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# *Francis Bacon's Valerius Terminus and the Voyage to the "Great Instauration"*

Richard Serjeantson

One of the most remarkable and far-reaching developments in post-medieval European intellectual history is the discovery of the future. The Renaissance had discovered the past. But the light that the *quattrocento* cast backwards took longer to be thrown forwards. The first works of fiction to be set in the future are an eighteenth-century phenomenon.<sup>1</sup> By the twentieth century the shadow of the future had become an inescapable property of the human condition.

Notoriously, Francis Bacon (1561–1626) is one of the earliest heralds of this development. His “unique position” in an “idea of progress,” his particular grasp of the *Gesinnung der Wissenschaft* (scientific mindset) that would follow him, has become a commonplace, both for optimists and pessimists about these developments.<sup>2</sup> Even Bacon’s most meticulous modern

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<sup>1</sup> Samuel Maddan, *Memoirs of the Twentieth Century* (London: Osborn et al., 1733); Louis-Sébastien Mercier, *L’an 2440, rêve s’il en fut jamais* (Amsterdam: Van Harreveldt, 1770).

<sup>2</sup> J. B. Bury, *The Idea of Progress* (London: Macmillan, 1920), 50; Max Horkheimer and Theodor Adorno, *Dialektik der Aufklärung* (Frankfurt: Fischer, 1986 [New York, 1944]), 10.

students have sometimes indulged themselves in rhapsodies about this “cartographer of futurity.”<sup>3</sup>

The scholar’s task is to elucidate, and also to complicate, the elements from which such mythologies arise. There is no question that Bacon announced himself as *Buccinator*, a trumpeter, of knowledge to come.<sup>4</sup> (He even bequeathed his memory to “the next ages” in his will.<sup>5</sup>) But how did he arrive at this view? And—no less importantly—how did he decide to present it to his own age?<sup>6</sup> The answers to these questions that are offered here will set aside the Bacon of the future in favor of the Bacon of his own moment. I shall identify an overlooked early engagement with the humanistic learning of the century in which he was born: learning brought into being in northern Europe, in large part, by the powerful figure of Erasmus. But I shall also identify a turn away from that learning, in favor of an engagement with the implications of the enlargement of that European world by trade and navigation. It will emerge that Bacon’s preoccupation with a new “worlde of invencions and sciences vnknowne,” made him an acute observer of the globalization of the sixteenth century that was occurring among China, the Americas, and Iberia.<sup>7</sup> The focus of this inquiry will be the earliest surviving version of Bacon’s philosophical instauration, a work that Bacon, exceptionally, ascribed to a pseudonymous author: “Valerius Terminus.”<sup>8</sup>

## PRESENTING THE INSTAURATION

By the time the fifty-nine-year-old Bacon finally published the first installment of his *Instauratio magna* in 1620, he had come to a view at which his compatriot Nicholas Hill had previously arrived: that the unmethodical

<sup>3</sup> Graham Rees, “Introduction,” to Francis Bacon, *The Instauration magna Part II: Novum organum and Associated Texts*, Oxford Francis Bacon [hereafter cited as *OFB*], vol. 9 (Oxford: Clarendon Press, 2004), xlv.

<sup>4</sup> Francis Bacon, *De augmentis scientiarum* (London: John Haviland, 1623), sig. 2A3v (4.1).

<sup>5</sup> National Archives, Kew, PROB 1/33/1.

<sup>6</sup> On this point, see also Dana Jalobeanu, *The Art of Experimental Natural History: Francis Bacon in Context* (Bucharest: Zeta Books, 2015), 173–76.

<sup>7</sup> Serge Gruzinski, *The Eagle and the Dragon: Globalization and European Dreams of Conquest in China and America in the Sixteenth Century*, trans. Jean Birrell (Cambridge: Polity Press, 2014).

<sup>8</sup> Bacon, “Valerius Terminus,” in British Library, MS Harley 6463, 14 (hereafter VT). Citations are to this (paginated) manuscript, with cross references to the reordered text in Bacon, *Works*, ed. James Spedding, R. L. Ellis, and D. D. Heath, 7 vols. (London: Longman et al., 1859), 3:217–52, at 223 (hereafter cited as *SEH*).

form of the “aphorism” was the best means of presenting an anti-Aristotelian natural philosophy.<sup>9</sup> Unlike the “Methods” and “partitions” of their more academic contemporaries, this “brief and scattered” form did not, as Bacon explained, pretend to completeness.<sup>10</sup> But Bacon’s road to this decision was a circuitous one. His chaplain and editor, William Rawley, later reported that he had seen “at the least” twelve different versions of Bacon’s *Instauratio magna*, “Revised, year by year, one after another; And every year altred, and amended, in the Frame thereof; Till, at last, it came to that *Modell*, in which it was committed to the *Presse*.”<sup>11</sup>

A number of those earlier drafts survive to verify Rawley’s claim. The (so-called) *Redargutio philosophiarum* takes the form of a stately oration purportedly delivered to an audience of civil and ecclesiastical dignitaries in Paris.<sup>12</sup> The *Cogitata et visa* adopts the same vatic third person (“Franciscus Bacon sic cogitavit”) that came to open the *Instauratio magna*.<sup>13</sup> Before settling on the *aphorismus*, Bacon also tried out the *sententia*,<sup>14</sup> and then the *consilium*.<sup>15</sup> But perhaps the most striking of Bacon’s solutions to the problem of how to present his philosophical ideas is also (probably) the earliest one to survive: the unfinished English manuscript treatise with the pseudonymous title *Valerius Terminus of the Interpretation of Nature with the Annotations of Hermes Stella*. Apparently written in 1603 or thereabouts, its fullest surviving version is a manuscript, copied by one of

<sup>9</sup> Nicholas Hill, *Philosophia epicurea, democritiana, theophrastica, proposita simpliciter, non edocta* [1601] (Geneva: François Le Fèvre, 1619), 3–5, defends himself for writing in aphorisms, “sine methodo seu via aut ordine.”

<sup>10</sup> Bacon, *Novum organum*, 1.86 (OFB 11:138). See further Stephen Clucas, “‘A Knowledge Broken’: Francis Bacon’s Aphoristic Style and the Crisis of Scholastic and Humanist Knowledge-Systems,” in *English Renaissance Prose: History, Language, and Politics*, ed. Neil Rhodes (Tempe: MRTS, 1997), 147–72.

<sup>11</sup> William Rawley, “The Life of the Honourable Author,” in Bacon, *Resuscitatio* (London: William Lee, 1657), (c)1r–v. See further Angus Vine, “Francis Bacon’s Composition Books,” *Transactions of the Cambridge Bibliographical Society* 14 (2008): 1–31, at 1. Samuel Hartlib also recorded that Bacon was “said to have written over 7. times his *Novum Organum* with his owne hand with many other Notes out of which at last hee extracted the choicest Notions.” *The Hartlib Papers*, ed. Mark Greengrass et al. (Sheffield: HRI Online Publications, 2013), www.hrionline.ac.uk/hartlib, HP 30/4/4B (transcription emended).

<sup>12</sup> British Library, MS Harley 6855, fol. 4r–v (SEH 3:559). The customary title of this work is an addition in a later hand.

<sup>13</sup> Queen’s College, Oxford, MS 280, fol. 212r (SEH 3:581); cf. OFB 11:2.

<sup>14</sup> Bacon, “De interpretatione naturæ sententiæ xii,” in *Scripta in naturali et universali philosophia* (Amsterdam: Lodewijk Elzevir, 1653), T10r–V1v.

<sup>15</sup> Bacon, “Aphorismi et consilia, de auxiliis mentis, et accensione lvmis natvralis,” in *Scripta*, T8v–T10r.

Bacon's scribes, with numerous revisions and additions in Bacon's own hand.<sup>16</sup>

Though Bacon abandoned this work and set its manuscript aside, the unfinished *Valerius Terminus* nonetheless forms a vital seedbed for several of his subsequent writings. Bacon mined it extensively for material that went into the *Advancement of Learning* of 1605.<sup>17</sup> That book principally took up the many aspects of *Valerius Terminus* that are concerned with "impediments to knowledge," re-framing them as a discipline-by-discipline discussion of "deficiencies of learning." But Bacon worked and reworked the philosophical core of *Valerius Terminus*—its nascent theory of the "Interpretation of Nature"—into what was eventually published as the *Novum organum*, contained within the *Instauratio magna* volume of 1620.<sup>18</sup> As such, *Valerius Terminus* has often been discussed in passing by scholars interested in Bacon's philosophical ideas and intellectual development. But it has less often been seen as a work that merits attention in its own right. This study assesses the place of *Valerius Terminus* within Bacon's authorial career. It considers three related questions: firstly, where the work came from; secondly, the significance of the pseudonyms that frame it; and, lastly, the insights that it offers into the historical, sociological, and geographical nature of Bacon's conception of knowledge. By undertaking this inquiry, we shall understand more clearly how Bacon developed his presentation of his vision of the melioration of the human condition. A further reason why we might regard this vision as world-historical is that it was self-consciously global in nature.

