

ROGER BACON

The Art and Science of Logic

A translation of the *Summulae dialectices*
with notes and introduction
by
Thomas S. Maloney

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The book is unique in several respects. First, there is the breadth of its sources. Not only do we find explicit reference to the usual authors such as Aristotle, Plato, Boethius, Porphyry, Cicero, and Priscian, we also find unexpected reference to Augustine, Bernardus Silvestris, Donatus, Terence, and Themistius, along with mention of the Muslim philosophers Algazel and Ibn Rushd. Second, it is clear that Bacon is drawing on or reacting to an extraordinarily wide variety of medieval sources: Garland the Computist, Hugh of St. Victor, Master Hugo, Hugutius of Pisa, Isidore of Seville, Nicholas of Damas, Nicholas of Paris, Richard of Cornwall, Robert Kilwardby, Robert of Lincoln, and Robert the Englishman. Third, it unexpectedly presents a full-blown treatment of Aristotle's theory of demonstration. And finally, Bacon reveals a highly unorthodox view of the signification of common terms.

Bacon, here, takes his students and us deeper into medieval sources and controversy than any of his rivals do.

MEDIAEVAL SOURCES IN TRANSLATION 47

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PONTIFICAL INSTITUTE OF MEDIAEVAL STUDIES

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*To my wife Stephanie,
the wind in my sails.*

“Indeed, thinking itself is sometimes injurious to health.”

Aristotle

Nicomachean Ethics 1153a20

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Preface

Early in the 1240s the University of Paris hired a recent graduate from Oxford, Roger Bacon by name, to teach the arts and introduce Aristotle to its curriculum. Along with eight sets of questions on Aristotle's natural works and the *Metaphysics* he claims to have authored another eight books before he returned to Oxford around 1247. Within the prodigious output of this period we find a treatise on logic titled *Summulae dialectices*, and it is this that is here annotated and presented in translation.

The book is unique in several respects. First, there is the breadth of its sources. Not only do we find explicit reference to the usual authors such as Aristotle, Plato, Boethius, Porphyry, Cicero, and Priscian, we also find unexpected reference to Augustine, Bernardus Silvestris, Donatus, Terence, and Themistius, along with mention of the Muslim philosophers Algazel and Ibn Rushd. Second, it is clear that Bacon is drawing on or reacting to an extraordinarily wide variety of medieval sources: Garland the Computist, Hugh of St. Victor, Master Hugo, Hugutius of Pisa, Isidore of Seville, Nicholas of Damas, Nicholas of Paris, Richard of Cornwall, Robert Kilwardby, Robert of Lincoln, and Robert the Englishman. Third, it unexpectedly presents a full-blown treatment of Aristotle's theory of demonstration. And finally, Bacon reveals a highly unorthodox view of the signification of common terms.

Bacon, here, takes his students and us deeper into medieval sources and controversy than any of his rivals do.

* * *

This book has been long in the making, and I am especially grateful to all for their encouragement along the way. But I owe a special debt of gratitude to Paul Spade and Simo Knuuttila for their patience in going over with me all too numerous texts that proved to be especially troublesome. The tedious task of checking references and proof reading was parceled out to relatives, who, because of blood, had no noble way out: John and Martha Maloney, Mary Zena, and Mariam Ballantine. Their invaluable contribution is immensely appreciated. And finally I wish to thank Ms. Jean Hoff of the PIMS Press. It is simply hard to imagine a more competent, efficient, and graceful person with whom to work in smoothing out the last wrinkles of the text: *inspiciens qua acutior cogitari nequit*.

Abbreviations

- CHLMP* Kretzmann, Norman, Anthony Kenny, and Jan Pinborg, eds. *The Cambridge History of Later Medieval Philosophy: From the Rediscovery of Aristotle to the Disintegration of Scholasticism 1100–1600*. Cambridge, London, New York, New Rochelle, Melbourne, Sydney: Cambridge University Press, 1982.
- Cn* Steele, Robert, ed. *Opera hactenus inedita Rogeri Bacon*. 16 vols. Oxford: Clarendon Press, 1905?–1941. Vol. 2: *Liber primus communium naturalium Fratris Rogeri* (Parts 1–2), 1905?
- Cst* Maloney, Thomas S., ed. and trans. *Compendium studii theologiae. Roger Bacon: Compendium of the Study of Theology*. Studien und Texte zur Geistesgeschichte des Mittelalters, vol. 20. Leiden, New York, Copenhagen, Cologne: E. J. Brill, 1988.
- CTMPT* Kretzmann, Norman and Eleonore Stump, trans. *The Cambridge Translations of Medieval Philosophical Texts*. Vol. 1: *Logic and the Philosophy of Language*. New York: Cambridge University Press, 1988.
- CWA* *The Complete Works of Aristotle: The Revised Oxford Translation*. 2 vols. Edited by Jonathan Barnes. Bollingen Series, vol. 71, pt. 2. Princeton, NJ: Princeton University Press, 1984.
- “*Ds*” Fredborg, Margareta, Lauge Nielsen, and Jan Pinborg, eds. “An Unedited Part of Roger Bacon’s *Opus Maius*: ‘*De signis*’.” *Traditio* 34 (1978): 75–136.
- GL* Keil, Heinrich, ed. *Grammatici Latini*. 8 vols. Vols. 2–3: Priscian. *Institutiones grammaticae*. Edited by Martin Hertz. Vol. 4: Donatus. *De arte grammatica libri*. Edited by Martin Hertz. 1855–1880. Reprint, Hildesheim: Georg Olms, 1961.
- Introductiones* William of Sherwood. *Introductiones in logicam. Einführung in die Logik*. Edited and translated into German by Hartmut Brands and Christoph Kann. Philosophische Bibliothek, vol. 469. Hamburg: Felix Meiner Verlag, 1995.
- William of Sherwood. *Introductiones in logicam*. Translated by Norman Kretzmann. *William of Sherwood’s Introduction to Logic*. [Based on Grabmann’s emended text.] Westport, CT: Greenwood Press, 1966.

