



Ockham and Ambiguity

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In the *Sophistici elenchi*, Aristotle identifies thirteen types of fallacies or ways one can go wrong in arguing. According to Aristotle, of these fallacies, six come about in language, and seven are independent of language.¹ The six in language can be characterized as types of ambiguity that arise because of the peculiarities of natural language. These types of ambiguity are equivocation, amphiboly, composition, division, accent, and *figura dictionis*. The seven ways independent of language in which one can go wrong in arguing can be characterized as arising because of the limited mental capacity of human beings. And these ways of going wrong are accident, affirming the consequent, begging the question, many questions, treating as cause what is not the cause, *secundum quid et simpliciter*, and *ignoratio elenchi*.

At the beginning of the twelfth century, with the recovery of the *Sophistici elenchi* in the Latin West, philosophers became particularly interested in the six types of ambiguity that Aristotle identifies as coming about in language—those of composition and division more so than the others. One reason for the latter may have been the difficulty people had in recognizing and therefore avoiding bad arguments based on composition and division. Another may have been the philosophical usefulness a recognition of composition and division afforded. For

1. *Sophistici elenchi* 4 (165b24ff. and 166b20ff.).

example, the following sort of argument for the incompatibility of divine foreknowledge of human actions and human freedom would have been considered a failure by most medievals because it depends on a premise that is ambiguous with respect to composition and division:

- (1) Whatever must be the case is not subject to human free will.
- (2) Whatever must be the case is necessarily true, and whatever is necessarily true must be the case.
- (3) *Whatever is known by God necessarily is true.*
- (4) God, who is omniscient, knows our future actions.
- (5) Therefore, our future actions must occur.
- (6) Therefore, our future actions are not subject to our free will.

Premise (3) is ambiguous with respect to composition and division because the modal operator 'necessarily' can govern² either the word 'true' or the sentence 'Whatever is known by God is true'. When it governs 'true', the sense of the premise is that whatever God knows is a necessary truth, or that if God knows that *p*, then necessarily *p*. When it governs 'Whatever is known by God is true', the sense of the premise is that 'Whatever God knows is true' is a necessary truth, or that it is necessarily the case that if God knows that *p* then *p*. The sense resulting when 'necessarily' governs 'Whatever is known by God is true' would have been taken to be true insofar as it expresses the fundamental truth that whatever one knows is true. On the other hand, the sense resulting when 'necessarily' governs 'true' would have been taken to be false on the incompatibilist conviction that people sometimes act freely, and that actions performed on those occasions are not causally necessitated. Thus, the medievals could avoid accepting (6) by maintaining that the argument resulting when (3) is taken in its true sense is invalid, and that the argument resulting when (3) is taken in its other sense is valid but unsound.

One can see, then, how having a basic understanding of composition and division would be important to the scholastics. So it is hardly surprising that, between the beginning of the twelfth century and the end of the fifteenth, more than one account of the nature of composition and division was put forward. William Ockham offers an

2. Here the word 'govern' means 'modify', but is intended to designate a genus of grammatical relationships of which modification is only one.

account that differs in two important respects from earlier accounts, and I would like to discuss that account here. My focus will be on what he takes to be the defining characteristics of composition and division, and what he seems to take to be the link between composition and division and two of the other four types of ambiguity that arise in language.

OCKHAM'S DEFINITION OF COMPOSITION AND DIVISION: A PRELIMINARY WORRY

Ockham gives his most detailed account of composition and division in his *Summa logicae* and *Expositio super libros Elenchorum*.³ According to him, composition and division are ambiguities which arise when (a) a written or spoken expression can have different senses simply in virtue of different punctuations or pronunciations of the words in that expression,⁴ and (b) the expression has no sense independently of being punctuated or pronounced in one way or another.⁵ For example, the expression 'Whoever lives always is' (*Quicumque vivit semper est*) is taken by Ockham to have neither the sense it has when it is punctuated 'Whoever lives always, is' nor the sense it has when it is punctuated 'Whoever lives, always is'. In the first case, the word 'always' governs 'lives', and the sense is that whoever has sempiternal life exists—which is true. In the second case, 'always' governs 'is', and the sense is that whoever lives exists sempiternally—which is false. Ockham stresses that the source

3. William of Ockham, *Summa logicae*, in *Opera philosophica et theologica ad fidem codicum manuseriptorum*, *Opera philosophica* 1, ed. Philotheus Boehner, Gedeon Gál, and Steven F. Brown (St. Bonaventure, N.Y.: The Franciscan Institute, 1974). The relevant portion is 3–4.8. William of Ockham, *Expositio super libros Elenchorum*, in *Opera philosophica* 3, ed. Francesco del Punta (St. Bonaventure, N.Y.: The Franciscan Institute, 1979). The relevant portion is 1.3.6.

4. William of Sherwood describes composition and division in this way in his *Introductiones in logicam*, and so does the anonymous author of *Fallacie Parvipontane*. See William Sherwood's *Introduction to Logic*, trans. Norman Kretzmann (Minneapolis: University of Minnesota Press, 1966), and *Logica Modernorum: A Contribution to the History of Early Terminist Logic*, ed. L. M. de Rijk, vol. 1 (Assen: Van Gorcum, 1962).

5. *Super lib. Elench.* 1.3.6 (del Punta 34.3–10).

of the compounded/divided ambiguity is the possibility of different punctuation or pronunciation. He insists on the error of those who say that expressions such as the following can be distinguished according to composition and division: 'A white thing can be black' (*Album potest esse nigrum*), 'An impossible thing can be true' (*Impossibile potest esse verum*),⁶ and 'Every man of necessity is an animal' (*Omnis homo de necessitate est animal*). The different senses of these expressions cannot be sorted out by means of different punctuation (or pronunciation). In Ockham's view, distinguishability of senses on the basis of different punctuation or pronunciation is what differentiates the compounded/divided ambiguity from amphiboly.⁷ An example of amphiboly is 'I hope that you the enemy may capture' (*Pugnantes vellem te accipere*). Given the rules of Latin grammar, the word for 'you' can be either the subject or the object of the subordinate verb. The utterance thus has two senses—one in which my wish is that you capture the enemy, one in which my wish is that the enemy captures you. These two senses cannot, however, be brought out on the basis of punctuation or pronunciation.