### "ACTIVE KNOWLEDGE"

The origins of *Valerius Terminus* are exposed by a tiny but revealing detail in its manuscript: a deletion in the running titles of the text. Throughout

<sup>16</sup> British Library, MS Harley 6463, 1–73. On the date, see Spedding, in *SEH* 3:208. It is disputed by André Lalande, "L'interprétation de la nature dans le *Valerius Terminus* de Bacon," in *Annales internationales d'histoire: Congrès de Paris 1900, 5<sup>e</sup> section: Histoire des sciences* (Paris: Armand Colin, 1901), 1–14, at 2–4, but far from persuasively.

<sup>17</sup> Borrowings from *Valerius Terminus* in the *Advancement of Learning* are noted in the editions by Michael Kiernan, *OFB* 4:205–362, and Dana Jalobeanu and Grigore Vida, *Cele două cărți despre excelența și progresul cunoașterii divine și umane* (Bucharest: Humanitas, 2012).

<sup>18</sup> On Bacon's theory of *interpretatio naturae*, see Richard Serjeantson, "Francis Bacon and the 'Interpretation of Nature' in the Late Renaissance," *Isis* 105 (2014): 681–705.

the manuscript, these running titles consistently follow the wording of the title of the treatise: that is, "Of the Interpretation of Nature." But there is one telling exception: in two openings only, Bacon's scribe originally used a different formula; he instead called the work "Of Actiue knowledge."<sup>19</sup> This title has then been deleted, and replaced in Bacon's own hand with the standard formula about the interpretation of nature.<sup>20</sup>

This overlooked revision is less inconsequential than it might at first sight appear, for it takes us back into a previously unknown stratum in Bacon's philosophical development. It hints that behind *Valerius Terminus* there perhaps lies an earlier work that bore the title "Of Active Knowledge." And this is indeed confirmed by a note in the revealing "Ephemerides" kept by the intelligencer Samuel Hartlib from the mid-1630s onwards. As Stephen Clucas has explained, Hartlib was keenly interested in finding and collecting unpublished logical, philosophical, and religious manuscripts, including ones by Bacon, and in his "Ephemerides" Hartlib records the existence of many such documents.<sup>21</sup> Thus it was in 1640 that Hartlib heard of a particular unpublished manuscript by Francis Bacon, Baron Verulam, which he documented as follows: "Langfort olim Monioy's favorit hase a MS. of Verulam of Active knowledge which Sparrow hopes to get."<sup>22</sup>

"Monioy" here must refer to Charles Blount, eighth Baron Mountjoy and first earl of Devonshire (1563–1606), with whom Bacon was well acquainted: he was the addressee of Bacon's 1604 defense of his actions in prosecuting his former patron, the earl of Essex.<sup>23</sup> The man who was "olim" (formerly) Mountjoy's "favorit" may be the Devonshire MP John Langford (born ca. 1560)—or perhaps, given this date, a son—of whom "little is known," but who was "presumably one of the circle of friends and relations of Lord Mountjoy," with whose family Langford's own had

<sup>19</sup> As Spedding spotted, *SEH* 3:208, the scribe who copied the Harleian manuscript of *Valerius Terminus* also copied Bacon's draft letter to Edward Bruce, 25 March 1603 (Lambeth Palace Library, MS 936, item 3), and also (I would add) the letter to John Davies, 28 March 1603 (*ibid.*, item 4).

<sup>20</sup> VT 50–52. Spedding, *SEH* 3:207, overlooks the deletion.

<sup>21</sup> Stephen Clucas, "Samuel Hartlib's *Ephemerides*, 1635–59, and the Pursuit of Scientific and Philosophical Manuscripts: The Religious Ethos of an Intelligencer," *Seventeenth Century* 6 (1991): 33–55, esp. 41–42, 50–51. In 1634 Jan Jonston reported to Hartlib from Oxford that no Bacon manuscripts were to be found in "our Library" ("Verulamij manuscripta nulla in Bibliotheca nostra reperiuntur")—but does he mean Oxford or Leiden? (*Hartlib Papers*, HP 44/1/3A).

<sup>22</sup> *Hartlib Papers*, HP 30/4/54B ("Ephemerides," 1640).

<sup>23</sup> Bacon, *His Apologie, in Certaine Imputations Concerning the Late Earle of Essex. Written to the Right Honorable His Very Good Lord, the Earle of Deuonshire, Lord Lieutenant of Ireland* (London: Felix Norton, 1604).

intermarried in the fifteenth century.<sup>24</sup> Lastly, the person who hoped to obtain the manuscript is John Sparrow (1615–70), a former student of Bacon's Cambridge college, and member of the Inner Temple, who was also acquainted with Bacon's former chaplain, William Rawley.<sup>25</sup>

The congruity between Hartlib's record of Sparrow's researches and the surviving *Valerius Terminus* manuscript is telling. It suggests that there once existed a hitherto unknown work by Bacon entitled "Of Active Knowledge," which he may have circulated to Lord Mountjoy and his clients in the late sixteenth or very early seventeenth century, and which was still extant in 1640. It does not, however, appear in either of the two earlier seventeenth-century catalogues of Bacon's posthumous manuscripts that are known to me,<sup>26</sup> and may now be lost.<sup>27</sup> It nonetheless seems likely that elements of that vanished work may be contained in parts of this surviving one.

How did Bacon conceive this "active knowledge"? An answer is offered in chapter 12 of *Valerius Terminus*—the very chapter above which the deleted running title first appears. There Bacon critiques various existing ways of acquiring knowledge, whether from "antiquitie and authority," "common and confessed notions," "Inductions without instances contradictory," or "the report of the senses." Instead he insists that the "only triall to be accepted of," is the discovery of "new workes"—or, as he also puts it, of "actiue directions"—that have not been known before. This passage is, in fact, Bacon's most explicit early articulation of what Pérez-Ramos has characterized as his "maker's-knowledge" philosophy of science. The discovery of "new instances" now constitutes the verification of truth, whereas knowledge that discovers no such "new instance" is "vaine and vntrue."<sup>28</sup> Works alone are the proper arbiter of truth.

"Active knowledge," then, seems to have been an early philosophical touchstone for Bacon. (The Latin equivalent, invoked in one version of the

<sup>24</sup> P. W. Hasler, "Langford, John (b. ca. 1560)," in *The History of Parliament: The House of Commons 1558–1603*, ed. Hasler (London: HMSO, 1981), sub nomine.

<sup>25</sup> K. Grudzien Baston, "Sparrow, John (1615–1670)," in *Oxford Dictionary of National Biography*, [www.oxforddnb.com](http://www.oxforddnb.com); the connection with Rawley appears from *Hartlib Papers*, HP 30/4/5A.

<sup>26</sup> British Library, MS Sloane 629, fol. 243r. Ibid., fols. 244r–245v. The first of these lists, apparently made by John Sparrow on the basis of his acquaintance with Rawley, was also copied by Hartlib into his "Ephemerides" for 1639 (*Hartlib Papers*, HP 30/4/5A, printed in Clucas, "Hartlib's *Ephemerides*," 50–51).

<sup>27</sup> No such manuscript appears in Peter Beal, "Francis Bacon, Baron Verulam, Viscount St Albans (1561–1626)," *Catalogue of English Literary Manuscripts*, [www.celm-ms.org.uk](http://www.celm-ms.org.uk), as of April 25, 2017.

<sup>28</sup> VT 50 (SEH 3:242). Antonio Pérez-Ramos, *Francis Bacon's Idea of Science and the Maker's Knowledge Tradition* (Oxford: Clarendon Press, 1988).

title of the slightly later *Cogitata et visa*, is “Scientia operativa.”<sup>29</sup>) It co-opted for the study of the natural world all the desirable connotations of the “active life” (*vita activa*) that had been prized for so long in Ciceronian moral and political traditions. Implicitly, too, “activity” served as a counterblast to the dominant vision of natural philosophy articulated by Aristotle and his many sixteenth-century followers. In this tradition, moral philosophy was concerned with “practical” matters. Natural philosophy, by contrast, was a self-consciously “contemplative” or speculative affair, which did not seek to intervene in the operations of nature.<sup>30</sup> *Valerius Terminus*, by contrast, raises the hope of discovering “all operations and possibilities of operations,” from “imortalitie (if it were possible)” to “the meanest mechanically practize.”<sup>31</sup>

Before Bacon could explain how he might achieve this “indowment of mans life with new commodities,” however, he first needed to clear the ground. He needed to lay out “the limits and end”—that is, the *finis* or goal—“of knowledge.” This is the purpose, and the title, of the first chapter of *Valerius Terminus*: the only part of the work that exists in a finished form. Its function is to establish the ways in which knowledge is to be “lymited by Religion” while also insisting that it be “referred to vse and action.” It is thus a little misleading to suggest, as G. A. J. Rogers has done, that Bacon “wastes little time in his numerous writings in attempting to provide a moral or theological justification for his programme.” On the contrary: the opening chapter of *Valerius Terminus* shows that just such a justification formed the starting point for some of Bacon’s earliest surviving philosophical endeavors.<sup>32</sup>

This is not to say, however, that Benjamin Milner’s contrasting suggestion—that Bacon abandoned *Valerius Terminus* because his natural philosophy was also leaving behind its Calvinist theological foundation—is itself entirely persuasive. Bacon’s goal in his first chapter is rather the one proposed for him by classical rhetorical theory, of which he was such a close student: to begin by refuting views that are opposed to the speaker’s

<sup>29</sup> Queen’s College, Oxford, MS 280, fol. 212r (SEH 3:591): “Cogitata & visa: de Interpretatione Naturæ, siue de Scientia operativa.”