- Logica* Alessio, Franco, ed. *Logica (Summa Lamberti)*. Pubblicazioni della facoltà di lettere di filosofia dell'università di Milano, vol. 59. Florence: La Nuova Italia Editrice, 1971.
- LM Rijk, L. M. de. *Logica Modernorum: A Contribution to the History of Early Terminist Logic*. 2 vols. Vol. 1: *On the Twelfth-Century Theories of Fallacy*. Vol. 2, pt. 1: *The Origin and Early Development of the Theory of Supposition*. Vol. 2, pt. 2: *The Origins and Early Development of the Theory of Supposition: Texts and Indices*. Assen: Van Gorcum, 1962 and 1967.
- Mullally Mullally, Joseph P., ed. and trans. *The Summulae logicales of Peter of Spain*. (Only the treatises on supposition, relatives, ampliation, appellation, restriction, distribution, and exponible.) *Publications in Mediaeval Studies*, vol. 8. Notre Dame, IN: University of Notre Dame, 1945.
- Obi* Steele, Robert, ed. *Opera hactenus inedita Rogeri Bacon*. 16 vols. Oxford: Clarendon Press, 1905?–1941.
- Sd* Libera, Alain de, ed. “Les Summulae dialectices de Roger Bacon.” Parts 1–2: *De termino, De enuntiatione*. Part 3: *De argumentatione*. *Archives d'histoire doctrinale et littéraire du Moyen Age* 53 (1986): 139–289; 54 (1987): 171–278.
- Tractatus* Rijk, L. M. de. *Tractatus, Called Afterwards Summule Logicales*. Assen: Van Gorcum, 1972.
- “Le traité” Libera, Alain de, ed. “Le traité *De appellatione* de Lambert de Lagny (Lambert d'Auxerre).” *Archives d'histoire doctrinale et littéraire du Moyen Age* 48 (1981): 227–285.

Introduction

I. INTRODUCTORY COMMENTS

During the 1240s at the University of Paris higher education in the liberal arts was undergoing one of its periodic revolutions. Since 1210 there had been a papal ban on lecturing on (and reading) the so-called natural works of Aristotle, the *Metaphysics*, and commentaries on these by Islamic authors. This left students and masters there extremely envious of their peers at other universities where the ban was not in effect. But at some point early in the 1240s a young Oxford-trained master by the name of Roger Bacon was invited to teach there and with him came a knowledge of and interest in the new Aristotle that was to result in a recognition of this master as a true pioneer in the study of Aristotle.

Before his return to Oxford, Bacon seems to have written eight sets of questions on Aristotle's natural works and the *Metaphysics* as well as one commentary. He speaks of eight other books, and Ferdinand M. Delorme thinks of these as other questions, whereas one of Bacon's recent biographers, Stewart Easton, suggests they may have been commentaries.¹ Whatever the case, this all represents a prodigious amount of work for so short a time and serves to give us our first indication of the kind of person Bacon was.

Among the works certainly ascribable to him from this period or immediately afterwards are a treatise on grammar (*Summa grammatica*) and one on logic (*Summulae dialectices*). Such labors are certainly in keeping with the duties of a master of arts at a university, so what distinguishes Bacon is not the mere fact that he wrote a treatise on grammar and one on logic but the range of sources they utilize and the evidence they supply for an author who is very much in touch with the cutting-edge of intellectual developments in his time. More to our purposes here, they portray Bacon as one who views the study of logic and language in a considerably more scientific setting than do other important teachers of this

1 For Delorme's list of the disputed books see *Opera hactenus inedita Rogeri Bacon*, ed. Robert Steele, vol. 13: *Questiones supra octo Physicorum Aristotelis*, ed. Ferdinand Delorme with Robert Steele (Oxford: Clarendon Press, 1935), pp. xx and xxi (henceforth, *Obi* plus volume title); and for a discussion of this issue see Stewart C. Easton, *Roger Bacon and His Search for a Universal Science: A Reconsideration of the Life and Work of Roger Bacon in the Light of His Own Stated Purposes* (1952; reprint, New York: Russell and Russell, 1971), pp. 59–61.

period whose works have survived, like William of Sherwood, Peter of Spain, and Lambert of Auxerre.

Up to the present Bacon's grammar has not received the attention it deserves but his textbook on logic has come into its own in the last two decades or so, especially the section on semantics in Part 2. This was provoked principally by the discovery and editing of a missing chapter of his *Opus maius* of 1267 entitled "*De signis*," which caused a flurry of interest in Bacon's semiotics and semantics. The publishing of the "*De signis*" also ultimately inspired a new edition and English translation of Bacon's *Compendium studii theologiae* of 1292, all of whose Part 2 was a re-working of the material in the "*De signis*," and an English translation of three treatments by him of the problem of universals, two of which were written during the Parisian period already mentioned.²

In 1987–1988 another significant step in Bacon studies was taken with the appearance of a new edition of Bacon's *Summulae dialectices*, by Alain de Libera.³ The first printed edition was published in 1940 by Robert Steele, but was based on only one of the two extant manuscripts and turned out to have some serious flaws.⁴ The continuing interest in Bacon studies, the centrality of the *Summulae dialectices* to contemporary interest in medieval logic, and the specific interest in Bacon's semantics moved de Libera, then, to collate the two known manuscripts and the result is the Latin text that serves as the basis for the present translation.

