

# GREGORY OF RIMINI AND THE LOGIC OF THE FUTURE

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by

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## GREGORY OF RIMINI AND THE LOGIC OF THE FUTURE

### 1. Statement of the Problem

The status of statements about the future has been vigorously debated since Aristotle's famous discussion of the sea-battle in *De Interpretatione* §9.<sup>1</sup> In particular, attention has been focussed on future contingents – that is, statements about aspects of the future which are not necessary.<sup>2</sup> The heart of the debate has been the question of whether or not future contingents have truth-values.<sup>3</sup> Bound up with this is the question of whether, if statements about the future have truth-values, the future can be contingent. For if 'Bush will wage war on Iran' is true, then it seems that Bush will wage war on Iran no matter what else happens; otherwise the statement would not have been true.

Concerns about contingency, in turn, give rise to concerns about free will. For if Bush will wage war on Iran no matter what else happens, then it seems that he does not have the freedom not to wage war on Iran.<sup>4</sup> And concerns about free will give rise to concerns about rewards and punishments, staples in the fabric of human society. For if Bush does not have the freedom not to wage war on Iran, then it seems that no one can praise or blame him for such an action.

Perhaps this problem is merely academic for us humans; in practice we never know what the future has in store, even if there is such a store. But then, of course, there is the question of God. If there is an omniscient God, and if there is a truth as to whether or not Bush will wage war on Iran, then it seems that He must know this truth. But it seems unfair for God to evaluate Bush's actions as part of a scheme of retributive justice, if He has always known for certain, even at the creation of the world, what he was going to do – just as it would be unfair for me to throw Bush into the road and then blame him for causing a car crash.

The problems specific to divine foreknowledge add a certain poignancy to the issue of future contingents, but they will not concern us here. We will focus on the first and most fundamental question, on which the other issues surrounding future contingents depend: do statements about the future have truth-values? We will approach this question via the work of a most interesting fourteenth-century theologian-cum-philosopher, Gregory of Rimini, whose thorough treatment will turn out to throw the crux of the matter into sharp relief.

<sup>1</sup> The literature on this topic is vast. For an overview and an extensive bibliography, see Dorothea Frede, 'The Sea-Battle Reconsidered' (1985). Aristotle's Greek is edited by Lorenzo Minio-Paluello in *Aristotelis Categoriae et Liber de Interpretatione* (1949); John Ackrill's *Aristotle's Categories and De Interpretatione* (1963) provides a good translation and notes. C. W. A. Whitaker's *Aristotle's De Interpretatione: Contradiction and Dialectic* (1996) is invaluable as an introduction, but also mounts a serious challenge to traditional views of the work.

<sup>2</sup> I use the term 'future contingent' to refer to an assertion about a future contingent state of affairs, though it can be used to refer to the state of affairs itself; for the latter I use the term 'contingent future'. As for contingency, we will define that later (p. 6 below); for now, an intuitive feel will do. 'There will be a sea-battle tomorrow' is a future contingent; 'two plus two will be four tomorrow' is not, because it is mathematical and therefore necessary.

<sup>3</sup> These are often glossed as 'determinate truth-values', though it is unclear what difference is supposed to obtain between having an indeterminate truth-value and lacking a truth-value altogether. (On this question see further n. 46 below.) Whitaker (1996, p. 130) is adamant that '[Aristotle's] question is not whether a prediction about the future has a truth-value'; be that as it may, the fact remains that subsequent debate has revolved around this question, as will ours here.

<sup>4</sup> A discussion of free will is beyond the remit of this essay. The *loci classici* are in Gary Watson (ed.), *Free Will* (1982).

## 2. Gregory of Rimini

Gregory of Rimini (c.1300-1358) was an Augustinian hermit, that is, a member of the *Ordo Fratrum Eremitarum Sancti Augustini* (OESA). He left Rimini for Paris to study theology in the 1320s, but moved back to Italy to teach at Augustinian *studia* in nearby Bologna, Padua, and Perugia, inter alia. In 1342 he returned to Paris, armed with his newly-acquired knowledge of the works of Oxonian thinkers like William of Ockham and Adam of Wodeham,<sup>5</sup> and prepared to lecture on the *Sentences* of Peter Lombard, as was obligatory for would-be masters of theology. These lectures on the first and second of the four books of the *Sentences*,<sup>6</sup> delivered in 1343-44, are his most important surviving works; after a period of neglect by modern scholars, barely relieved in 1955 by a facsimile reprint of a Venetian edition from 1522, they are now available in a modern critical edition.<sup>7</sup>

Gregory wrote even more carefully and systematically than most scholastics, and his thought was at times brilliant. His treatment of infinity surpassed those of his peers and was to remain unmatched, though sadly unappreciated, until Bernard Bolzano's *Paradoxes of the Infinite* (1851); though Bolzano's work had the benefit of vastly improved notation, it is arguable that Gregory's account was only surpassed by Georg Cantor's pivotal paper 'On a Property of the Collection of All Real Algebraic Numbers' (1874). This may seem all the more remarkable given that Gregory's profession was theology.<sup>8</sup> The same mental acuity can be seen in his related discussion of the nature of continua; characteristically, what launched him into this discussion was a question about where angels were created, to which Peter Lombard's answer was simply that they were created in the highest heaven, the empyrean. Gregory seized on this as an opportunity to ask instead whether angels live in divisible or indivisible places; in the following pages, angels are scarcely mentioned.<sup>9</sup>

It is therefore reasonable to suppose that Gregory of Rimini's treatment of the problem of future contingents might prove stimulating and of more than archaeological interest.

<sup>5</sup> Gregory played an important role in the transmission of Oxonian thought to Paris; see Chris Schabel, 'Paris and Oxford between Aureoli and Rimini' (1998). My vignette of Gregory's life is derived from Schabel, 'Gregory of Rimini' (2001), which also provides an introduction to his work; for another overview, see Jack Zupko, 'Gregory of Rimini' (2003).

<sup>6</sup> It was standard practice in 14<sup>th</sup>-century Paris to de-emphasize the third and fourth books (on Christ and the sacraments) at the expense of the first and second; in 1366 the university felt obliged to decree that aspiring masters should also do justice to these more theological books. Schabel informs me that Pascale Bermon is wrong to suggest that these books were left out, as she does in 'La *Lectura* sur les deux premiers livres des *Sentences* de Grégoire de Rimini' (2002), p. 274.

<sup>7</sup> The seven-volume critical edition, including one volume of indices, is *Gregorii Ariminensis Lectura super primum et secundum Sententiarum*, ed. Damasus Trapp, Venício Marcolino, et al. (1979-87). My references to Gregory's text, some of which I reproduce in the Appendix, are of the form *S* b.d.q.a (v p:l), where the variables are book, distinction, question, article, volume, page and line; 'prol.' refers to the prologue; references to *additiones* (as in n. 23 below) are misleading but by now unavoidable. The terminology is a vestige of a misunderstanding by the editor of the 1522 edition; it is now thought that Gregory *removed* most of these passages while revising his lectures after their delivery. See Bermon (2002), pp. 269-71.

<sup>8</sup> For Gregory on infinity, see John Murdoch, '*Mathesis in Philosophiam Scholasticam Introducta*' (1969), pp. 223-24. For the appropriate references for Bolzano and Cantor, see Mark Thakkar, 'Infinity, Continuity and Quantification' (2004).

<sup>9</sup> The *Sentences* were often used in the 14<sup>th</sup> century as a springboard for thoughts at best tangentially related to Lombard's; see Philipp Rosemann, *Peter Lombard* (2004), pp. 206-08. For Lombard's answer to the question of angelic location I have relied on Rosemann, pp. 96-98. Gregory's answer occupies over 50 pages, starting at *S* II.2.2 (IV 277:13). For Gregory on continuity, see Richard Cross, 'Infinity, Continuity, and Composition' (1998); for some clarifications and relevant passages, see Thakkar (2004). Gregory spends so long on philosophical matters that I doubt his enthusiasm can be at all ascribed to the Parisian habit of lecturing on only the first two books of the *Sentences*, *pace* Bermon (2002, p. 274).

### 3. Gregory's Aristotelian Logic

Gregory approaches the problem of future contingents by asking the question:

(Q) Utrum aliqua enuntiatio singularis de inesse categorica de futuro in materia contingenti ad utrumlibet sit vera.<sup>10</sup>

In order to penetrate this terminological thicket, we will need to begin with some preliminaries.<sup>11</sup> Gregory will have read Aristotle's logical works in the translations of Boethius,<sup>12</sup> and it is from these that he takes most of his terminology.<sup>13</sup> An *oratio* (λόγος) is a sentence;<sup>14</sup> a sentence which asserts something<sup>15</sup> is an *oratio enuntiativa* (λόγος ἀποφαντικός) or simply an *enuntiatio* (ἀπόφανσις). This latter is characterized by Aristotle as a sentence which admits of truth or falsity.<sup>16</sup> To modern philosophers this characterization is precisely that of the proposition, and indeed we find Gregory using the terms *enuntiatio* and *propositio* interchangeably.<sup>17</sup> Propositions can be divided into affirmations and negations: an *affirmatio* (κατάφασις) asserts that a certain predicate and a certain subject are in some sense combined, while a *negatio* (ἀπόφασις) asserts that a certain predicate and a certain subject are not so combined. A contradictory pair, a *contradictio* (ἀντίφασις), is a pair of propositions consisting of an affirmation and its corresponding negation.<sup>18</sup>

<sup>10</sup> *S* I.38.1 (III 237:3-4).

<sup>11</sup> In this section I am indebted to Whitaker (1996), which provides a masterly introduction to Aristotelian logic.

<sup>12</sup> Despite William of Moerbeke's fresh translations, made in the third quarter of the 13<sup>th</sup> century, Boethius' translations of Aristotle's logical works (except the *Posterior Analytics*) remained standard. In the case of the *De Interpretatione*, there are 297 extant MSS of Boethius' translation and only 4 of William's; see Bernard Dod, 'Aristoteles Latinus' (1982), pp. 64, 74. Gregory's quotations are much closer to Boethius' version, but not verbatim; for an example, see n. 16 below.

<sup>13</sup> The *Peri Hermeneias* translations of both Boethius (510-522) and William of Moerbeke (1268) can be found in *Aristoteles Latinus*, ed. L. Minio-Paluello and G. Verbeke (1965), II 1-2.

<sup>14</sup> Strictly speaking, an *oratio* is a phrase: it may be a sentence, but need not be. In practice, Gregory almost always uses the term where we would prefer the more restrictive 'sentence'. The sole exception in the passages we are concerned with is at *S* I.38.1.3 (III 258:8): '[intelligo] idem quod per hanc orationem <possibile, non necessarium>'. An expression, i.e. a phrase which is specifically *not* a sentence, is a *dictio* (φάσις); we meet this only at *S* I.38.1.3 (III 265:29,32): 'illa dictio <quando>', 'cum hac dictione <cum>, sicut cum hac dictione <si>'. Here we would prefer the more restrictive 'word'.

<sup>15</sup> Non-assertoric sentences include, for instance, prayers; see *De Interpretatione* §1, 17a5-6.

<sup>16</sup> *De Interpretatione* §4 (17a2-3), quoted by Gregory at *S* I.38.1 (III 238:8-9): 'omnis enuntiatio est oratio, «in qua est verum et falsum», ut patet ex eius definitione 1 Perihermeneias'. For this Boethius has 'enuntiativa [oratio] vero non omnis, sed in qua verum vel falsum inest', while Moerbeke has 'enuntiativa [oratio] autem non omnis, sed in qua verum aut falsum contingit dicere'. Gregory's version is closer to Boethius', but still differs from it; perhaps he is relying on memory, or (as Schabel has suggested to me) on a florilegium of Aristotelian quotations.

<sup>17</sup> For instance, the 'aliqua enuntiatio ...' of *S* I.38.1 (III 237:6) becomes 'aliqua talis propositio' at line 16. Gregory does not fail to make the important distinction between sentences and propositions; see n. 14 above. (The same sentence can express different propositions in different contexts; e.g. 'This man is white'.) On propositions in Gregory and other authors, see Norman Kretzmann, 'Medieval Logicians on the Meaning of the Propositio' (1970), esp. pp. 771-75.

<sup>18</sup> Whitaker (1996) explains clearly on pp. 80-81 why Aristotelian negation is not the same as our propositional negation. Aristotle defines affirmations, negations and contradictions in *De Interpretatione* §6, 17a25-37. In addition to contradictory propositions, there are also contrary propositions; we meet these only once, at *S* I.38.2 (III 253:30). 'Socrates is not white' is the contradictory of 'Socrates is white'; 'Socrates is black' is a contrary of 'Socrates is white'. A contrary to P entails the negation of P; the contradictory of P is the negation of P. On this, see the Glossary to Aristotle, *Selections*, trans. Terence Irwin and Gail Fine (1995), p. 601, under 'OPPOSITE'; see further *De Interpretatione* §7, 17b16-26.

Propositions can also be divided into those which are universal (*universalis*, καθόλου) and those which are particular or singular (*singularis*, καθ' ἑκάστων).<sup>19</sup> A singular proposition is one whose subject is an individual; for instance, 'Socrates is white' is singular. A universal proposition is one whose subject is a universal, that is, whose subject can be predicated of more than one individual; for instance, 'All men are mortal', 'Some men are white', and 'Man is a rational animal' are universal,<sup>20</sup> because the class of men contains more than one individual. Of these three examples, the first two are said to be made universally, while the last one is said to be made non-universally. We will not be concerned with the last type of universal proposition; Gregory only qualifies universal propositions with *universaliter* twice in the passages with which we are concerned, and even then he is simply quoting Aristotle.<sup>21</sup> There is a further distinction to be made between propositions like 'All men are mortal' and propositions like 'Some men are mortal': the term 'universal' is reserved for propositions of the former type, while those of the latter type are called 'partial' (*particularis*, ἐν μέρει).<sup>22</sup> Finally, universal affirmations (e.g. 'All men are mortal') have partial negations (e.g. 'Some men are not mortal') as their contradictories, and universal negations (e.g. 'No man is mortal') have partial affirmations (e.g. 'Some men are mortal') as their contradictories.

So much for *enuntiatio* and *singularis*. Next, a proposition *de inesse* is a proposition about what is actually the case, as opposed to a proposition *de possibili*, which is about what could be the case. Thus Gregory writes: 'predicates are predicated sometimes of something in potency, i.e. in a proposition *de possibili*, and sometimes [of something] in actuality, i.e. in a proposition *de inesse*.'<sup>23</sup> A reasonable translation for *de inesse* would thus be 'factual';<sup>24</sup> for *de possibili* we will have to make do with 'about

<sup>19</sup> Nowadays, we would always use 'particular' in this context. But in order to avoid confusion with *particularis* (a term we shall soon see) I follow Whitaker (1996, pp. 89-90) in using 'singular' for *singularis* and avoiding 'particular' for *particularis*.

<sup>20</sup> The second example, 'Some men are white', will usually be labelled 'partial' and not 'universal', as we shall see.

<sup>21</sup> See *S* I.38.1.1 (III 242:18, 242:24). Universal propositions made non-universally are propositions about the class itself, not about its individual members. They do not have to entail a corresponding universally-made universal; for instance, 'Man is two-footed' (true) does not entail 'Every man is two-footed' (false). There are at least four types of such propositions: the property (e.g. 'Man is rational'), the genus (e.g. 'Man is an animal'), the definition (e.g. 'Man is a rational animal'), and, peculiarly, the accident (e.g. 'Man is ugly'). I say 'peculiarly' because the accidental proposition 'Man is ugly' is true if and only if 'Some man is ugly' is true; this category therefore seems redundant. This type of non-universally-made universal proposition has been interpreted in other ways, but Whitaker (1996), pp. 90-93, claims to have cleared up the matter, citing a number of references to the *Topics*. This is not the place for a critical discussion of his interpretation; the important point for us here is that two such propositions can both be true even if they ascribe opposite predicates to the same subject, as for instance 'Man is ugly' and 'Man is beautiful'.

<sup>22</sup> See n. 19 above on the translation of *particularis* as 'partial'.

<sup>23</sup> *S* I.28-32.2 additio 144 (III 163:9-11): 'quodlibet praedicamentum praedicatur aliquando de aliquo in potentia, id est per propositionem de possibili, aliquando in actu, id est per propositionem de inesse'; cf. *S* I.8.3 additio 59 (II 113:17-21). At *S* II.12.1 (V 246:7-12) Gregory says that a being is actual if it fits in an existential statement *de inesse* (e.g. 'this is', 'hoc est'); if a being only fits in an existential statement *de possibili* (e.g. 'this can be', 'hoc potest esse'), it is merely possible.

<sup>24</sup> Chris Schabel and Russell Friedman, in a draft of their forthcoming translation (*Modality, Order and Transcendence: Gregory of Rimini on God's Knowledge, Power, and Will*) which Schabel kindly sent to me, have 'concerning what inheres in reality' for *de inesse*, which strikes me as rather heavy-handed. (The idea is that a factual proposition affirms or denies that a certain predicate 'inheres' in a certain subject; see Gyula Klima's translation of John Buridan's *Summulae de Dialectica* (2002), pp. 29-30, n. 62.) If 'factual' were to be criticized, I would be almost as happy with 'assertoric', as used e.g. by Klima (see *Summulae* p. xlv); almost as happy, because 'factual' flags up what will turn out to be a vital point. (The term 'pure' was used in this capacity for a while after the mid-seventeenth century (*Shorter Oxford English Dictionary* (1993), sense 2e); cf. *S* I.38.1 (III 257:33), where Gregory writes that a certain antecedent and consequent are 'purely factual' ('mere de inesse').)

what is possible’, because ‘possible’ on its own would be open to misinterpretation. *De inesse* and *de possibili* do not exhaust the possibilities; there are also propositions *de necessario* (‘about what is necessary’) and *de contingenti* (‘about what is contingent’). If we need to contrast factual with non-factual propositions, we can call the latter ‘modal’.<sup>25</sup>

Propositions can also be divided syntactically into categorical and hypothetical propositions.<sup>26</sup> A hypothetical proposition is a compound of simpler propositions; a categorical proposition is the simplest form of proposition.<sup>27</sup> Hypothetical propositions are not, as the name might suggest to us, restricted to conditionals; they also include conjunctions and disjunctions.<sup>28</sup> Unlike the atomic propositions of modern logic, categorical propositions can be either affirmations or negations; neither Aristotle nor the scholastics took not-P to be a complex proposition derived from P.<sup>29</sup>

With this logical terminology under our belts, we can understand what Gregory means when he talks of a ‘singular factual categorical proposition about the future’ – namely, a proposition like ‘Antichrist will come’.<sup>30</sup> But there is a further qualification to be understood: he is concerned only with those propositions which concern the *contingens ad utrumlibet* (‘contingent towards both sides’).

<sup>25</sup> Thus for instance John Buridan writes: ‘logicians call [some] propositions “modal” and distinguish them from those called “about what is” or “about what will be” or “about what was”.’ (*Summulae* I.8.2.3: ‘logici vocant propositiones <modales> et distinguunt eas contra vocatas <de inesse> vel <de fore> vel <de fuisse>.’ The Latin is from a preliminary edition by Ria van der Lecq, available online.) In the next section, *Summulae* I.8.2.4, Buridan makes the important point that propositions are not modal just because they contain certain modal terms; for instance, ‘P is a necessary proposition’ (‘propositio est necessaria’) is a *factual* proposition about the proposition P. ‘P might be a necessary proposition’, on the other hand, is a bona fide modal proposition. See Paul Spade, *Thoughts, Words and Things* (2002), pp. 309-10.

<sup>26</sup> The *De Interpretatione* is not concerned with hypothetical propositions at all. Thus al-Farabi, in an attempt to explain the title of the work, writes in his *Commentary* that ‘interpretation’ means ‘complete statement’ (*al-qawl al-tamm*) – that is, usually, a factual categorical proposition; see Deborah Black, ‘Logic in Islamic Philosophy’ (1998), §4. Whitaker (1996), pp. 5-7, contains a discussion of the title, which is not Aristotle’s; Whitaker would prefer ‘On the Contradictory Pair’.

<sup>27</sup> The question of what counts as a categorical proposition is not straightforward. For instance, John Buridan writes (*Summulae* I.7.1) that ‘a man who is white is coloured’ (‘homo qui est albus est coloratus’) is categorical, even though it looks like it contains two subjects, two predicates and two copulae (and therefore looks hypothetical), because in fact it has one (complex) subject, one predicate and one copula: we could write it ‘(a man who is white) is coloured’. On the other hand, ‘a man is white who is coloured’ (‘homo est albus qui est coloratus’) is hypothetical; in effect, it is a conjunction. A further and more interesting example: Buridan claims that ‘a donkey, if it flies, has wings’ (‘asinus si volat habet pennas’) is categorical because it is to be parsed as ‘(a donkey, if it flies) is winged (*habens pennas*)’. Klima disagrees (p. 59 nn. 89, 90); he claims that Buridan’s parsing can only be explicated as either (i) ‘a donkey is such that if it flies, then it has wings’ or (ii) ‘a donkey is something which, if it flies, then it has wings’, of which (i) is hypothetical and (ii) has ‘a donkey’ as its subject and ‘something which, if it flies, then it has wings’ as its predicate. But perhaps we can instead read ‘asinus si volat’ as ‘a donkey that flies’, in which case Buridan’s analysis is spot on. If, however, this is not a possible reading, then Klima is right to complain; for if ‘asinus si volat habet pennas’ means the same as ‘si asinus volat, habet pennas’, we should not parse the former as categorical and the latter as conditional. For an iconoclastic analysis of such supposed conditionals as enthymematic arguments, see Vic Dudman, ‘Antecedents and Consequents’ (1986), esp. §4.5.