<sup>30</sup> See, e.g., Johannes Velcurio, *Commentariorum libri III in universam Aristotelis Physicæ* (London: George Bishop, 1588), 9, for a conventional vision of natural philosophy as a form of “speculative” knowledge whose goal is to understand nature theoretically and not to make or do anything.

<sup>31</sup> VT 12–13 (SEH 3:222).

<sup>32</sup> VT 1, 3 (SEH 3:217, 218). G. A. J. Rogers, “The Seventeenth Century and the Reconstruction of Knowledge,” in *The Proper Ambition of Science*, ed. Martin Stone and Jonathan Wolff (London: Routledge, 2000), 56–75, at 61. On this point in general, see also Alexis Tadié, *Francis Bacon: Le continent du savoir* (Paris: Garnier, 2014), 78–80.



own.<sup>33</sup> The remainder of *Valerius Terminus* is not founded upon the theological discussion of the first chapter.<sup>34</sup> However, Bacon's preoccupation in this opening chapter with the "limits and end" of knowledge is indeed crucial if we are to understand the significance of a work purportedly written by an author with the name of "Terminus."

### THE SIGNIFICANCE OF BACON'S PSEUDONYMS

*Valerius Terminus* stands out among Bacon's unpublished natural philosophical writings for the use of a pseudonym to conceal his authorship. Moreover, the recent emergence of a second fragmentary manuscript of the treatise shows that what became the first chapter of the work circulated publicly as an independent treatise. Crucially, it sailed abroad under its pseudonym, which really does seem to have served to occlude the identity of its author.<sup>35</sup> We should therefore ask what the implications of Bacon's pseudonyms are. For though the names "Valerius Terminus" and "Hermes Stella" are deliberately opaque, they are not senseless. In order to establish their meaning—or better, their range of meanings—we should begin by considering the intellectual cultures that Bacon was invoking by presenting his ideas pseudonymously.

The device of pseudonymous authorship was widespread in the later sixteenth century.<sup>36</sup> It was a staple in religious controversy, where it might genuinely serve to protect the identity of authors liable to criminal sanction, whether they were Jesuit priests, such as "R. Doleman" (Robert Persons), or godly enemies of bishops, such as "Martin Marprelate" (whose identity, or identities, still remain unknown).<sup>37</sup> Pseudonymity served a similarly protective function in the indistinct world of Elizabethan epistolary espionage that was inhabited by Bacon's early friend Thomas Phelippes and by his

<sup>33</sup> Ps-Cicero, *Rhetorica ad Herennium*, trans. Harry Caplan (London: Heinemann, 1954), 8 (1.3.4); Serjeantson, "Testimony: The Artless Proof," in *Renaissance Figures of Speech*, ed. Sylvia Adamson et al. (Cambridge: Cambridge University Press, 2007), 180–94, at 190.

<sup>34</sup> Pace Benjamin Milner, "Francis Bacon: The Theological Foundations of *Valerius Terminus*," *Journal of the History of Ideas* 58 (1997): 245–64, esp. 260; also Peter Harrison, *The Fall of Man and the Foundations of Science* (Cambridge: Cambridge University Press, 2007), 169–73.

<sup>35</sup> Serjeantson, "The Philosophy of Francis Bacon in Early Jacobean Oxford: With an Edition of an Unknown Manuscript of the *Valerius Terminus*," *Historical Journal* 56 (2013): 1087–106, esp. 1102–3.

<sup>36</sup> Marcy North, *The Anonymous Renaissance: Cultures of Discretion in Tudor-Stuart England* (Chicago: University of Chicago Press, 2003).

<sup>37</sup> For Bacon's engagement with Marprelate, see *An Advertisement Touching the Controversies of the Church of England*, OFB 1:127–97.

brother Anthony Bacon.<sup>38</sup> A more contrived form of pseudonymity was also prominent among writers of verse in the Elizabethan court, where perhaps its most notable exponent was Sir Philip Sidney, whose sonnet sequence is addressed by the figure of "Astrophel" (star-lover) to a lady called, just like Bacon's annotator, "Stella."<sup>39</sup> Bacon was no stranger to these worlds, having moved in all of them since his youth.

Spies, controversialists, and poets were not, however, the only kinds of author who concealed their identities behind pseudonyms. Another culture with which Bacon's pen names signal an association is the illicit art of alchemy. From the time of its origins in Hellenistic antiquity, down to the seventeenth century, alchemical adepts consistently employed pseudonyms. These names sometimes indeed included that of Hermes, for the "thrice great" Hermes—Hermes Trismegistus—was held to be a founder of the art.<sup>40</sup> In *Valerius Terminus*, as elsewhere, Bacon ostentatiously renounces the "vaine and abusing promises of *Alchimistes* and *Magicians*."<sup>41</sup> Yet Graham Rees has shown how great a debt his cosmology owed to the Paracelsian chymical tradition.<sup>42</sup> It therefore seems likely that the aliases of *Valerius Terminus* also owe something to the self-consciously secretive culture of alchemy. By abandoning the device of the pseudonym when he set aside *Valerius Terminus*, Bacon was also further distancing himself from that suspected pursuit.

But what do Bacon's pseudonyms mean? Let us begin to answer this question by considering the name of the annotator, "Hermes Stella." Though this figure is invoked in the title of the work, the only indication of his presence are eighteen marginal letters added by the scribe to chapter 1 as signposts to a set of absent "Annotations"—which do not exist, and which Bacon probably never composed. For the subsequent chapters of the treatise even such call-outs are absent. Robert Leslie Ellis proposed that the implication of the absent "Stella" was that this figure would "throw a kind of starlight" on the treatise, "enough to prevent the student's losing his way, but not much more."<sup>43</sup> The firmest statement on the matter, however, was offered by Fulton Anderson. He declared that Hermes Stella stood for

<sup>38</sup> See Lisa Jardine and Alan Stewart, *Hostage to Fortune: The Troubled Life of Francis Bacon* (London: Gollancz, 1998), esp. 55–58.

<sup>39</sup> Sir P. S. *his Astrophel and Stella. Wherein the Excellence of Sweete Poesie is Concluded* (London: Thomas Newman, 1591).

<sup>40</sup> See, e.g., *Ars chemica, quod sit licita recte exercentibus* (Strasbourg: Samuel Emmel, 1566), 7.

<sup>41</sup> VT 14.

<sup>42</sup> Rees, "Bacon's Speculative Philosophy," in *The Cambridge Companion to Francis Bacon*, ed. Markku Peltonen (Cambridge: Cambridge University Press, 1996), 121–45.

<sup>43</sup> Robert Leslie Ellis, "Preface to *Valerius Terminus*," in *SEH* 3:201.

King James, on the grounds that Bacon used “star” as a symbol to represent the sovereign, and that in the *Advancement of Learning* he specifically spoke of James as being possessed of the threefold qualities of “the ancient *Hermes*”: the “power and fortune of a King”; the “knowledge and illumination of a Priest”; and the “learning and vniuersalitie of a Philosopher.”<sup>44</sup> This interpretation has been welcomed by some.<sup>45</sup> Others, however, remain unpersuaded.<sup>46</sup> And indeed there is no necessary reason to assume that because Bacon associated *Hermes* with James in the *Advancement*, he is also doing so in *Valerius Terminus*. It would be at least as plausible to suggest that it was only after James’s accession that Bacon saw an opportunity to apply a longer-standing existing interest in the figure of *Hermes Trismegistus* to the king.

Be this as it may, the name “*Hermes*” does clearly imply a messenger or interpreter, which not only suits the planned function of “*Hermes Stella*” as a commentator, but also sits interestingly with Bacon’s consistent preoccupation with the “interpretation” of nature. There may indeed, therefore, be a sense in which we should see “*Hermes Stella*” as a kind of starry messenger (pre-Galilean, of course), bringing down interpretative light from the heavens.