The above considerations serve equally well as a motive for a translation of Bacon's treatise on logic. There is a special need for the translation and it devolves from the more general interest these days in the study of the history of logic, especially semantics and the theory of argument. Yet to those who do not enjoy facility in the Latin language the medieval period is effectively closed to direct inspection. And I suspect this is more true in the field of logic than in any of the other traditional branches of philosophy. The works of many of the great theologians of the thirteenth century

2 See *Compendium studii theologiae*. Roger Bacon: *Compendium of the Study of Theology*, ed. and trans. Thomas S. Maloney, *Studien und Texte zur Geistesgeschichte des Mittelalters*, vol. 20 (Leiden, New York, Copenhagen, Cologne: E. J. Brill, 1988; henceforth, *Cst*) and *Three Treatments of Universals by Roger Bacon*, trans. Thomas S. Maloney, *Medieval & Renaissance Texts & Studies*, vol. 66 (Binghamton, NY: Medieval & Renaissance Texts & Studies, 1989).

3 See Alain de Libera, ed., "Les *Summulae dialectices* de Roger Bacon," parts 1–2: *De termino*, *De enuntiatione*; part 3: *De argumentatione*. *Archives d'histoire doctrinale et littéraire du Moyen Age* 53 (1986): 139–289; 54 (1987): 171–278 (henceforth, *Sd*).

4 See *Obi*, vol. 15: *Summa grammatica necnon Sumule dialectices Magistri Rogeri Bacon* (Oxford: Clarendon Press, 1940). For comment on the manuscripts see below, Section III: The Latin Text.

have long been accessible through translations, but only much more recently has interest shifted to the lesser masters of arts. So, the general interest in the history of logic, the significance of the masters of arts, and a very vibrant specific interest in Roger Bacon all support the labor entailed in such a translation.

II. THE AUTHOR, DATE, AND PLACE OF COMPOSITION

While at one time there was some question as to whether the *Summulae dialectices* was written by (the yet to be Franciscan) Roger Bacon or by the Dominican Robert Bacon, it seems now agreed that it is the work of the former. Among the considerations that support this view is the fact that its author has to be someone with an incredibly broad range of intellectual interests and a willingness not to be bound by tradition in deciding what sorts of sources are appropriate for a textbook on logic. The work reveals itself as a kind of synthesis between speculative and applied knowledge in that it draws on works beyond the expected Aristotelian *Organon* and Boethius' commentaries on those works. In support of this one could note the following.

- (1) There are references, among others, to Aristotle's *Physics* and *Meteorology*, to Boethius' *De arithmetica*, Isidore of Seville's *Etymologiae*, the *Liber de causis*, Alfred of Sareshel's *De mineralibus* and his commentary on Aristotle's *Metaphysics*, Nicholas of Damas' *De plantis*, Bernardus Silvestris' *De mundi universitate* (*Cosmographia*), and Robert Kilwardby's commentary on Aristotle's *On Sophistical Refutations*. In addition it shows complete familiarity with Algazel's *Logica* and *Metaphysica*, Ibn Sina's *De congelatione et conglutinatione lapidum*, and Ibn Rushd's *De substantia orbis* along with his commentary on Aristotle's *Metaphysics*.
- (2) It presents Aristotle's theory of demonstration, and this, in turn, reveals complete familiarization with that author's *Posterior Analytics*, a work only slightly known in the 1250s and almost never referenced, granted Peter of Spain points to it twice. Even as late as 1292 Bacon is lamenting the fact that the logical treatises of Aristotle were only "lately received and lectured on" and that (a now unknown) Master Hugo was the first to lecture on the *Posterior Analytics*. So extraordinary is familiarity with this work that Bacon goes out of his way to tell us that he met the man and read his book.⁵
- (3) Apropos of the dispute over authorship there is the fact that the work espouses the semantic theory that names are originally imposed to signify (appellate) only existing things, a minority opinion in mid-thirteenth-century logic but one clearly adopted by

5 See *Cst* I.14.

Roger Bacon in his 1267 *Opus maius*, “*De signis*.” Roger Bacon announces this theory in the present work (241) and holds fast to it to the end of his life, as is evidenced in his last work, the 1292 *Compendium studii theologiae*.

When one takes all of these things into consideration one can see why de Libera would say of this work: “It is not a dialectician, it is a philosopher who is speaking here, someone familiar with Greco-Arabic knowledge, doubtless already a scientist, soon perhaps an experimenter, in any case certainly a pupil of Robert of Lincoln and a continuer of Alfred of Sareshel.”⁶ The author has to be a master of arts, says de Libera, and the whole picture rules out anyone prior to 1245–1250 and Robert Bacon.⁷

But the date and place of the composition of the work are considerably more problematical. Robert Steele, the work’s first editor, speaks of the *Summulae dialectices* as “the last work of his University career,” and Easton agrees. Neither gives a clear reason for this belief, but I suspect that it is rooted in the recognition that it would have taken Bacon some years to acquire familiarity with the works cited above that ordinarily find no mention in a logic textbook. Easton does grant it could have been composed earlier in the 1240s.⁸ Indeed, it would have been quite natural for a beginning teacher in the arts to include such a work in his earliest writings. Easton and Theodore Crowley both agree that Bacon probably left Paris for Oxford in 1247 and both (Easton explicitly, Crowley by inference) agree that it seems very improbable that he continued to teach in an arts faculty once he returned to Oxford.⁹ In addition there is a practice within the work itself that supports a Parisian setting for its composition. In a work clearly written at Paris, and possibly before the *Summulae dialectices*, Bacon’s *Questiones supra libros octo Physicorum Aristotelis*, he draws on the Seine river (not the Thames) for an example: “... as if my palm would touch the Seine.”¹⁰ Then in our work, when discussing supposition, Bacon proposes two propositions to analyze, “The Seine runs” and “England is a good land” (227) and goes on to give extended analysis only of the former. “The Seine runs” is used a third time as an example in this work, in a syllogism involving equivocation (387), and Montmartre is mentioned in yet another example (386). Twice he gives examples of the category Place. In

6 *Sd* 1–2, p. 147.