In addition to maintaining that composition and division arise when and only when a written or spoken expression can have different senses in virtue of different punctuation or pronunciation, Ockham maintains that there are two modes (or sorts) of composition and division. One mode occurs when the ambiguous expression is in each of its senses categorical, or is in each of its senses hypothetical. Another mode occurs when the sense of composition is categorical and the sense of division is hypothetical.⁸ A categorical sentence has one subject, one predicate, and one copula. An example would

6. Walter Burley, for one, uses these two expressions as examples of compounded/divided ambiguous expressions in *De puritate artis logicae* tract. brev., ed. Philotheus Boehner (St. Bonaventure, N.Y.: The Franciscan Institute, 1955), pp. 240ff.

7. *Super lib. Elench.* 1.3.6 (del Punta 34.15–21): "Nam manifeste patet quod in talibus [scil., propositionibus] non potest esse diversa punctuatio propter quam possent diversi sensus causari, quod tamen necessario requiritur [si compositio et divisio est], et in hoc maxime differt ab amphibolia." See also *Super lib. Elench.* 2.5.3 (del Punta 179.8–17).

8. *Summa log.* 3.4.8 (Bohner 786.12–787.21); compare *Super lib. Elench.* 1.3.6 (del Punta 35.38–41). One might wonder why Ockham does not mention the other possibility; namely, that one mode (a third) of composition and division arises when the compounded sense is hypothetical and the divided sense is categorical. This

be 'Socrates is running'. A hypothetical sentence is composed of two or more categorical sentences joined by at least one adverb or conjunction. Examples would be 'While Socrates is running, Plato is disputing', 'If Socrates is running, Plato is disputing', 'Socrates is running or Plato is disputing', 'Since Socrates is running, Plato is disputing, and Cicero is writing'.⁹ Ockham thinks that this aspect of his account of composition and division in terms of categoricals and hypotheticals is supported by the examples Aristotle gives in the *Sophistici elenchi*.¹⁰

In *Summa logicae*, Ockham organizes his discussion of examples of compounded/divided ambiguous expressions under the just-mentioned modes of composition and division, although he does not explicitly identify the categorical or hypothetical sentences expressing the senses of his examples. I take it, however, that the expression 'Whoever lives always is' is an example of the first mode of composition and division, since it seems that in each of its senses it is a categorical sentence: 'Every sempiternally living person is an existent person', and 'Every living person is a sempiternally existent person'.¹¹ On the

characterization of composition and division, which seems to be unique to Ockham, needs to be strengthened from 'is' to 'must be'. See note 11 below.

9. See *Summa log.* 2.1 and 2.30.

10. *Super lib. Elench.* (del Punta 35.41–42). For the examples of compounded/divided expressions given by Aristotle, see *Sophistici elenchi* 4 (166a23–37) and 20 (177a33–177b34).

11. Someone might suppose that it is plausible to say that this first sense of 'Whoever lives always is' is expressed in a categorical and the second in a hypothetical (e.g., 'If any person lives, he exists always'). In such a case the original expression is an example of the second mode of composition and division. But surely if one can take the second sense as expressed in a hypothetical, one can take the first sense as expressed in a hypothetical (e.g., 'If any person lives always, he exists'). In such a case, the original expression must still be considered an example of the first mode. It must be considered one all the more, since, given their similarity, it would be irrational to treat the one sense as hypothetical and the other as categorical. Rationality dictates that each sense be taken as categorical or each as hypothetical. These considerations notwithstanding, it is theoretically possible for someone to take one sense as categorical and the other as hypothetical in such cases. Yet Ockham's characterization of the two modes of composition and division does not take into account this possibility. For that reason, one can see that Ockham does not adequately distinguish the modes. For that reason as well, I doubt that Ockham is correct in claiming that *his* account of composition and division in terms of categoricals and

other hand, the expression 'Everything possible if it is necessary is true' (*Omne possibile si est necessarium est verum*) appears to be an example of the second mode of composition and division, since one of its senses is naturally expressed in a categorical sentence, and the other in a hypothetical: 'Everything possible-if-it-is-necessary is true', and 'If everything possible is necessary, everything possible is true'.

Now given that Ockham's description of the modes of composition and division in *Summa logicae* is in terms of two senses designatable as the *compounded sense* and the *divided sense*, the question one will want to ask is, On what basis does Ockham distinguish a compounded sense from a divided sense? Why, for instance, should 'Everything possible-if-it-is-necessary is true' be considered the compounded sense rather than the divided sense of the expression 'Everything possible if it is necessary is true', since what is apparently the divided sense in this case seems to result from nothing other than a different way of *composing* or *putting together* the elements of the original expression: i.e., 'Everything possible if-it-is-necessary is true'? Although most medieval philosophers before Ockham maintain that the compounded sense is the sense that is expressed when what is more naturally suited to be compounded is compounded (under some interpretation or other of 'naturally suited'),¹² Ockham says nothing of the sort.¹³ What he

hypotheticals is supported by the examples Aristotle gives. However, it may well be that some account in terms of categoricals and hypotheticals other than the one Ockham gives is compatible with Aristotle's examples.

12. For example, some of Ockham's predecessors might say that in the case of the expression 'Whoever lives always is', the compounded sense is the one that results when the word 'always' is taken as governing the principal verb, and the divided sense the one that results when the word 'always' is taken as governing the subordinate verb. That 'always' is naturally suited to be compounded with the principal verb is defended on the grounds that the principal or main verb in an expression plays the role of a verb more than does the verb of the subordinate clause in the same expression insofar as there is no complete thought, no sentence without it. At least this is the way Lambert of Auxerre puts it: "nam verbum principale magis se habet in natura verbi quam verbum non principale vel implicativum. . . ." See his *Logica (Summa Lamberti)*, ed. Franco Alessio, Pubblicazioni della Facoltà di Lettere e Filosofia dell'Università di Milano 59 (Florence: La Nuova Italia, 1971), p. 156.