In considering the significance of the name of the treatise’s purported author, “*Valerius Terminus*,” we may set aside the incredible proposal that this is some sort of anagram of “*Verulamius naturae minister*.”<sup>47</sup> Instead we observe that it evokes an number of existing names. It echoes, to begin with, the name of *Valerius Maximus*, the first-century Roman author of a collection of *Memorable Sayings and Deeds* that was extraordinarily widely printed across the fifteenth and sixteenth centuries.<sup>48</sup> It is possible that in invoking that name Bacon hints at the importance of what his own *Valerius* has to say. At the end of his life Bacon remembered having called his first philosophical work, written forty years previously (i.e., around 1585),

<sup>44</sup> Fulton H. Anderson, *The Philosophy of Francis Bacon* (Chicago: University of Chicago Press, 1948), 16–17; *Advancement of Learning*, OFB 4:5.

<sup>45</sup> Benjamin Farrington, *The Philosophy of Francis Bacon: An Essay on Its Development from 1603 to 1609 with New Translations of Fundamental Texts* (Chicago: University of Chicago Press, 1964), 38; Paolo Rossi, *Francis Bacon: From Magic to Science*, trans. Sacha Rabinovitch (Chicago: University of Chicago Press, 1969), 269n13; Sophie Weeks, “Francis Bacon’s Science of Magic” (Ph.D. diss., University of Leeds, 2007), 3n8.

<sup>46</sup> Reinhardt Brandt, “Über die vielfältige Bedeutung der Baconschen Idole,” *Philosophisches Jahrbuch* 83 (1976): 42–70, at 54; Perez Zagorin, *Francis Bacon* (Princeton: Princeton University Press, 1998), 240n52; Michael Kiernan, in OFB 4:xxxix–xl.

<sup>47</sup> Lalande, “L’interprétation de la nature,” 3. As Wolfgang Krohn, *Francis Bacon* (Munich: Beck, 2006), 195, devastatingly points out, Bacon was only created Baron Verulam in 1618.

<sup>48</sup> The *Universal Short-Title Catalogue*, [ustc.ac.uk](http://ustc.ac.uk), records 285 editions before 1600.

*Temporis partus maximus* ("The Greatest Offspring of Time").<sup>49</sup> Is it merely a coincidence that two of the earliest versions of Bacon's philosophy invoke both parts of the name of Valerius Maximus?

More significant, however, are the implications of the name of a different Valerius: the early Roman senator Publius Valerius. As Bacon knew well from his deep familiarity with the early books of Livy's *Ab urbe condita* (not to mention Machiavelli's *Discorsi*), this Valerius was a preeminent figure in the history of Roman liberty, who served several times as Consul, and—most tellingly—was accorded the cognomen of Publicola ("friend of the people") for his actions in ejecting the Tarquin tyranny.<sup>50</sup> This beneficent implication sits interestingly with Bacon's long-standing preoccupation with turning his philosophy to the public good: in a famous letter to Lord Burghley written in 1592, Bacon had argued that the motive for his "vast contemplative ends" was not "curiosity, or vain glory," but rather "*philanthropia*"—a love for humankind.<sup>51</sup> It seems eminently possible that Bacon intended his use of the name "Valerius" to hint that a treatise promising the "indowment of mans life with new commodities" had been written by a second such friend of mankind.<sup>52</sup>

Yet Bacon's title may have also have been intended to evoke a different Valerius, in a less positive way: Cornelius Valerius, the author of the only work of contemporary scholastic physics that Bacon seems to have mentioned explicitly. In an early letter of advice on studies that Bacon drafted for his patron, the earl of Essex, he mentions just one work of natural philosophy: "Valerius physicks."<sup>53</sup> Cornelius Valerius's *Physicae* (1567) is a self-consciously introductory work, which presents itself as offering the rudiments of the subject in a way that will allow students more easily to approach the entirety of what "Aristotle and other philosophers" have to teach about nature.<sup>54</sup> Bacon might have encountered it as an undergraduate at Trinity College, Cambridge, or during the continuation of his

<sup>49</sup> James Spedding, *Letters and Life of Francis Bacon*, 7 vols. (London: Longman, 1861–74), 7:530 (Bacon to Fulgenzio Micanzio, autumn 1625). (Hereafter cited as *LL*: "Equidem memini me quadraginta abhinc annis juvenile *Opusculum* circa has res confecisse, quod magna prorsus fiducia & magnifico titulo, *Temporis Partum maximum* inscripsi.") See further Thomas Tenison, "An Account of all the Lord Bacon's Works," in *Baconiana* (London, 1679), 9; Stephen Gaukroger, *Francis Bacon and the Transformation of Early-Modern Philosophy* (Cambridge: Cambridge University Press, 2001), 43.

<sup>50</sup> Titus Livy, *The Romane Historie*, trans. Philemon Holland (London: Adam Islip, 1600), 45, 49 (bk. 2); Niccolò Machiavelli, *I Discorsi* ("Palermo" [i.e. London]: John Wolfe, 1584), 23–24 (1.13), 38 (1.28).

<sup>51</sup> *LL* 1:109.

<sup>52</sup> VT 15 (*SEH* 3:223).

<sup>53</sup> *Letter of Advice to Fulke Greville*, OFB 1:207, and Stewart's note, OFB 1:794.

<sup>54</sup> Cornelius Valerius, *Physicae* (Antwerp, 1567), 10.

education as a member of household of the English ambassador to the French court as it progressed around northern France and the Loire valley in the later 1570s.<sup>55</sup> The letter attests that Bacon regarded the work as representative of the study of natural philosophy as it stood in the late sixteenth century.<sup>56</sup> Should we therefore understand his pseudonym “Valerius Terminus” as indicating that his work will explore the limits of, and indeed go beyond, the kind of physics that this earlier Valerius taught? Or even that his “Valerius” will bring the kind of physics taught by the earlier Cornelius Valerius to an end—that is, to a “terminus”? In this light, Didier Deleule’s suggestion that Bacon’s title is “peut-être parodique” gains intriguing support—although we might prefer instead to call it sardonic.<sup>57</sup>

With this suggestion in mind, let us now turn from the fictional author’s multivalent *praenomen* (Valerius) to his decisive *nomen* (Terminus). The significance of the name “Terminus” must be connected with the meaning of the Latin word *terminus* as “boundary,” “limit,” or “end.” By extension, therefore, the Roman god of borders was likewise named “Terminus.”<sup>58</sup> The ancient and patristic authorities collected by sixteenth-century scholars recorded that Terminus was a uniquely stubborn deity.<sup>59</sup> Livy regarded his refusal to be displaced from the Capitoline as a “divine token” of the perpetuity of the city of Rome.<sup>60</sup> More strikingly still, Aulus Gellius recorded a riddle about a figure who “would not yield even to the king of the Gods, Jupiter himself” (*Iovi ipsi regi noluit concedere*)—a riddle to which the answer, as Angelo Poliziano and Giglio Giralaldi had explained, was “Terminus.”<sup>61</sup> Terminus was also a familiar figure from the account of his *Terminalia* in Ovid’s *Fasti*. Addressing the god, Ovid observed that since Terminus “possesses the temple alongside great Jupiter” (*magno cum Iove templa tenet*) he could never afterwards be moved, “in case you might seem to place men above Jupiter.” (*ne videare hominem praeposuisse Iovi*).<sup>62</sup>

<sup>55</sup> See LL 1:6–8; Jardine and Stewart, *Hostage to Fortune*, 39–66.

<sup>56</sup> For a discussion of Bacon in the light of Valerius, see Peter Pesic, “Francis Bacon, Violence, and the Motion of Liberty: The Aristotelian Background,” *Journal of the History of Ideas* 75 (2014): 69–90, at 74.

<sup>57</sup> Didier Deleule, “Introduction,” to Bacon, *Récusation des doctrines philosophiques et autres opuscules* (Paris: Presses Universitaires de France, 1987), 13.

<sup>58</sup> On this point, see also Brandt, “Die vielfältige Bedeutung,” 54; Krohn, *Bacon*, 2nd ed., 34.

<sup>59</sup> Giglio Giralaldi, *De deis gentium* (Lyon: Heirs of Jacques Giunta, 1565), 44–45, collects these authorities.

<sup>60</sup> Livy *Romane Historie* 38 (*Ab urbe condita* 1.55).

<sup>61</sup> Aulus Gellius *Noctes Atticae* 12.6. Angelo Poliziano, *Miscellanea* [1489], in *Opera* (Basel: Nicholas Bischoff the younger, 1553), 256; Giralaldi, *Aenigmata* [1507], in *Libelli duo* (Basel: Johannes Oporinus, 1551), 43–44. I am indebted here to Edgar Wind, “Ænigma Termini,” *Journal of the Warburg Institute* 1 (1937): 66–69.

<sup>62</sup> Ovid *Fasti* 2.670, 2.676.