7 *Ibid.*, p. 151.

8 *Ohi*, vol. 15, p. xx, and Easton, p. 61.

9 Easton, p. 70, and Theodore Crowley, *Roger Bacon and the Problem of the Soul in His Philosophical Commentaries* (Louvain: Editions de l’Institut Supérieur de Philosophie; Dublin: James Duffy, 1950), pp. 27–34. Easton (p. 87) says the return to Oxford could not have been later than 1250.

10 *Ohi*, vol. 13, p. 226.5–6.

the first he mentions Paris and England (not Oxford) (24); in the second he cites Vernon three times and Paris once, whereas London (not Oxford) and Rome get mentioned once (105). In another context, when he has cause to be speaking of languages, he mentions French, Greek, and Latin, but not English (118). And, finally, in Part Three, he chooses the French town Troisvaux for an example (442). Clearly, there is a pattern here. It is hard to imagine an English author's proclivity for French place names as examples if he were writing for students in an English locale. There was, after all, considerable rivalry between those two universities. So, these tend to support a Parisian site for the composition of the work and a date in the 1240s prior to 1247, both favored by Steele and Easton. Crowley, whose interests are elsewhere in his book, does not address the date of the *Summulae dialectices*.

The editors of the "*De signis*," on the other hand, point to a statement in Bacon's 1292 *Compendium of the Study of Theology* in which he says that he had aired the solution to the problem of the appellation of privative and negative terms forty years earlier, and our work is the principal one of his writings which does indeed discuss that problem.¹¹ Thus they speak of a date of 1250 for the composition and place it at Oxford. Neither Crowley nor Easton comments on this particular text and its significance for dating our work.

Alain de Libera, however, says that it is "probable" that the work was given a final redaction in Oxford around 1250, and mention of a redaction implies an earlier and initial composition at Paris.¹² It is, for him, a work that, while fundamentally in the Oxfordian tradition, has elements from the Parisian tradition: "The *Summulae dialectices* owes much to the Oxfordian tradition. Nothing, however, prevents thinking that it also reflects Bacon's teaching at Paris, the culture of the masters at the University of Paris, his discussions with the Parisian masters of arts of 1245 to 1250."¹³

11 "But this objection is reasonable which I came across forty [years] ago when I aired [the solution] to this difficulty." (*Cst* 2.106.) For the editors of the "*De signis*" see Margareta Fredborg, Lauge Nielsen, and Jan Pinborg, eds., "An Unedited Part of Roger Bacon's *Opus Maius*: '*De Signis*,'" *Traditio* 34 (1978): 79, n. 7 (henceforth "*Ds*"). The "objection" he refers to is taken to be the theory held by Richard of Cornwall that terms like 'dead man' have univocal appellation, such that Christ can be said to be a man during the three days he was in the tomb. For Richard's position see Franz Pelster, "Der Oxforder Theologe Richardus Rufus O.F.M. über die Frage: '*Utrum Christus in triduo mortis fuerit homo*,'" *Recherches de théologie ancienne et médiévale* 16 (1949): 258–280.

12 *Sd* 1–2, p. 152. See also p. 141.

13 *Ibid.*, p. 154. Elsewhere (p. 152) he speaks of the Parisian influence as "very probable."

Support for an Oxford setting could, perhaps, come as a corollary to the answer to a further question: Does the work stand in the Oxfordian or the Parisian tradition?¹⁴ Because of the work's link with, among others, the logic treatises *Cum sit nostra* and *Ut dicit* and the complete familiarity it shows with the *Fallaciae ad modum Oxoniae* (even if on several points it disagrees with it), those looking at the issue from this point of view, then, could be seen to be suggesting that the work was written in Oxford or that the influence entered principally through a redaction made there around 1250.

Now the hypothesis of a Parisian site in the 1240s for the composition cannot account for the Oxfordian tone of the work nor for the current interpretation of the words "forty [years] ago when I aired [the solution] to this difficulty." On the other hand the hypothesis of an Oxfordian site in 1250 cannot account for the consistent reference to Parisian or French place names, nor for the fact that such a book is not surprising for one who is writing profusely and teaching logic at Paris in the 1240s, nor for one who will not be teaching the arts after 1247. So, it is exceedingly difficult to say which of these two hypotheses is the more plausible since both stand on solid but mutually exclusive historical considerations. To accept the Parisian hypothesis it seems we must ignore the Oxfordian tenor of the work and a date of 1252 as plausibly inferred by Bacon's own words. To accept the Oxfordian hypothesis it seems we must ignore the Parisian place examples and the fact that Bacon would have had no real reason for either writing or redacting this work after 1247 since he is consumed by scientific interests and is no longer teaching in the arts. We are left with an urgent need for some third hypothesis about its composition, one that will reconcile all the data that ground such apparently well-founded historical considerations.