13. As it turns out, Ockham does tell us how to distinguish the compounded and divided senses in modal contexts. According to him, a (genuine) modal proposition is one in which a mode ('true', 'false', 'possible', 'necessary', and so on) can be taken with a *dictum* (an expression in indirect discourse, where both the subject and

does say is that it is up to a person to say what he would like and to take the words ‘compounded’ and ‘divided’ as he pleases.¹⁴ We will not, then, get from Ockham the help we need to identify one sense of an ambiguous expression as the compounded sense, the other as the divided sense.

At one point in *Summa logicae*, Ockham even goes so far as to say that he does not care how composition and division are described, “since I don’t think that knowing this is very useful for the special sciences, although knowing how to draw distinctions regarding such expressions is very useful.”¹⁵ Presumably if he does not care how composition and division are described, he does not care, once again, in what way the compounded sense and the divided sense are described. Nor does he care whether one sense is distinguished as a compounded sense rather than a divided sense or vice versa. For one cannot non-arbitrarily distinguish the senses unless one has a view about why one sense is called compounded and the other divided. Once one has formulated such a view, however, one has thereby committed oneself

predicate are in the accusative case and the copula is an infinitive). A compounded sense of the modal proposition is expressed when the modal term is predicated of the *dictum* of the original proposition, and a divided sense is expressed when the modal term is predicated of a sentence whose predicate is the predicate of that *dictum*, and whose subject is the word ‘this’ or a pronoun standing for the referent of the subject of that *dictum*. For example, ‘That a white thing is black is possible’ (*Album esse nigrum est possibile*) is taken by Ockham to be a modal proposition, its compounded sense being ‘“A white thing is black” is possible’, and its divided sense being ‘“This is black” is possible’, where ‘this’ refers to something that is white. The compounded sense is false, since a thing cannot be white and black at one and the same time; but the divided sense is true, since some white thing (a table, say) can be black (insofar as it can be painted) at some time other than the time at which it is white. See *Super lib. Elench.* 1.3.6 (del Punta 36–37), *Summa log.* 2.8.9 (Boehner 273–279) and 3.4.8 (Boehner 787). The example we are considering—‘*Omne possibile si est necessarium est verum*’—is not a modal proposition according to Ockham, since it has no mode that can be taken with a *dictum*. Therefore, this example is not one about which Ockham has anything to say regarding which of its senses is compounded and which is divided, or why those senses are to be so described.

14. *Super lib. Elench.* 1.3.6 (del Punta 35.45–48): “Sed ista difficultas non est multum utilis, et magis est ad placitum hominis dicere quod voluerit et accipere vocabula sicut placuerit quam ex re ipsa, ideo de ipsa pertranseundum est.”

15. *Summa log.* 3.4.8 (Boehner 787.21–24): “Utrum tamen isto modo sit accipienda distinctio istarum fallaciarum non multum curo, quia hoc scire non reputo multum utile scientis specialibus, quamvis notitia distinguendi tales orationes magnam habeat utilitatem.”

to a non-superficial theory of composition and division, and *ipso facto* taken the description of composition and division to be important. In other words, Ockham's description in *Summa logicae* of the modes of composition and division with reference to *the* compounded sense and *the* divided sense is at odds with statements he makes elsewhere about composition and division. To make the point more forcefully: if, as Ockham says, I can use words as I please, then suppose that what pleases me is to understand by 'compounded sense' and 'divided sense' the reverse of what Ockham apparently understands by them in *Summa logicae*.¹⁶ In that case, what Ockham will classify as falling under Mode II will not fall under Mode II—or Mode I for that matter—since the compounded sense will be hypothetical and the divided sense categorical, and he makes no provision for this possibility.

It is true that in *Super libros Elenchorum* Ockham describes the second mode of composition and division without designating the senses of the ambiguous expression as compounded or divided. But this fact will not dissolve the difficulty since *Super libros Elenchorum* was written before *Summa logicae*.¹⁷ Moreover Ockham's description in *Summa logicae* of the second mode of composition and division in terms of the compounded sense and the divided sense¹⁸ shows that he must think that it is at least theoretically possible to distinguish what can properly be called a compounded sense from what can properly be called a divided sense. Indeed, both Ockham's predecessors (particularly Aristotle) and his contemporaries seem to think that there is such a thing as composition *and* division, and that there is a way to sort out by name the senses associated with these two types of

16. See above, the section "Ockham's Definition . . ."

17. According to the editors of *Summa log.*, the text was written in 1325 after Ockham wrote his commentary on Aristotle's *Physics*, and *Super lib. Elench.* was written before his commentary on the *Physics* (Boehner 48*). There is a basis for maintaining, therefore, that the view of modes expressed in *Summa log.* is Ockham's mature view.

18. Ockham also speaks of compounded and divided senses in connection with the example 'He is a good shoemaker'. See *Summa log.* 3.4.8 (Boehner 789.86–90): "Similiter, ut frequenter, orationes in quibus ponitur adiectivum cum substantivo distinguendae sunt, sicut tales 'iste est bonus sutor', demonstrando malum hominem. Si sit oratio divisa, falsa est, quia tunc denotatur quod est bonus et quod est sutor; si sit composita, tunc vera est, quia tunc denotatur quod habet perfecte talem artem suendi." Compare note 13 above.

ambiguity. Given the historical context, then, as well as the evidence of his position's internal inconsistency, Ockham needs to explain why we needn't trouble ourselves with these details. That speakers may take words as they please would seem in this case beside the point.