Finally, Plutarch's account of the deity Terminus in his treatise known as the *Roman Questions* notes that whereas Romulus appointed "no bounds and limits of his countrey," his successor as king of Rome, Numa Pompilius, set up Terminus as the "superintendent" of the Romans' borders, and decreed that no blood should be shed in his worship.<sup>63</sup>

In the sixteenth century the person most closely associated with Terminus was Desiderius Erasmus, who from 1509 onwards appropriated the youthful god and his motto *concedo nulli* ("I yield to no one") as his emblem (fig. 1).<sup>64</sup> Yet as Edgar Wind elegantly explained in 1937, Erasmus's identification with Terminus underwent a curious shift across his lifetime. When the aged Erasmus was confronted by his enemies at the court of Charles V with the charge that his appropriation of Terminus's motto demonstrated his intransigent arrogance, he then claimed that Terminus was an emblem of mortality: "for death is the true *terminus*, which gives way to no one."<sup>65</sup> One of these Spanish enemies was the Franciscan Luis de Carvajal, who to Erasmus's great annoyance went so far as to connect the *concedo nulli* of Terminus with the Emperor's motto *plus ultra* ("further beyond").<sup>66</sup>

Thus across the sixteenth century there also developed a broadly Christianized reading of the pagan deity Terminus as a figure of death. This is the interpretation emphasized in Andrea Alciato's immensely popular emblem book: his Terminus is the ultimate goal (*scopus*) of human life who stands before the final day and "signifies death" (*mortem significat*).<sup>67</sup> Alciato's vision of Terminus is the one that was taken up in the penultimate lozenge of the rich emblematic frontispiece of the *Lapis philosophicus* (1602?) of the Oxford philosopher and physician John Case (d. 1600) (fig. 2). Its

<sup>63</sup> Plutarch, *The Philosophie, Commonlie Called, the Morals*, trans. Philemon Holland (London: Arnold Hatfield, 1603), 4C2r (*Roman Questions*, 15). (See also Plutarch, *The Lives of the Noble Grecians and Romanes*, trans. Thomas North [London: Thomas Vautroullier, 1579], G3r–v [Numa].)

<sup>64</sup> See further John Rowlands, "Terminus, the Device of Erasmus of Rotterdam: A Painting by Holbein," *Bulletin of the Cleveland Museum of Art* 67 (1980): 50–54; Arnoud Visser, "Scholars in the Picture: The Representation of Intellectuals on Medals and Emblems," in *Transmigrations*, ed. Billy Grove and Alison Saunders (Geneva: Droz, 2011), 139–59.

<sup>65</sup> Erasmus to Alfonso Valdes, 1 August 1528 (Allen 2018), appropriately the final document in Erasmus, *Opera*, 9 vols. (Basel: Froben and Bischoff, 1540), 9:1442–43: "Mors enim vere terminus est, qui nulli cedere nouit." See further Wind, "Ænigma Termini," and Jardine, *Erasmus, Man of Letters: The Construction of Charisma in Print* (Princeton: Princeton University Press, 1993), 82.

<sup>66</sup> Luis de Carvajal, *Dulcoratio* (Paris: Simon Colin, 1530), fol. 68r. Erasmus's pained response, to Pero Mexía, 30 March 1530 (Allen 2300), was printed in Erasmus, *Epistolarum floridarum liber unus* (Basel: Johannes Herwagen, 1531), 75.

<sup>67</sup> Andrea Alciato, *Emblemata* (Paris: Richer, 1584), fol. 217v.



FIGURE 1: Erasmus im Gehäus. Woodcut by Veit Specklin after Hans Holbein the younger, ca. 1538. (British Museum, no. 1895,0122.843. Reproduced under license CC BY-NC-SA 4.0.)



FIGURE 2: John Case, *Lapis philosophicus* (Oxford, [n.d.]). Detail of frontispiece. (Folger Shakespeare Library, shelfmark STC 4756. Used by permission under license CC BY SA 4.0.)

meaning is glossed in an accompanying explanatory poem: “Behold the Infinite; but lest Terminus remain fixed it has wings” (*Ecce | Infinitum; at habet, ne constet, Terminus alas*); the final image depicts Case’s corpse. In Case’s commentary on Aristotle’s *Physics*, then, the figure of Terminus marks the limits of infinity and stands on the threshold of death.<sup>68</sup>

<sup>68</sup> John Case, *Lapis philosophicus* (Oxford, [n.d.]), sigs. ¶1r (frontispiece), 2¶5v (verses).



As these instances suggest, Terminus also had a rich graphic and architectural existence in the latter part of the sixteenth century. The “term”—a figure atop a column, or later serving as the column itself—became a staple of “mannerist” architecture, ornamenting chimney pieces, doorways, furniture, and chests. Terms acquired their own orders (Tuscan, Corinthian, Ionic), and might even depict animals, such as bears or boars, as well as women, men, and gods.<sup>69</sup>

Bacon’s own invocation of “Valerius Terminus,” I suggest, may be seen as participating in this mannerist cultural world. But how, precisely, does it relate to these different representations? With Reinhardt Brandt we may observe that there is a suggestive connection between the pseudonym of the author and that of his (absent) annotator: for while Terminus was the Roman god of boundaries, Hermes was the Greek god who guided travelers over such borders.<sup>70</sup> Yet, lacking any indication in Bacon’s treatise of what Hermes Stella’s annotations would accomplish, it would be rash to speculate what role they were to play. What should be said is that Giglio Giraldo’s work on ancient riddles and pagan deities is the kind of book that helped inform Bacon’s *De sapientia veterum*, published in 1609, a few years after the presumptive composition date of *Valerius Terminus*, in around 1603.<sup>71</sup> In this respect, the quasi-mythological figure of “Valerius Terminus” may be seen as a cousin to Bacon’s naturalistic interpretations of Pan, Orpheus, and the Sphinx in that later published work.<sup>72</sup>

As this suggests, moreover, Bacon’s invocation of Terminus is more pagan than Christian. In chapter 1 of the treatise, it soon becomes apparent that “Terminus” makes a very appropriate pseudonym for the author of a treatise concerned with exploring the true “limites and end” of knowledge.

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On the iconography of Case’s frontispiece, see further S. K. Heninger, *Touches of Sweet Harmony: Pythagorean Cosmology and Renaissance Poetics* (San Marino: Huntington Library, 1974), 217–20, and Charles B. Schmitt, *John Case and Aristotelianism in Renaissance England* (Kingston, Ont.: McGill–Queen’s University Press, 1983), 253–54.

<sup>69</sup> Hugues Sambin, *Oeuvre de la diversité des termes* (Lyon: Jean Durant, 1572); Joseph Boillot, *Nouveaux portraitz et figures des termes . . . composez & enrichiez de diversité d’animaulx* (Langres: Jehan des Prey, 1592).

<sup>70</sup> Brandt, “Die vielfältige Bedeutung,” 54.

<sup>71</sup> Bacon, *De sapientia veterum* (London: Robert Barker, 1609). Jean Seznec, *The Survival of the Pagan Gods* (Princeton: Bollingen, 1972), 249–51.

<sup>72</sup> *Valerius Terminus* and *De sapientia veterum* are also connected by Rhodri Lewis, “Francis Bacon, Allegory, and the Uses of Myth,” *Review of English Studies* 61 (2010): 360–89, and Anna-Marie Hartmann, “Light from Darkness: The Relationship between Francis Bacon’s *Prima Philosophia* and His Concept of the Greek Fable,” *Seventeenth Century* 26 (2011): 203–20, at 204–5.

Aulus Gellius's and Ovid's accounts of Terminus as a successful competitor to Jove are extremely suggestive here, for they sit remarkably well with Bacon's determination in this chapter to demarcate human endeavor from divine prerogative: he sets out by explaining that he will identify the respective "precinctes and boundes" of human and divine knowledge, and expose the "infinite" prejudice that they have received from being intermingled.<sup>73</sup>

There is, furthermore, one very particular divinely imposed bound that Bacon's Terminus explicitly challenges: the limit of death. Francis Bacon, like many sixteenth- and seventeenth-century students of nature, was discreetly obsessed by the prolongation of life—Graham Rees, indeed, has characterized this as the "first and highest objective" of his new philosophy.<sup>74</sup> This preoccupation, which Bacon inherited from Italian authors such as Marsilio Ficino and Alvise Cornaro, emerges with increasing prominence in the later *De vijs mortis* and the posthumous *New Atlantis*.<sup>75</sup> But an interest in the extension of life is vestigially present even in *Valerius Terminus*, a work merely of the fourth decade of Bacon's own life. For had he not asserted that the goal of his treatise was "a discovery of all operacions and possibilities of operacions," of which the highest one of all was "imortalitie (if it were possible)"?<sup>76</sup> In this respect, Bacon's Terminus also offers the very slightest hint of a destiny that lies beyond both pagan Rome and contemporary Christianity.