To that end I propose that we clarify one point and rethink one of the persuasions that ground the hypothesis that the work was composed at Oxford around 1250. The clarification pertains to the temptation to think that a work in the Oxford tradition must have been composed in Oxford and to the reinterpretation of the claim that Bacon's words in 1292 "forty [years] ago when I aired" refer to our work.

Does it follow that a book in the Oxfordian tradition has to have been composed in Oxford? Surely not. Bacon was educated in that tradition as a student before he left Oxford for Paris and it was that mind-set that he took with him to Paris. Then he developed it against his Parisian challengers, adopted some of their tradition when persuaded, and crafted the amalgamation we now call the *Summulae dialectices* during some seven

14 For a delineation of the issues that constitute these two traditions see Alain de Libera, "The Oxford and Parisian Traditions in Logic," in *CHLMP*, pp. 174–187, esp. 176–177. For a description of the Parisian and Oxfordian influences on this work see *Sd* 1–2, pp. 151–154.

years at Paris. De Libera speaks of this work as “a complex original of premises and themes where the Parisian magisterial element coexists often along side the usual authoritative data of the Oxford tradition.”¹⁵ Given Bacon’s thorough foundation in that tradition as a student at Oxford it seems there is every good reason for thinking that whatever he composed in his early career would reflect that training. So, I do not think that anyone should be tempted by the mere fact that the work is predominantly in that tradition to overemphasize its significance for establishing the place of the work’s composition.

The reinterpretation requires one to take another look at Bacon’s claim in 1292 to have aired a solution to a problem of appellation forty years earlier, that is, in 1252. Easton recounts in his biography of Bacon that Adam Marsh writes in a letter of 1248 that Richard of Cornwall received permission to go to Paris to lecture on the *Sentences* but changed his mind “because of poor health” and remained in Oxford.¹⁶ In letters of 1252 or 1253 Adam again requests the Minister General to allow Richard to act on the earlier invitation, but this time the reason given is “because of the more overwhelming situations of the disturbances.”¹⁷ Richard, he says, tells him that it is “very urgent” that he go. Easton suggests that Richard may have been mixed up in the disturbances or that they were directed against him (since no one else is urgently leaving Oxford at this time). At this point Easton notes that A. G. Little once suggested, without pursuing the point, that Bacon may have been involved in the disturbances.¹⁸ Easton then proceeds to hypothesize that Bacon, who was a skilled debater and who disliked theologians in principle and Richard of Cornwall specifically, may have confronted Richard publicly and was thereby the cause of the disturbances. We know Richard was lecturing at Oxford in 1252, that Bacon knew him then, and that Bacon detested his teaching on the appellation of privative and negative terms. This would explain why Richard wanted out of Oxford and wanted out quickly, namely, to escape the harassment. Easton concludes: “All these facts are consistent with a public challenge about the year

15 *Sd* 1–2, p. 154.

16 For this and what follows in this paragraph see Easton, pp. 95–97.

17 The Latin for this phrase is somewhat obscure and reads: “*ob vehementiores perturbationum occasiones*.” One could translate it more literally by ‘because of the more vehement occasions of the disturbances’. What is very curious is the use of the comparative degree of ‘*vehemens*’. Situations/occasions more overwhelming/vehement than what? The use could suggest that there was more than one situation/occasion that was overwhelming/vehement and Adam is referring to the worse of the two.

18 A. G. Little, “The Franciscan School at Oxford in the Thirteenth Century,” *Archivum Franciscanum Historicum* 19 (1926): 842.

1252.”¹⁹ And, I would add, we know from Bacon’s later writings just how obnoxious he could be. Such a public altercation with Richard would have been completely in character for him.

Now, if we – Easton does not do this – connect Richard’s public harassment in 1252 with Bacon’s comment “forty [years] ago when I aired,” we have a way to resolve the conflicting data as to the place and date of our work. The airing mentioned in the *Compendium of the Study of Theology* would be reinterpreted to be referring, not to the *Summulae dialectices* and its composition, as the editors of the “*De signis*” suggest, nor to the redaction proposed by de Libera, but to the public confrontation with Richard in Oxford in 1252 over an issue on which he had done his homework earlier. This reinterpretation would provide a referent for the remark in 1292 and at the same time allow our work to have been composed in Paris before he left in 1247.

In this new hypothesis the scenario would be as follows. Bacon as a student, well educated in the tradition in logic at Oxford, is called to Paris around 1240 to teach the arts, logic among them, and writes a textbook on logic that reflects the Oxfordian tradition. In 1247 having become more and more familiar with the sciences through his reading of people like Isidore of Seville, the *Liber de causis*, Alfred of Sareshel, Nicholas of Damas, and Bernardus Silvestris, he becomes totally consumed by a new vision of a universal science, and gives up his position in Paris to be able to return to Oxford so he can associate with a group inspired by Robert Grosseteste who have similar interests in the sciences and languages, all the while prevailing on his wealthy brother to give him a huge sum of money for secret books and instruments and tables. While at Oxford he pays attention to what is going on in the University (though not teaching there) and in 1252 he becomes infuriated with Richard of Cornwall, then lecturing on the *Sentences* at Oxford, and begins to publicly harass him over the issue of the appellation of privative and negative terms – Christ may not be called a man during the three days in the tomb! – causing Richard to prevail upon Adam Marsh to intercede for him with the Minister General for permission to accept a deferred invitation to lecture in Paris. Richard goes to Paris and does not return to Oxford until 1256, and then to serve as regent master in theology for the Franciscans, and around 1257 Bacon enters the Order. This puts Richard in a position to repay Bacon for past offenses, and Easton speculates, “Richard’s influence may have been one of many that prevented [Bacon] from rising to any degree of dignity within this Order in spite of his intellectual attainments.”²⁰ It might also

19 Easton, p. 96. The hypothesis is somewhat reminiscent of the twelfth-century story of William of Champeaux being driven to a monastery by his public humiliations at the hands of Peter Abelard.

