriculum had been greatly influenced of late by the new humanism, the *studia humanitatis* (literally, the *study of the humanities*). But Bacon probably did not want to be remembered, as he was during his own lifetime, as “our English Tully”;²⁰ he was striving to be England’s Aristotle, not its Cicero.²¹

And yet, in *Of the Advancement of Learning* Bacon denounces those who prefer words to ideas; he adheres to the old classical distinction subsuming *verba* (words) to *res* (subject or matter). Words are merely a vehicle, then, for expressing ideas. In the *Novum organum*, in a passage commonly referred to as the *idols of the mind*, Bacon (long before Locke) rails against the “Idols of the Market-place,” errors and delusions “imposed by words on the understanding” (4: 61). (One of Bacon’s complaints against the scholastics is, we know, their

¹⁷ “For many years lauded as one of the ‘fathers’ of modern science . . . Bacon’s status as a ‘scientist’ was later reassessed, and . . . interest in his work shifted from his scientific legacy to his power as a rhetorician” (Susan Bruce, “Introduction,” *Three Early Modern Utopias: Utopia, New Atlantis, and The Isle of Pines*, ed. Susan Bruce [Oxford: Oxford University Press, 1999], xxix).

¹⁸ “If we can no longer estimate Bacon the scientist very highly . . . justice has certainly yet to be done to him as a writer” (Brian Vickers, *Francis Bacon and Renaissance Prose* [Cambridge: Cambridge University Press, 1968], 2).

¹⁹ A curriculum comprised of the *trivium* (i.e., logic, grammar and rhetoric), the *quadrivium* (arithmetic, geometry, astronomy and music), and philosophy divided into its three major branches (metaphysical, natural and moral).

²⁰ “Tully”; that is, Marcus Tullius Cicero (106-43 BC), Roman orator and statesman. Peltonen argues that the sobriquet was a way of referring not only to Bacon’s eloquence, but his preference for the *via activa* (Peltonen, “Introduction,” 14).

²¹ For some he was England’s true Shakespeare. It is perhaps a testament to his eloquence and rhetorical prowess that, beginning in the nineteenth century, Bacon is periodically “unmasked” as the “true” author of Shakespeare’s plays.

excessive reliance on syllogistic logic, deductive forms of reasoning which Bacon sees as purely linguistic mechanisms.) It is one of the great ironies of Bacon's career, then, that he is known more for the force of his arguments than their substance. Bacon's *idols of the mind* is arguably his most famous piece of writing: not because it propounds a new theory, however, but because it is an undeniably powerful piece of imagery; a rhetorical *tour de force*.

The Doctrine of the Idols

Let us examine Bacon's *doctrine of the idols* a little more closely. For the "Idols of the Market-place" are, Bacon asserts in the *New organum*, but one of "four classes of Idols which beset men's minds" (4: 53): the three others being the "Idols of the Tribe," the "Idols of the Cave" and the "Idols of the Theatre." Sachiko Kusukawa calls Bacon's idols "prejudices and preconceptions of the human mind,"²² but they represent very distinct modalities of prejudices and preconceptions. The Idols of the Tribe refers to the innate deficiencies in the operation of the human intellect, flaws that constitute an inalienable aspect of human nature: "human understanding," as Bacon puts it in the *Novum organum*, "is like a false mirror" of reality (4: 54). The Idols of the Cave, conversely, refers to preconceptions purely idiosyncratic in nature: they are the "idols of the individual man" (4: 54). The Idols of the Theatre, finally, denote those errors and misconceptions which have been inculcated through the unexamined "dogmas of philosophies"; Bacon calls them Idols of the Theatre because these dogmas "are but so many stage-plays, representing worlds of their own creation after an unreal and scenic fashion" (4: 55).

In general, critical discussions of the idols (which also figure largely in Bacon's *Of the Advancement of Learning*) fail to take them seriously, treating them instead as gaudy ornaments, mere images, figures of speech for the real matter at hand: Bacon's launching of the scientific or inductive method ("The formation of ideas and axioms by true induction is no doubt the proper remedy to be applied for the keeping off and clearing away of idols" [4: 54]). In such readings, in effect, Bacon the poet eclipses Bacon the philosopher.²³ It is as if to

²² Sachiko Kusukawa, "Bacon's Classification of Knowledge," in *The Cambridge Companion to Bacon*, ed. Peltonen (Cambridge: Cambridge University Press, 1996), 63

²³ More generally, such readings betray a certain distrust, within the practice of philosophy, or more generally theory itself, of the image, of the *conceit*, as it were, within the *concept*. This is precisely the distrust that French philosopher Jacques Derrida (for example, in "White Mythology"), and before him German philosopher Friedrich Nietzsche (in works such as *On Truth and Lying in a Non-Moral Sense*), identified as the signature anxiety of all philosophy: i.e., the fear of its own opacity or textuality or poeticity.

take these images seriously would be to succumb to their own idolatrous force, and thereby abandon the true path of “science.”²⁴