This worry about Ockham's account of the nature of composition and division may perhaps be satisfactorily dispelled if one notices the following. First, the two linguistic phenomena one attempts to distinguish in the case of composition and division may not, after all, be precisely distinguishable. Ockham's predecessors had put forward varied and sometimes conflicting accounts of what composition and division are, and no consensus was ever reached.¹⁹ If there were in fact no precise way of distinguishing composition from division, that would certainly explain why there had been no consensus.²⁰ Second, what Aristotle describes as the other four individual fallacies in language (i.e., equivocation, amphiboly, accent, and *figura dictionis*) possess the same general characteristic as do the alleged two fallacies he calls composition and division. This characteristic is ambiguity arising from two or more possible construals of a grammatical unit, where a grammatical unit is an expression, a word, or part of a word (e.g., a suffix). So, for example, even though in the case of the fallacy of accent an expression can have at least two senses depending on the way one particular word in the expression is pronounced, those two senses are not given technical names, nor are two different fallacies picked out on the basis of the two possible pronunciations. I take it that for Ockham there is no obvious reason to treat what from this perspective looks like a single phenomenon—namely, composition/division—any

19. For various medieval accounts of composition and division, see, for example, *Dialectica Monacensis*, in *Logica Modernorum: A Contribution to the History of Early Terminist Logic*, ed. L. M. de Rijk, vol. 2.2 (Assen: Van Gorcum, 1967); William of Sherwood's *Introduction to Logic*, trans. Kretzmann; and Lambert of Auxerre *Logica (Summa Lamberti)*, ed. Alessio.

20. In *Super lib. Elench.*, for example, Ockham says that wherever there is the ambiguity of composition there is in some way the ambiguity of division, and *vice versa*. The Latin reads, "Hic tamen intelligendum est quod ubicumque est fallacia compositionis ibi est aliquo modo fallacia divisionis, et e converso. Quae autem oratio debeat vocari composita et quae divisa, non est multum curandum" (1.3.6 [del Punta 35.49–36.53]). It should be noted that during the scholastic period '*fallacia*' denoted what we mean today by 'ambiguity', and '*paralogismus*' denoted what we mean today by 'fallacy' or 'fallacious argument'.

differently. Furthermore, in order to communicate effectively, to understand what is being said, or to do well in academic disputations or logical exercises it would be important to recognize ambiguity, although it would not matter whether the various senses associated with that ambiguity had names. One can recognize, for example, that the expression 'Flying planes can be dangerous' is ambiguous and that the ambiguity depends on the possibility of taking the word 'flying' as either an adjective modifying 'plane' or as a verb whose direct object is 'plane'. There seems, however, to be no practical point whatsoever in arguing for special names for these senses, because there seem to be no characterizable phenomena other than the ambiguity broadly picked out as equivocation.

If the three reasons just mentioned are collectively convincing as reasons for departing from tradition, then Ockham's basic account of compounded/divided ambiguity can be defended. In conjunction with that defense, however, one will have to conclude that by falling back into talk of compounded senses and divided senses in *Summa logicae*, Ockham was simply being careless. One will also have to conclude that Ockham therefore should have simply described the second mode of composition and division as one which arises when one sense of the ambiguous expression in question is categorical and the other hypothetical.

Finally, assuming that the three reasons just mentioned are something like the reasons that motivated Ockham in his account of composition and division, that account—that departure from tradition—can be seen as based on an application of the Principle of Parsimony: One should never multiply entities (or their names) without good reason.

A FURTHER REFINEMENT OF OCKHAM'S ACCOUNT: FOUR CONTEXTS OF COMPOSITION AND DIVISION

Although Ockham does not think it is worthwhile to discuss which sense is compounded and which is divided, or why, he does take time to describe the contexts in which composition and division arise within the two modes. He recognizes four contexts.

- (1) A context in which a conjunction is placed between two terms in an expression, e.g., 'Five are two *and* three' (*Quinque sunt duo et tria*), 'Every animal is rational *or* irrational' (*Omne animal est rationale vel irrationale*), 'Everything possible *if* it is necessary is true'.
- (2) A context in which one word in an expression can be joined together with either of two other words, e.g., 'Whoever lives always is'.
- (3) A context in which an adjective is placed together with a substantive term,²¹ e.g., 'He is a white monk' (*Iste est albus monachus*).
- (4) A context in which the expression involves both a *dictum* and a modal term,²² e.g., 'It is possible that a seated person walk' (*Possibile est sedentem ambulare*).

In what follows, I will discuss the second and third contexts because Ockham's discussion of them suggests that as far as he is concerned equivocation (or something like it) is the most basic of the linguistic fallacies—or at least is the one to which three of the six linguistic fallacies can be reduced. A perceived reducibility to equivocation of at least some of the standardly recognized types of ambiguity is a second important respect in which Ockham's account of composition and division differs from the accounts of his predecessors.

COMPOSITION AND DIVISION PRODUCED BY LINGUISTIC MODIFICATION

In *Summa logicae* Ockham tells us that when an expression contains a word that can be joined together with either of two

21. A term is anything that can be used as a subject, predicate, or copula in a categorical sentence, and anything that can be used as a modifier of the subject, predicate, or copula of such a sentence. A substantive term is a term which refers to what would fall into the Aristotelian category of substance.

22. A *dictum* is an expression in indirect discourse, as for example 'that every man is an animal'. In Latin such expressions are in the accusative/infinitive construction, as for example '*omnem hominem esse animal*'. An example of an expression involving both a *dictum* and a modal term is 'That every man is an animal is necessary' (*Omne hominem esse animal est necessarium*).

words in that expression, the expression is ambiguous with respect to composition and division.²³ We have already seen one example of this in 'Whoever lives always is'. The expression 'Whatever anyone knows now he has learned' (*Quod quis scit nunc didicit*) is a second example insofar as its two senses can be distinguished on the basis of punctuation or pronunciation. 'Whatever anyone knows now, he has learned' is one reading. According to Ockham, it is true because whatever he now knows, he has already learned. In this case the adverb 'now' governs the word 'knows'. There is another reading: 'Whatever anyone knows, now he has learned'. In this case 'now' governs 'has learned', and the resulting sense is one Ockham says is false. In neither instance does Ockham identify the sense as compounded or as divided.