20 Ibid., p. 97.

explain the hostility Bacon reserved for Richard even forty years later and which finds expression in one of his final references to him: “And I knew well the worst and most foolish [author] of these errors, who was called Richard of Cornwall, a very famous one among the foolish multitude. But to those who knew, he was insane and [had been] reprov’d at Paris for the errors which he had invented [and] promulgated when lecturing upon the *Sentences* there, and after he had lectured on the *Sentences* at Oxford from the year of our Lord 1250. From that [year of] 1250 up till now the multitude has remained in the errors of this master, i.e., for forty years or more, and it is currently gaining strength at Oxford, just where this unlimited madness began.”²¹

Just how plausible is this reinterpretation of the referent of Bacon’s remarks in 1292? It has two major weaknesses. First, the case for it is circumstantial; there is simply no evidence in the historical record of a public altercation between Bacon and Richard at Oxford around 1252. Second, the current interpretation of the disturbances mentioned by Adam Marsh focuses on a conflict that arose when Adam, in February of 1253, insisted to the Chancellor and masters of the University that Thomas of York be appointed to take Richard of Cornwall’s place in lecturing on the *Sentences* at Oxford.²² The seculars were much opposed because Thomas was not a master of arts, was less qualified than Richard, since Thomas had never lectured on the *Sentences*, and indeed, the very request for any Franciscan to do such was most exceptional. The University finally agreed to Adam’s request but only on the grounds that it would never happen again. One is left to speculate why Richard took deep offense in this struggle, for that is not part of the historical record. Whatever the reason, we have here a documented historical event that offers a possible understanding of what the disturbances could have been about.²³

So where does this leave us? I am not prepared to say that Little’s suggestion has no plausibility in it, (a) given what we know about Bacon’s per-

21 *Cst* 2.86.

22 I am indebted to Rega Wood for the background to what appears in this paragraph. For a brief description of the debate over the inception of Thomas of York in theology at Oxford and the role Adam Marsh played in it see A. G. Little, *The Grey Friars in Oxford* (Oxford: Clarendon Press, 1892), pp. 37–39, and I credit Wood for the reference.

23 Ironically, the introduction of the York affair into the discussion could be taken in a way that accommodates Little’s intuition about Bacon’s trouble-making, namely, by clarifying Marsh’s use of the comparative degree in his “because of the *more* overwhelming situations of the disturbances.” He would be thinking of *both* the York and the Bacon situations and describing one of them as the more compelling. One could easily think of Bacon’s public harassment as more painful than some hurt endured in the York affair. For the quotation see above, n. 17.

sonality and the contempt in which he held Richard; (b) given a strong consensus (Steele, Easton, Crowley, and presumably de Libera) that Bacon most probably was not teaching in an arts faculty after 1247, in consequence of which he would have no reason for composing a treatise on logic around 1250, and very little, if any, for redacting an earlier composition; (c) given the lack of a sufficiently plausible explanation of why the York affair would have been so painful to Richard that it would inspire such a sense of urgency in him to take up the invitation to go to Paris which he had so recently turned down; and (d) given the way in which the theory can settle the date and place of the composition of the *Summulae dialectices* in a way that conflicts with no historical data. Nevertheless, it must be stated again that there is no historical evidence of a public conflict between Richard and Bacon at Oxford around 1252. The upshot seems to be that now we have three hypotheses to account for the place and date this work, and all three of them have serious problems.

III. THE LATIN TEXT

The original printed edition of the *Summulae dialectices* was edited in 1940 by Robert Steele in the fifteenth volume of the *Opera hactenus inedita Rogeri Baconi*, comprising chiefly works written by Bacon during his first sojourn in Paris, i.e., during the 1240s.²⁴ Because it was based on only one manuscript, Oxford, Bodleian, Digby 204 (identified in the notes as O.), and because of numerous problems within the text, Alain de Libera has taken the pains to collate a second manuscript, Seville, Biblioteca Capitular Columbina 5-2-40 (identified as S.), with the former to produce the edition on which the translation is based. The existence of the second manuscript was announced by E. Longpré in 1938, too late for Steele's use, but no printed text was ever made from it.²⁵ De Libera lists the contents of each manuscript and gives an analysis of the quality of the two (both are seriously faulty), indicates his choice of the Digby manuscript as the principal text, and then proceeds to articulate his method of editing.²⁶

Both manuscripts are highly contracted and the variations and lacunae present serious and numerous difficulties in producing a reasonable facsimile of the original text. Those familiar with the art of editing such texts, therefore, will not be surprised to find that de Libera's edition stands in need of not a few corrections. Where it is necessary to emend the Latin text

24 Robert Steele, ed. *Opera hactenus inedita Rogeri Baconi*. 16 vols. Oxford: Clarendon Press, 1905?-1941.

25 E. Longpré, "La *Summula dialectica* de Roger Bacon," *Archivum Franciscanum Historicum* 13 (1938): 204-205.

26 See *Sd* 1-2, respectively, pp. 139-140, 167, and 167-170.

in order to be faithful to the manuscripts or secure a coherent translation, I call attention to this in the notes.