And yet it is worth taking the doctrine of the idols seriously (that is, as philosophy, as well as poetry). Let us consider, for example, the extent to which Bacon’s figures depend on the allegorical rehabilitation of recognizable classical *topoi* (commonplaces or themes). The term *idol*, itself, after all (from the Greek *eidolon*, or *image*), from the beginning ties Bacon’s doctrine of the idols to Plato’s critique of *mimesis* (imitation), which, Plato argues, proffers mere *eidola* (images) in place of the real. Let us turn now to Bacon’s explication of the Idols of the Cave, by which, we have seen, he refers to the idiosyncratic distortions of the mind that arise from education, upbringing, prejudice and proclivity. From the *Novum organum*: “For everyone . . . has a cave or den of his own, which refracts and discolours the light of nature” (4: 54). To dismiss this explanation as a mere *conceit* is to fail to see it rewrites Plato’s *allegory of the cave* (in *Republic* 514a–520a), with significant implications for his philosophy.²⁵ Meanwhile, in *Of the Advancement of Learning*, Bacon presents “three vanities in studies” (3: 282) (vain words, vain matter, and deceit) that run roughly parallel to the four idols. In regard to the first vanity, “when men study words and not matter,” Bacon asserts: “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 . . . to fall in love with them is all one as to fall in love with a picture” (3: 284). Bacon’s admirers, traditionally speaking, are resolved not to become Pygmalion, not to fall in love with Bacon’s words; it’s the *matter* in which they’re interested, not the *words*. But, ironically enough, in failing to take these images seriously one acknowledges their seductive power; one turns them back into the very idols against which Bacon had warned us. And so Bacon becomes a victim of the same vanity, the *vanity of words*, which he attacks in his own work.

Bacon’s Legacy

Bacon’s achievements, then, lie as much in the domain of poetry as philosophy. And the poetry proved potent indeed in the years to come. Bacon seems to have

²⁴ In “Bacon and the Rehabilitation of Nature,” Willey laments, “If only Bacon’s exposure of the Idols had been remembered”; for “the Baconian method hardened into a dogmatism as assertive as scholasticism itself” (Willey, “Bacon and the Rehabilitation of Nature,” 44).

²⁵ The reliance on classical models evident here remains an essential motif in Bacon’s thinking; in his work on civil philosophy, for example, Bacon explicitly bases his legal reforms on the foundation provided by the 6th-century Byzantine emperor Justinian’s *Corpus iuris civilis* (*Body of Civil Law*).

escaped the fate of other prophets, those (*pace* Matthew 13: 57²⁶) who go unrecognized in their own lands. The Royal Society, founded under Charles II in 1660, saw Bacon as one of its tutelary spirits, and sought to realize Bacon's vision of science as an active, cooperative venture. The faith that knowledge leads inevitably to progress, and which is the very essence of the Enlightenment, may be said to be an extension of Bacon's philosophy.

Hence Bacon's dream, depicted in his utopian fantasy *New Atlantis*, of a rational world ruled by scientists (as opposed to the utopia depicted in Plato's *Republic*, which the *New Atlantis* expressly evokes, and which was administered by theoretical philosophers). The *New Atlantis*, Bacon's last major work, in its general lines follows the tradition of early modern utopian narratives, such as Thomas More's *Utopia* (to which Bacon's work alludes), in which fabulous tales of fabricated worlds also serve as an implicit critique of current social and political realities. Bacon's *New Atlantis*, with its fictional account of a journey to the lost island of "Bensalem" (suggesting a new *Jersusalem*), would seem to adhere to this general pattern, except that in this case the centerpiece of the work, constituting almost one third of the text, is devoted exclusively to a description of Bensalem's most venerable institution, "Salomon's House" (evocative of Solomon's temple), which resembles nothing so much as a modern university. Salomon's House is an institution "dedicated to the study of the Works and Creatures of God,"²⁷ the end of which is "the enlarging of the bounds of Human Empire, to the effecting of all things possible."²⁸ According to Susan Bruce in her introduction to the *New Atlantis*, readers in Bacon's own time saw in this description of Salomon's House "a blueprint for a new scientific institution"; in the 17th century it was widely viewed "as a model of the Royal Society."²⁹

And yet it has to be acknowledged: Bacon's utopian dream of science triumphant remains largely unfulfilled. Today the old faiths are alive and well; dogmas of all kinds have proved surprisingly tenacious in the face of science. More insidiously, our apparently unlimited faith in technology today suggests a new form of idolatry: precisely the kind of heresy against which Bacon warned us in his oracular prose.

²⁶ Returning to his own country to spread the word of God, Jesus finds an unresponsive audience; whereupon he declares: "A prophet is not without honour, save in his own country, and in his own house" (Authorized King James Version).

²⁷ Bacon, *New Atlantis*, in *Three Early Modern Utopias: Utopia, New Atlantis, and The Isle of Pines*, ed. Susan Bruce (Oxford: Oxford University Press, 1999), 167.

²⁸ *Ibid.*, 177.

²⁹ Bruce, "Introduction," xxxi.

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