Another example of an expression of this sort is 'Forty of men one hundred left godlike Achilles' (*Quadraginta virorum centum reliquit dives Achilles*).²⁴ Ockham's treatment of this example is worth exploring for reasons which will become clear shortly. In *Summa logicae*, Ockham classifies the Achilles example as a compounded/divided ambiguous expression containing a word that can be joined together either with one word or with another. In *Super libros Elenchorum*, however, he says that we can see that (the senses of) 'Forty of men one hundred left godlike Achilles' can be distinguished in accordance with composition and division, *and* amphiboly, *and* equivocation.²⁵ As for the analysis on the basis of composition and division, Ockham merely tells us that there is one; he does not tell us what it is. He says, "In the same way it can be analyzed on the basis of composition and division, as was said."²⁶ In his analysis of the same expression on the basis of amphiboly, Ockham says that 'of men' (*virorum*) can be construed with 'forty' or with 'one hundred' (potest construi cum li 'quadraginta' vel cum li 'centum'). Here one should not be misled into thinking that this is really a characterization of the various senses of

23. *Summa log.* 3.4.8 (Boehner 789.75–76). Ockham does not explicitly consider examples falling within this context in *Super lib. Elench.*

24. See *Sophistici elenchi* 4 (166a33–38).

25. *Super lib. Elench.* 1.3.6 (del Punta 39.162–174).

26. *Super lib. Elench.* 1.3.6 (del Punta 39.173–174): "Eodem modo potest distingui secundum compositionem et divisionem, sicut dictum est. Et idem in multis reperitur." I understand "sicut dictum est" as referring to the general description of an analysis in terms of composition and division Ockham gives near the beginning of *Super lib. Elench.* (del Punta 34.3–14).

the expression in terms of composition and division insofar as ‘construing’ sounds a lot like ‘combining’ or ‘compounding’. Recall that Ockham defines composition and division in terms of the possibility of distinguishing more than one sense of an expression on the basis of different punctuation or pronunciation. Insofar as he does this, he can describe amphiboly in terms of construing certain words with other words²⁷ without thereby conflating amphiboly and composition and division.

At any rate, I take it that from Ockham’s point of view, the analysis of ‘Forty of men one hundred left godlike Achilles’ on the basis of composition and division would yield these results: The expression can be pronounced or punctuated either as ‘Forty, of men one hundred, left godlike Achilles’ (*Quadráginta, virorum centum, reliquit dives Achilles*)—i.e., forty men remain out of the original one hundred. Or it can be pronounced and punctuated as ‘Forty of men, one hundred left godlike Achilles’ (*Quadráginta virorum, centum reliquit dives Achilles*)—i.e., one hundred men remain instead of the original forty. Although the different punctuations of the English translation of the Latin expression in question clearly are unnatural, it is unclear whether the corresponding punctuations of the Latin translation of the original expression in Aristotle’s Greek would be considered similarly unnatural to a native speaker or to a schoolman fluent in Latin. In any event, it seems clear that Ockham would endorse an analysis on the basis of composition and division at least similar to the one I have presented.

In his analysis of ‘Forty of men one hundred left godlike Achilles’ on the basis of equivocation, Ockham says that ‘forty’ can be taken in either the genitive or the accusative, and that ‘one hundred’ can be taken in either the accusative or the genitive. (The corresponding Latin words ‘*quadráginta*’ and ‘*centum*’ are indeclinable.) Equivocation brought about in virtue of the capacity of a word or words to be taken

27. Ockham takes amphiboly to be ambiguity in an expression (as opposed to a word) that cannot be sorted out on the basis of the way the expression is pronounced or punctuated (*Super lib. Elench. 1.3.6* [del Punta 34.18–21]). According to him, there are three modes or sorts of amphiboly: (a) one expression, wherever it is written or uttered, has more than one distinguishable sense, (b) an expression has a primary signification in virtue of a primary imposition, and a secondary signification in virtue of a way of talking begun in connection with a special situation, and (c) an expression uttered or written by itself has one sense, yet when put with another expression becomes ambiguous (del Punta 177.94–103).

in more than one grammatical case is the third mode of equivocation recognized by Aristotle.²⁸ When 'forty' is taken as genitive, 'men' is the noun it determines; 'one hundred' is then taken as accusative, and the sense of the expression is that of forty men, godlike Achilles left one hundred.²⁹ On the other hand, 'forty' can be taken as accusative and 'one hundred' as genitive, in which case the sense of the expression is that of one hundred men, godlike Achilles left forty. The two senses of the expression recognized in connection with the analysis based on equivocation are the same two senses one must recognize when one analyzes the expression in connection with composition and division and in connection with amphiboly.³⁰

On the basis of what we have just seen, I believe that Ockham's claim that the Achilles example can be distinguished in accordance with composition and division, amphiboly, and equivocation commits him to the view that there is more than one plausible analysis of that expression—one being preferable to the others. I say this because a compounded/divided analysis of the Achilles example does not explain the existence of two possible senses of the expression in question unless it is assumed that in virtue of pronouncing or punctuating the expression in certain ways one comes to see which words are

28. See *Sophistici elenchi* 4 (166a14–22) and *Super lib. Elench.* 1.2.6 (del Punta 20.13–18). At one point Ockham says, "Multa quae hic dicuntur de istis tribus modis aequivocationis possunt applicari ad modos amphiboliae. Quia tamen, ut frequenter, ubi est aliquis modus amphiboliae est etiam modus aequivocationis penes tertium modum, eo quod aliqua dictio potest esse unius casus vel alterius, vel unius numeri vel alterius, et sic de aliis accidentibus dictionum" (*Super lib. Elench.* 1.2.9 [del Punta 30.173–189]).

29. Supposing that Achilles has taken forty men into battle, it is impossible that he leave behind—to continue to fight, to be prisoners of war, or to die—one hundred men. The state of affairs expressed in this case, then, is impossible. This is the reading medievals seem to have in mind. See, for instance, Lambert of Auxerre's *Logica* (Alessio 164.23–32). They apparently do not consider the case in which Achilles brings sixty reinforcements to a garrison of forty.