In contrast to the recent editions of Peter of Spain's *Tractatus*, William of Sherwood's *Introductiones in logicam*, and Lambert of Auxerre's *Logica de Libera* has decided, more often than not, not to divide the contents of Bacon's *Summulae dialectices* into paragraphs in the logical sense, but rather into much smaller units, employing a rubric not always apparent. This results in unnecessary fragmentation and makes the larger logical moves within the text less apparent. In three instances it has even produced the anomaly of incomplete sentences. For this reason the translation abandons his format and re-structures the text along lines that give a much more clear indication of the major and minor breaks that Bacon himself intended. The result is, however, that now the paragraph numbers in the Latin text and in the translation do not agree. To facilitate cross referencing these two texts, de Libera's paragraph numbers are placed in brackets at the end of each of the paragraphs in the translation, and one may find in an appendix a table of correlations that matches up the paragraph numbers in the two works.

One who reads the Latin text of de Libera's edition will notice several anomalies. In Part Two the paragraph number 166 appears twice; the enumeration jumps from 329 to 340 and from 483 to 494; and 496 appears twice. In Part Three where 506 should be, one finds 596. But perhaps more bothersome is the numbering system itself. Instead of a simple, continuous enumeration from beginning to end, or at minimum within each of the three Parts and the Prologue, one finds that the enumeration begins anew after the Prologue at the beginning of two subdivisions of Part One: 1.1 (Predicables) and 1.2 (Predicaments). Parts Two and Three are numbered separately but at least continuously within each Part. De Libera's method makes referencing the text more troublesome than is necessary. For this reason in the translation all the paragraphs are numbered successively from beginning to end, thus providing a one-number basis for referencing any part of the translation, a process employed with success by Albert G. Judy in his edition of Kilwardby's *De ortu scientiarum*.

IV. TRANSLATION

The first question a translator of a Latin text like the *Summulae dialectices* must ask pertains to the audience for whom one is writing. Do they read Latin? How much do they know about medieval philosophical discourse? Should references to Latin sources by the Latin text's editor be reproduced? Surely no one will pick up this translation for a little casual reading, and hence one thing is certain: the translation need not be of such literary quality that the language itself would recommend the reading. Those who consult this work will be looking to understand the technical

points made by Bacon about logic and semantics, his position in the thirteenth-century controversies. The translation has in mind principally three groups: (1) those who can read no Latin at all; (2) those who have a facility in Latin but who, having come upon an especially problematical text in Latin, wish to see how someone who has pondered the text at even greater length and is deeply familiar with the work as a whole has managed to make sense out of it; and (3) those who have a facility in Latin, but who often find much value in using a translation first and then proceeding to the original version when the translation gives evidence that the translator is having difficulty rendering the author's thought with complete confidence. This has brought me to the following considerations which guided the execution of various features of the present translation.

In the (French) Introductions to Parts 1–2 and Part 3 of his edition of the *Summulae dialectices* Alain de Libera has provided a wealth of material on the twelfth- and thirteenth-century influences on Bacon's position in the logic controversies of his time. Since these are then available to the reader, and for reasons of economy, they are not re-presented here. What are, however, noted are his occasional comments on the significance of what Bacon is saying.

Some translations leave the reader with an unwarranted level of confidence. To avoid this I have determined to present a more or less literal translation and to follow the custom that places the troublesome Latin terms and phrases in parentheses in the text itself. (See, e.g., the unusual use of '*demonstratio*' in the opening line of the Prologue.) The reader is immediately alerted to the fact that the meaning of the original needs close scrutiny even though an interpretation is presented in the form of the translation provided. It seems to me that the field of medieval philosophical literature is in rather desperate need of a greater standardization in the translation of what is already standardized terminology in Latin. To this end I have kept a ready eye on Kretzmann's translation of William of Sherwood's *Introductiones* and on those of Kretzmann and Stump in *The Cambridge Translations of Medieval Philosophical Texts*, sacrificing on occasion preference to harmony, without doing damage to the meaning to be conveyed. Much of their terminology and phrasing will be found in this translation. There is one notable exception, the term '*ad placitum*'. In the "Introduction" to my edition and translation of Bacon's *Compendium studii theologiae* (pp. 26–29) I argued at length, based on the research of J. Engels, that translation by "conventionally" or "arbitrarily" does not really do justice to the notion that the Medievals wanted to convey and that the more literal "at one's own pleasure" or simply "at pleasure" does just that.²⁷ Were

27 See J. Engels, "La doctrine du signe chez saint Augustin," ed. F. Cross, in *Studia Patristica*, vol. 6, pp. 366–373, *Texte und Untersuchungen*, vol. 81 (Berlin: Akademie-Verlag, 1962), and his "Origine, sens et survie du term boécien '*secundum placitum*'," *Vivarium* 1 (1963): 87–113.

Augustine the prevailing influence in this matter the case might be different; but (against others) I think it is more probable that Boethius is.²⁸ The paradigm for Bacon for the way in which words get attached to things is, after all, the naming of infants at Baptism and the naming of pets.

Apposition will often be used where ‘*sive*’ is found in Latin and is obviously meant to convey true apposition; otherwise it will be translated by ‘or’, and the reader will be left to determine whether apposition or disjunction is intended. Similarly, ‘*vel*’ and ‘*aut*’ are often used by Bacon interchangeably, and cannot be relied on to signify, respectively, a soft or hard disjunction. (See, e.g., *Sd* 2.151, 157, 159 in the Latin text.) He also uses ‘*ei*’ when the reflexive ‘*sibi*’ is needed. When this is significant, attention is called to it in the notes.