<sup>28</sup> This list is not comprehensive. Buridan, for instance, adds causal, temporal and spatial propositions; see *Summulae* I.7.2. These include: ‘It is daytime, because the sun shines above the earth’ (causal; see *Summulae* I.7.6), ‘Socrates is where Plato is’ (spatial; see *Summulae* I.7.8), ‘Socrates lectured when Plato disputed’ (temporal; see *Summulae* I.7.7).

<sup>29</sup> For Aristotle, see n. 18 above. For the scholastics, see Spade (2002), p. 128, n. 139.

<sup>30</sup> This is Gregory’s chief example, introduced for the first time at *S* I.38.1.1 (III 239:8-9); Socrates, the stock-in-trade of mediaeval logic, barely makes an appearance. Aristotle’s example of the sea-battle must have been resonant for the Athenians, who owed their freedom to the battle of Salamis; the mediaeval example of the coming of the Antichrist may likewise have been topical. (Compare my examples concerning Bush.) I translate ‘Antichristus erit’ as ‘Antichrist will come’, partly for stylistic reasons, but mainly to sidestep any questions about existential statements which would be

An event or entity is contingent if its occurrence or existence is possible but not necessary,<sup>31</sup> leaving open the question of what is meant by ‘possible’ and ‘necessary’.<sup>32</sup> An event or entity is *ad utrumlibet* if both its occurrence or existence and its non-occurrence or non-existence are possible.<sup>33</sup> We can easily see that ‘contingent’ and ‘ad utrumlibet’ are equivalent; Gregory’s phrase here is therefore pleonastic.<sup>34</sup> I shall translate ‘(ad) utrumlibet’ as ‘bilateral’ and ‘contingens ad utrumlibet’ as ‘bilaterally contingent’, on the understanding that the adverb in the latter phrase is redundant.

Most of the statements that we make are about contingent matters; necessity is reserved for the likes of truisms (‘all bachelors are unmarried’), truths of mathematics (‘two plus two is four’), and, for mediaeval authors, the existence of God.<sup>35</sup> We will take a brief look later at future statements about necessary matters (n. 101), but for now we restrict ourselves to the domain of future contingents.

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irrelevant to the present discussion. Perhaps I should also forestall any questions about reference in future statements by pointing out that there should be no problem: those supposed future entities which do not yet exist can be referred to by description. I have not delved into the question of whether or not Gregory realized this, but for mediaeval authors’ use of theories of ‘ampliation’ to deal with potentially difficult questions of reference, see Spade (2002), §10, esp. pp. 324-27, and Klima, ‘Existence and Reference in Medieval Logic’ (2001), esp. §4.2.

<sup>31</sup> *S* I.38.1.3 (III 258:14-15): ‘the definition of the contingent is “the not necessary, [but] possible”, or, the other way round, “the possible, [but] not necessary”.’ Here Gregory is explicitly following Aristotle, *Prior Analytics* I §13, 32a18-21.

<sup>32</sup> Only one of ‘possible’ and ‘necessary’ needs explanation: each can be defined in terms of the other, using negation. Given an account of possibility, for instance, we can define ‘X is necessary’ as ‘not-X is not possible’. For the account in *De Interpretatione* of the relationship between necessity, possibility and contingency, see Whitaker (1996), pp. 156-70.

<sup>33</sup> *S* I.38.1.1 (III 240:12-13): ‘Boethius [writes]: “The *utrumlibet* is that whose occurrence (*eventus*) is indifferent (*indiscretus*), i.e. that for which existence and non-existence are equally possible”.’ The verb in the latter clause is ‘contingit’, which in this sense is impersonal, taking an accusative and infinitive: literally, ‘it is equally possible for it (*quod*) to be or not to be’. That ‘contingit’ in this sense means ‘it is possible’ and not ‘it is contingent’ can be seen e.g. from *S* I.38.1.1 (III 243:7-13): ‘non contingit vere dicere haec est vera’ (‘it is not possible [for us] to truly say “this one is true”’), etc. (We will see only one other sense of ‘contingit’ used, and only once: ‘it happens that the affirmation is not true’, at *S* I.38.1.1 (III 241:31).)

<sup>34</sup> Thus Gregory himself writes at *S* I.38.1.1 (III 242:11-12): ‘*ad utrumlibet*, that is, contingent towards coming about (*fore*) and not coming about.’ From Gregory’s definitions (nn. 31, 33 above), it seems that he is not concerned with the special cases – deriving from Aristotle, *Prior Analytics* I §13, 32b4-18 – of the contingent *ut in pluribus* (occurring naturally but not necessarily, and hence more often than not) and *ut in paucioribus* (similarly, less often than not). In this special sense, the ‘contingent *ad utrumlibet*’ is supposed to occur as often as not. See e.g. Walter Burley, *De Puritate Artis Logicae Tractatus Brevior*, as quoted in Spade, ‘Boehner’s Text of Walter Burley’ (1998), p. 14: ‘sciendum quod “contingens” accipitur dupliciter’ (‘it is to be understood that “contingens” can be taken in two ways’), etc.

<sup>35</sup> There is also a sense in which ‘Bush waged war on Iraq’ could be said to be necessary, although this would not be logical or mathematical necessity. In this sense, the past is necessary because it is unalterable. This issue lies just outside the scope of this essay, but would be absolutely central to a discussion of the conclusions on free will and divine foreknowledge that Gregory draws in the sections immediately following the first conclusion of *S* I.38.1.2. For a foretaste of why his account may be problematic, see his (very short) fifth conclusion at *S* I.38.1.2 (III 254:28-255:3), where he says that a true future contingent ‘*is able (potest) never to have been true*’ ‘because [the future it proposes] is bilaterally contingent’. For contemporary views, see William Courtenay, ‘John of Mirecourt and Gregory of Rimini on Whether God Can Undo the Past’ (1972-73) and Richard Gaskin, ‘Peter of Ailly and other Fourteenth-Century Thinkers on Divine Power and the Necessity of the Past’ (1997). (*Caveat lector*: Courtenay’s two-part article predates the discovery that the ‘additiones’ came from Gregory’s original version (see n. 7 above), which vitiates some of his historical speculations.) Finally, no modern discussion could fail to mention Michael Dummett, ‘Bringing About the Past’ (1964).

#### 4. Gregory's Aristotelian Theory of Truth<sup>36</sup>

Since the question at hand is whether or not any such statement is *true*, we need to have some idea of what makes a statement true. Gregory bases his theory of truth on Aristotle's.<sup>37</sup> The relevant remarks in the *De Interpretatione* – for example, 'falsity and truth involve combination and division'<sup>38</sup> – are not self-contained, so we will look first at a couple of passages from the *Metaphysics*. Thus:

We define what the true and the false are. To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true; so that he who says of anything that it is, or that it is not, will say either what is true or what is false.<sup>39</sup>

Being and non-being in the strictest sense are truth and falsity. The condition of this in the objects is their being combined or separated, so that he who thinks the separated to be separated and the combined to be combined has the truth, while he whose thought is in a state contrary to that of the objects is in error. This being so, when is what is called truth or falsity present, and when is it not? We must consider what we mean by these terms. It is not because we think that you are white, that you *are* white, but because you are white we who say this have the truth.<sup>40</sup>

The combination and division or separation mentioned here is that of subject and predicate, as in the definition of affirmations and negations (see p. 3 above). The last sentence of the second passage explains this remark from the *De Interpretatione*:

For if it is true to say that it is white or is not white, it is necessary for it to be white or not white; and if it is white or not white, it was true to say or deny this. If it is not the case it is false, and if it is false it is not the case. So it is necessary for the affirmation or the negation to be true.<sup>41</sup>

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<sup>36</sup> In this section I extract the outline of Gregory's theory of truth from what he says in *S* I.38.1 (III 237-71). More detail can be found in the prologue to his commentary. For the existence of propositions, see *S* I.prol.1.1 (I 8:25-10:24) and n. 44 below. For the truth of propositions, see *S* I.prol.1.1 (I 10:26-11:31). These passages are reproduced on pp. 362-71 of Dominik Perler (ed.), *Satztheorien* (1990), together with a facing-page German translation.

<sup>37</sup> For Aristotle's theory of truth, see Whitaker (1996), pp. 26-30. 'To sum up, the theory states that true assertions represent a combination as combined or a separation as separated, while false assertions represent a combination as separated or a separation as combined' (p. 30).

<sup>38</sup> *De Interpretatione* §1, 16a 12-13.

<sup>39</sup> *Metaphysics* IV ('Γ') §7, 1011b25-28, from the Revised Oxford Translation (ROT) edited by Jonathan Barnes (1984).

<sup>40</sup> *Metaphysics* IX ('Θ') §10, 1051b1-9, ROT.

<sup>41</sup> *De Interpretatione* §9, 18a39-18b5, ROT.

The sense in which it is *necessary* for X to be white if ‘X is white’ is true is simply that ‘X is white’ cannot be true unless X is white.<sup>42</sup> Thus Gregory prefaces his quotation of this last passage with:

[Aristotle’s] proof is based on the fact that the being (*esse*) of a thing always accompanies (*comitatur*) the truth of a proposition, so that whenever a proposition is true, things are so or are not so, just as the proposition states (whatever that proposition might be); and conversely the truth of a declarative (*enuntians*) proposition accompanies the being of a thing, just as [that thing] is; and the falsity of a proposition accompanies the non-being of a thing, and vice versa.<sup>43</sup>

This is a version of what is now known as the correspondence theory of truth: a proposition is true if and only if there is a fact (or other part of reality) to which it corresponds.<sup>44</sup> Applying this to Gregory’s stock example, the future contingent ‘Antichrist will come’ is (now) true if and only if there is (now) some fact to which this statement corresponds.

## 5. Gregory’s Solution to the Problem

In *S* I.38.1.2, Gregory puts forward eight conclusions of his own. The first of these directly answers the question of whether statements about the future have truth-values, and is backed up by a barrage of arguments. In the subsequent seven conclusions (which, taken together, occupy less space than the first), Gregory explores the consequences of his answer for the necessity or otherwise of statements about the future. He will go on in the next article to deal with the nature of contingency, as a prelude to an assault on Aristotle’s argument that the truth of statements about the future would be inconsistent with the contingency of the future.<sup>45</sup>

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<sup>42</sup> Whitaker (1996) comes to the same conclusion; see pp. 115-16. This point has been misunderstood far too often.

<sup>43</sup> *S* I.38.1.1 (III 239:31-35). ‘Comitatur’ can also mean ‘follows’, but in this context – given the two-way relationship – it is clear that ‘accompanies’ is better.

<sup>44</sup> Here I tiptoe around the ontological question which haunts the theory – that is, the question of what precisely a true proposition is supposed to correspond *to*. My subsequent mentions of ‘fact’ should be taken as equally non-committal. Gregory’s theory is that a proposition has as its significatum an abstract entity called a *complexe significabile* (‘complexly signifiable’) or simply an *enuntiabile* (‘proposable’, i.e. statable in a proposition). It is not certain whether this was also Aristotle’s opinion. At *S* I.prol.1.1 (I 5:17-31, 8:25-9:7), Gregory cites in support of his thesis *Categories* §10, 12b5-16 and §12, 14b18-22, where Aristotle mentions ‘things’ (πράγματα, *res*) which underlie (true) propositions. For discussion see Gaskin, ‘Simplicius on the Meaning of Sentences’ (1998), pp. 42-46, and ‘*Complexe Significabilia* and Aristotle’s *Categories*’ (2003); see also Whitaker (1996), p. 30, on ‘Aristotle’s use of truth and falsehood to apply to the states of affairs which assertions describe truly or falsely.’ Such an ontologically full-blooded version of the correspondence theory has been unpopular for a while, having lost out to ‘deflationist’ theories thanks to the razor-wielding efforts of metaphysical vegans like Quine; see e.g. *Word and Object* (1960), §50 (‘*Entia non grata*’). Still, it has some defenders: David Armstrong’s *A World of States of Affairs* (1997) uses the principle that every truth has a ‘truthmaker’ to arrive at its titular world, while Jonathan Bennett’s ‘abstract realism’ in *A Philosophical Guide to Conditionals* (2003), pp. 155-58, is ‘the view that worlds are propositions, states of affairs, or ways-things-could-be – abstract objects of some kind.’ On the origins of Gregory’s theory, and for Buridan’s parsimonious response, see Zupko, ‘How it Played in the Rue de Fouarre’ (1994-97), esp. pp. 217-25.

<sup>45</sup> I have not studied these conclusions in detail, but they look dubious to me. See in particular the fifth conclusion at *S* I.38.1.2 (III 254:28-255:3), the conclusion for the third article at *S* I.38.1.3 (III 261:2-262:15), the third counter-argument at *S* I.38.1.3 (III 265:22-28), and the argument against the second proof for Aristotle’s first argument at *S* I.38.1

Our present concern, therefore, lies solely with his first conclusion:

My first [conclusion] is that every singular proposition about the future is true or false, so that of any such contradiction it can truly be said ‘this part is true and that one is false’, even though we ourselves do not know which particular one is true and which false.<sup>46</sup>

We may group Gregory’s arguments for this under six headings:

- |       |                                      |                     |
|-------|--------------------------------------|---------------------|
| (i)   | Correspondence of Truth with Reality | (III 246:1-247:9)   |
| (ii)  | Law of Excluded Middle               | (III 247:10-248:39) |
| (iii) | Rule of Contradictory Pairs          | (III 249:1-19)      |
| (iv)  | Principle of Non-Contradiction       | (III 249:20-32)     |
| (v)   | Truth-Functionality                  | (III 249:33-251:26) |
| (vi)  | Theology                             | (III 251:27-252:18) |

The two theological arguments – that it is heretical to deny the truth of scriptural prophecies, and that it is heretical to deny God’s knowledge of the future – will not concern us here.<sup>47</sup> The remaining arguments are unnecessarily involved, and it is easy to get lost in their labyrinthine ‘consequences’; in the following sections I give a skeletal reconstruction.<sup>48</sup>

(III 268:8-20). There are flashes of understanding; see for instance the argument against the first proof for Aristotle’s first argument at *S* I.38.1 (III 267:24-36), in which Gregory differentiates between  $\Box (P \rightarrow P)$  and  $P \rightarrow \Box P$ . However, this observation does not vitiate Aristotle’s argument, which is, as we saw on pp. 7f. above, that for  $P$  to be true the state of affairs described by  $P$  must obtain; so, given that  $P$  is true, the state of affairs described by  $P$  must obtain. Gregory’s argument at *S* I.38.1 (III 268:29-38) looks more sophisticated; he admits determinacy *de inesse* (here, ‘of what will happen’), which he claims is irrelevant to contingency, but nonetheless asserts indeterminacy *de possibili*, on which he says contingency depends. (This use of the distinction may derive from Francis of Marchia via Michael of Massa; see Schabel, *Theology at Paris 1316-1345* (2000), p. 268.) Gregory’s insistence that inevitability does not entail necessity is extraordinary.  
<sup>46</sup> *S* I.38.1.2 (III 245:30-32). My translation of ‘*quae sit vera determinate aut quae falsa*’ as ‘which particular one is true and which false’ is controversial. The likes of ‘*haec determinate est vera*’ are usually rendered ‘this is determinately true’. I think this confuses the issue by introducing the peculiar idea that something might be ‘indeterminately true’; it seems clear to me that in the relevant contexts Gregory means ‘in particular’. Some writers, e.g. Richard Campsall and Walter Burley, *did* try to use the notion of ‘determinately true’, and hence also that of ‘indeterminately true’; see Calvin Normore, ‘*Petrus Aureoli and his Contemporaries on Future Contingents and Excluded Middle*’ (1993). But it is apparent from Normore’s article (p. 89) that ‘indeterminately true’ is a misnomer, as it is not distinct from ‘indeterminately false’. Thus this view collapses into the view that statements can be (‘determinately’) true, (‘determinately’) false, or neither true nor false. So as far as Gregory is concerned, my translation has a double virtue. If I am right in thinking that Gregory does not try to use a notion of ‘determinate truth’, my translation is right to avoid suggesting as much; but if I am wrong in so thinking, my translation loses little by omitting ‘determinately’, as the notion is not distinct from that of truth *simpliciter*.

<sup>47</sup> Notice that Gregory leaves the theological arguments till the last; even then, they are directed not at Aristotle but at Peter Aureol, who (unlike Aristotle) is open to the charge of heresy. Gregory does not resort to theology willy-nilly.

<sup>48</sup> Gregory’s ‘consequences’ are what we would call ‘inferences’; see Peter King, ‘*Consequence as Inference: Mediaeval Proof Theory 1300-1350*’ (2001). My presentation in the following sections is much tidier than Gregory’s, as the gain in clarity is worth the apparent loss in authenticity. (As confirmation of this, I believe I have been able to identify a tiny but significant error of punctuation in the critical edition at *S* I.38.1.2 (III 246:18). See the Appendix, pp. A19-A20, n. 41.)

### 5.1 Correspondence of Truth with Reality (III 246:1-247:9)

A given future contingent must be either true or not true. Gregory's thesis is that every future contingent is either true or false.<sup>49</sup> True future contingents pose no threat to this thesis, so he needs to show that any future contingent which is not true must be false. Thus:

*Theorem 1:* Suppose that 'S will P' is not true. Then 'S will P' is false.

*Lemma 1:*<sup>50</sup> S will not P.

*Proof:* If S will P, then 'S will P' is true. (correspondence)  
 'S will P' is not true. (hypothesis)  
 Therefore S will not P. (contraposition)

*Proof 1a:*<sup>51</sup> S will not P; (Lemma 1)  
 'S will not P' is true. (correspondence)<sup>52</sup>  
 Therefore 'S will P' is false. (law of contradictories)<sup>53</sup>

*Proof 1b:*<sup>54</sup> S will not P. (Lemma 1)  
 Therefore 'S will P' is false. (correspondence)<sup>55</sup>

*Corollary 1:*<sup>56</sup> 'S will not P' is true. (Proof 1a)

After this, Gregory uses *reductio ad absurdum* to prove another theorem: one of two contradictory statements must be true. His proof makes use of the law of contradictories as in Corollary 1.

*Theorem 2:* Either 'S will P' is true or 'S will not P' is true.

*Proof 2:*<sup>57</sup> Suppose (for a contradiction) that 'S will P' and 'S will not P' are both not true.

'S will P' is false. (Theorem 1)  
 'S will not P' is true. (Corollary 1)  
 'S will not P' is false. (Theorem 1)  
 'S will P' is true. (Corollary 1)<sup>58</sup>

This is absurd. Therefore either 'S will P' is true or 'S will not P' is true.

<sup>49</sup> That is, future contingents obey the Principle of Bivalence (PB). It is surprising how much confusion there is over the PB, given the obvious etymology of 'bivalence'; for instance, Normore's 'Future Contingents' (1982) gets off on the wrong foot by defining the PB as 'the principle that for any sentence P either P is true or not-P is true' (p. 358).

<sup>50</sup> *S* I.38.1.2 (III 246:16-21).

<sup>51</sup> *S* I.38.1.2 (III 246:8-13).

<sup>52</sup> Here I have made explicit the intermediate step between the fact that S will not P and the falsity of 'S will P'.

<sup>53</sup> *S* I.38.1.2 (III 246:11): 'haec est falsa <Antichristus erit per legem contradictoriarum>'. For this step, see §5.3 below.

<sup>54</sup> *S* I.38.1.2 (III 246:23-29).

<sup>55</sup> Gregory cites this as 'another principle, namely that the falsity of a proposition accompanies the non-being of a thing': *S* I.38.1.2 (III 246:25-26). But this principle is not independent of the one he has already used; it is merely its obverse.

<sup>56</sup> *S* I.38.1.2 (III 246:29).

<sup>57</sup> *S* I.38.1.2 (III 246:29-247:9).

<sup>58</sup> 'S will P', rather than 'S will not not P', because the inference concerns a contradictory pair, not propositional negation.

## 5.2 Law of Excluded Middle (III 247:10-248:39)

Aristotle's Law of Excluded Middle (LEM) is that there is no middle of denial (*medium per abnegationem*) in a contradiction: concerning the question of whether S is P, the only possibilities are affirmation and negation, that S is P and that S is not P.<sup>59</sup> Gregory deduces the following theorem:

*Theorem 3:* 'S will P' is either true or false.

*Lemma 3:*<sup>60</sup> Suppose that 'S will P' is neither true nor false. Then neither will S P nor will S not P.

*Proof i:* 'S will P' is neither true nor false. (hypothesis)  
 If S will P, then 'S will P' is true. (correspondence)  
 If S will not P, then 'S will P' is false. (correspondence)  
*Therefore* neither will S P nor will S not P.

*Proof ii:* 'S will P' is not true. (hypothesis)  
 Neither will S P... (correspondence)  
 'S will P' is not false. (hypothesis)  
 ...nor will S not P. (correspondence)<sup>61</sup>  
*Therefore* neither will S P nor will S not P.

*Proof 3:*<sup>62</sup> Suppose (for a contradiction) that 'S will P' is neither true nor false.