Bacon's pseudonym "Valerius Terminus," then, invokes a benefactor of humankind who will mark out the true limits and goals of human knowledge on earth; who will advance human good without shedding human blood on the way; and who may one day even challenge the limit of death. This Terminus, furthermore, in a sardonic undertone, will also put an end to the kind of Aristotelian physics taught in schools by authors such as Cornelius Valerius. And is there, finally, the immodest hint that, by invoking Erasmus's tutelary deity, Bacon is presenting himself as a weighty successor to that protean figure?<sup>77</sup>

<sup>73</sup> VT 1, 14, 5 (SEH 3:217, 223, 219).

<sup>74</sup> Rees, "Bacon's Speculative Philosophy," 141.

<sup>75</sup> Rees, "Introduction," to OFB 6:lxv–lxix; Serjeantson, "Natural Knowledge in the *New Atlantis*," in *Francis Bacon's New Atlantis*, ed. Bronwen Price (Manchester: Manchester University Press, 2002), 82–105, at 93–95.

<sup>76</sup> VT 12–13 (SEH 3:222).

<sup>77</sup> Erasmus is one of the scholars who falls under Bacon's stricture of having inclined "rather towards copie [i.e. *copia*], then weight" in *Advancement of Learning*, OFB 4:23. See further Judith Rice Henderson, "'Vain Affectations': Bacon on Ciceronianism in *The Advancement of Learning*," *English Literary Renaissance* 25 (1995): 209–34.

## THE “THROUGH LIGHTS” OF GLOBAL KNOWLEDGE

These considerations bring us to the third and final aspect of *Valerius Terminus* that I wish to explore here: how Bacon located its ambitions in place and time. I have been arguing that, beginning with its very name, *Valerius Terminus* places itself in a liminal situation, carefully demarcating its ambitions while also seeking to step beyond the boundaries of existing knowledge. I now want to develop this point by considering Bacon’s sense of the politics, history, and geography of the knowledge it advances.

In its compendious way, *Valerius Terminus* contains both a theory of “active knowledge” (in chapter 11) and numerous analyses of different “impediments of knowledge” (chapters 4–8, 19, 21–22, 25–26). As we might expect from the future author of the *Novum organum*, Bacon’s analysis also has a strong focus on mental errors (chapter 16)—what he is already calling the “Idolls or false appearances that offer themselves to the vnderstanding.”<sup>78</sup> Perhaps less familiarly, however, there is also a firm institutional and political—indeed, one might almost say a sociological—quality to Bacon’s early account of the impediments to knowledge.<sup>79</sup>

Remarkably, then, Bacon shows himself in *Valerius Terminus* to be interested in the consequences of political arrangements for the practice, and conclusions, of intellectual life. A preoccupation with the respective merits of different kinds of political regime was a very long-standing theme of humanist political reflection.<sup>80</sup> It had been brought to renewed prominence in the late sixteenth century in the writings of Giovanni Botero, which Bacon knew well.<sup>81</sup> But Bacon’s application of this preoccupation to the question of the progress of learning is nonetheless striking. The “nature of ciuill customes and government,” he proposes in chapter 15, have “in most tymes” been adverse to intellectual innovation. This point is elaborated in the final chapter (26): “there is noe composicion of estate or society” which does not have “some point of contrariety” towards “true knowledge.” Monarchies, for their part, “inclyne wittes to proffit and pleasure.” “Common wealthes,” by contrast—that is, republics—incline wits,

<sup>78</sup> VT 56 (*SEH* 3:245); also VT 33–34 (*SEH* 3:241–42). In *Novum organum*, OFB 11:72, they have become “Idola humanæ mentis.” See further Zagorin, “Francis Bacon’s Concept of Objectivity and the Idols of the Mind,” *British Journal for the History of Science* 34 (2001): 379–93.

<sup>79</sup> This quality was recognized by Robert K. Merton, “Singletons and Multiples in Science,” in *The Sociology of Science: Theoretical and Empirical Investigations* (Chicago: University of Chicago Press, 1973), 343–70, at 351n19.

<sup>80</sup> See, e.g., Aurelio Lippo Brandolini, *Republics and Kingdoms Compared* [ca. 1492], ed. and trans. James Hankins (Cambridge, Mass.: Harvard University Press, 2009).

<sup>81</sup> Giovanni Botero, *Le relatione universali* (Venice: Niccolò Polo, 1597).

no less fatally, to “glory and vanity.”<sup>82</sup> Neither of these two fundamental forms of government have fostered the advancement of natural knowledge.

When Bacon came to elaborate this political analysis in the *Advancement of Learning* (1605)—a book not merely dedicated to the new King James, but addressed to him throughout—he had to place a hand on the scales of this balanced critique. Amidst his praise of his new king's free monarchy, the comparison of regimes is now displaced to antiquity: it is Greek “popularitie” (i.e., democracy), and the “greatnesse” of the Roman monarchy, respectively, that are now said to have stood in the way of their acquisition of knowledge. Yet in the later *Novum organum*, Bacon did not stint to blame monarchies for impeding the growth of philosophical sects such as had flourished among the popular government of the Greeks.<sup>83</sup>

If this was a ticklish theme, then the critique that preceded it was even more precarious to navigate. As we have seen, chapter 1 of *Valerius Terminus* opens with an elaborate exploration of the proper religious limits to knowledge, and in chapter 25 Bacon returns to that question with an analysis of the “superstitions and errours of Religion.” Here his criticisms are professedly aimed at targets beyond Christianity in place and time. Yet they are all evidently also aimed at tendencies within his own society.<sup>84</sup> The charge against a religion that consists in “rytes & formes of adoration” purports to be aimed at “the religion of the heathen.” But it clearly also applies to those Christians, both Catholic and Protestant, whose inquiries into nature nonetheless have theology as their goal. The charge, similarly, against forms of religion that are “jealous” of learning and which regard it as a potential threat to their “foundacions,” is explicitly aimed at “the religion of the Turke”; that is, at the Islam of the Ottoman Empire. But this, too, is clearly also aimed at radical Protestant views closer to home; in particular, perhaps, at the followers of Henry Barrow, whose assault on university learning had become notorious in the 1590s.<sup>85</sup> *Valerius Terminus* is motivated by a stern critique of the widespread post-Reformation view that divine Providence operated daily and directly in the world. For Bacon, it was a thoroughly dangerous error to ascribe the “ordinary effectes” of nature to “the imediate workinge of God.”<sup>86</sup>

<sup>82</sup> VT 54, 69 (SEH 3:244, 252).

<sup>83</sup> Bacon, *Advancement of Learning*, OFB 4:181. Bacon, *Novum organum*, OFB 11:96 (1.62).

<sup>84</sup> See also Zagorin, *Francis Bacon*, 47–49.

<sup>85</sup> VT 68, 69 (SEH 3:251). Henry Barrow, *A Plaine Refutation of M. G. Giffardes Reprochful Booke* ([Dordrecht?: s.n.], 1591), R1r–R4v. Corpus Christi College, Oxford, MS 321, fols. 22r–24v (John Case, “Epistola . . . adversus Baroistas,” 1596).

<sup>86</sup> VT 69 (SEH 3:251).

To these considerations of politics, institutions, and religion, Bacon adds historical and geographical perspectives to his analysis of the fortunes of human knowledge. One reason why antiquity was “vnfitt and vnproper for amplification of knowledge,” he suggests in *Valerius Terminus*, is that it “had not history to anie purpose.”<sup>87</sup> By contrast, and notwithstanding that he holds himself to be living in the “autumne of the world,”<sup>88</sup> Bacon finds his own age to be remarkable for one particular and novel reason. To illustrate this novelty he employs an architectural image that merits our attention: that of “through lights.”

A room was said to be through-lighted if it had windows on opposite sides (fig. 3). Hence in the description of a “Perfect *Pallace*” that he elaborated in his 1625 essay “Of Building,” Bacon stipulated that it should be a “double House”—i.e., with two sets of chambers in each wing. This meant that it would be “without Thorow Lights,” so that there would always be a room in which one could escape from the sun.<sup>89</sup> Bacon’s vision of the globe he inhabited, by contrast, was the opposite. From the mutual endeavors of “comerce and navigacion,” he says, the world itself has now, for the first time, acquired “through lightes.” And this in turn means that for the first time there can be a global “contribucion of wittes” to the amplification of knowledge.<sup>90</sup>

Bacon was fond of this image of a newly through-lighted globe. He reused it in the *Advancement of Learning*, in which he affirmed that it was “to the honor of these times, and in a vertuous emulation with Antiquitie, that this great Building of the world, had neuer *through lights* made in it, till the age of vs and our fathers.”<sup>91</sup> Or as the later Latin translation of this work put it, the globe of the world was now, “in a wonderful way, windowed and open.”<sup>92</sup> Here, in an early form, is a thought that would ultimately motivate Bacon to locate his *New Atlantis* (1626) in the southern Pacific, and thereby to make it the first global utopia.<sup>93</sup>

As is well known, Bacon even contrived to find biblical authority for

<sup>87</sup> VT 35 (SEH 3:225). On Bacon’s histories of knowledge, see also Hartmann, “The Strange Antiquity of Francis Bacon’s *New Atlantis*,” *Renaissance Studies* 29 (2015): 375–93, esp. 377–78.