The identification of the precise referent of pronouns (especially when subjects of verbs) is as problematical in Medieval Latin syntax as it is in modern English. Where such referents are too far removed to be easily remembered, or where they need to be disentangled from alternative candidates, I will use the convention of placing them in brackets. Thus, for example, what would otherwise appear as “it applies here” becomes “[the first meaning of the term] applies here.” More often than not, however, bracketed words are supplied simply to make the text more understandable. The price, of course, is a less than aesthetically pleasing page, but scholars, I think, are willing to pay it in exchange for being alerted to the places where caution is due.

On those occasions when internal cross-references appear, often in the form of something like “as has already been said,” I insert in parentheses the number of the paragraph in the translation to which reference is made. A clause such as “as was just said” refers one to a prior remark within the same paragraph.

With considerable reluctance I conceded to the removal of all third-level headings. Because, however, there are some noticeable shifts within the lengthy sections as now headed, I have inserted additional spacing between some paragraphs to indicate Bacon is moving to an issue different from the one just discussed but still covered by the prior heading. See, e.g., the break between paragraphs 23 and 24. When that extra spacing appears at the top of a page it is, of course, less noticeable.

Finally, when quoting from Sherwood’s *Introductiones* I use the Brands and Kann edition of the Latin text and Kretzmann’s translation of Grabmann’s Latin edition. Because of the particular texts involved, this presents

28 That Augustine is the principal source of Bacon’s semantics is a claim on which I have attempted to cast reasonable doubt. See Thomas S. Maloney, “Is the *De doctrina christiana* the Source for Bacon’s Semiotics?” in Edward D. English, ed., *Reading and Wisdom: The De doctrina christiana of Augustine in the Middle Ages* (Notre Dame, IN, and London: University of Notre Dame Press, 1995), pp. 126–142.

no problem. In quoting from Peter of Spain's *Tractatus* I use de Rijk's edition of the Latin text and the selective translations by Kretzmann and Stump found in *The Cambridge Translations of Medieval Philosophical Texts*. For those parts of the *Tractatus* not translated by Kretzmann and Stump I have provided my own translation. This enables me to achieve a higher degree of standardization in terminology than had I used Francis P. Dinneen's translation of the *Tractatus*, a work to be used with considerable caution. For those parts of the *Tractatus* also translated by Joseph Mullally I provide reference so that the reader may consult his translation, even though all translations of that work are my own. For references to Lambert of Auxerre's *Logica* I use Alessio's edition of the Latin text (except for the section in Chapter Eight "On Appellation," for which I use de Libera's more recent edition) and the translation of the chapter called "Properties of Terms" by Kretzmann and Stump found in *The Cambridge Translations of Medieval Texts*; all other translations of this work are mine. Finally, when Aristotle is quoted in English the translation will be that provided in Jonathan Barnes' edition of *The Complete Works of Aristotle*, unless otherwise noted. On occasion the translation will be my own from the Latin version found in the series *Aristoteles Latinus*.²⁹

Where reference to various works is required over and over again, abbreviations and full bibliographical data are supplied in the list of Abbreviations given above.

V. CONCLUDING REMARKS

The value of such a work as this is, obviously, entirely tied up with its use. Hopefully, the appearance of this translation will have a result that is

29 Translations in English now available are: William of Sherwood's *Introductiones in logicam: William of Sherwood's Introduction to Logic*, trans. Norman Kretzmann (Westport, CT: Greenwood Press, 1966; henceforth *Introductiones*); Peter of Spain's *Tractatus: Peter of Spain: Language in Dispute*, trans. Francis P. Dinneen, Amsterdam Studies in the Theory and History of Linguistic Science, Series III: Studies in the History of the Language Sciences, vol. 39 (Amsterdam and Philadelphia: John Benjamins, 1990) – note, however, that this translation has been severely criticized by E. J. Ashworth (*Vivarium* 30 [1992]: 277–281) and should be used with great caution; for tract 7 (On Properties of Terms): *The Summulae logicales of Peter of Spain*, ed. and trans. Joseph P. Mullally (Notre Dame, IN: University of Notre Dame Press, 1945; henceforth Mullally); and for tracts 2 (Categories), 3 (Predicables), 4 (Syllogisms), 5 (Topics), and 7 (selections: fallacies of Composition and Division): *The Cambridge Translations of Medieval Texts*, vol. 1: *Logic and the Philosophy of Language* (trans. Norman Kretzmann and Eleonore Stump (New York: Cambridge University Press, 1988), respectively, pp. 80–88, 88–101, 217–226, 226–245, and 245–261; and Lambert of Auxerre's *Logica* (selection: the Properties of Terms): trans. Kretzmann and Stump, *ibid.*, pp. 104–162.

more than the sum of its parts, for with it, and for the first time, scholars competent in English but unable to read Latin will be able to compare three extremely rich sources for our understanding of thirteenth-century logic and semantics: William of Sherwood, Peter of Spain (in part or in Dinneen's sometimes idiosyncratic translation), and Roger Bacon. Shortly I hope to be able to provide a translation with explanatory notes of Lambert of Auxerre's complete *Logica* so that English readers can get at the comprehensive comparisons they need. Until then, at least Lambert's discussion of the property of terms can be approached fruitfully through the translation of the appropriate chapter by Kretzmann and Stump in *The Cambridge Translations of Medieval Philosophical Texts*. There is still much valuable work to be done simply in discovering where these four major figures of the mid-thirteenth century agree and disagree, to say nothing of all the work needed to uncover their various sources, few, if any, of which have been translated into any modern language. Much work is needed on a comparative study of their theories of categories, supposition, demonstration, modal argument, syllogistic, topics, and the fallacies, to say nothing of the pedagogical qualities of their works as textbooks on logic.