S either will P or will not P. (LEM)  
 Neither will S P nor will S not P. (Lemma 3)  
 S neither will P nor will not P. (necessary consequence)<sup>63</sup>

This is absurd. *Therefore* 'S will P' is either true or false.

<sup>59</sup> *Metaphysics* IV ('Γ') §7, 1011b23-24: 'there cannot be an intermediate between contradictories, but of one subject we must affirm or deny any one predicate'. The point is that a pair of contradictories exhausts the possibilities: 'S is P' asserts that S and P are somehow combined, while 'S is not P' simply denies that there is any such combination. (This distinguishes contradictories from contraries (see n. 18 above): for example, there is a middle between 'Socrates is white' and 'Socrates is black', but there is no middle between 'Socrates is white' and 'Socrates is not white'.)

<sup>60</sup> The first proof is at *S* I.38.1.2 (III 247:31-248:3). The second is added rather clumsily at *S* I.38.1.2 (III 248:29-35), after the cautious excursus outlined in n. 63 below. Gregory's painstaking thoroughness can often mar his clarity.

<sup>61</sup> Since 'S will P' is not false, it is not the case that S will not P; for if that were the case, then 'S will P' would be false. As Gregory puts it at *S* I.38.1.2 (III 248:33-34), these 'two inferences follow from the definitions of "true" and "false".'

<sup>62</sup> *S* I.38.1.2 (III 248:3-5). The proof itself is short and simple, but it is followed by a complex set of clarifications.

<sup>63</sup> Gregory spends a long time justifying this step at *S* I.38.1.2 (III 248:18-28), as he is keen to ensure that he is left with a *categorical* statement, not a hypothetical one. ('S neither will P nor will not P' has only one subject, and can therefore be called a categorical statement with a complex (here, 'coupled') predicate; see n. 27 above.) Just to make sure, though, he shows that 'Neither will S P nor will S not P' is impossible, because it entails (by correspondence) that the two contradictories 'S will P' and 'S will not P' are both false; he can then argue that since 'S neither will P nor will not P' entails 'neither will S P nor will S not P', and the latter is impossible, the former is also impossible: *S* I.38.1.2 (III 248:6-17).

Gregory goes on to turn *Metaphysics* IV (‘Γ’) §7 against Aristotle: in proving the Law of Excluded Middle, Aristotle uses the fact that anyone affirming or denying must be saying something true or something false;<sup>64</sup> he should therefore agree that every proposition is true or false. Gregory has an extremely good case here, though he does not linger on it.<sup>65</sup> In fact, we may strengthen his case: as we saw in §3 above, Aristotle characterizes propositions (ἀποφάνσεις) as those sentences which admit of truth and falsity, and then divides them into affirmations (καταφάσεις) and negations (ἀποφάσεις). It seems, then, that according to Aristotle himself any given affirmation or negation must be either true or false.<sup>66</sup>

### 5.3 Rule of Contradictory Pairs (III 249:1-19)

Gregory’s next complaint is that Aristotle’s thesis will invalidate the ‘First Principle’ (*primum principium*). Evidently this must be an important principle, but what is it? To answer this question, we are going to need some background. One possible answer is “Concerning anything whatever either the affirmation or negation is true,” a logical principle so fundamental that [mediaeval theologians] called it the “First Principle” (*primum principium*).<sup>67</sup> Let us examine the relevant passages to test the hypothesis that this is what Gregory means.

If ‘Antichrist neither will nor will not come’ is true, for example, it follows that not every contradiction with one part false has its other part true; instead, it will happen that of some contradiction one part will be false and the other will not be true; which is contrary to the First Principle.<sup>68</sup>

If the *primum principium* is that either the affirmation or the negation – which are the two parts of a contradiction – is true, then this principle will certainly be violated by a contradiction of which one part is false and the other is not true, given that the false part cannot also be true. So far so good.

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<sup>64</sup> The editors of the critical edition give Gregory’s citation as 1012a3-4, but this cannot be right. What Aristotle says there is that whenever anyone says something true or false, he must be affirming or denying something, simply because the definition of truth (see p. 7 above) is given in terms of affirmation and negation. Gregory must be referring instead to 1011b28: ‘he who says of anything that it is, or that it is not, will say either what is true or what is false.’

<sup>65</sup> The argument occupies just over three lines, at *S* I.38.1.2 (III 248:36-39).

<sup>66</sup> Whitaker argues convincingly that Aristotle takes bivalence for granted throughout, and that his task in *De Interpretatione* is to test not the PB but the ‘Rule of Contradictory Pairs’ (see my §5.3). He bolsters his case (ch. 9, esp. pp. 125-26) with a quotation from *De Anima* III §6, 430b4-5: ‘not only is it false or true that Cleon is pale, but also that he was or will be’. My task here is not to interpret Aristotle, but I should just like to mention a potentially interesting passage I noticed while following up that quotation: ‘Where the alternative of true or false applies, there we always find a sort of combining of objects of thought in a quasi-unity... If the combination be of objects past or future the combination of thought includes in its content the date (ἄν δὲ γενομένων ἢ ἔσομένων, τὸν χρόνον προσεννοῶν καὶ συντιθείς).’ (430a26-b1, ROT.)

<sup>67</sup> Schabel (2000), p. 18.

<sup>68</sup> *S* I.38.1.1 (III 241:12-16). This is Gregory’s exposition of Aristotle’s argument at *De Interpretatione* §9, 18b17-20.

So of this contradiction the affirmation is not true, while however the negation is false; this is equally inconsistent with the First Principle, whose law is that if one part is false, the other part is true, no matter what it is.<sup>69</sup>

Here Gregory makes the same point, with a vital addition: the First Principle is something whose law ('cuius lex') is that if one part of a contradiction is false, then the other is true. This is certainly a corollary of the principle we are testing, again given that the false part cannot be true, and it is similar to what '[in] the Middle Ages [was] called the "Law of Contradictories" (*lex contradictoriarum*), that for each pair of contradictory propositions ... exactly one is true and the other false.'<sup>70</sup> Similar, but not identical; Gregory's law is, rather, a corollary of this law.

The Parisian theologian Peter Aureol, though, gave the *lex contradictoriarum* as the law 'that if one is true, the other is false'; this was in response to a hypothetical objector who had claimed that the law went on to say 'and that of necessity one is true and the other is false'. Aureol disagreed: 'the law is not, however, that always one is true and the other is false; rather, the Philosopher excepted future contingent propositions in the first book of the *De Interpretatione*.'<sup>71</sup>

Aureol's version of the *lex contradictoriarum* is closer to Gregory's, though strictly speaking it is not the same. Before we move on to the next passage from Gregory, let us look at one final version, that of John Buridan: 'The law of contradictories is that if one is true, the other is false, and vice versa. For in no matter can they be both true or both false.'<sup>72</sup> Buridan's version is the conjunction of the versions of Gregory and Peter; with no reason to suppose that either Gregory or Peter wanted the law to be asymmetrical, then, we should be happy with Buridan's as the definitive statement:

**LC:**        If one part of a contradiction is true, then the other part is false;  
              if one part of a contradiction is false, then the other part is true.

As promised in n. 53 above, this explains the final step of Proof 1b, where Gregory moves from the truth of 'S will not P' to the falsity of 'S will P'. Notice that this step is the converse of Gregory's statement of the law of contradictories ('if one part is false, the other part is true'), so it seems that we were right to accept Buridan's more precise version.

But we have yet to be certain that we have the right candidate for the *primum principium* whose law is the LC; indeed, we should be suspicious, because our candidate, unlike the law which supposedly derives from it, does not mention truth *and* falsity. Let us continue our trawl. A few pages further on, we find:

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<sup>69</sup> S I.38.1.1 (III 241:25-28).

<sup>70</sup> Schabel (2000), p. 18.

<sup>71</sup> Petrus Aureoli, *Scriptum Super Primum Sententiarum*, dist. 38, art. 3. The following Latin text for these quotations is from an online version of Schabel's 1995 edition: 'licet lex contradictoriarum sit quod si una est vera, reliqua sit falsa, non tamen est lex quod una sit vera et reliqua falsa semper; immo excipit Philosophus propositionem de futuro contingenti primo *Peri hermeneias*' (ll. 1000-1003); 'et quod de necessitate una sit vera, reliqua sit falsa' (l. 941).

<sup>72</sup> Buridan, *Summulae* I.4.4.3: 'Lex contradictoriarum talis est quod si una est vera, reliqua est falsa et e converso. In nulla enim materia possunt simul esse verae vel falsae.' The Latin is from van der Lecq's preliminary edition, as in n. 25 above.

And it is clear that this is impossible, because it follows from it that both contradictories are false ... But that conflicts with the First Principle.<sup>73</sup>

Again, this is consistent with the hypothesis that the First Principle is that either the affirmation or the negation is true; if both the affirmation and the negation are false, neither of them is true. But a couple of pages later we hit a snag:

One of two things follows: either that ... or that two contradictories will be true at the same time. And both of them seem absurd. [The absurdity] of the second is clear by reason of the First Principle.<sup>74</sup>

The worry is that if the First Principle is that either the affirmation or the negation is true, it seems consistent with the First Principle for *both* contradictories to be true (though this would fall foul of the Principle of Non-Contradiction; see §5.4 below). So it looks as if Gregory may not be one of the mediaeval theologians who took this to be the First Principle.<sup>75</sup>

So far, we have discovered that what Gregory takes to be the *primum principium* entails that:

- i. A contradiction cannot have one part false and the other not true. (LC)
- ii. A contradiction cannot have one part true and the other not false. (LC)
- iii. A contradiction cannot have both parts false. (III 248:12-15)
- iv. A contradiction cannot have both parts true. (III 250:32-35)

Only two sorts of contradiction are compatible with these four conditions:<sup>76</sup> a contradiction with neither part true or false, and a contradiction with one part true and the other part false. We can see from the last two sections that Gregory will not allow the first sort, so perhaps the First Principle is that one part of a contradiction is true and the other part is false. But if so, it is strange that he does not immediately use the *primum principium* against the possibility that neither is true. Look back at Gregory's proof of Theorem 2, and then consider the following proof:

*Theorem 2:* Either 'S will P' is true or 'S will not P' is true.

*Proof 2':* One of 'S will P' and 'S will not P' is true. (First Principle)

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<sup>73</sup> § I.38.1.2 (III 248:12-15).

<sup>74</sup> § I.38.1.2 (III 250:32-35).

<sup>75</sup> From what I have seen of his commentary, Aureol may not have been one of these people either; he quotes the *primum principium* as 'of anything, it is or it is not' ('de quolibet esse vel non esse', l. 931), which looks like the Law of Excluded Middle. On the other hand, he says this as a hypothetical objector; we can see from p. 13 above that he may not mean it.

<sup>76</sup> Conditions (iii) and (iv) add very little to the first two conditions; they just add to the LC the restriction that statements cannot be both true and false, which we could derive from the Principle of Non-Contradiction. Buridan assumes this restriction when he says that the LC holds 'because they cannot be both true or both false' (n. 72 above).

It is true that Gregory's arguments do not always follow the path of least resistance; the fact that he *does not* use this rather neat proof does not necessarily mean that he *could not* use it. But notice that when we have seen him using the First Principle, it has always been in cases in which one part of a contradiction is true or false; perhaps this Principle is silent about statements without truth-values.

So much for the background. We now have two candidates for Gregory's First Principle:

- (1) Of a contradiction, one part is true and the other is false.
- (2) Of a contradiction, either one part is true and the other is false, or neither is true or false.<sup>77</sup>

Thankfully we will be able to decide between these on the basis of the passage with which this section is supposed to be concerned. I shall quote this at length:

If of any one contradiction it is denied that this [part] is true and that one false, the same could be said for all [contradictions], whether they be propositions about the present or about the past; and it is certain that this could never be refuted more [strongly] than in the case of propositions about the future, because it could never be argued effectively without using the force of the first principle, which however is equally valid or invalid for all [propositions]. For this reason, such a position undoubtedly invalidates the first principle. Moreover, just as it is denied of a contradiction of singular categorical propositions about the contingent future that this particular part is true and that part [is] false, the same thing could equally be denied ... in general of contradictories of all kinds. And consequently the first principle could be abandoned completely in the context of future matters, and because of this nothing certain could be affirmed or denied about such matters.<sup>78</sup>

Clearly, Gregory's *primum principium* must be (1) and not (2). For if it were (2), it would allow both parts of a contradiction to be neither true nor false; but Gregory abhors this idea as a flagrant violation of the principle. We have unmasked the First Principle as the Rule of Contradictory Pairs:

**RCP:** Of every contradictory pair, one member is true and the other is false.<sup>79</sup>

It will readily be seen that LC, the *lex contradictoriarum*, is indeed a corollary of this principle. Notice, too, that it seems Gregory really *did* miss a very obvious trick with Proof 2'. Perhaps he had his reasons for not giving that proof; but perhaps this is where charity ends and hagiography begins. In any case, let us now see how cogent Gregory's objections in this section are.

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<sup>77</sup> This candidate is just the LC. This is not a problem; the LC does not *have* to be a corollary of the First Principle.

<sup>78</sup> *S* I.38.1.2 (III 249:16-19).

<sup>79</sup> My statement of the RCP is taken verbatim from Whitaker (1996), p. 79. It is one of Whitaker's central theses that Aristotle is concerned in the *De Interpretatione* to test the alethic behaviour of different types of contradictory pairs.

Whether or not Aristotle was consistent on the question of truth-values for individual statements about the future (see n. 66), and whether or not he is therefore open to some of the criticisms levelled at him by Gregory and by others, it is clear from the opening section of *De Interpretatione* §9 that he took singular statements about the future to constitute an exception to RCP:

In the case of what is and what has been, then, it is necessary that the affirmation or negation be true or false. And in the case of universal statements about universals, it is always [necessary] for one to be true and the other false; and the same is true of singulars, as we have said. But in the case of universals not spoken of universally, this is not necessary; we have also discussed this. But in the case of singulars that are going to be, it is not the same.<sup>80</sup>

Thus Gregory's argument in the long passage quoted above is not quite the *reductio ad absurdum* he takes it to be. If Aristotle is merely testing the status of the RCP, then he is not claiming that it holds in all cases. And indeed we saw in n. 21 that other types of statement do not obey RCP, as Aristotle noticed; the seventh and eighth chapters of the *De Interpretatione* are devoted to two classes of such exceptions.<sup>81</sup> So Gregory has not succeeded in using Aristotle's own words against him.

#### 5.4 Principle of Non-Contradiction (III 249:20-32)

The Principle of Non-Contradiction (PNC), sometimes rather perversely known as the Principle of Contradiction, is the most fundamental principle of Aristotle's metaphysics:

It is impossible for the same thing both to belong and not to belong at the same time to the same thing and in the same respect (and let us assume we have drawn all the further distinctions that might be drawn to meet logical complaints).<sup>82</sup>

The PNC is the unprovable but indubitable bedrock of rational thought. Gregory has already implicitly used it twice in his previous proofs, in both its metaphysical form (as just given) and its logical form (that two contradictories cannot both be true): the final step of Proof 2 relies on the logical PNC, while the final step of Proof 3 relies on the metaphysical PNC. It seems strange, then, that Gregory should seek to prove his conclusion 'from a different principle ... namely, that it is impossible for any contradictories to be true at the same time, whatever the context'.<sup>83</sup> *Quid novi?*

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<sup>80</sup> *De Interpretatione* §9, 18a28-34. The translation is from Irwin and Fine (1995), though I have changed 'particulars' to 'singulars' for the reasons given in n. 19 above. For a detailed explanation of why the opening sentence is not a straightforward statement of the Principle of Bivalence but a compressed statement of the Rule of Contradictory Pairs, see Whitaker (1996), pp. 114-15.

<sup>81</sup> See Whitaker (1996), chs 7, 8.

<sup>82</sup> *Metaphysics* IV ('Γ') §3, 1005b19-22. The translation is from Irwin and Fine (1995).

<sup>83</sup> *S* I.38.1.2 (III 249:20-22).

*Theorem 4:* ‘S will P’ is either true or false.

*Proof 4:* Suppose (for a contradiction) that ‘S will P’ is neither true nor false.

‘S will P’ is not true.	(hypothesis)
S will not P.	(correspondence)
‘S will P’ is not false.	(hypothesis)
S will P.	(correspondence + LEM) <sup>84</sup>

*Therefore* ‘S will P’ is either true or false. (by the PNC)

As suspected, this is not a new proof; it is simply a compressed version of Proof 3, using Proof ii of the lemma.

### 5.5 Truth-Functionality (III 249:33-251:26)

In this section, Gregory attacks the viability of maintaining the truth of ‘either S will P or S will not P’ whilst denying the truth of ‘S will P’ (A) and the truth of ‘S will not P’ (B), as Aristotle seems to do.<sup>85</sup> His attack takes three related forms:

- i. A partial proposition will be true although none of its singulars will be true.
- ii. A universal proposition will be false although all of its singulars will be true.
- iii. A disjunction will be true although neither of its parts will be true.

Gregory’s exposition of these is very involved; we shall not go far into the details. The partial proposition is ‘one of A and B is true’, which is supposed to be true despite the fact that neither A nor B is true. The universal proposition is ‘neither A nor B is true’, which is supposed to be false despite the fact that both ‘A is not true’ and ‘B is not true’ are both true. The disjunction is ‘A or B’, which is supposed to be true despite the fact that neither A nor B is true.

In essence, these three all boil down to the same accusation, which is that voiced forcefully by Quine in a separate context: ‘This notion has even brought [an opponent] to the desperate extremity of entertaining Aristotle’s fantasy that “It is true that  $p$  or  $q$ ” is an insufficient condition for “It is true that  $p$  or it is true that  $q$ .”’<sup>86</sup>

<sup>84</sup> As in n. 59 above, it is not the case that S will not P; so, given the LEM’s restriction on the possibilities, S will P.

<sup>85</sup> This is what Gregory calls ‘Aristotle’s second conclusion’: *J* I.38.1.1 (III 239:21-26).

<sup>86</sup> Quine, ‘On a So-Called Paradox’ (1953), p. 65.

Gregory takes it that Aristotle falls prey to his attack because of this passage:

Since expressions are true just as are the things, ... [of chance events] it is necessary for one portion of the contradiction or the other to be true or false, but not this one or that one (τόδε ἢ τόδε), but however it chances (ὁπότερ' ἔτυχευ).<sup>87</sup>

It is arguable, though I shall not go into the question here, that Aristotle is indeed open to this objection. In the solution I present in §6 below, we will see that it is not necessary for either of them to be true or false – quite the opposite – though it is necessary that one or the other will come about.

## 6. Solution to the Problem<sup>88</sup>

It should be clear from my presentation in §5 that the arguments in which Gregory seeks to establish his own position all rely fundamentally on his application of the correspondence theory of truth. His criticisms of Aristotle may or may not be justified, but that is not our main concern here.

So the keystone of Gregory's positive position is a version of the correspondence theory of truth: a proposition is true if and only if there is a fact to which it corresponds. Gregory uses this to show that if (as a matter of fact) Antichrist will come, 'Antichrist will come' is true,<sup>89</sup> and that if (as a matter of fact) Antichrist will not come, 'Antichrist will come' is false.<sup>90</sup>

One obvious way of rejecting Gregory's position, should we wish to do so, would be to reject the correspondence theory of truth. But there is a better way: we can show that his use of the theory is faulty.<sup>91</sup> Q, the question heading the discussion, asks about future propositions *de inesse*, that is, factual, assertoric, non-modal future propositions – propositions, we might put it, about 'what is actually the case in the future', whose truth or falsity depends on certain facts about the future. But it is not clear that there are any such propositions or any such facts; at least, as I shall now attempt to show in outline, our languages are not capable of expressing any such propositions, since it is an implicit and deeply entrenched part of our world-view that there are no such facts.<sup>92</sup> If that is so, then none of our languages' statements about the future can express a factual proposition, and hence – on the present theory of truth – none of our languages' statements about the future can be true.

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<sup>87</sup> *De Interpretatione* §9, 19a36-38. The translation is Whitaker's (1996, pp. 121-22). See also the clear exposition given by Gregory at *S* I.38.1.1 (III 242:30-243:13), which Gaskin has described on p. 345 of *The Sea Battle and the Master Argument* (1995) as 'the definitive statement of the correct interpretation of Aristotle's intention in *DI* 9'.

<sup>88</sup> My thoughts in this section owe a great deal to exchanges with Bob Hargrave and thence to the works of Vic Dudman.

<sup>89</sup> *S* I.38.1.2 (III 246:19-21).

<sup>90</sup> *S* I.38.1.2 (III 246:25-26).

<sup>91</sup> This is a better way for at least two reasons. Firstly, because we might wish to hold on to some version of this theory; Simon Blackburn provides some motivations in *Spreading the Word* (1984), §7. Secondly, because this approach does not require a wholesale rejection of Gregory's (Aristotelian) theory. It is always a good idea to take on an opponent on his own terms when possible; Gregory himself adheres to this principle, as for instance at *S* I.38.1.3 (III 264:17-18).

<sup>92</sup> Recall Quine's slogan (borrowed from James Grier Miller as one of the mottos of *Word and Object*) that ontology recapitulates philology: our languages enshrine a metaphysical outlook that has been forged in the unforgiving fires of evolution. What I mean by that will, I hope, become clear. (On a tangential note, while arguments from etymology cannot be conclusive, it is at least interesting to note that a fact is *factum*, that is, 'done'.)