30. Ockham tells us what the senses of the ambiguous expressions are only in connection with the analysis in terms of equivocation. With regard to the analysis in terms of amphiboly, he says that the senses are evident: "patet sensus" (*Super lib. Elench.* 1.3.6 [del Punta 39.173]). Furthermore, Ockham states explicitly, at least in the case of analyses on the basis of composition and division and on the basis of amphiboly, that the senses of the ambiguous expression are the same: "Sive tamen distinguantur penes unam fallaciam sive penes aliam dico quod sensus non variantur" (*Summa log.* 3.4.8 [Boehner 788.42–43]).

to be construed with which other words. The compounded/divided analysis cannot be understood except on the basis of the amphiboly analysis. Furthermore, Ockham's amphiboly analysis of the example does not explain the existence of two possible senses of the expression unless it is understood that 'of men' can be determined by either 'forty' or 'one hundred'. If 'of men' is construed with 'forty', isn't it the case that 'of men' is being taken as determined by 'forty', that 'forty' is being taken as genitive and 'one hundred' as accusative? And if 'of men' is construed with 'one hundred', isn't 'one hundred' taken as genitive and 'forty' as accusative? One cannot understand the amphiboly analysis except on the basis of the equivocation analysis.

These considerations strongly suggest that some compounded/divided ambiguous expressions, if not most or all, are ambiguous in virtue of containing an equivocal term, and that one can describe such ambiguous expressions at levels less precise than the proper (or fundamental) description in terms of equivocation. In this case, the description of the Achilles example in terms of amphiboly can be seen as less explanatory than its description in terms of equivocation; and the description in terms of composition and division can be seen as even less explanatory than the description in terms of amphiboly.

Although Ockham explicitly connects equivocation, amphiboly, and composition and division only in *Super libros Elenchorum*, the views expressed in *Summa logicae* are compatible with the one I claim is expressed in *Super libros Elenchorum*. And although, as I pointed out earlier, *Summa logicae* was written after *Super libros Elenchorum*, Ockham does not in the *Summa* repudiate what he says in the commentary on this score. So, for instance, Ockham says in *Summa logicae*,

And to me it seems that they [i.e., expressions typically described as compounded/divided ambiguous³¹] can be more plainly and more manifestly analyzed in Latin in respect of amphiboly, although perhaps in Aristotle's idiom or in Greek this kind of ambiguity in expressions of this sort is more manifest in respect of composition and division than in respect of amphiboly.³²

31. It is not clear whether Ockham means any expression that can fall under the head of compounded/divided ambiguity, or whether he means only a small class of such expressions; namely, those in which both senses of the expression are categorical or both hypothetical, or those containing a *dictum* and a modal term. See *Summa log.* 3.4.8 (Boehner 787.38–788.42).

32. *Summa log.* 3.4.8 (Boehner 787.38–788.42).

In this passage Ockham tells us that as far as he is concerned certain compounded/divided ambiguous expressions are more plainly analyzed in terms of amphiboly. I take it that he means by this that the analysis in terms of amphiboly yields more information than the analysis in terms of composition and division. And if, as I have suggested, the analysis in terms of composition and division is broader than the analysis in terms of amphiboly, one would of course expect the analysis in terms of amphiboly to be the plainer, more explanatory analysis.

COMPOSITION AND DIVISION PRODUCED BY AN ADJECTIVE TOGETHER WITH A SUBSTANTIVE TERM

The third context in which Ockham recognizes the compounded/divided ambiguity—that in which an adjective is placed with a substantive term—also falls under Mode I. Ockham says that ‘He is a good shoemaker’ (*Iste est bonus sutor*) is compounded/divided ambiguous.³³ The expression can mean either that this man is good and that he is a shoemaker, or that this man has mastered the art of shoemaking. Ockham goes on to say,

And although such expressions can be analyzed in accordance with composition and division, it seems to me that they can also be analyzed in accordance with amphiboly, and the senses [distinguished] will not be varied [in the two analyses]. Such propositions [as] ‘He is a white monk’ can be analyzed in the same way; in one sense it is denoted that he is white and that he is a monk, in another sense it is denoted that he is a monk of such-and-such an order.³⁴

Although Ockham does not say here that expressions containing an adjective and a substantive term are more plainly analyzed in terms

33. *Summa log.* 3.4.8 (Boehner 789.86–88). Ockham tells us that if the man who is indicated is evil, then the first identified sense is false, the second true. I have not seen this sort of example used in connection with composition and division by any other medieval authors later than the twelfth-century *Anonymi*. For information about them, see L. M. de Rijk’s *Logica Modernorum* 1. It should also be noted that the English translation of the example is misleading. In the Latin, there is no article ‘a’, and so it is clearer how in Latin there can be two possible readings.

34. *Summa log.* 3.4.8 (Boehner 789.90–96).

of amphiboly, he does say that they can be analyzed in terms of amphiboly with the same results. The plausibility of my interpretation will depend to some extent on whether expressions falling in this third context can be analyzed in terms of equivocation as well as amphiboly and composition and division as these are defined by Ockham. The answer to that question is not at first glance clear. For although it may seem reasonable to think in the case of 'He is a white monk' that 'white' is ambiguous and can be taken as signifying either a color or a religious order, it may seem equally reasonable to think that in both senses of the expression 'white' signifies a color—the color of the monk's skin, or the color of his habit. Also, although it may seem reasonable to think in the case of 'He is a good shoemaker' that 'good' is ambiguous and can be taken as signifying either moral excellence or proficiency in a craft, it may seem equally reasonable to think that 'good' signifies the appropriate actualization of (different) relevant potentialities in both senses of the expression.³⁵

I believe, however, that the controversial positions that can be taken concerning the analyses of 'He is a good shoemaker' and 'He is a white monk' suggest that there is in fact some kind of variability in words such as 'good' and 'white'—a variability which it is altogether appropriate to call 'equivocation' insofar as it will fall under that mode of equivocation according to which a word is unambiguous in isolation but becomes ambiguous when joined with another word or expression.³⁶ If so, this would count in Ockham's favor, since he would then be seen as having a thesis about the reducibility of composition and division which does not smack of arbitrariness in being restricted to a small handful of compounded/divided ambiguous expressions. The question, then, is how might one bring out the aforementioned kind of variability or equivocation?