<sup>88</sup> VT 9 (SEH 3:221).

<sup>89</sup> Bacon, *Essays* (1625 text), OFB 15:136–37.

<sup>90</sup> VT 36 (SEH 3:225).

<sup>91</sup> Bacon, *Advancement of Learning*, OFB 4:70.

<sup>92</sup> Bacon, *De augmentis scientiarum*, O3v (SEH 1:514): “Orbis enim Terrarum factus est, hâc nostrâ ætate, mirum in modum fenestratus, atque patens.”

<sup>93</sup> Bacon, *New Atlantis*, in *Sylva Sylvarum* (London: William Lee, 1626), a3r, locating the island of Bensalem on a voyage across the “South Sea” from Peru to China and Japan.



FIGURE 3: Château de Chenonceau, Val de Loire (built 1570–76). This contemporary gallery, like Bacon's image of his late sixteenth-century world, is illuminated by "through lights." (Photograph by Joe Shlabotnik, reproduced under license CC-BY-2.0.)

this situation: for had not the prophet Daniel foreseen "the opening of the world by navigacion and commerce" and the "further discovery of knowledg" of Bacon's age when he wrote that "*Manie shall passe too & fro; and science shalbe increased*"?<sup>94</sup> This idiosyncratic interpretation did not escape the attention of several of Bacon's Reformed contemporaries, who were sometimes doubtful about its "congruitie" to the words of Daniel's text—but who, in the case of the godly divine William Twisse (1576–1646), nonetheless plucked the idea out of a circulating manuscript of *Valerius Terminus* and advertised it.<sup>95</sup> More sympathetic was William

<sup>94</sup> VT 9–10 (*SEH* 3:221). On Bacon's idiosyncratic interpretation, see Mordechai Feingold, "'And Knowledge Shall be Increased': Millenarianism and the Advancement of Learning Revisited," *Seventeenth Century* 28 (2013): 363–93, at 363–67.

<sup>95</sup> Charles Webster, *The Great Instauration: Science, Medicine and Reform 1626–1660*, 2nd ed. (Bern: Peter Lang, 2002), 21–23. Isaac Dorislaus was even more skeptical: Anthony Grafton, *What Was History? The Art of History in Early Modern Europe* (Cambridge: Cambridge University Press, 2007), 179–80.

Watts (ca. 1590–1649), a translator of Augustine’s *Confessions*, who in a very Baconian exhortation to university scholars showed that he clearly grasped the implications of the “late Discoueryes” made by recent navigators.<sup>96</sup>

Ultimately, however, Bacon’s sense of the importance of what he had to offer in *Valerius Terminus* went beyond even the contribution of geographical discoveries to the intellectual life of Europe at the beginning of the seventeenth century. The potential for human knowledge, he insists, is as expansive as the new world across the oceans. The “newfound world of land was not greater addicion to the ancient continent then there remayneth at this daie a worlde of invencions and sciences vnknowne.” Bacon’s vision of knowledge thus measured itself not only against other places, but against other times: it is the “ancient Regions of knowledge” that will seem as barbarous compared with the new ones, “as *the* new Regions of people seeme barbarous compared to manie of the old.”<sup>97</sup> Or, as he put the same point more directly in the *Advancement of Learning*: “this third period of time will farre surpasse that of the *Græcian* and *Romane* Learninge.”<sup>98</sup> For Bacon, the implications of the discovery of new geographical worlds are still bound up with the question of ancient authority.<sup>99</sup>

### THE VOYAGE TO THE “GREAT INSTAURATION”

Bacon’s insight in *Valerius Terminus* about the implications of global navigation and commerce for the destiny of human knowledge continued to shape his vision, even as he put that abandoned work behind him. As I have been hinting, if Bacon had published *Valerius Terminus*, he would surely have commissioned a frontispiece for it that depicted Terminus on his pillar. But this particular emblem of the limits of knowledge was not how Bacon eventually chose to present his Great Instauration to the public. Instead, he designed a famous image that had become even more expressive of his mature vision: an image that no longer contained one pillar, but two (fig. 4).

<sup>96</sup> “To the venerable Artists and younger Students in Divinity, in the famous Vniuersity of Cambridge,” in *The Strange and Dangerous Voyage of Captaine Thomas Iames* (London: John Partridge, 1633), R4r–S4v, echoing Bacon’s Daniel interpretation, S2v. On Watts’s authorship of this discourse, see *The Voyages of Captain Luke Foxe of Hull and Captain Thomas James of Bristol*, ed. Miller Christy (London: Hakluyt Society, 1894), 2:620n1.

<sup>97</sup> VT 14, 15 (SEH 3:223).

<sup>98</sup> Bacon, *Advancement of Learning*, OFB 4:181.

<sup>99</sup> The theme of Anthony Grafton and April Shelford, *New Worlds, Ancient Texts: The Power of Tradition and the Shock of Discovery* (Cambridge, Mass.: Harvard University Press, 1992).



FIGURE 4: Francis Bacon, *Instauratio magna* (London, 1620), frontispiece. The trans-navigated Pillars of Hercules have now superseded the unyielding Terminus as the emblem of Bacon's endeavors. (British Museum, no. 1868,0808.3213. Used by permission under license CC BY-NC-SA 4.0.)



The seeds of this shift are already apparent in the *Advancement of Learning* of November 1605. Here he now invokes the Hapsburg Emperor Charles V's confected motto *plus ultra* ("further beyond"), with its double implication of both limit and of ambition, to characterize the times in which he lived.<sup>100</sup> In July 1608 Bacon reminded himself to write an "Ordinary discours"—by contrast, perhaps, with the out-of-the-ordinary pseudonymous discourse of *Valerius Terminus*, or the vatic *Cogitata et visa*—about "plus ultra in Sciences."<sup>101</sup> It was this vision that would ultimately give rise to the famous image of a ship returning from the New World to the Old that Bacon commissioned from the well-connected court engraver Simone de Passe to introduce his lavish folio *Instauratio magna* of 1620 to the world. This is also an image of a boundary. But now the trans-navigated Pillars of Hercules, the *ne plus ultra* of an older world, have replaced the unyielding Terminus as the emblem of Bacon's endeavors.<sup>102</sup>

It is quite possible that Bacon's change of mind arose from hints that were offered to him by Erasmus's quarrel with Carvajal over the propriety of connecting Terminus's *concedo nulli* with Charles V's *plus ultra*. The squabble was, after all, well known. Claude Paradin recalled it when he explained Terminus's motto in his French volume of *Devises heroïques* (1551) (fig. 5):

Erasmus Roterodamus vsed for his simbole the image of Terminus the God of the Romanes, which neuer gaue place to Iupiter himselfe, for the which thing Caruaylus a Franciscan frier found fault with him. Laying it to his charge, and objecting it as a thing done too arrogantly of Erasmus, for that he thereby signified that he woulde yeelde to no man on earth in anie point of learning: although that sentence indeede may be vnderstoode of death which is the last or vttermost bound or limite of all things, which no man is able, or by anie meanes may escape, or flie from: with the which answer Caruaylus was satisfied and contented.<sup>103</sup>

<sup>100</sup> Bacon, *Advancement of Learning*, OFB 4:71. Earl Rosenthal, "Plus Ultra, Non Plus Ultra, and the Columnar Device of Emperor Charles V," *Journal of the Warburg and Courtauld Institutes* 34 (1971): 204–28.

<sup>101</sup> British Library, MS Add. 27,278, fol. 15r (LL 4:64).

<sup>102</sup> On the iconography of this engraved title page, see further Rees, in OFB 11:489–90. See also the Iberian perspective (so important to Bacon) provided by Juan Pimentel, "The Iberian Vision: Science and Empire in the Framework of a Universal Monarchy, 1500–1800," *Osiris* 15 (2000): 17–30, at 24, and Silvia Manzo, "Utopian Science and Empire: Notes on the Iberian Background of Francis Bacon's Project," *Studii de știință și cultură* 6 (2010): 120–22.

<sup>103</sup> Claude Paradin, *Heroicall Deuises*, trans. P. S. (London: William Kearney, 1591), 129–30, translating Paradin, *Devises heroïques*, 2nd ed. (Lyon: Jean de Tournes et Guillaume Gazeau, 1557), 103.