It is plain that we have no contact with the future. The present is accessible to us through perception, while the past is accessible to us through memory.<sup>93</sup> That is why we can form statements about the past and about the present which are informative, that is, which pass on facts. But as for the future, we can only ever *imagine* what it might be like, so that our statements about the future are of a different species altogether: they are not statements of fact, but *judgements*.<sup>94</sup> Precisely because we can never take the future for granted, our futurate statements are irreducibly tinged with uncertainty, expectation, and so on; leaving aside the metaphysical question of whether or not there are future facts, it is surely uncontroversial that we have had no reason to develop a means of passing them on.

We could perhaps conclude from this that all statements about the future are *ipso facto* false, but that rather cursory solution would not be satisfactory because it does not advance our understanding of such statements.<sup>95</sup> Rather, our conclusion should be that statements about the future are neither true nor false, because, unlike statements of fact, they are not *aimed* at truth. One way of seeing this is to compare the entailments of statements of fact to those of future judgements.

- (F) Bush waged war on Iraq
- (J) Bush will wage war on Iran

Suppose someone assents to both (F) and (J), and suppose he is now confronted with F' and J':

- (F') Bush waged war on Iraq, even if he was offered oil by Saddam
- (J') Bush will wage war on Iran, even if he is offered oil by Khamenei

His assent to (F) commits him to (F'); if (F) is true, it is true no matter what else is true. But his assent to (J) does not commit him to (J'); he might well assent to (J) but not to (J'). Now if (J) were true, it would be true no matter what else was true, and assent to (J) would commit anyone to (J'). Therefore (J) is not true. But if our man is made aware of this point of logic, it will not have the slightest effect on his avowed assent to (J). Therefore in assenting to (J) he is not aiming at truth.<sup>96</sup>

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<sup>93</sup> This picture is simplistic; we can also have access to the past via perception, e.g. by using the Hubble Space Telescope, and the question of what exactly constitutes the present (and, relatedly, whether we can only ever perceive the immediate past) is not straightforward. But these details do not affect the crucial point for us here, namely, the sharp distinction between the past and the present on the one hand and the future on the other.

<sup>94</sup> Again, the picture I have given here is simplistic. We can make non-factual statements about the past, like for instance 'Jefferson would not have liked Bush'. This, too, relies on the projective faculty of imagination, and so this, too, is a judgement. For a fuller account which outlines the mental process involved here, see Dudman, 'On Conditionals' (1994). For a comprehensive account, covering non-projective ('practical') judgements like 'he must have left it at home', see Dudman, 'Towards a Theory of Predication for English' (1985), esp. pp. 164-94, or at least the summary on pp. 193-94.

<sup>95</sup> Tellingly, Aristotle considers this suggestion but rejects it because of the correspondence theory; see *De Interpretatione* §9, 18b20-25, and Whitaker (1996), pp. 117-18. This is another important ground for Whitaker's theory that Aristotle is concerned with RCP, not PB: PB alone would not make the future determinate, as all future statements could be false. In case I seem to be idolizing Whitaker, I should add that I disagree with his agreeing with Aristotle. I do not see how he can consistently maintain (pp. 130f.) that 'an assertion which accurately predicts the future is certainly true; however, it is not fixed which assertion from the contradictory pair is the true one, just as it is not fixed whether the event will take place or not.' For related criticisms, see Robert McArthur, 'Factuality and Modality in the Future Tense' (1974).

<sup>96</sup> For more on the difference between the logic of propositions and that of judgements, see Dudman, 'Three Twentieth-Century Commonplaces about "If"' (2001), pp. 126-27. That the two logics are immiscible is fatal to the various projects which have sought to wring a trivalent logic from Aristotle's observation that statements about the future lack truth-

That is not to say that judgements cannot be evaluated; (J), we might say, is a poor judgement because our man has failed to take into account several factors that militate against it. But what makes a judgement good or bad is the reasoning that underlies it. So judgements and statements of fact are evaluated in different ways, judgements as good or bad, considered or hasty, and so on, and statements of fact as true or false.<sup>97</sup> Since it is propositions which are usually said to admit of truth and falsity, it seems sensible to reserve the term ‘proposition’ for statements of fact.

Statements about the future, on the other hand, should be classed as modal, as a simple consideration suggests. I claimed earlier that both ‘factual’ and ‘non-modal’ are valid translations of *de inesse*,<sup>98</sup> since statements about the future are not factual, then, it appears that they are modal.<sup>99</sup>

There is much more that could be said to complete and defend this thesis. One of the more obvious questions to be addressed concerns the status of a statement like ‘that car is going to crash’, which is present-tensed but seems to be about the future. The answer is perhaps almost as obvious: that statement is about a present tendency and not about the future. For suppose S says ‘That car is going to crash’, and suppose that the car does not crash. S can then reaffirm his assertion, saying ‘It *was* going to crash, but the driver swerved at the last minute’. It is significant that no such reaffirmation is available for ‘That car will crash’, for the latter statement is not a statement of fact.

For now, though, we shall make do with this outline, on the strength of which we may reply to Gregory’s question (Q): since we cannot make factual statements about the future, *a fortiori* no singular categorical factual statement<sup>100</sup> about the future concerning a contingent matter is true.<sup>101</sup>

values; most recently, for instance, Craig Bourne’s ‘Future Contingents, Non-Contradiction, and the Law of Excluded Middle Muddle’ (2004), though a valiant attempt, is doomed to failure. On his system (p. 125), ‘Bush waged war on Iraq and he will wage war on Iran’ is a conjunctive proposition with an indeterminate truth-value ( $1/2$ ), because ‘Bush waged war on Iraq’ is true and [Bush] will wage war on Iran’ is indeterminate. *Sed contra*: this is not a conjunctive proposition, but rather a concatenation of two quite different sorts of statement, viz. a proposition and a judgement. The absurdity of trying to patch the two together can be seen more readily with (supposed) disjunctions like ‘Bush waged war on Iraq or he will wage war on Iran’, which Bourne would call true and everyone else would call nonsense.

<sup>97</sup> If someone makes the prediction (J), and subsequently Bush *does* wage war on Iran, what are we to say about his prediction? A standard response is that it has ‘become true’; but on our account that would involve its status changing from that of a judgement to that of a proposition. No matter how good the grounds for predicting (J), such a prediction remains a judgement, and to call it ‘true’ would be to abuse a term of art. With this in mind, and having denied that statements about the future function in the same way as those about the present or the past, we can answer an objection based on ‘truth-value links’ which has been raised by Dummett in ‘The Metaphysics of Time’ (2004), pp. 83-85. Truth-value links are what relate the truth of ‘Bush is waging war on Iraq’ as uttered in March 2003 to the truth of ‘Bush waged war on Iraq a year ago’ as uttered in March 2004. Dummett’s objection is that these two should also be linked to the truth of ‘Bush will wage war on Iraq in a year’s time’ as uttered in March 2002: a prediction that has been ‘rendered true’ (p. 80). But once we realize that predictions can never be true, strictly speaking, this objection is neutered. (Dummett toys with this on p. 85, but calls it ‘a case difficult to sustain’. Cf. ‘Bringing About the Past’ (1964), p. 340.) Of course, hindsight allows us to say that a prediction *turned out to be right*; but we can say that a prediction which turned out to be right was nonetheless a bad prediction, and conversely. Predictions are evaluated against what was epistemically available at the time, not on what would prove to happen; the latter approach would be hopelessly unfair.

<sup>98</sup> See above, pp. 4-5 and nn. 24, 25.

<sup>99</sup> For a brilliant two-page demonstration of the difference between statements about the future and those about the present or the past, see Dudman, ‘A Popular Presumption Refuted’ (1992). For a more detailed account of why statements about the future should be classed as modal, see Dudman, ‘Against the Indicative’ (1994), §1, pp. 17-21. See also John Lyons, *Linguistic Semantics* (1995), §10.3 (on tense) and §10.5 (on mood).

<sup>100</sup> I use ‘statement’ where I previously had ‘proposition’, because ‘factual proposition’ is pleonastic on our current usage.

## 7. Conclusion

In §1 we saw how the status of statements about the future could have implications for the contingency of the future, for human free will, for human justice, for divine knowledge and for divine justice. Let us run briefly through these with Gregory. He insisted that statements about the future do have truth-values, and hence that God, being omniscient, knows which statements about the future are true and which are not (although we humans can only understand the idea of such knowledge by an analogy with sight); but he nonetheless maintained that the future is contingent and that we do have free will. I do not know what he thought about human schemes of justice, but he did come to some very strong conclusions about divine justice.<sup>102</sup> Augustine had maintained against the British monk Pelagius that men were incapable of redeeming themselves; if men were saved, it was thanks to God's active grace. The logical conclusion may or may not have been accepted by Augustine, but it was openly embraced by Gregory: not only were the saved predestined by God to salvation, but the damned were also predestined by God to damnation. Moreover, there was no rationale behind this double-edged predestination: it was not because people freely chose to do certain things that they were saved or damned, but simply because God, the freest of agents, willed them to be saved or damned. (Thus, for instance, Paul could not have resisted his conversion: it was God's will.) One consequence of this was that children who died before even having had the chance to do anything wrong could still be damned. Gregory's stance on this issue earned him the nickname 'Torturer of Infants'.<sup>103</sup>

Much of this follows fairly straightforwardly from the conjunction of standard elements of monotheism with the assertion that statements about the future have truth-values.<sup>104</sup> Thus we find that Peter Aureol, who denied this assertion, had a vastly different account of divine justice. As he held that the future was not fixed, he also held that men were responsible for their own salvation or damnation. God had laid down the satisfaction conditions for salvation, and if we chose to accept His offer and meet those conditions, we would be saved.<sup>105</sup>

<sup>101</sup> What about statements about necessary aspects of the future? In n. 2 above I said that 'two plus two will be four tomorrow' was mathematical and therefore necessary. Are not such statements therefore true? It seems not, precisely because if they were to be true, they would (on our theory of truth) have to be true in virtue of relevant *future facts*.

<sup>102</sup> Gregory's account of divine justice is found at § I.40-41, after his account of foreknowledge in § I.38.2 and § I.39. Schabel has pointed out to me that Gregory may have something to say about human justice in his *De Usura* (on usury).

<sup>103</sup> Theological intricacies aside, it is clear as day that divine creation and divine foreknowledge entail divine responsibility, and it is refreshing, if disturbing, to see a theologian cheerfully admitting as much; not for Gregory the crass ascription of all good to God and all evil to anything else. For a far less simplistic treatment with far more theological intricacy, see James Halverson's excellent *Peter Aureol on Predestination* (1998), pp. 1-10, 143-57, and 172-73, on which I have relied here.

<sup>104</sup> This is not to say that Gregory must have begun by working out whether or not statements about the future had truth values, and must then have gone on to explore the logical consequences of his answer, finding – perhaps to his surprise – that he was predestined to salvation or to damnation. The point is that, given certain beliefs which he took as basic, the two theses are bound up with each other. For instance, denying truth to all future statements would mean denying God's knowledge of what is future for us, which would make divine preordination impossible, because God wills and knows all things 'from eternity': if He does not even know that a certain person will exist, He cannot predestine him either way. Of course, there are objections to this – e.g. that God's knowledge that a certain person 'will exist' is not expressible in a statement about the future, because to God nothing is future – but this is not the place for such a discussion.

<sup>105</sup> See Halverson (1998), p. 172.

The solution offered in §6 leaves God out of the picture. Language is a human construct, refined over thousands of years to serve human purposes.<sup>106</sup> Even if the determinists are right and there is only one possible future (which is therefore necessary), our natural languages have no way of expressing statements about the future which is parallel to our factual statements about the present and the past; so if truth and falsity are tied to facts, none of our statements about the future can be true or false. There are some skirmishes left to be fought, but there is reason to believe that the sea-battle is finally drawing to a close.<sup>107</sup>

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<sup>106</sup> Schabel has pointed out to me that this picture of language may not have been acceptable in Gregory's time. I hope to look further into this as part of future work on Peter Aureol's treatment of the problem.

<sup>107</sup> I would like to thank Charles Burnett and especially Chris Schabel for helpful comments on the original version of this dissertation.

# GREGORY OF RIMINI AND THE LOGIC OF THE FUTURE

A Warburg Institute MA Dissertation

by

MARK THAKKAR

## Appendix

Here I reproduce the text of the critical edition for *S* I.38.1 with a facing-page translation. The Latin text for III 237-252 conforms to the line-numbering of the critical edition. My translation is considered until the Second Conclusion of Article 2; thereafter it may be less accurate.

I have benefited from a draft translation by Chris Schabel and Russell Friedman, kindly sent to me by Chris Schabel. Their translation has helped me in a number of places, though we have some points of disagreement; both are pointed out in the notes.

## DISTINCTIO 38

## QUAESTIO 1

UTRUM aliqua enuntiatio singularis de inesse categorica de futuro in materia contingenti ad utrumlibet sit vera.

Super distinctionem 38, in qua Magister<sup>1</sup> tractat de praescientia dei respectu rerum et enuntiabilium futurorum, quaero primo, utrum aliqua enuntiatio singularis de inesse categorica de futuro in materia contingenti ad utrumlibet sit vera.

Et arguo primo quod non, quia, si aliqua talis esset vera, sequeretur per naturam contradictoriorum quod sua contradictoria esset falsa. Sed hoc non est verum, quoniam, cum contingens huiusmodi non sit plus determinatum ad esse quam ad non-esse – alioquin non esset contingens ad utrumlibet –, non est possibile unam partem contradictionis determinate veram esse et alteram determinate falsam, cum non sit potior ratio quod una sit vera quam reliqua.

Secundo, si aliqua talis propositio esset vera, igitur vel esset necessaria vel contingens. Non necessaria, quia tunc illud futurum necessario eveniret, et sic non esset ad utrumlibet. Nec contingens, quia tunc posset esse non vera; et si sic, vel posset esse non vera ante positionem in esse illius futuri quod enuntiat, vel non ante, sed tantum post. Si secundo modo, sequitur sicut prius quod illud necessario ponetur in esse et non contingenter. Primum autem non potest dici, quia qua ratione in aliquo instanti vel tempore ante positionem illius in esse ipsa est vera, eadem ratione in quolibet antequam illud ponatur, et per consequens necesse est ipsam esse veram toto tempore praecedente esse illius, ac per hoc illud necessario eveniet. Consequentia assumpta patet, quia, sicut "omne quod est, quando est, necesse est esse", ut dicit Philosophus<sup>2</sup>, sic omne quod est verum, quando est verum, necesse est esse verum.

Unde ex eodem posset argui aliter sic: Si talis propositio nunc est vera, igitur suum enuntiabile nunc est futurum, et ultra, igitur nunc necessario est futurum. Prima consequentia est evidens; et secunda probatur, quia, sicut 'omne quod est, quando est, necesse est esse', ita omne quod est futurum, quando est futurum, necesse est esse futurum. Et, si necesse est esse futurum, necessario eveniet.

1 cf LOMBARDUS 1 Sent dist 38 cap 1-2

2 ARISTOT De interpretatione 9 (19a 23-24; Juntina 1',80M-81A = cap 6)

## DISTINCTION 38

## QUESTION 1

Whether any singular factual categorical future proposition on a bilaterally<sup>1</sup> contingent matter is true.

Concerning Distinction 38, in which the Master treats of God's foreknowledge with regard to future things and states of affairs (*enuntiabilia*)<sup>2</sup>, I ask firstly whether any singular categorical<sup>3</sup> factual future proposition on a bilaterally contingent matter is true.

And I argue **firstly** that no [such proposition] is true.<sup>4</sup> For if such a [proposition] were true, it would follow from the nature of contradictories that its contradictory would be false. But this is not true, because, since such a contingent is no more determined to happen than not to happen (otherwise it would not be bilaterally contingent), it is not possible for one part of the contradictory pair in particular<sup>5</sup> to be true and the other in particular [to be] false, as there is no more reason for one to be true than for the other [to be true].

**Secondly**, if any such proposition<sup>6</sup> were true, then it would be either necessary or contingent. But [it could] not [be] necessary, because in that case that future would necessarily come about, and hence it would not be bilateral. Nor [could it be] contingent, because in that case it could be not true; and if so, either it could be not true before the coming-to-be of that future which it proposes, or not before but only after [that coming-to-be]. In the latter case, it follows (as before) that that [future] would come to be necessarily and not contingently. And the first [case] cannot be said [to obtain], because whatever made [the proposition] true at some instant or for some time<sup>7</sup> before that [future] came about, would also [make it true] at *any* time before that [future] came about.<sup>8</sup> The assumed consequence is clear,<sup>9</sup> because just as 'everything that is, when it is, necessarily is,' as the Philosopher says, so everything that is true, when it is true, necessarily is true.

Hence from the same [principle] one could argue **in another way** as follows. If such a proposition is now true, then the state of affairs it proposes is now future, and furthermore, it therefore is now necessarily future. The first consequence is obvious; and the second is proved as follows. Just as 'everything that is, when it is, necessarily is,' so everything that is future, when it is future, necessarily is future; and if it is necessarily future, it will necessarily come about.

<sup>1</sup> Translating *ad utrumlibet*. A future is bilaterally possible if it is open to the possibility both of occurrence and of non-occurrence. Bilaterality is obviously built into contingency and is therefore a redundant addition here.

<sup>2</sup> A proposition or statement (*enuntiatio*) proposes or states (*enuntiat*) a state of affairs (*enuntiabile*).

<sup>3</sup> The critical edition has *categorematica*, but that term (meaning roughly 'signifying something') usually applies to words, not propositions. The 1522 edition has 'cathe<sup>ca</sup>', which could give either *cathegorica* or *categorematica*. As it happens, propositions can be said to be categorematic for Gregory, in that they have a referent (the *enuntiabile*); see Alexander Broadie, *Notion and Object* (1989), pp. 75-76. But this clearly cannot differentiate between propositions, and is therefore not what is meant here; instant (though unnecessary) corroboration comes from 'cathegorica' in I. 3.

<sup>4</sup> This is not Gregory's position; the first three arguments here are ones with which he disagrees.

<sup>5</sup> My use of 'in particular' for *determinate* is controversial. See n. 46 of the dissertation.

<sup>6</sup> Note the easy substitution of *propositio* for *enuntiatio*. If there is a difference, it is not significant at this point.

<sup>7</sup> The distinction between truth at an instant and truth over an interval of time was (also?) made by John Buridan.

<sup>8</sup> Lit. 'by whatever reason it is true ... by the same reason [it is true] ...'.

<sup>9</sup> The phrase *consequentia patet* appears very frequently here. 'The inference is valid' would be a freer translation. See Peter King's excellent paper 'Consequence as Inference: Mediaeval Proof Theory 1300-1350' (2001).

Tertio, idem probatur auctoritate Philosophi<sup>3</sup> 1 Perihermeneias, ubi expresse determinat quod nulla talis propositio est vera.

Ad oppositum arguo sic: Si nulla huiusmodi propositio est vera, igitur quaelibet est falsa, et, si quaelibet est falsa, igitur cuiuslibet contradictoria est vera, et ultra, igitur aliqua est vera; igitur de primo ad ultimum, si nulla est vera, aliqua est vera, et sic contradictoria simul sunt vera; quod est impossibile. Prima consequentia probatur, quia omnis enuntiatio est oratio, "in qua est verum vel falsum", ut patet<sup>4</sup> ex eius definitione 1 Perihermeneias; et secunda consequentia patet<sup>5</sup> per legem contradictoriorum. Reliquae consequentiae sunt ex se notae.

In hac quaestione erunt articuli tres: Nam, quia apud aliquos<sup>6</sup> est controversia, quid circa hoc quaesitum fuerit opinatus Philosophus, primo ostendam quae fuit eius opinio; quod etiam tangit tertium argumentum. Secundo videbitur, quid secundum veritatem tenendum sit de quaesito. Tertio, quia de contingenti principaliter inquiritur, videbitur, quando contingens est contingens, an scilicet quando est vel quando non est, et simul cum hoc de veritate illius propositionis Philosophi<sup>7</sup> assumptae in tertio argumento "omne quod est, quando est, necesse est esse".

## ARTICULUS I

### (Conclusiones duae Aristotelis)

Quantum ad primum est sciendum quod Philosophus<sup>8</sup> in 1 Perihermeneias, tractans de enuntiationibus contradictoriis et ostendens qualiter se habent ad invicem secundum veritatem et falsitatem, determinat quod cuiuslibet contradictionis, sive sit propositionum quarum una est universalis et reliqua particularis, sive propositionum singularium de praesenti vel de praeterito, una pars determinate est vera, et altera determinate est falsa. Sed non est sic de

3 *cf ibid* (19a 9–10 et 35–39; Juntina 1',80L et 81 BC = cap 6)

4 *ibid* 4 (17a 2–3; Juntina 1',71M = cap 4)

5 *cf ibid* 9 (18a 34–39; Juntina 1',80CD = cap 6)

6 *scil* Scotus, Ockham et Adam Goddam

7 *cf p* 237, nota 2

8 *cf* ARISTOT *loc cit* 7 et 9 (17b 16–20 et 18a 28–33; Juntina 1',75K et 80BC = cap 5 et 6)

**Thirdly**, the same thing can be shown using the authority of the Philosopher in *De interpretatione* 1, where he expressly determines that no such proposition is true.