35. During the Middle Ages many philosophers (including Augustine, Boethius, and Albert the Great) held that goodness and being are connected in an interesting way. During the thirteenth century, Thomas Aquinas provides what is perhaps the most detailed account of this connection, describing being in terms of the actualization of potentiality. For an excellent discussion of Aquinas's views, see Eleonore Stump and Norman Kretzmann, "Being and Goodness," in *Divine and Human Action: Essays in the Metaphysics of Theism*, ed. Thomas V. Morris (Ithaca, N.Y.: Cornell University Press, 1988), pp. 281–312.

36. *Super lib. Elench.* 1.2.6 (del Punta 20.13–8) and *Sophistici elenchi* 4 (166a18–22).

First, although in connection with the monk example 'white' can be thought of as signifying color when the sense is that the man belongs to a particular religious order, surely its signification in that case is not restricted to color. The religious order could change the color of its habit and retain the name 'white monks'. And it could do that, I think, because a name signifies primarily its object and only secondarily, if at all, the object's accidental characteristics. Therefore, even if 'white' (even now) refers to the color of the robes worn by the order's first members, it also refers to one particular religious order irrespective of the color of its members' robes. In short, the signification of 'white' differs in the two senses of 'He is a white monk' if only because in one of those senses the signification is expanded or augmented to cover more than a particular color.

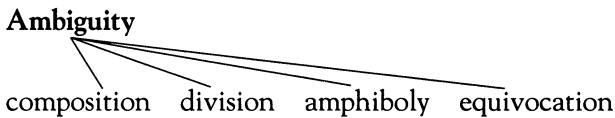
Second, in connection with the shoemaker example, the variability can be seen as associated with the signification of the term 'good', and with the sorts of things to which the term is applied. 'Good', unlike 'white', is what the medievals call a transcendental term (a term which can be correctly applied to absolutely everything insofar as it refers to what transcends Aristotle's ten categories). For instance, one can speak of the shoemaker's being good in respect of *x* (making shoes), and good in respect of *y* (living a moral life). Variability associated with 'good' as used in the example has to do with the fact that 'good' does not specify enough about the object that is called 'good'—enough, that is, to be of use to anyone interested in communicating; and so the word that is modified by 'good' augments the signification of 'good' such that one understands *in what way* the object referred to has potentialities and is supposed to have realized those potentialities. The words 'appropriate' and 'relevant' in the definition of 'good' being presupposed for our purposes (i.e., 'the appropriate actualization of relevant potentialities') are made precise by virtue of the words which 'good' can be connected with in a compounded/divided ambiguous expression.³⁷

It is possible, therefore, to make a case for expressions which fall under the third context of composition and division being reducible

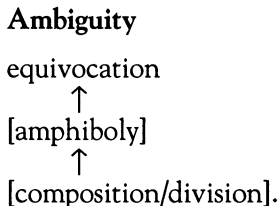
37. This is consistent with Ockham's remarks in *Super lib. Elench.* 2.5.5 (del Punta 182.28–31): "Et est sciendum quod quando 'bonus' vel 'malus' per se ponitur significat bonitatem vel malitiam moris, sed quando ponitur cum 'sutore' significat notitiam vel ignoratitiam talis artis."

to equivocation. It is also clear, I think, that those expressions can in fact be characterized in terms of composition and division and amphiboly too. I can see no reason to deny that one can indicate the two senses of '*Iste est bonus sutor*' in the following way: '*Iste est, bonus sutor*' and '*Iste est bonus, sutor*'.³⁸ Nor do I see any reason to deny that these two senses are distinguishable in virtue of the adjective '*bonus*' functioning either as a modifier of the noun (to which it is adjoined) or as a predicate adjective (independently modifying the subject-term).³⁹ The adjectival term can be construed either with '*sutor*' or something else in the expression. As we saw earlier, Ockham characterizes amphiboly in just this way. The third context of composition and division, therefore, adds support to my contention that as far as Ockham is concerned, compounded/divided ambiguity is ultimately reducible to equivocation.

The upshot of our consideration of Ockham's remarks in *Summa logicae* and *Super libros Elenchorum* about composition and division can be represented graphically. Ockham's predecessors would diagram the relationship between certain types of ambiguity in the following way:



Ockham would diagram them in this way:



38. The point I want to make here cannot be made using the English translation of the Latin, since in order to preserve the ambiguity in the English translation, the article 'a' would have to be omitted, rendering the English ('He is good shoemaker') ungrammatical.

39. In the latter case I take the sense to be 'He is a good man (*Iste est bonus*), [and] a shoemaker'.

If my reading is correct, Ockham finds one and the same phenomenon where his predecessors found four. This departure from tradition might, like the departure pointed out earlier, be seen as based on an employment of the Principle of Parsimony.

TWO PROBLEMS

One problem faced by the account of composition and division I attribute to Ockham is of the 'so what?' variety. Some people might maintain that the account I attribute to Ockham is no different from the one that is transparent in Aristotle's text. Aristotle says, for example, at one point in the *Sophistici elenchi*,

However, nothing prevents the same expression from having several ways of failing.⁴⁰

It looks as if the view about the reducibility of composition and division to equivocation I have been claiming for Ockham as innovative was not innovative at all, since even according to Aristotle the classification of types of fallacies is non-exclusive.