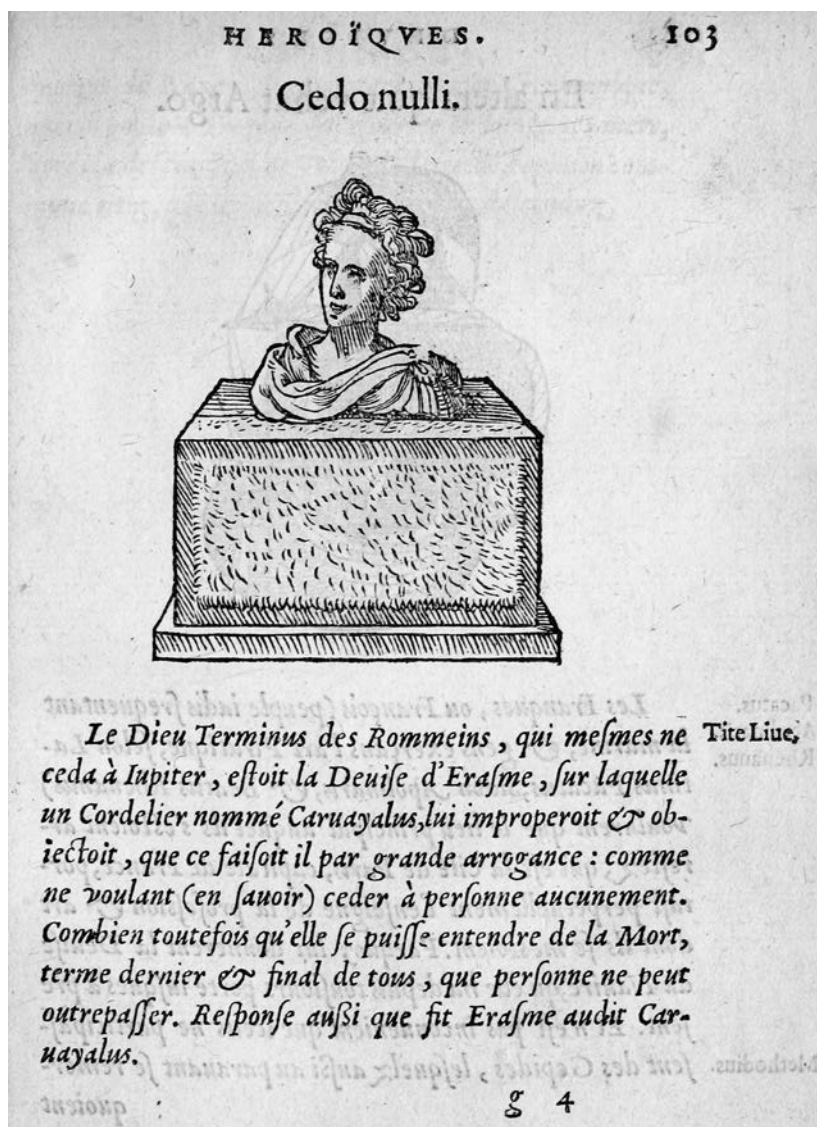


FIGURE 5: Claude Paradin, *Deuises heroïques* (Lyon, 1557), 103. (Rubenstein Library, Duke University, shelfmark PN6352 .P37 1557 c.1. Reproduced by permission.)

Terminus is not the only emblem in Paradin's work that might have caught Bacon's eye: from the second edition of 1557 onwards, we also find among his heroic devices Charles V's *plus ultra* (fig. 6).<sup>104</sup>

These connections—between Erasmus and Carvajal, and within the pages of Paradin's book—certainly offer suggestive hints to explain the direction we have seen Bacon taking. But we need not require him to have been familiar with them to see more clearly the general significance of his movement from the heroic name of "Valerius Terminus" to a "New Organon." In shifting from Terminus to the pillars of Hercules, Bacon was also, quite deliberately, making a voyage from the ancient world to a new world; from the humanistic learned world of Erasmus's Europe to the more self-consciously maritime and commercial globe of the later sixteenth century.

When Bacon presented his *Instauratio magna* to King James VI & I on October 12, 1620, he wrote that the purpose of his book was to make "Philosophy and Sciences" both more true and more "Active."<sup>105</sup> The title of his early work on "Active Knowledge" still rang in Bacon's mind. As we have seen, *Valerius Terminus* offers us other continuities with the Great Instauration. It allows to see, *in aenigmate*, the shape of Bacon's early philosophy. This was already a capacious and an ambitious, even an overweening philosophy. It is also the version of Bacon's philosophy that is most concerned with the potential challenges of intemperate religious zeal. It is a mannerist philosophy, with its contrived pseudonym hinting at (and encouraging) the kind of interpretations of pagan myth that would shape the *De sapientia veterum* a few years later. More directly, Bacon continued to work and rework the materials of this half-finished maquette. He first reused some of its elements in the *Advancement of Learning*. He reshaped other aspects of it across the unpublished treatises of the following two decades or so, until he finally published his theory of the "interpretation of nature" in the (still unfinished!) *Novum organum* of 1620.

The pseudonym of "Valerius Terminus" initially served Bacon to emphasize, obliquely, the preoccupations of this early work. It calls attention to the author's purpose as messenger, crossing the boundaries of knowledge, at once the peaceful friend of human improvement and the sardonic terminator of Aristotelian physics. And it perhaps even suggests that this author may be a successor, in his way, to Erasmus. But *Valerius Terminus* also contained the seeds that would lead to its own supersession. For it

<sup>104</sup> Paradin, *Devises heroïques*, 29.

<sup>105</sup> National Library of Scotland, Advocates MS 33/1/7, item 11 (Bacon to James I, 12 October 1620) (LL 7:120).

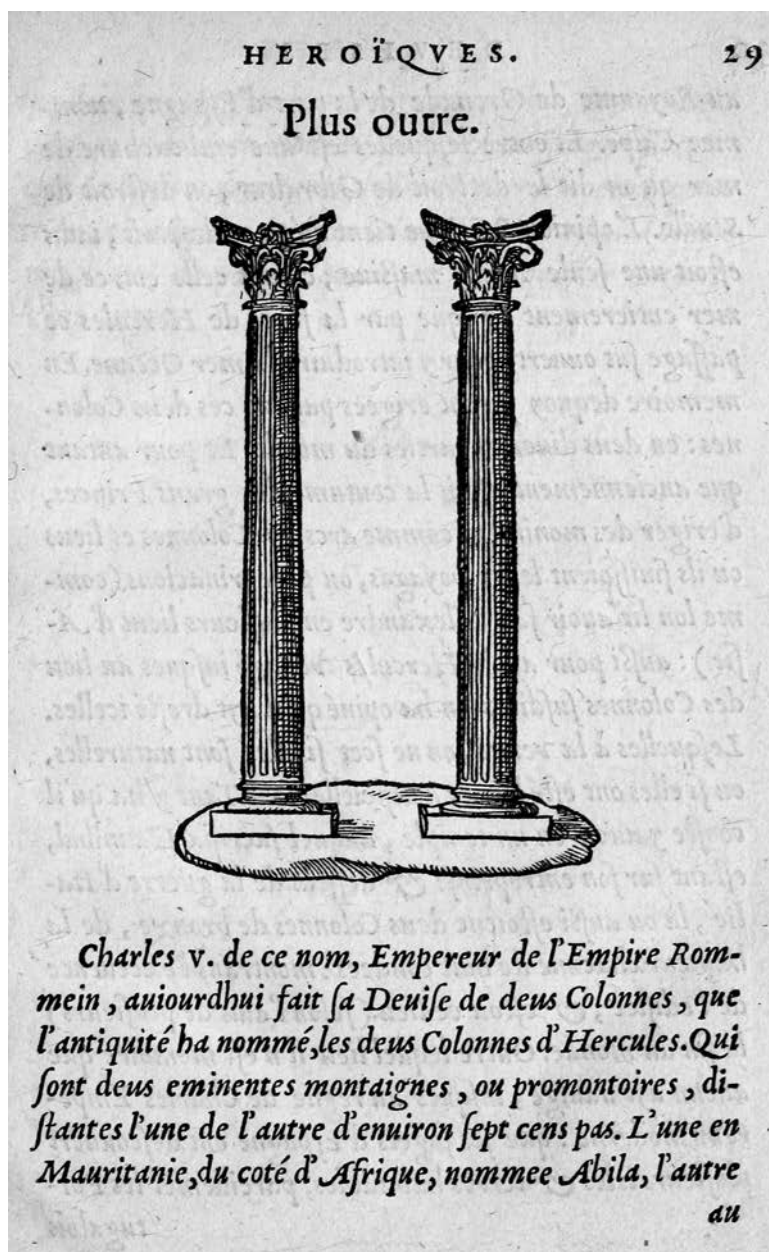


FIGURE 6: Claude Paradin, *Deuises heroïques* (Lyon, 1557), 29. (Rubenstein Library, Duke University, shelfmark PN6352 .P37 1557 c.1. Reproduced by permission.)

is the earliest surviving document to show Bacon engaging with the implications for the destiny of human knowledge of an increasingly interconnected globe. The striking vision contained in that early work of a orb now fully illuminated by the “through-lights” of circumnavigation and trade helped form Bacon’s sense of the best way to frame his mature vision. No longer was the emblem of his studies an unyielding ancient deity; now it was the visual representation of a prophetic insight about the newly commercial world he inhabited: as many sail to and fro, knowledge shall be increased.

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