I argue **for the opposite [position]** as follows. If no such proposition is true, then all [such propositions] are false; and if all [such propositions] are false, then their contradictories are all true, and furthermore, therefore, some [such proposition] is true. So from premiss to conclusion,<sup>10</sup> if no [such proposition] is true, then some [such proposition] is true, and thus [two] contradictories are [both] simultaneously true; which is impossible. The first consequence is proved because every proposition is a sentence ‘which is the bearer of truth or falsity’, as is clear from the definition of a proposition in *De interpretatione* 1.<sup>11</sup> The second consequence is clear from the law of contradictories, and the remaining consequences are self-evident.

In this question there will be three articles. Now because it is a matter of controversy among some people as to what the Philosopher thought about this question, I will first show what his opinion of the matter was; this also touches on the third argument [above]. Secondly we will see what we should think about the matter under investigation according to the truth. Thirdly, because we are concerned especially with the contingent, we will see when a contingent is contingent, or rather, when it is and when it is not, and at the same time [we will see] about the truth of that proposition of the Philosopher which is assumed in the third argument [above], ‘everything that is, when it is, necessarily is’.

#### ARTICLE 1

#### (Two Conclusions of Aristotle)

As for the first, it should be known that the Philosopher in *De interpretatione* 1, treating of contradictory propositions and showing how they are related to each other with regard to truth and falsity,<sup>12</sup> determines that of every contradictory pair of propositions of which one is universal and the other partial,<sup>13</sup> and of every contradictory pair of singular propositions about the present or the past, one of the pair in particular is true and the other in particular is false.<sup>14</sup> But it is not so for

<sup>10</sup> Lit. ‘from first to last’. This rule of logic can be found in Burley’s *De Puritate Artis Logicae Tractatus Brevior* as Rule 2a: see the translation in Kretzmann and Stump (eds), *The Cambridge Translations of Medieval Philosophical Texts, Volume One: Logic and the Philosophy of Language* (1988), pp. 286-87.

<sup>11</sup> Here Gregory uses the fact that the Principle of Bivalence is built into Aristotle’s definition of a proposition.

<sup>12</sup> Whitaker would thoroughly approve of this summary of Aristotle’s project in the *De Interpretatione*.

<sup>13</sup> Not ‘particular’; that role is covered by ‘singular’. See Whitaker (1996) p. 89, and p. 4 of this dissertation.

<sup>14</sup> The structure here is not ‘A is (determinately B)’ but ‘(A determinately) is B’. See n. 46 of the dissertation.

quibuslibet propositionibus singularibus contradictoriis de futuro, quia non de illis, quae sunt circa futura contingencia ad utrumlibet.

Unde quantum ad hoc ponit ipse duas conclusiones, quarum prima<sup>9</sup> est quod non omnis propositio singularis de futuro categorica et de inesse de simplici praedicato affirmativa vel negativa est vera vel falsa, ita quod non cuiuslibet contradictionis de futuro haec pars determinate vel illa est vera, et similiter nec ista determinate vel illa est falsa, quia non contradictionis de futuro contingenti ad utrumlibet, verbi gratia huius contradictionis 'Antichristus erit, Antichristus non erit' nec haec pars determinate 'Antichristus erit' est vera vel falsa, nec haec pars determinate 'Antichristus non erit' est vera vel falsa.

Et intelligendum est dictum Philosophi de propositionibus singularibus, quarum subiecta sunt simplicia, videlicet vel pronomina demonstrativa praecise ut hoc vel istud, vel nomina propria ut Plato et Antichristus. Nam habentium subiecta composita multae sunt falsae, et oppositae sunt verae, verbi gratia si demonstretur unus Aethiops et dicatur 'hoc album disputabit cras', constat ipsam esse falsam et eius oppositam, scilicet hanc 'hoc album non disputabit cras', esse veram eodem demonstrato. Similiter, si Aethiops quidam vocetur Plato, haec determinate est falsa 'Plato albus disputabit cras' et opposita est vera sumpto hoc nomine 'Plato' utrobique pro Aethiopo illo.

Secunda conclusio Philosophi<sup>10</sup> est quod, licet neutra talium determinate sit vera, non tamen propositio singularis negativa de praedicato copulato ex praedicatis illarum ambarum est vera, verbi gratia quamvis nec haec sit vera 'Antichristus erit' nec ista etiam vera sit 'Antichristus non erit', ista tamen non est vera 'Antichristus neque erit neque non erit'; quod tamen posset aliquibus apparere sequi ex primo.

### (Prima conclusio Aristotelis probatur)

Primam conclusionem sic intellectam Philosophus<sup>11</sup> probat dupliciter, primo sic: "Si omnis", inquit ipse, "affirmatio aut negatio vera vel falsa est, et omne necesse est esse vel non esse".

Hanc consequentiam probat dupliciter: Prima probatio in hoc fundatur, quod semper veritatem propositionis comitatur esse rei, ita quod semper sic est vel non est, sicut propositio enuntiat, si est vera, quaecumque sit propositio illa, et e converso esse rei comitatur veritas propositionis enuntiantis, sicut est, non-esse autem rei sequitur falsitas propositionis, et e converso. Unde ait<sup>12</sup>:

<sup>9</sup> cf *ibid* 9 (18a 33-18b 16; Juntina 1',8000 = cap 6)

<sup>10</sup> cf *ibid* (18b 16-25; Juntina 1',80GH)

<sup>11</sup> *ibid* (18a 34-35; Juntina 1',80CD)

<sup>12</sup> *ibid* (18a 39-18b 3; Juntina 1',80DE)

every contradictory singular proposition about the future, because it is not so for those which are about bilaterally contingent futures.

[Aristotle] then puts forward two conclusions as far as this is concerned. The **first** of these is that not every singular categorical factual future proposition with a simple predicate,<sup>15</sup> whether affirmative or negative, is true or false, so that not every contradictory pair of statements about the future has this part in particular or the other [part in particular] true, and likewise neither this [part] in particular nor that [part in particular] is false; for of a contradiction concerning a bilaterally contingent future, e.g. of the contradiction ‘Antichrist will come, Antichrist will not come’, this part in particular, ‘Antichrist will come’, is not true or false, and this part in particular, ‘Antichrist will not come’, is not true or false.

And we must understand what the Philosopher said about singular propositions with simple subjects, that is, with either specific demonstrative pronouns like ‘this’ and ‘that’ or proper names like ‘Plato’ and ‘Antichrist’. For many of those [propositions] which have composite subjects are false and their opposites true; for example, if someone points to<sup>16</sup> an Ethiopian and says ‘This white [man] will dispute tomorrow’, it is clear that this is false, while its opposite, that is, ‘This white [man] will not dispute tomorrow’, is true if the same man is pointed to.<sup>17</sup> Likewise, if a certain Ethiopian is called Plato, the particular [proposition]<sup>18</sup> ‘The white [man] Plato will dispute tomorrow’ is false, while its opposite is true, taking the name ‘Plato’ in both cases to refer to that Ethiopian.

The Philosopher’s **second** conclusion is that, although of such a pair neither [proposition] in particular is true, nonetheless the singular negative proposition whose predicate is composed from the predicates of both [propositions] is not true. For example, although neither ‘Antichrist will come’ nor ‘Antichrist will not come’ is true, nonetheless ‘Antichrist neither will come nor will not come’ is not true – even though this might appear to some people to follow from the first [statement].

### Proof of Aristotle’s First Conclusion

The first conclusion, thus understood, is proved in two ways by Aristotle. **Firstly** he says ‘If every affirmation or negation is true or false, then everything necessarily must be or not be’.

He proves this consequence in two ways. The first proof is based on the fact that the being of a thing always accompanies<sup>19</sup> the truth of a proposition, so that whenever<sup>20</sup> a proposition is true, things are so or not so, just as the proposition states (whatever that proposition might be); and conversely the truth of a declarative<sup>21</sup> proposition accompanies the being of a thing, just as [that thing] is; and the falsity of a proposition follows upon the non-being of a thing, and vice versa. Thus he says:

<sup>15</sup> ‘Socrates is a good carpenter’ has a simple predicate; ‘Socrates is good and is a carpenter’ does not.

<sup>16</sup> I have appropriated the vocabulary of ‘pointing to’ from the translation of Schabel and Friedman.

<sup>17</sup> See Whitaker (1996) p. 65 on why Aristotle’s theory renders affirmations and negations with referential failure false and true respectively. The point is that ‘S is P’ states that subject S and predicate P are somehow combined, while ‘S is not P’ states that they are not so combined. If S does not exist, then there can be no such combination. Note that we cannot dismiss this using the counterexample ‘S is non-existent’, because for Aristotle ‘is non-existent’ is not a genuine verb. (He would reluctantly call it an ‘indefinite’ (ἀοριστος) verb; see *De Interpretatione* §3, 16b12-16.)

<sup>18</sup> For some justification of this use of ‘particular’, see n. 46 of the dissertation.

<sup>19</sup> For *comitatur*, which can also mean ‘follows’; given the two-way relationship, though, ‘accompanies’ is better.

<sup>20</sup> This is a reshuffling of the ‘semper’.

<sup>21</sup> For *enuntians*.

"Quoniam, si verum est dicere, quoniam est album vel non est album, necesse est esse album vel non album, et, si est album vel non album, verum est affirmare vel negare; et, si non est, mentitur", supple affirmans, "et, si mentitur, non est". Unde Boethius<sup>13</sup> exponens ait sic: "Quod de futuro possit esse iudicium a praesentibus, trahit exemplum. Ait enim hanc esse rerum consequentiam, ut rem subsistentem propositionis veritas consequatur, veritatem propositionis rei, de qua loquitur propositio, essentia comitetur". Et infra<sup>14</sup>: "Veritas quidem rei quae est et res quae est veritati, falsitas vero rei quae non est et res quae non est falsitati convertitur". Si ergo affirmatio est vera, ita erit, et, si negatio est vera, ita non erit. Igitur nihil erit ad utrumlibet, "nam utrumlibet", ut ait ibi Philosophus<sup>15</sup>, "nihil magis sic vel non sic se habet, aut habebit". Et Boethius<sup>16</sup>: "Utrumlibet est, cuius indiscretus eventus est, id est quod aequaliter esse vel non esse contingit". Si autem nihil ad utrumlibet, igitur quodlibet necessario erit vel necessario non erit.

Secundo probatur eadem consequentia, quia, 'si omnis affirmatio vel negatio etc', tunc inquit Philosophus<sup>17</sup>, "si aliquid est album, verum erat dicere primo quoniam erit album, quare et semper fuit verum dicere quodlibet eorum, quae facta sunt, quoniam erit; quod si semper verum est dicere, quoniam est vel erit, non potest hoc non esse vel non futurum esse. Quod autem non potest non fieri, impossibile est non fieri; et quod impossibile est non fieri, necesse est fieri. Omnia ergo, quae futura sunt, necesse est fieri".

Et probata illa consequentia probat Philosophus<sup>18</sup> consequens esse falsum, quia alioquin non oporteret de futuris "consiliari neque negotiari, quoniam, si facimus hoc, erit illud". Si vero non facimus, nihil minus erit, quoniam "nihil prohibet in millesimum annum hunc dicere", quoniam illud erit, hunc vero negare. Et, si nullus illud diceret, nihilominus hoc erit vel non erit, quia "non propter nostrum negare vel affirmare illud erit vel non erit". Unde, ut ait ibi Boethius<sup>19</sup>, "sive dicatur aliquid sive non, quidquid vere praedici potuisset, illud, etiam si non praedicatur, evenire necesse est. Idcirco enim vere praedicatur, quia vere praedici potest, et idcirco vere praedici potest, quia immutabiliter futurum est". Patet etiam falsitas consequentis, ut ait Philosophus<sup>20</sup>, quia manifestum est nos esse principium futurorum et dominos actuum nos-

13 BOETH In De interpretatione 1 ed prima (PL 64,332BC)

14 *ibid* (PL 64,332D)

15 ARISTOT *loc cit* (18b 8–9; Juntina 1',80E = cap 6)

16 BOETH *loc cit* (PL 64,333D)

17 ARISTOT *loc cit* (18b 9–15; Juntina 1',80F = cap 6)

18 *ibid* (18b 31–35; Juntina 1',80HK)

19 BOETH *loc cit* (PL 64,337A)

20 cf ARISTOT *loc cit* (19a 7–22; Juntina 1',80LM = cap 6)

‘For if it is true to say that<sup>22</sup> [something] is white or is not white, then it must necessarily be white or not white; and if it is white or not white, then it is true to affirm or deny [that it is white]. And if it is not [white], then it is wrong,’ sc. to affirm [that it is white]; ‘and, if it is wrong [to affirm that it is white], then it is not [white]’. Thus Boethius, explaining this, wrote: ‘That there can be judgement about the future from the present state of affairs, he brings in an example. For he says that it is a consequence of things that as the truth of a proposition follows from a subsistent thing, [so] there follows from the truth of a proposition the existence of the thing about which the proposition speaks.’ And further on: ‘Indeed, truth is related<sup>23</sup> to an existent thing, and an existent thing is related to truth; but falsity is related to a non-existent thing and a non-existent thing is related to falsity’. If therefore a [future] affirmation is true, then things will be so, and if [its] negation is true, then things will not be so. Therefore nothing will be contingent, ‘for what is contingent’, as the Philosopher says there, ‘neither is nor will be any more so or not so’. And Boethius [writes]: ‘The contingent is that whose occurrence is indifferent,<sup>24</sup> i.e., that for which existence and non-existence are equally possible’. But if nothing is contingent, then everything either necessarily will happen or necessarily will not happen.

Secondly, the same consequence is proved because, as the Philosopher goes on to say, ‘if every affirmation or negation [etc.], then if something is white, it was true to say beforehand that it would be white, and thus it was always true to say of anything which has [now] happened that it would happen; but if it is always true to say that [this] is or will be, then it is impossible for it not to be or to be going to be. But it is impossible that what cannot fail to be should fail to be; and what cannot possibly fail to be must necessarily be. Therefore everything which is going to be must necessarily be’.

And having proved that consequence, the Philosopher shows that the consequent is false, since otherwise we should not, concerning future matters, ‘deliberate or engage in business on the grounds that if we do A then B will happen’. For if we do not do [A], then nothing less will happen, for ‘there is nothing to stop some man saying 1,000 years in advance’ that B will happen and some other man denying as much. And, even if no one did say that, nonetheless B will happen or will not happen, because ‘it is not because of our affirmation or negation that B will or will not happen’. Hence, as Boethius says there, ‘whether or not anything is [actually] said, whatever could have been said truly beforehand must necessarily come about, even if it is not said beforehand. For something is said truly beforehand because it *can* be said truly beforehand, and it can be said truly beforehand because it is immutably going to come about’. But the falsity of the consequent is clear, as the Philosopher says, because it is obvious that we are the cause of future events and masters of our actions<sup>25</sup>

<sup>22</sup> NB *quoniam*, like *quia* and *quomodo*, is sometimes used by mediaevals in place of *quod*.

<sup>23</sup> Translating *convertitur* as ‘is related to’, instead of the more literal ‘is changed’ or ‘is translated’.

<sup>24</sup> For *indiscretus*.

<sup>25</sup> Well, it may *seem* that way. But how would it seem if our intentions as well as our actions were predetermined?

trorum et multa posse esse et non esse, et non omnia ex necessitate, sicut declarat per exempla.

Secundo probat Philosophus<sup>1</sup> eandem conclusionem iuxta finem dicti libri sic: Sicut se habent res ad esse vel non-esse, sic orationes enuntiantes illas esse vel non esse ad veritatem et falsitatem. Sed futura contingentia sunt indeterminata ad esse vel non-esse. Igitur et ipsae orationes indeterminatae sunt et non plus haec, quae enuntiat rem futuram esse, est vera quam illa, quae enuntiat eam non esse futuram, nec e converso. Et sic patet prima conclusio.

### (Secunda conclusio Aristotelis probatur)

Secundam conclusionem probat Philosophus<sup>2</sup> in illa parte "At vero nec quoniam neutrum etc" dupliciter: Primo, quia, si haec esset vera 'Antichristus neque erit neque non erit', sumatur haec gratia exempli, sequitur quod non cuiuslibet contradictionis, si una pars est falsa, reliqua est vera, quinimo continget quod alicuius contradictionis una pars erit falsa et reliqua erit non vera; quod est contra primum principium. Consequentia vero patet, quia, si haec sit vera 'Antichristus neque erit neque non erit', igitur haec affirmativa 'Antichristus erit' est falsa, quia ipsa affirmat illud, quod illa in sua prima parte vere negat. Sed probatum est in prima conclusione quod ista non est vera 'Antichristus non erit'; igitur harum duarum contradictoriarum affirmativa est falsa et negativa non est vera. Et eodem modo probatur quod negativa est falsa et affirmativa non est vera, quia, si haec est vera 'Antichristus neque erit neque non erit', igitur propter hoc, quod dicitur 'neque non erit', sequitur quod haec sit falsa 'Antichristus non erit', et probatum est in prima conclusione quod haec non est vera 'Antichristus erit'. Igitur huius contradictionis non est vera affirmativa, cum tamen negativa sit falsa; quod pariter repugnat primo principio, cuius lex est quod, si una pars est falsa, reliqua est vera, quaecumque sit illa.

Hanc rationem ponit Philosophus<sup>3</sup>, cum ait: "Primum enim, cum sit affirmatio falsa, erit negatio non vera; et, cum haec sit falsa", scilicet negatio, "contingit affirmationem non esse veram". Amplius, si illa sit vera, sequitur, sicut dicit Boethius<sup>4</sup>, quod ambae erunt falsae, quia nec esset quod affirmatio dicit esse futurum, nec non esset quod negatio non esse praedixit, et sic utraque falsa; quod est impossibile.

1 *cf* *ibid* (19a 32-39; Juntina 1',81 BC)

2 *ibid* (18b 16-25; Juntina 1',80G)

3 *ibid* (18b 18-20; Juntina 1',80G)

4 *cf* BOETH *loc cit* (PL 64,334D-335B)

and that many things can be or not be, and that not everything [happens] of necessity, as he shows through examples.

**Secondly**, the Philosopher proves the same conclusion towards the end of the said book as follows. Just as things are related to being and non-being, so sentences stating that things are or are not are related to truth and falsity. But future contingents are indeterminate with respect to being and non-being. Therefore those sentences are also indeterminate; and a sentence which states that a thing will happen is no more true than one which states that it will not happen, and vice versa. And thus the first conclusion is clear.

### Proof of Aristotle's Second Conclusion

The Philosopher proves his second conclusion in two ways in the section beginning 'But nor [can we say] that neither [is true]'.

**Firstly**, because if 'Antichrist neither will nor will not come' is true (taking this for an example), then it follows that not every contradiction one of whose parts is false has its other part true; instead, it will happen that of some contradiction one part will be false and the other will not be true; which is contrary to the first principle.<sup>26</sup> And the consequence is clear, for if 'Antichrist neither will nor will not come' is true, then the affirmative 'Antichrist will come' is false, because this latter affirms something that the former truly denies in its first part. But it was shown in the first conclusion that 'Antichrist will not come' is not true; therefore of these two contradictory statements the affirmation is false and the negation is not true. And we can likewise show that the negation is false and the affirmation is not true, for if 'Antichrist neither will nor will not come' is true, then because of the fact that 'nor will not come' was said, it follows that 'Antichrist will not come' is false, and it was shown in the first conclusion that 'Antichrist will come' is not true. So of this contradictory pair the affirmation is not true, while however the negation is false; which is equally inconsistent with the first principle, whose law is that if one part is false then the other part is true, no matter what it may be.

The Philosopher gives this reasoning when he says: 'For firstly, though the affirmation is false, the negation will not be true; and, though it,' sc. the negation, 'is false, it happens that the affirmation is not true'. Furthermore,<sup>27</sup> if that is true, then it follows, as Boethius says, that both will be false, since what the affirmation says *is* going to happen *is not* [going to happen], and what the negation says *is not* [going to happen] *is not not* [going to happen], so that they are both false; which is impossible.

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<sup>26</sup> The *primum principium* will turn out to be the Rule of Contradictory Pairs: of every contradictory pair, one member is true and the other false. On this see Whitaker (1996), pp. 79-82, 111-12, and §5.3 of the dissertation.

<sup>27</sup> On the contrary, this two-liner shortcuts the preceding long-winded argument, rather than following from it.

Secundo probat Philosophus eandem conclusionem, quoniam, si illa esset vera, sequitur quod tale futurum ex necessitate erit et non ad utrumlibet. Consequentiam probat per fundamentum primae rationis ad primam conclusionem, quoniam, sicut in praedicatis simplicibus dictum est quod, si verum est dicere quod hoc est album, oportet illud esse album, et eodem modo, si de futuro dicatur, sic etiam est in praedicatis compositis. Et ideo ait<sup>5</sup> quod, "si verum est dicere" de aliquo "quod est album et magnum, oportet utrumque esse"; et similiter, "si verum erit cras, oportet esse cras", id est, si verum est dicere de aliquo quod erit album et magnum cras, oportet ipsum esse magnum et album cras. Igitur, si verum est dicere quod neque erit neque non erit, oportet ipsum non fore neque non fore; et sic non erit ad utrumlibet, id est contingens fore et non fore.

Tunc Philosophus<sup>6</sup> concludit conclusionem primam – quae est principaliter intenta, quoniam secunda non principaliter, sed potius ad excludendum oppositam, quae videretur forsitan alicui sequi ex prima, introducta fuit –, dicens: "Quae ergo contingunt inconvenientia, haec sunt et huiusmodi alia, si omnes affirmationes et negationes, vel in his quae in universalibus dicuntur universaliter, vel in his quae sunt singularia, necesse est oppositionis hanc esse veram, illam vero falsam".