Ockham can get around this apparent difficulty by pointing out, first of all, that Aristotle makes this remark in the course of arguing that those people are mistaken who try to solve a certain example of ambiguity by saying that it turns on considering one and the same object in different respects⁴¹ instead of solving it by pointing out that it depends on accident. The fallacy of accident is, however, a fallacy independent of language, and the fallacy recognized by Aristotle's imagined interlocutors, insofar as it at least resembles the fallacy *secundum quid et simpliciter*, also seems to be independent of language. Given the context of Aristotle's remark at 179b17, then, it is not clear that whatever he means, he intends that remark to apply not only to fallacies independent of language, but to linguistic fallacies or fallacies in language as well—this latter being what presently concerns us.

40. "Nihil autem prohibet eandem orationem plures fallendi occasiones habere." So the text of *Sophistici elenchi* 24 (179b17) as it appears in *De Sophisticis Elenchis*, ed. Bernard G. Dod, AL 6.1-3 (Leiden: E. J. Brill, 1975).

41. *Sophistici elenchi* 24 (179b10-11) as in AL 6.1-3: "eundem quidem nosse et ignorare dicunt, sed non secundum idem."

Ockham can also point out that although Aristotle does say that fallacies independent of language can be reduced to *ignoratio elenchi*,⁴² it would be surprising to find him making a similar claim about linguistic fallacies, since he thinks not only that there must be a certain number of such fallacies (six), but thinks that this can be proved by induction and by syllogism.⁴³ My claim, then, that Ockham was doing something innovative still stands.

A second problem for the account of composition and division I attribute to Ockham is the following. Even if the account is supported by what Ockham says in connection with the second and third contexts of composition and division, unless it is likewise supported by what can be said about the first and fourth contexts, there is no reason to think that Ockham either believes or is committed to believing that composition/division is reducible to, or has as its source, equivocation.

I believe that one can at least begin to make a case for the first and fourth contexts also being reducible to equivocation. Consider, for instance, 'Five are three and two', which exemplifies the first context because in it a conjunction is placed between two terms. The two readings of 'Five are three and two' are 'Five are (three and two)' and 'Five are three, and five are two'. One can see that 'and' is not the same operator on both readings. On the second reading 'and' is used as an operator for sentential conjunction; on the first, 'and' is used as an operator for arithmetical summation, where the arguments are numbers and not sentences. 'And' can thus be seen as the equivocal term in this case.

Consider, also, 'It is possible that Peter speaks French'. This example falls within the fourth context because it involves both a *dictum* and a modal term. The two readings in this case are "'Peter speaks French" is possible' and 'It is possible for Peter to speak French'. 'Possible', however, is not the same operator on both readings. On the first it is used epistemically, indicating that for all I know Peter speaks French. On the second it is used performatively, indicating that Peter has the ability to speak French.⁴⁴ Or consider 'It is possible that

42. *Sophistici elenchi* 6 (168a17–19).

43. *Sophistici elenchi* 4 (165b27–29).

44. This second reading is ambiguous in its own right insofar as the ability referred to can be either realized (as in the case of a skill) or unrealized (as in the case of a mere power).

a seated person walk'. The two readings in this case are "A seated person is walking" is possible' and 'It is possible for this individual (namely, the one who happens to be sitting) to walk'. Once again, 'possible' is not the same operator on both readings. On the first it modifies a sentence and is used absolutely, indicating that the state of affairs expressed by that sentence does not violate the law of non-contradiction (i.e., is self-consistent); on the second it modifies a term, indicating that the thing referred to by that term has a particular ability. In each of these examples 'possible' can be seen as an equivocal term which modifies either a sentence or a term therein.⁴⁵

It is not clear, therefore, that the move Ockham makes to connect in some way the analyses of certain ambiguous expressions in terms of composition and division and equivocation cannot be made for them all in such a way that we see a full-fledged theory emerging.

CONCLUSION

If my reading of Ockham is correct, one sees Ockham during the early fourteenth century, razor in hand, attempting to bring order to a rather unwieldy century's worth of medieval accounts of composition and division. The result is his rejection of the view that Aristotle was correct in thinking that he had identified in the *Sophistici elenchi* six distinct linguistic fallacies. This rejection is suggestive. If 'composition' and 'division' are two names for one apparent type of ambiguity, and this type of ambiguity is reducible to equivocation, and amphiboly is reducible to equivocation, are accent and *figura dictionis* also reducible to equivocation? I think that a case can be made for their being so.

First, in connection with accent, one can point out that particular words as they are written simply do have more than one sense. Take,

45. Notice that the first readings of the two examples involving 'possible' depend on non-linguistic facts. On the basis of syntactical considerations it would be difficult to argue that even these first readings are not ambiguous insofar as 'possible' can in each case be taken epistemically or absolutely: 'For all I know Peter speaks French' and 'Peter's speaking French is a self-consistent state of affairs'; 'For all I know a sitting person is walking' and 'A sitting person's walking is a self-consistent state of affairs'. I will not speculate about why under ordinary circumstances we tend to ignore one of the two readings.

for example, i-n-v-a-l-i-d, which is in one of its senses appropriate to use in describing an argument, in the other sense a person. Second, in connection with *figura dictionis*, one could say with plausibility that given the various functions a particular prefix or suffix can serve, particular words which include them simply do have more than one sense. Take, for example, 'desirable', which can mean either 'is worthy of being desired' or 'can be desired'.⁴⁶ One could, then, construct diagrams for accent and *figura dictionis* similar to the diagram Ockham would construct for amphiboly and composition and division. In other words, the case can be made that there is only one linguistic fallacy, and it is equivocation.

This result, though it conflicts with what Aristotle says about ambiguity in the *Sophistici elenchi*, might nevertheless be greeted by Aristotle with approval. I say this because, as I pointed out earlier, it is Aristotle's view that the seven fallacies that arise independently of language are reducible to one—*ignoratio elenchi*. Its turning out that the six fallacies that arise in language are also reducible to one—to equivocation—makes for a satisfying symmetry.

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46. Some accuse John Stuart Mill of failing to notice this ambiguity in his defense of the principle of utility. See, for example, G. E. Moore in *Principia Ethica* (Cambridge: Cambridge University Press, 1903), chapter 3.