Ex his autem patet ipsum voluisse quod alicuius oppositionis contradictoriae non est haec pars demonstrata vera et illa falsa, aut econverso; sed, cum ipse<sup>7</sup> in principio huius inquisitionis dicat quod "in his, quae sunt et quae facta sunt", id est praesentibus et praeteritis, "necesse est affirmationem vel negationem veram esse vel falsam esse, in universalibus quidem universaliter semper hanc quidem veram, illam vero falsam, et in his etiam, quae sunt singularia", id est in contradictoriis singularibus, restat quod in oppositionibus contradictoriis de futuro, saltem quae sunt singulares, non haec determinate sit vera, et illa falsa. Quod et statim explicite ibidem ipse proposuit et consequenter, sicut ex recitatis patet, prolixè probare conatus est. Et eandem prorsus sententiam concludit in fine illius libri. Sed advertendum quod, quamquam Philosophus dicat quod non cuiuslibet contradictionis haec est vera, illa vero falsa, tamen cum hoc vult quod cuiuslibet contradictionis altera est vera et altera falsa. Nec umquam invenitur ibi dicere quod non cuiuslibet contradictionis altera est vera et altera falsa, sed semper cum signo singulari, scilicet

5 ARISTOT *loc cit* (18b 20-22; Juntina 1',80G)

6 *ibid* (18b 26-29; Juntina 1',80H)

7 *ibid* (18a 28-31; Juntina 1',80BC)

**Secondly**, the Philosopher proves the same conclusion in this way: if [‘Antichrist neither will come nor will not come’] is true, it follows that such a future will come about of necessity and not contingently. He proves the consequence using the basis of the first argument for the first conclusion, since, just as in the case of simple predicates it was said that if it is true to say that X is white then X must be white, so it is also if we are talking about the future; and the same goes for composite predicates. And that is why he says that ‘if it is true to say’ of something ‘that it is white and large, it must be both [white and large]’; and likewise ‘if it will be true tomorrow, it must be [the case] tomorrow’, that is, if it is true to say of something that it will be white and large tomorrow, then that thing must itself be white and large tomorrow.<sup>28</sup> Therefore, if it is true to say that it will neither be nor not be, then it must neither come about nor not come about; and thus it will not be bilaterally contingent, that is, contingent towards coming about and not coming about.<sup>29</sup>

Then the Philosopher finishes his first conclusion – which is his chief purpose, since the second was introduced not as a main conclusion but rather in order to exclude its opposite, which might perhaps seem to some to follow from the first – by saying: ‘These and others like them, therefore, are the absurdities that arise if it is necessary with respect to all affirmations and negations, whether in the case of universals spoken of universally,<sup>30</sup> or in the case of singulars, for this side of the opposition to be true and that to be false.’

Now, from these remarks it is clear that Aristotle thought that of some contradictory opposition this particular part is not true and that one false, and vice versa; but since he says at the start of this investigation that ‘in the case of things that are and that have been,’ that is, in present and past matters, ‘it is necessary for the affirmation or the negation to be true or to be false – at any rate for universals [taken] universally [it is necessary] always for one to be true and the other false, and the same goes for singulars’, that is, for singular contradictories – it remains that for contradictory oppositions about the *future*, or at least for those which are singular, it is not the case that this one in particular is true and that one false. And Aristotle himself immediately and explicitly stated as much in the same passage, before subsequently trying to prove it at length, as is clear from the quoted passages. And he wholeheartedly repeats the same opinion at the end of the book. But it should be noted that, although the Philosopher says that not every contradiction has this [particular] part true and that one false, he nonetheless also holds that of any contradiction *one* part is true and another [part] false. And in this book he is never found to say that not every contradiction has one part true and another [part] false; rather, he always uses a singular sign, namely,

<sup>28</sup> This sentence paraphrases *De int.* 18b22-24. If ‘white and large’ looks odd, it should. This is found in some MSS of *De int.*, but others have ‘white and black’. Irwin and Fine (*Aristotle: Selections*) settle for the latter. (As Charles Burnett has pointed out to me, the confusion must have arisen from the capitalized Greek: ΜΕΓΑΣ vs. ΜΕΛΑΣ.)

<sup>29</sup> This sentence paraphrases *De int.* 18b24-26.

<sup>30</sup> On the two types of universals – those spoken of universally and those not – see Whitaker (1996), pp. 83-88.

pronomine demonstrativo, numquam autem particulari quale est 'alter' vel 'altera', quinimmo cum tali signo dicit expresse oppositum etiam in contradictionibus singularibus de futuro ad utrumlibet. Unde de talibus loquens circa finem ait<sup>8</sup>: "Horum enim necesse est quidem alteram partem contradictionis esse veram vel falsam, non tamen hoc vel illud, sed utrumlibet", id est non tamen hanc designatam vel illam, sed unam vel alteram indiscrete.

Ex quo manifeste patet quod demonstratis quibusdam duobus contradictoriis singularibus de futuro, haec particularis secundum Philosophum est vera 'altera harum duarum est vera', et tamen nulla eius singularis est vera, ita quod non contingit vere dicere 'haec est vera', sive haec sive illa demonstraretur. Et similiter haec particularis est vera 'altera istarum est falsa', et tamen non habet aliquam singularem veram, quoniam non contingit vere dici 'haec est falsa', sive demonstraretur affirmativa sive negativa.

Ex istis autem patet evidenter quod opinio Philosophi fuit quod nulla propositio singularis de futuro contingenti determinate secundum se sumpta est vera vel falsa. Et miror multum, quomodo aliquis intelligens putet Philosophum non istud sensisse, praesertim cum oppositum dicentes<sup>9</sup> nullum textum vel sententiam Philosophi ad probationem sui dicti adducant vel adducere possint. Quod autem dicunt quidam<sup>10</sup> non esse verisimile ipsum sic errasse, cum multa manifesta inconvenientia sequantur ex hoc, apparenter est amicabilem excusatio, sed secundum veritatem potius accusatio, quia sequela inconvenientium non eum illud non sensisse, sed non debuisse sensisse convincit.

Praeterea, constat quod etiam Tullius, tam magnus philosophus, qui propter rationem supra factam Philosophi negavit omnem praescientiam futurorum, ut patebit<sup>11</sup> in quaestione sequenti, habuit etiam in praemissa conclusione cum Philosopho convenire.

Item moderni aliqui theologi, magni doctores, dixerunt conclusionem praemissam non solum fuisse de intentione Philosophi, sed etiam esse verissimam et utique demonstratam; propter quod non sic excluditur ex toto verisimile quod Philosophus illam fuerit opinatus, quamquam ipsa sit falsa. Cui accedit etiam quod in pluribus aliis turpissime erravit, et in aliquibus etiam sibi contradixit, ut patet<sup>12</sup> ex quaestione praecedenti.

8 *ibid* (19a 36–38; Juntina 1',81BC)

9 *cf* OCKHAM In 1 Sent dist 38 q 1 (ed Etzkorn - Kelley, tom IV, St. Bonaventure N. Y. 1979, p 584,3-4)

10 *cf* ADAM GODDAM In Sent 1-4 lib 3 dist 14 q 2 art 2 dubium 1 sub littera F (codd Paris Mazarine 915, fol 174va = Université 193, fol 130ra)

11 *cf* p 274,5–9

12 *cf* p 221,10-21

a demonstrative pronoun, but never a partial<sup>31</sup> sign such as ‘one’ or ‘another’. Rather, with the latter sort of sign he expressly states the opposite, even for singular contradictories about the contingent future. Thus in speaking of such contradictories towards the end [of the chapter] he writes: ‘For in these cases it is in fact necessary that one part of the contradiction is true or false, but not however *this* one or *that* one, but either’, that is, not however this or that particular one, but one or the other indifferently.

From this it is manifestly clear that given two singular contradictory [propositions] about the future, the partial [proposition] ‘one of these two is true’ is, according to the Philosopher, true; but nonetheless neither of its singular [propositions] is true, so that we cannot truly say ‘this one is true’ whether we pick out this one or that one. And likewise the partial [proposition] ‘one of them is false’ is true; but nonetheless it does not contain any true singular, because we cannot truly say ‘this one is false’, whether we pick out the affirmative or the negative [singular].

And from these considerations it is evidently clear that the Philosopher’s opinion was that no singular proposition about a contingent future, taken by itself in particular, is true or false. And I am greatly surprised that someone intelligent should think that the Philosopher was not of this opinion, especially since those who claim the opposite do not, and cannot, adduce any passage or opinion of the Philosopher as proof of their claim. Some people say that it is unlikely that he would have thus erred, since many obvious absurdities follow from this [position]; this looks like a charitable excuse, but actually it is rather an accusation, because the following of absurdities does not prove that he was not of this opinion, but rather that he should not have been.

Moreover, it is an established fact that even as great a philosopher as Cicero, who, as we will see in the next question, denied all foreknowledge of future events because of the Philosopher’s reasoning as given above, also had to agree with the Philosopher on the foregoing conclusion.

Also, certain modern theologians, greatly learned men, have said not only that the aforementioned conclusion was what the Philosopher meant, but also that it is quite right and certainly proven; for this reason we cannot exclude the very possibility that the Philosopher was of that opinion, even if that opinion is false. To this we can add that he was shamefully wrong on many other points, and that in some he even contradicted himself, as we saw in the previous question.

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<sup>31</sup> Not ‘particular’. Partial signs also include e.g. ‘some’.

**(Opinio Petri Aureoli)**

Supradictam quoque conclusionem, quam nullus debet dubitare fuisse Philosophi, quidam doctor<sup>13</sup> dicit esse verissimam et ad eius oppositam necessario sequi inconvenientia, ad quae deducit Philosophus. Unde ad huius declarationem probat duas propositiones: Quarum prima est "quod, si talis propositio est vera, illa immutabiliter et inevitabiliter est vera. Secunda, quod ex illa inevitabiliter et necessario sequitur quod tale futurum ponetur in esse".

Prima probatur<sup>14</sup> dupliciter: Primo quidem, quia, "si ipsa mutari possit, ne sit vera, aut ergo in instanti quo est vera, aut in praecedenti, aut in sequenti usque ad instans in quo res fiet, aut in instanti in quo res fiet". Non potest dici primum, quia tunc "in eodem instanti esset vera et non esset vera". Nec secundum: "Tum quia in instanti dato est vera, ergo et in omni praecedenti fuit vera, et ita, si tunc mutari poterat in falsitatem, poterat simul esse vera et non vera. Tum quia, si in instanti praecedente mutaretur, sequitur quod ante amitteret veritatem quam haberet; quod nihil est dictu". Nec tertium dici potest, quia, si in aliquo tali instanti, utpote cras, sit falsa, impossibile est quod fuerit heri vera. "Detur enim oppositum, scilicet quod heri fuerit vera et hodie falsa, hoc erit propter aliquam mutationem factam in re"; sed hoc est falsum, "quia nondum res est nec subest alicui potentiae in actu, et per consequens, cum nihil mutetur circa rem, nihil mutabitur circa propositionem". Nec potest dici quartum, scilicet "quod in instanti, in quo res fiet", mutetur propositio a sua veritate: "Tum quia veritas illa transit in praeteritum, nam usque ad illud instans verum fuit" quod illud erit; "quod autem transit in praeteritum, immutabile est", ut patet<sup>15</sup> 6 Ethicorum "'Hoc solo privatur deus etc'". Tum quia, si tunc mutetur, "aut hoc erit, quia significatum eius ponetur in esse", et sic "non mutabitur, sed potius confirmabitur in sua veritate, aut oppositum sui significati ponetur" in esse, "et tunc etiam non mutabitur", quia sequitur quod "numquam fuit vera, sed semper falsa". Cum igitur in nullo instanti talis propositio possit mutari a veritate in falsitatem, necessario est immutabiliter vera, si ipsa est vera.

Secundo<sup>16</sup> sic: "Illud quo posito in esse pro aliquo instanti ponitur pro semper in esse", si pro aliquo instanti ponitur esse, ponitur immutabiliter esse. Hoc patet, quia quod "sibi determinat sempiternitatem in essendo, in

13 *Gregorius in mg* (λ fol 147Q): Aureolus primo sententiarum distinctione 38 q prima articulo 3. – PETRUS AUREOLI In 1 Sent dist 38 art 3 (ed Romae 1596, p 883bEF)

14 *ibid* (p 883bF-884aD)

15 ARISTOT Eth Nicom 6,2 (1139b 10-11; Juntina 3,82F = cap 2)

16 PETRUS AUREOLI *loc cit* (p 884aD-884bA)

### The Opinion of Peter Aureol

A certain doctor also says that the conclusion stated above – which no one should doubt to have been the Philosopher's – is very true, and that from its opposite there must follow the absurdities derived by the Philosopher. Then to make this clear he proves two propositions. The first of these is 'that if such a proposition is true, it is immutably and inevitably true. The second is that from this it inevitably and necessarily follows that such a future will be brought into being'.

The **first** is proved in two ways. Firstly, 'if it can be changed so that it is not true, then [it can be changed] either at the moment when it is true,<sup>32</sup> or at an earlier moment, or at a later moment before the moment at which the thing comes about, or at the moment at which the thing comes about'. We cannot settle on the first, for then 'at that moment it would be true and it would not be true'. Nor [can we settle on] the second: 'Firstly, because it is true at the given moment, and therefore it was true at all earlier moments, and so, if it could then have been changed into falsity, it could have been true and not true at the same time. Secondly, because if it were changed at an earlier moment, it follows that it would previously have lost the truth which it had; which is unthinkable'.<sup>33</sup> Nor can we settle on the third, because if it were false at some such moment, for instance tomorrow, it is impossible that it should have been true yesterday. 'For let the opposite be given, that is, that yesterday it was true and today it is false. This will be on account of some change that has taken place in the thing'; but this is false, 'since the thing is not yet [existent] or subject to any actual power/potency [?], and consequently since nothing about the thing can be changed, nothing about the proposition can change'. Nor can we settle on the fourth, that is, 'that at the moment at which the thing comes about' the proposition is changed from its truth: 'Firstly, because that truth then moves into the past, for until that moment it was true' that such-and-such will be; 'but what passes into the past is immutable', as is clear from *Ethics* VI: "Of this alone is God deprived," etc. Secondly, because if it is changed at that moment, 'either it will be that its significatum<sup>34</sup> is brought into being', and thus 'it will not be changed, but rather confirmed in its truth; or the opposite of its significatum will be brought' into being, 'and even then it will not change', because it follows that 'it was never true, but always false'. Since, therefore, such a proposition cannot be changed from truth to falsehood at any time, it must be immutably true, if it is true [at all].

Secondly, [the first proposition is proved] thus: 'That which, having been brought into being at any instant, is brought into being for ever', if it is brought into being at any instant, is brought immutably into being. This is clear, because that which 'fixes for itself eternal duration in being

<sup>32</sup> That is, the moment when we know it to be true, the moment stipulated in 'if such a proposition is true'.

<sup>33</sup> *Quod nihil est dictu*: literally, 'which is nothing to say'. As an alternative, 'which makes no sense' might do.

<sup>34</sup> That is, what the proposition signifies. For Gregory this means the state of affairs (*enuntiabile*) that it proposes.

nullo tempore mutari potest". Sed, si propositio de futuro pro aliquo instanti ponitur vera, ponitur pro semper vera, nam, si pro aliquo instanti est vera, pro quolibet instanti praecedenti et subsequenti, quamdiu suum significatum est futurum, est vera. Et tunc in instanti, quo illud ponitur, transit "a futuritione in praesentialitatem et est verum quod illud est; et postea in praeteritionem et erit verum deinceps in aeternum quod illud fuit", et sic perpetualiter illa veritas permanebit. Igitur, si propositio de futuro ponitur pro aliquo instanti vera, est immutabiliter vera.

Secunda propositio probatur<sup>17</sup>, quia sequitur necessaria consequentia 'propositio de futuro est vera, igitur tale futurum ponetur in esse'.

Hoc probatur dupliciter: Primo, quia<sup>18</sup> "ex opposito consequentis sequitur oppositum antecedentis"; sequitur enim 'tale futurum, verbi gratia Socrates, non ponetur in esse, igitur Socrates non erit, et ultra, igitur haec non est vera 'Socrates erit', et ita universaliter sequitur 'futurum, quod propositio enuntiat futurum, non ponetur in esse, igitur illa propositio de futuro non est vera'.

Secundo<sup>19</sup> idem probatur, quia "idem penitus significant futurum et venturum", igitur, si aliquid est futurum, sequitur quod illud eveniet. Et, si haec est vera 'aliquid, verbi gratia Socrates, erit' de necessitate, haec est vera 'Socrates eveniet' et ponetur in esse. Et sic patet quod haec consequentia est necessaria 'propositio de futuro est vera, igitur tale futurum ponetur in esse', ergo, si antecedens est immutabile et inevitabile, consequens est immutabile et inevitabile. Probatum est autem quod, si propositio de futuro est vera, ipsa est immutabiliter vera, igitur, si propositio de futuro est vera, futurum inevitabiliter ponetur in esse, et sic nihil contingenter eveniet, ut deducebat Philosophus. Et hoc quantum ad primum articulum.

## ARTICULUS 2

Nunc secundo videndum est, quid sit secundum veritatem sentiendum de quaesito. Et circa hoc pono octo conclusiones.

### (Prima conclusio)

Prima est quod omnis propositio singularis de futuro est vera vel falsa, ita quod cuiuslibet talis contradictionis contingit vere dici 'haec pars est vera et illa falsa', quamvis nos, quae sit vera determinate aut quae falsa, nesciamus.

17 *cf ibid* (p 884bBC)

18 Quoad regulam vide PETRUM HISPANUM *Summulae logicales*, tract 7,153 (ed de Rijk, Assen 1972, p 169,25-26)

19 PETRUS AUREOLI *loc cit* (p 884bCD)

cannot be changed at any time'. But if a proposition about the future is supposed to be true at any instant, it is supposed to be true for ever; for if it is true at any instant, it is true at any earlier or later instant, as long as its significatum is future. And then, at the moment at which [its significatum] comes into being, it passes 'from futurity into presentness, and it is true that [its significatum] *is*; and afterwards [it passes] into pastness, and it will always be true from then on that [its significatum] *was*', and thus that truth will last forever.<sup>35</sup> Therefore if a proposition about the future is supposed to be true at any instant, it is [supposed to be] immutably true.

The **second** proposition is shown from the fact that the following consequence necessarily follows: 'a proposition about the future is true, therefore such a future will come about'.

This is proven in two ways. Firstly, because "from the opposite of the consequent there follows the opposite of the antecedent". For this follows: 'such a future, e.g. Socrates, will not come about, therefore Socrates will not exist, and furthermore, therefore, 'Socrates will exist' is not true'. And so for the general case this follows: 'the future which a [certain] proposition states as future will not come about, therefore that future proposition is not true'.

Secondly, the same follows because "future" and "going to happen" have fundamentally the same meaning', therefore, if something is future, it follows that it will happen. And if 'something (say Socrates) will be' is true, by necessity 'Socrates will happen' is true, and [its significatum] will be brought into being. And thus it is clear that the following consequence is necessary: 'a [certain] proposition about the future is true, therefore such a future will be brought into being'; therefore, if the antecedent is immutable and inevitable, then the consequent is immutable and inevitable. But we have shown that if a proposition about the future is true, it is immutably true; therefore if a proposition about the future is true, that future will inevitably be brought into being, and thus nothing will happen contingently, as the Philosopher deduced. So much for the first article.

## ARTICLE 2

Now, secondly, we need to see what we should think about the matter under investigation according to the truth. And on this topic I put forward eight conclusions.

### First Conclusion

My first [conclusion] is that every singular proposition about the future is true or false, so that of any such contradiction it can truly be said 'this [particular] part is true and that one is false', even though we ourselves do not know which particular one is true and which false.

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<sup>35</sup> Cf. the debate over whether 'Christ will come' (prophets) and 'Christ has come' (Christians) are the same belief. See on this Øhrstrøm and Hasle, *Temporal Logic*, pp. 33-34.

Hanc conclusionem probo primo ex eodem principio, super quo principaliter Philosophus sustentatus est in probando conclusionem oppositam, videlicet quod veritatem propositionis consequitur esse rei, et e converso, et non esse rei concomitatur falsitas propositionis, et e converso; quod quidem tenet in qualibet materia et in cuiuslibet temporis propositionibus secundum Philosophum, ut supra<sup>20</sup> patet.

Sumo igitur istam gratia exempli ‘Antichristus erit’, et arguo sic: Aut haec est vera, aut non est vera. Si est vera, habeo propositum. Si non, tunc sic sequitur ‘haec ‘Antichristus erit’ non est vera; igitur Antichristus non erit’, et antecedens est verum per responsionem, igitur et consequens, et ultra, igitur haec est falsa ‘Antichristus erit’ per legem contradictoriarum, qua etiam Philosophus<sup>1</sup> supra in secunda sua conclusione usus est, videlicet quod, si una est vera, reliqua est falsa, et e converso. Et sic habetur propositum, scilicet quod haec ‘Antichristus erit’ est vera vel falsa, quia sequitur ‘haec est falsa, igitur est vera vel falsa’. Similiter ex alio habetur intentum, quia opposita est una singularis de futuro et est vera, ut conclusum est. Quod autem sequatur ‘haec non est vera ‘Antichristus erit’, igitur Antichristus non erit’, sicut assumptum est, primo probatur, quia<sup>2</sup> “ex opposito consequentis sequitur oppositum antecedentis”; sequitur enim per principium assumptum de mutua consequentia rei ad veritatem propositionis ‘Antichristus erit, igitur haec est vera ‘Antichristus erit’”, quod consequens contradicit illi antecedenti. Secundo, ex eodem principio arguo sic: Aut haec propositio ‘Antichristus erit’ est vera, et habeo propositum. Aut non, et tunc arguo: Si haec non est vera, igitur Antichristus non erit; patet ex proxima probatione per istud assumptum. Et ultra, per aliud principium<sup>3</sup>, quia scilicet non-esse rei comitatur falsitas propositionis, sequitur ‘Antichristus non erit, igitur haec est falsa ‘Antichristus erit’”; et<sup>4</sup> “quicquid sequitur ad consequens, sequitur ad antecedens”, sequitur ‘haec ‘Antichristus umquam erit’ non est vera, igitur haec ‘Antichristus erit’ est falsa’, et si sic, igitur eius opposita est vera. Et ex eodem principio sequitur, si non utraque secundum se sit vera vel falsa, et sic contradictoriae erunt simul verae et simul falsae; quod est simpliciter falsum et inconueniens et Philo-

20 *cf* p 239,28 sqq

1 *cf* p 241,11-34

2 *cf* p 245, nota 18

3 *cf* p 239,35

4 Quoad regulam vide BURLAEUUM De puritate artis logicae tractatus longior, tract 2 pars 1 cap 1 (ed Boehner, St. Bonaventure N. Y. 1955, p 62,10)

I prove this conclusion **firstly** from the same principle on which the Philosopher chiefly relied while proving the opposite conclusion, that is, [the principle] that the being of a thing follows from the truth of a proposition, and vice versa, and the falsity of a proposition accompanies the non-being of a thing, and vice versa. Indeed, according to the Philosopher this [principle] holds for any subject-matter and in propositions of any tense, as is clear from the above.<sup>36</sup>

So, taking as an example the [proposition] ‘Antichrist will come’, I argue [**firstly**] as follows. Either this is true, or it is not true.<sup>37</sup> If it is true, I have my proposal. If it is not, then this consequence follows: “‘Antichrist will come’ is not true; therefore Antichrist will not come’.<sup>38</sup> The antecedent is true because of the response,<sup>39</sup> and therefore so is the consequent. Furthermore, ‘Antichrist will come’ is therefore false by the law of contradictories, which the Philosopher also used in his second conclusion above – that is, [the law] that if one is true then the other is false, and vice versa.<sup>40</sup> And thus I have my proposal, namely that ‘Antichrist will come’ is true or false, because ‘this is false, therefore it is true or false’ is valid. Likewise, my intent has been satisfied in another way, because the opposite [i.e. ‘Antichristus non erit’] is a singular [proposition] about the future which is true, as was demonstrated.

And the consequence “‘Antichrist will come’ is not true, therefore Antichrist will not come’, which we assumed at first, is proved thus:<sup>41</sup> ‘from the opposite of the consequent there follows the opposite of the antecedent’; for ‘Antichrist will come, therefore “‘Antichrist will come’ is true’ follows from the principle we assumed about the mutual entailment of a thing and the truth of a proposition, and the consequent here contradicts the antecedent of the first proposition.<sup>42</sup>

**Secondly**, using the same principle I argue as follows. Either the proposition ‘Antichrist will come’ is true, in which case I have my proposal; or it is not, in which case I argue as follows. If [‘Antichrist will come’] is not true, then Antichrist will not come; this is clear from the last proof using the same assumption. And furthermore, using another principle, namely that the falsity of a proposition accompanies the non-being of a thing, ‘Antichrist will not come, therefore “‘Antichrist will come’ is false’ is valid. And ‘whatever follows from the consequent also follows from the antecedent’,<sup>43</sup> so “‘Antichrist will ever<sup>44</sup> come’ is not true, therefore “‘Antichrist will come’ is false’ follows. And if [‘Antichrist will come’ is false], then its opposite is true. And from the same principle it follows [as we shall see] that if neither [‘Antichrist will come’ nor ‘Antichrist will not come’] is true or false in itself, then [two] contradictories will be at the same time true and at the same time false; which is simply false and absurd, and

<sup>36</sup> For this correspondence of truth with reality, see the proof of Aristotle’s first conclusion on III 239-40.

<sup>37</sup> Gregory points out that P can only be true or not true; and if P is true then it is either true or false, QED; but if P is not true then (Gregory goes on to argue) it must be false. The argument rests entirely on the correspondence between truth and fact: if P is not true, then what P states is not in fact the case (by the definition of ‘true’); but if what P states is not in fact the case, then P is false (by the definition of ‘false’); so if P is not true, then P is false.

<sup>38</sup> This consequence, here taken for granted, is proved further down this page. (In the dissertation I call it Lemma 1.)

<sup>39</sup> That is, the response ‘it is not’ to the question implicit in ‘Either this is true, or it is not true.’

<sup>40</sup> This is not the Rule of Contradictory Pairs, but a corollary to it.

<sup>41</sup> The structure of the arguments here only makes sense if we alter the punctuation from ‘sicut assumptum est, primo probatur’ (as in the critical edition) to ‘sicut assumptum est primo, probatur’. Curiously, the 1522 edition does have the punctuation mark where reason requires it to be. Whether the error is Gregory’s or the editors’, I do not know.

<sup>42</sup> If ‘Antichrist will come’ is not true, Antichrist will not come. Therefore if Antichrist will come, ‘Antichrist will come’ is true. This inference is known as ‘contraposition’: given  $A \vdash C$ , we can infer  $\neg C \vdash \neg A$ .

<sup>43</sup> That is, consequences are transitive: given  $A \vdash B$  and  $B \vdash C$ , we can infer  $A \vdash C$ . The rule is also given in Burley’s *Tractatus Brevior* as the Second Principal Rule: see Kretzmann and Stump (eds) (1988), p. 285.

<sup>44</sup> The surprise appearance of *umquam* adds nothing to the argument. (It does not appear in the 1522 edition.)

sophusmet in hac materia etiam reputat impossibile in probatione<sup>5</sup> suae secundae conclusionis. Quod autem utrumque sequatur, probatio: Et, ut brevis fiat, sit A haec propositio 'Antichristus erit' et sit B opposita, scilicet haec 'Antichristus non erit', et ita in sequentibus supponant A et B pro illis propositionibus. Tunc sic: 'A non est vera, igitur A est falsa'; patet ex praemissis rationibus. Item, 'B non est vera, igitur B est falsa'; patet eodem modo. Et sic ambae falsae. Sed ulterius sic: 'A est falsa, igitur per legem contradictoriarum B est vera', et per idem sequitur 'B est falsa, igitur A est vera'; et sic ambae simul verae et ambae simul falsae.

Secundo ad idem ex alio principio verissimo et firmissimo, videlicet quod contradictionis non est medium per abnegationem; quod idem Philosophus<sup>6</sup> dicit esse verissimum 4 Metaphysicae iuxta finem et negantes hoc ipse reprobat ibidem. Unde, postquam probavit contradictoria non contingere esse simul vera, satis cito subicit<sup>7</sup>: "Ac vero nec contradictionis medium nihil esse contingit, sed necessarium aut dicere aut negare unum de uno, quodcumque illud sit". Item in proposita materia vult idem principium esse verum; unde in secunda conclusione probat quod non vere dicitur de aliquo contingenti quod neque erit neque non erit. Ex hoc arguo sic: Impossibile est esse medium isto modo inter aliqua contradictoria, igitur impossibile est aliquam propositionem esse neque veram neque falsam, igitur A non est neque vera neque falsa, et per consequens est vera vel falsa, et ita de B et de qualibet in singulari demonstrata potest inferri.

Secunda consequentia patens est. Et primam probo, sicut ipse Philosophus<sup>8</sup> ubi supra 4 Metaphysicae probat antecedens; sumit enim pro principio definitionem veri et falsi dicens: "Dicere namque ens non esse aut hoc", scilicet non-ens, "esse, falsum; ens autem esse et non-ens non esse, verum". Ex quo patet quod quaelibet propositio enuntians esse quod est, vel fuisse quod fuit, aut futurum esse quod erit, vel non esse quod non est, vel non fuisse quod non fuit, aut non fore quod non erit, est vera; secus autem est falsa. Si igitur sit possibile aliquam propositionem esse neque veram neque falsam, sit illa gratia exempli A, tunc arguo: A non est vera neque falsa, igitur neque Antichristus erit neque Antichristus non erit. Patet, quia, si non sequitur, igitur stabit oppositum, scilicet vel Antichristus erit vel Antichristus non erit. Si autem Antichristus erit, igitur A enuntiat fore illud quod erit, et per conse-

5 *cf* p 241,11 sqq

6 *cf* ARISTOT Metaph 4:6 (1011b 15–22; Juntina 8,95AB = tc 27)

7 *ibid* 4:7 (1011b 23-24; Juntina 8,95B = tc 27)

8 *ibid* (1011b 26-27; Juntina 8,95BC = tc 27)

even the Philosopher himself in this matter considers it impossible in the proof of his second conclusion. And that each of these would follow, [here is] the proof: and, to make it shorter, let A be the proposition ‘Antichrist will come’ and let B be its opposite, that is, ‘Antichrist will not come’, and so in what follows let ‘A’ and ‘B’ stand for those propositions. Thus: ‘A is not true, therefore A is false’; this is clear for the reasons given above. Again, ‘B is not true, therefore B is false’; this is clear for the same reason. And thus both [A and B are] false. But further we have: ‘A is false, therefore by the law of contradictories<sup>45</sup> B is true’, and for the same reason ‘B is false, therefore A is true’ follows; and thus they are both true at the same time and both false at the same time.

**Secondly**, [we can argue] to the same [conclusion] from another very true and most sure principle, that is, that there is no middle of denial in a contradiction; the Philosopher says that this is very true near the end of *Metaphysics* 4, where he himself refutes those who deny it. Hence, after he has shown that contradictories cannot be true at the same time, he pretty quickly adds: ‘And indeed there can be no middle of a contradiction, but it is necessary either to affirm or deny one [predicate] of one thing, whatever that may be’.<sup>46</sup> Again, in the matter under consideration he holds that the same principle is true; thus in his second conclusion he shows that it cannot be truly said of any contingent that it neither will nor will not be.

From this [principle] I argue as follows. It is impossible for there to be a middle in this way between any [two] contradictories, therefore it is impossible for any proposition to be neither true nor false, therefore A is not neither true nor false, and consequently it is true or false, and the same can be inferred for B and for any [proposition] given singularly.

The second consequence is clear. And I prove the first [consequence] just as the Philosopher himself [did] when proving the antecedent in *Metaphysics* 4 [as mentioned] above. For he takes for a starting-point the definition of ‘true’ and ‘false’, saying: ‘For to say that a existent thing does not exist, or that this’ sc. non-existent thing ‘does exist, is false; and [to say that] an existent thing exists, and that a non-existent thing does not exist, is true’. From this it is clear that any proposition which states that what is the case is the case, or that what was the case was the case, or that what will be the case will be the case, or that what is not the case is not the case, or that what was not the case was not the case, or that what will not be the case will not be the case, is true; but otherwise [a proposition] is false. Therefore if it is possible for any proposition to be neither true nor false – let it be A [from above], for example – then I argue as follows. A is neither true nor false, therefore neither will Antichrist come nor will Antichrist not come. This is clear because if it does not follow then we will be left with the opposite, that is, that either Antichrist will come or Antichrist will not come. But if Antichrist will come, then A states that what will be the case will be the case, and consequently

<sup>45</sup> That is, the Rule of Contradictory Pairs.

<sup>46</sup> Contradictories exhaust the possibilities: ‘S is P’ asserts that S and P are somehow combined, while ‘S is not P’ denies that there is any such combination. There can be no three ways about it. On this view of predication, if we are to give truth-values to future propositions then we should say that all future assertions are false and all future negations are true, because there simply are no combinations of subjects with future predicates. To see why the truth-values would cleave so neatly between assertions and negations, see my note to III 239:16-18.

quens est vera; quod repugnat antecedenti. Si vero Antichristus non erit, igitur ipsa est falsa, quia enuntiat fore quod non erit; quod etiam antecedenti repugnat. Et per consequens primum consequens sequebatur, scilicet 'neque Antichristus erit neque Antichristus non erit', ex quo ultra sequitur 'Antichristus neque erit neque non erit', et habetur medium in contradictione.

Forsitan concedet quis istam consequentiam 'A non est vera neque falsa, igitur neque Antichristus erit neque Antichristus non erit', sed ulteriorem negabit, qua infertur ista categorica de praedicato copulato 'Antichristus neque erit neque non erit'.

Contra: Primo quidem ex concessio habeo propositum, quia, cum haec sit impossibilis 'neque Antichristus erit neque Antichristus non erit', igitur illa, ex qua sequitur, est impossibile; quod est propositum. Quod autem haec sit impossibile, patet, quia ex ipsa sequitur quod utraque contradictoria sit falsa, sicut etiam patet per probationem Philosophi ac etiam Boethii supra<sup>9</sup> in prima ratione secundae conclusionis. Illud autem repugnat primo principio ac etiam ipsi Philosopho 4 Metaphysicae ac etiam ubi supra, qui reputat impossibile quod, si una contradictoriarum sit falsa, reliqua non sit vera.

Secundo, quia secunda consequentia etiam est necessaria, eo quod semper ex copulativa, cuius partes sint duae singulares de inesse negativae, ad categoricam singularem etiam de inesse negativam de praedicato copulato ex praedicatis partium copulativae, et de eodem subiecto, est necessaria consequentia, verbi gratia 'Socrates non scribit neque Socrates disputat, igitur Socrates neque scribit neque disputat', nec est possibile instantiam reperire in aliqua materia.

Praeterea, oppositum consequentis, videlicet haec 'Antichristus erit vel non erit', nullo modo est compossibile cum ista 'neque Antichristus erit neque Antichristus non erit', sicut patet cuilibet intuenti, ergo illa consequentia est bona.

Praeterea, probo illam principalem consequentiam ex eodem fundamento sic: Si A non est vera, cum ipsa enuntiet Antichristum fore, igitur Antichristus non erit, et, si ipsa non est falsa, igitur nec Antichristus non erit; igitur, si ipsa non est vera neque falsa, igitur Antichristus, quem enuntiat fore, neque erit neque non erit. Et duae primae consequentiae patent ex definitionibus veri et falsi; et tertia est evidens, quia utrumque antecedens infert proprium consequens.

Praeterea, Philosophus<sup>10</sup> per hoc praecise, quod omnis affirmans vel negans necessario "verum dicit vel mentitur", probat quod nullius contradictionis est medium, igitur eum oportet consequenter concedere quod omnis enuntiatio sit vera vel falsa.

<sup>9</sup> cf p 241,11-34

<sup>10</sup> ARISTOT *loc cit* (1012a 3-4; Juntina 8,95D. = tc 27) [or rather, 1011b28 – see dissertation n. 64]

A is true; which contradicts the antecedent. And if Antichrist will not come, then, because it states that what will not be the case will be the case, A is false; which also contradicts the antecedent. And consequently the first consequent did follow, namely ‘neither will Antichrist come nor will Antichrist not come’, from which it follows further that ‘Antichrist neither will come nor will not come’, and we have a middle in the contradiction.

Perhaps someone might concede the consequence ‘A is neither true nor false, therefore neither will Antichrist come nor will Antichrist not come’, but deny the further [consequence] by which we inferred the categorical [proposition] with a conjunctive<sup>47</sup> predicate, ‘Antichrist neither will come nor will not come’.

Against this: Firstly I have my proposal<sup>48</sup> from what he has conceded, because since ‘neither will Antichrist come nor will Antichrist not come’ is impossible, the other proposition, from which it follows, must be impossible; which is my proposal. And it is clear that this is impossible, because it follows from it that both contradictories are false, just as is also clear from the Philosopher’s proof and also from that of Boethius, as we saw earlier in the first argument of the second conclusion. But that conflicts with the first principle and even with the Philosopher himself in *Metaphysics* 4 and also in the passage [mentioned] above; Aristotle considers it impossible that if one of a pair of contradictories is false, the other should not be true.

Secondly, because the second consequence is also necessary, from the fact that there is always a necessary consequence from a conjunction whose parts are two singular factual negations to a singular categorical factual negation of a predicate joined together from the predicates of the parts of the conjunction and applying to the same subject. For example, ‘Neither does Socrates write nor does Socrates dispute, therefore Socrates neither writes nor disputes’. And it is impossible to find a counterexample in any domain.

Moreover, the opposite of the consequent, viz. ‘Antichrist will come or will not come’, is in no way compossible with ‘neither will Antichrist come nor will Antichrist not come’, as is clear to anyone who thinks about it, and therefore the consequence is valid.

Moreover, I prove that chief consequence<sup>49</sup> from the same grounds as follows. If A is not true, then since A states that Antichrist will come, Antichrist will not come. And if A is not false, then neither will Antichrist not come. Therefore, if A is neither true nor false, then Antichrist, who A states will come, neither will come nor will not come. And the two initial consequences are clear from the definitions of ‘true’ and ‘false’; and the third is evident, because each antecedent brings in its own consequent.

Moreover, the Philosopher uses precisely this, that anyone affirming or denying must needs ‘be saying something true or saying something false’, to show that there is no middle in any contradiction, so consequently he ought to concede that every proposition is true or false.

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<sup>47</sup> ‘Mediaeval logicians did not usually call [“copulative” propositions] “conjunctions” or “conjunctive propositions” because the term “conjunction” was used for the grammatical part of speech that includes not only “and” but also “or” or even “because” – Paul Spade, *Late Mediaeval Logic* version 1.1, p. 91.

<sup>48</sup> ‘I am right’ might do. Schabel and Friedman have ‘I make/prove my point’.

<sup>49</sup> In the dissertation I call ‘that chief consequence’ Lemma 3.

Praeterea, ipse<sup>11</sup> ibidem probans nullius contradictionis esse medium arguit quod, si alicuius ponatur, eadem ratione ponetur cuiuslibet, nisi quis loquatur ad libitum; unde ait: "Amplius praeter omnes oportet esse" medium contradictionis, "nisi orationis causa dicatur". Ita in proposito, si alicuius contradictionis negatur hanc esse veram, illam vero falsam, eodem modo dici poterit in qualibet, sive sint propositiones de praesenti sive de praeterito, et certum est quod numquam illud magis poterit reprobari quam in illis de futuro, quia non poterit argui efficaciter, nisi virtute primi principii, quod quidem aequaliter valet vel non valet in omnibus. Quapropter ista positio indubitanter infirmit primum principium.

Praeterea, sicut contradictionis singularium categoricarum de futuro contingenti negatur hanc determinate esse veram, illam vero falsam, pariter poterit negari quod contradictoriarum de futuro contingenti, quarum una sit universalis, reliqua particularis, similiter hypotheticarum, ut copulativae et disiunctivae, et universaliter quarumcumque contradictoriarum circa futura contingentia, haec determinate sit vera, illa vero falsa, et per consequens universaliter excludi poterit primum principium a materia futurorum, ac per hoc nihil certum poterit affirmari vel negari de eis; quod etiam ipsi Philosopho manifeste repugnat.

Tertio principaliter ex alio principio ab omnibus et a Philosopho etiam in hac materia concesso, scilicet quod impossibile est aliqua contradictoria esse simul vera, in quacumque materia formentur, arguo principaliter ad conclusionem sic: Sequitur 'A non est vera neque falsa, igitur Antichristus erit et Antichristus non erit'. Igitur, si antecedens est verum, cum consequens includat duas contradictorias, duae contradictoriae erunt simul verae. Probo autem consequentiam primam, quia, si A non est vera, cum sit propositio affirmativa, igitur enuntiat fore quod non erit – patet ex definitione veri –, et non enuntiat fore nisi Antichristum, igitur Antichristus non erit. Si quoque ipsa non est falsa, igitur enuntiat fore illud quod erit; patet, quia ex quo enuntiat Antichristum fore, si Antichristus non erit, est falsa – patet ex definitione falsi –, igitur ex opposito consequentis, scilicet 'non est falsa', sequitur oppositum antecedentis, scilicet 'Antichristus erit'.

Quarto, ista positio repugnat aliis principiis in se veris et a Philosopho alibi tamquam certissimis acceptis. Primo quidem, quia, sicut patet supra<sup>12</sup>, demonstratis quibuscumque singularibus de futuro contradictoriis haec particularis est vera 'altera istarum est vera'. Si igitur, ut dicit<sup>13</sup>, nec haec demonstrata est vera nec illa, sequitur quod est aliqua particularis vera, cuius

11 *ibid* (1012a 5-6; Juntina 8,95DE = tc 27)

12 *cf p* 242,1 sqq

13 *cf p* 242,20 sqq

Moreover, Aristotle himself, while proving in that passage that no contradiction has a middle, argues that if someone posits [a middle] for some [contradiction], he posits one for any [contradiction] by the same argument, if he is not speaking merely fancifully.<sup>50</sup> Thus he says: 'Further, in addition to all [contradictions] there must be' a middle of contradiction, 'unless one is speaking for the sake of it.' So with regard to our proposal, if of any one contradiction it is denied that this [part] is true and that one false, the same could be said for all [contradictions], whether they be propositions about the present or about the past; and it is certain that this could never be refuted more [strongly] than in the case of propositions about the future, because it could never be argued effectively without using the force of the first principle, which however is equally valid or invalid for all [propositions]. For this reason, such a position undoubtedly invalidates the first principle.

Moreover, just as it is denied of a contradiction of singular categorical propositions about the contingent future that this particular part is true and that part [is] false, the same thing could equally be denied of future contingent contradictories one of which is universal and the other of which is partial, and likewise of hypotheticals (e.g. of a conjunction or disjunction), and in general of contradictories of all kinds. And consequently the first principle could be abandoned completely in the context of future matters, and because of this nothing certain could be affirmed or denied about such matters; which is clearly at odds with even the Philosopher himself.<sup>51</sup>

**Thirdly**, I argue for this conclusion chiefly from a different principle, one conceded by everyone and even by the Philosopher in this matter, namely, that it is impossible for any contradictories to be true at the same time in whatever context they arise. So [I argue] as follows. 'A is neither true nor false, therefore Antichrist will come and Antichrist will not come' is valid. Therefore if the antecedent is true, then since the consequent contains two contradictories, two contradictories will be true at the same time. And I prove the first consequence thus: if A is not true, then since it is an affirmative proposition it states that what will not happen will happen – this is clear from the definition of 'true' – but it only states that Antichrist will come; therefore Antichrist will not come. And if A is also not false, then it states that what will happen will happen; this is clear because, since A states that Antichrist will come, if Antichrist will not come then A is false – this is clear from the definition of 'false' – and so from the opposite of the consequent, sc. 'A is not false', there follows the opposite of the antecedent, sc. 'Antichrist will come'.

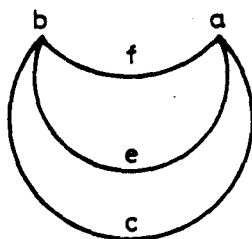
**Fourthly**, such a position conflicts with other inherently true principles which are elsewhere accepted by the Philosopher as most certain. Firstly, for instance, as is clear from the above, [there is the principle] that, given certain singular contradictory [propositions] about the future, the partial [proposition] 'one of these [propositions] is true' is true. So if, as he says, neither this given one nor that given one is true, it follows that a partial proposition is true

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<sup>50</sup> *Ad libitum*. Schabel and Friedman have 'for the sake of argument'. Perhaps 'for the sake of it' would do.

<sup>51</sup> Or is it? This paragraph makes a lot of sense, but it is not (*pace* Gregory) a *reductio ad absurdum*.

sunt aliquae singulares, et nulla tamen est vera; patet. Sed hoc expresse repugnat<sup>14</sup> sibi 1 Priorum iuxta principium, ubi probans conversiones propositionum, et primo quidem universalis negativae, tandem ad hoc se virtualiter reducit, quod, si particularis affirmativa sit vera, oportet quod praedicatum verificetur de subiecto pro aliquo singulari demonstrato, et per consequens quod aliqua singularis eius sit vera. Verbi gratia convertatur ista 'nullum B est A', nullum A est B, probat, quia, si non sequitur, detur oppositum, scilicet aliquod A ut C est B, tunc non erit verum, ut ait<sup>15</sup>, quod nullum B est A, quia C, quod est B, est A, et per consequens quoddam B est A; quod est oppositum primi. Constat autem quod totum hoc sustentatur in eo, quod designatur ali-



quod singulare sub A, de quo verificatur B. Unde et Averroes<sup>16</sup> ibidem sumpto opposito primi consequentis, scilicet hoc 'quoddam A est B': "Ponamus, inquit, illud aliquod sensibile sitque C etc". Si autem dicatur quod non oportet dare aliquod singulare signatum sub A, probatio nulla erit, nam istae duae non formaliter contradicunt 'nullum B est A', 'quoddam A est B'. Quapropter conversio illa non probabitur, et per consequens nec conversio alicuius alterius propositionis, cum quaelibet probetur ultimate per conversionem universalis negativae, et ultra sequitur quod omnis perfectio syllogismorum, qui per conversionem perficiuntur, sit invalida et infirma, et sic tollitur magna pars logicae et doctrinae Philosophi. Unde et in hac materia haec conversio et consequentia posset negari 'nulla propositio singularis categorica de futuro contingenti est propositio vera, igitur nulla propositio vera est propositio singularis categorica de futuro contingenti'. Nam oppositum consequentis non repugnat formaliter antecedenti nec dabitur aliqua singularis, ex qua possit inferri oppositum antecedentis. Nec potest dici quod per propriam conversionem habebitur oppositum antecedentis, quia, ut dictum est, quaelibet alia propositio convertitur virtute conversionis universalis negativae, sicut patet<sup>17</sup> 1 Priorum et cuilibet experienti. Sed negare illam conversionem primam certum est non esse bene logicum.

Praeterea, sequitur unum de duobus, videlicet quod erit aliqua propositio universalis falsa, cuius quaelibet singularis est vera, vel duae contradictoriae simul verae. Et utrumque videtur absurdum. De secundo quidem patet ratione primi principii; de primo autem, quia per propositionem universalem, si

<sup>14</sup> cf ARISTOT' *Analyt priora* 1,2 (25a 1–25; Juntina 1<sup>1</sup>,3BF - cap 2)

<sup>15</sup> cf *ibid* (25a 14-19; Juntina 1<sup>1</sup>,3DE = cap 2) et AEGIDIUS ROMANUS *In Analyt priora* 1 (ed Venetiis 1516, fol 5vb)

<sup>16</sup> AVERROES *In Analyt priora* 1 cap 2 (Juntina 1<sup>1</sup>,4A)

<sup>17</sup> Cf ARISTOT' *loc cit* (25a 5-25 ;Juntina 1<sup>1</sup>,3CF = cap 2) et AEGIDIUS ROMANUS *loc cit*

which contains certain singular propositions, but nonetheless neither of them is true; this much is clear.<sup>52</sup> But in this he flatly contradicts himself in *Prior Analytics* 1, near the beginning, when demonstrating the conversions<sup>53</sup> of propositions – firstly, for instance, that of a negative universal. Eventually he virtually brings himself back to this: that if a partial affirmative proposition is true, its predicate should be satisfied by the subject of some given singular [proposition], and consequently that some singular [proposition] [corresponding to] it is true. For example, he proves that ‘no B is A’ may be converted to ‘no A is B’ as follows. If [the conversion] is not valid, we may grant the opposite, that is, that some A (say C) is B; then it will not be true, as he says, that no B is A, because C (which is B) is A, and consequently some B is A, which is the opposite of the first [proposition]. Now it is clear that all this relies on the fact that some singular [proposition] is indicated on the basis of A, and that B is made true by this [singular proposition]. Hence at the same point Averroes, taking the opposite of the first consequent, sc. ‘some A is B’, writes: ‘Let us take this sensible something to be C’ etc. And if it is said that we do not have to grant any singular [proposition] on the basis of A, then there will be no proof, for ‘no B is A’ and ‘some A is B’ do not formally contradict each other; hence this conversion will not be proved, and consequently neither will the conversion of any other proposition, since [conversions] are all ultimately proved by the conversion of a universal negative; and furthermore it follows that every completed syllogism which is accomplished using conversion is weak and invalid, and thus a great part of the logic and teaching of the Philosopher is done away with. For example, in this context the following conversion and consequence could be denied: ‘no singular categoric proposition about a contingent future is a true proposition, therefore no true proposition is a singular categoric proposition about a contingent future’. For the opposite of the consequent is not formally inconsistent with the antecedent, and we are not granted any singular [proposition] from which we could infer the opposite of the antecedent. Nor can it be said that we have the opposite of the antecedent through its own conversion, because, as we said, all other propositions are converted by virtue of the conversion of a universal negative, as is clear from *Prior Analytics* 1 and to anyone who tries it. But it is certain that to deny that first conversion is not very logical.

Moreover, one of two things follows, viz. either that there will be some false universal proposition of which any given [corresponding] singular [proposition] is true, or that two contradictories will be true at the same time. And both of them seem absurd. [The absurdity] of the second is clear by reason of the first principle; that of the first, though, [I show as follows]. Nothing is denoted by a universal proposition

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<sup>52</sup> Cf. Quine on Aristotle’s fantastic notion. The disgust may be right: we may need to deny the truth of ‘A or B’.

<sup>53</sup> ‘Conversion’ is a standard operation of Aristotelian logic.

est affirmativa, non denotatur nisi quod praedicatum affirmatur vere de quolibet singulari sui subiecti, aut quod vere negatur a quolibet singulari sui subiecti, si sit negativa. Et ideo universalis et copulativa ex omnibus eius singularibus semper convertuntur, et impossibile est unam esse veram, quin reliqua sit vera, et e converso. Propter quod et commune dictum est quod ad veritatem universalis sufficit quamlibet singularem eius esse veram. Sed consequentiam probo; nam demonstratis gratia exempli A et B secundum Philosophum haec est vera 'altera istarum est vera'. Aut igitur haec etiam est vera 'neutra istarum est vera', quae est contradictoria primae, et sequitur secunda pars consequentis, aut ipsa est falsa – quod dicere oportet, cum eius contradictoria ponatur vera –, et tunc sequitur prima pars consequentis, quia utraque singularis eius est vera, nam haec est vera 'haec demonstrata A non est vera' et similiter haec est vera 'haec demonstrata propositione B non est vera', et istae sunt singulares istius universalis 'neutra istarum est vera' demonstratis A et B.

Item, sequitur ex hac opinione Philosophi quod aliqua disiunctiva erit vera, cuius nulla pars erit vera; quod etiam videtur inconueniens logicum. Consequentia patet, nam haec copulativa est falsa 'Antichristus non erit neque Antichristus non erit', nam ex ipsa sequitur quod duae contradictoriae sint simul falsae, sicut supra<sup>18</sup> per Philosophum in secunda sua conclusione et Boethium declarabatur quod ex ista de copulato praedicato 'Antichristus neque erit neque non erit' sequitur quod duae contradictoriae sint simul falsae. Et aequè patenter vel plus sequitur ex ipsa copulativa. Cum ergo ipsa sit falsa, sequitur per legem contradictoriorum quod eius contradictoria est vera. Ea autem est ista disiunctiva 'vel Antichristus erit vel Antichristus non erit', cuius neutra pars est vera secundum Philosophum.

Ultimo, specialiter contra doctorem<sup>19</sup> illum consentientem in opposita conclusione Philosopho arguo theologice, quia, si vera sit illa positio, sequitur quod nulla praenuntiatio singularis de futuro contingenti contenta in sacra scriptura esset vera. Patet consequentia, sed probo consequens esse falsum. Sumo enim hanc scriptam Actuum<sup>20</sup> 1 "Hic Iesus, qui assumptus est a vobis in coelum, sic veniet etc": Aut haec est vera, et habeo propositum; aut non est vera, et tunc sequitur quod hic Iesus non veniet, quod est expresse haereticum. Et consequentia patet ex principio primo assumpto.

Praeterea, in sacra scriptura non solum tales praenuntiationes ponuntur, sed etiam habetur expresse quod ipsae sunt verae; igitur dicere illas non esse

18 cf p 241,11-34

19 *scil* PETRUS AUREOLI; *cf* p 244,2 sqq

20 Act 1,11

except that its predicate is truly affirmed of any singular of its subject, if it is affirmative, or that its predicate is truly denied of any singular of its subject, if it is negative. And therefore a universal and the conjunction of all of its singulars are always interchangeable, and it is impossible for the one to be true without the other being true, and vice versa. For this reason also it is commonly said that for the truth of the universal it suffices that every one of its singulars is true. And I prove the consequence as follows. If A and B are given, for example, then according to the Philosopher ‘one of them is true’ is true. Therefore either ‘neither of them is true’ – which is the contradictory of the first [proposition] – is true, so that the second part of the consequent follows, or it is false – which we ought to say, as its contradictory is supposed to be true – in which case the first part of the consequent follows, because each of its singulars is true, for ‘this [particular] proposition, A, is not true’ is true and likewise ‘this [particular] proposition, B, is not true’ is true, and these are the singulars of the universal ‘neither of these is true’, where A and B are referred to.

Again, it follows from this opinion of the Philosopher that some disjunction will be true although neither of its parts is; which also looks like absurd logic.<sup>54</sup> The consequence is clear because the copulative ‘Neither will Antichrist come nor will Antichrist not come’ is false, for it follows from this that two contradictories are at the same time false – just as it was stated above by the Philosopher in his second conclusion and by Boethius that from the joined-predicate proposition ‘Antichrist neither will come nor will not come’ it follows that two contradictories are at the same time false. And [the same] follows just as clearly if not more so from our copulative. Therefore since [this copulative] is false, it follows from the law of contradictories that its contradictory is true. And that is the disjunction ‘either Antichrist will come or Antichrist will not come’, of which according to the Philosopher neither part is true.

**Finally** I argue from theology, especially against that doctor who agrees with the Philosopher on the opposite conclusion, that if his position is true, it follows that no singular prophecy of a contingent future that is contained in scripture is true. The consequence is clear, and I will show that the consequent is false. For I take this passage from Acts 1: ‘This same Jesus, which is taken up from you into heaven, shall so come’ etc. Either this is true, and I am done; or it is not true, and then it follows that this Jesus will not come, which is expressly heretical. And the consequence is clear from the first-assumed principle.

Moreover, in sacred scripture not only are such prophecies put forward, but it is even expressly said that they are true; therefore to say that they are not

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<sup>54</sup> Cf. Quine (1953).

veras est haereticum. Assumptum patet ex Apocalypsi 18 capitulo, ibi enim dicitur<sup>1</sup> : "Et absterget deus omnem lacrimam ab oculis eorum etc", quae est praenuntiatio singularis de futuro contingenti, et immediate dicitur Iohanni<sup>2</sup>: "Scribe, quia haec verba fidelissima sunt et vera".

Praeterea, Augustinus<sup>3</sup> in libro De praedestinatione gratiae, qui etiam intitulatur De voluntate dei: "Cum in sacrarum, inquit, voluminibus litterarum seu futurorum quid prophético spiritu praenuntiantibus seu praeteritorum historica veritate narrantibus seu vitae monita apostolorum auctoritate tradentibus aliqua veluti diversum sonante sententia, vel movetur lector vel sollicitatur auditor etc", sequitur, "hic lucidius apparere, ibi altius latere, nusquam tamen deesse noverit veritatem". Ecce quod numquam deest veritas in his, quae in sacra scriptura spiritu prophético futura praenuntiantur.

Plurimae aliae auctoritates tam canonis quam sanctorum ad id possent adduci, sed istae nunc satis sint.

Secundo, si nulla enuntiatio singularis etc, sequeretur quod deus non certe et determinate praesciret, quae pars contingentis sit futura vel non. Patet, quia cuiuscumque sciti enuntiatio, si formetur, est vera. Sed consequens est haereticum expresse, ut patebit<sup>4</sup> in sequenti quaestione.

### (Secunda conclusio)

Secunda conclusio est quod omnis talis propositio vera de eo, quod est vere futurum, quandocumque fuit, si fuit, fuit vera, et, si semper fuisset, semper fuisset vera.

Probo sic: Sumatur A gratia exempli, quia, sicut de una probatur, ita de qualibet potest probari. Et arguo sic: A est vera, igitur Antichristus erit; si Antichristus erit, quandocumque fuit A, si fuit, fuit vera, et, si semper fuisset, semper fuisset vera. Maior patet<sup>5</sup> ex primo principio assumpto in primae conclusionis probatione. Minor probatur, quia, si A semper fuisset, semper enuntiasset Antichristum fore, et per consequens enuntiasset futurum, quod vere erat futurum, et sic per definitionem veri sequitur quod fuisset vera, et suppono quod, sicut nunc A significat, ita semper significasset, quia, si non fuisset significativa aut fuisset instituta ad aliud significandum, probatio non procederet.

1 Apc 21,4

2 Apc 21,5

3 Ps-AUG De praed et grat 1,1 (PL 45,1665)

4 cf p 275,2 sqq

5 cf p 246,1-6

true is heretical. What I have assumed here is clear from Revelations chapter 18,<sup>55</sup> for there it is said: ‘And God shall wipe away all tears from their eyes’ etc., which is a singular prophecy about a contingent future, and immediately it is said to John: ‘Write: for these words are true and faithful’.

Moreover, Augustine, in his book *The Predestination of Grace*, which is also called *On the Will of God*, writes: ‘When in the volumes of sacred texts which prophesy something about the future by means of a prophetic spirit, or which tell something about the past by means of historical truth, or which hand down the apostles’ advice about life by means of some authority, even if the sentence says something different, the reader is moved, the hearer is roused’, etc, and he continues: ‘he will know that here the truth appears more clearly, there it is hidden more deeply, but nowhere is it missing’. See how truth is never absent from those prophecies made in sacred scripture by means of a prophetic spirit.

Many other authoritative sources, both in the canon and from the saints, could be adduced, but let these suffice for now.

Secondly, if no singular proposition etc., it would follow that God does not know certainly and determinately which part of a contingent is going to happen and [which is] not. This is clear because a proposition about anything that is known, if it is formulated, is true. But the consequent is expressly heretical, as we shall see in the next question.

### Second Conclusion

My second conclusion is that every such true proposition about what is truly going to happen, whenever it existed, if it existed, was true; and if it had always existed then it would always have been true.

I prove this as follows. Let us take A as an example, because [the conclusion] can be proved for any [proposition] just as it can be proved for one. I argue thus: A is true, therefore Antichrist will come; if Antichrist will come, then whenever A existed, if it existed, it was true, and, if it had always existed, it would always have been true. The major [conclusion] is clear from the first principle we assumed in the proof of the first conclusion. The minor [conclusion] is proved thus: if A had always existed, it would always have stated that the Antichrist would come, and consequently it would have stated that what was truly going to happen was going to happen, and thus by the definition of ‘true’ it follows that it would have been true; and [here] I suppose that A would have always had the meaning that it now does, because if it had not been meaningful or if it had created with another meaning in mind, the proof would go nowhere.

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<sup>55</sup> That is, chapter 21, verses 4-5.

Eodem modo potest probari quod, si aliqua talis est falsa, si semper fuisset, semper fuisset falsa, sic arguendo: Si B est falsa, igitur Antichristus erit; patet. Si Antichristus erit, igitur si B semper fuisset, semper fuisset falsa, quia semper enuntiasset non fore, quod vere erat futurum.

## (Tertia conclusio)

Tertia conclusio est quod nulla propositio singularis de inesse affirmativa vel negativa de futuro, cuius enuntiabile sit futurum contingens ad utrumlibet, est necessario vel inevitabiliter vera.

Probo sic: Cuiuslibet talis singularis contradictoria est possibilis, igitur nulla est necessaria vel inevitabiliter vera. Consequentia patet, alioquin contingeret aliquam et suam contradictoriam simul esse veras. Antecedens probatur ex eo, quod tale contingens potest fore et potest non fore, et, si ponetur in esse, sicut est possibile, tunc affirmativa erit vera, et per consequens contradictoria negativa est possibilis. Si vero non ponetur in esse, tunc negativa erit vera, et per consequens contradictoria affirmativa est possibilis.

## (Quarta conclusio)

Quarta conclusio, quod nulla propositio de inesse particularis vel universalis affirmativa enuntians aliquam entitatem contingentem futuram esse futuram est necessaria.

Probat, quia haec est possibilis 'nulla entitas contingens futura erit', igitur nulla talis universalis vel particularis est necessaria. Consequentia patet, quia istud antecedens est impossibile cuilibet tali universali vel particulari; antecedens autem patet, quia possibile est quod nulla huiusmodi umquam fiet, et per consequens quod nulla sit futura. Quo posito haec erit vera 'nulla entitas contingens futura erit'.

Ex hoc infero quod falsum dicunt aliqui doctores<sup>6</sup> ponentes has esse necessarias 'omne futurum contingens erit', 'aliquod futurum contingens erit', si 'futurum' in utraque sumatur pro aliqua entitate contingente futura. Et patet, quia haec est possibilis 'nullum futurum contingens erit', quae est contradictoria particularis et contraria universalis. Dico tamen quod utraque harum est necessaria, si subiecta stent pro enuntiabilibus complexis enuntiationum de futuro tam affirmatarum quam negativarum. Probat: Quia impossibile est quin cuiuslibet contradictionis de futuris contingentibus alterum contradic-

<sup>6</sup> cf *exempli gratia* OCKHAM Summa logicae pars 3 tract 3 cap 32 (ed Boehner, St. Bonaventure N. Y. 1974, p 710,70-711,83)

In the same way we can prove that, if any such [proposition] is false, if it had always existed then it would always have been false, by arguing as follows. If B is false, then Antichrist will come; this much is clear. If Antichrist will come, then if B had always existed, it would always have been false, because it would always have stated that what was truly going to happen would not happen.

### **Third Conclusion**

My third conclusion is that no singular factual affirmative or negative proposition about the future, which describes a future state of affairs which is two-sidedly contingent, is necessarily or inevitably true.

I prove this as follows. The contradictory of any such singular [proposition] is possible, therefore no [such proposition] is necessary or inevitably true. The consequence is clear, for otherwise it would happen that a [proposition] and its contradictory were both true at the same time. The antecedent is proved from the fact that such a contingent can come about and can not come about, and if it is brought into being, as is possible, then the affirmative will be true, and consequently the negative contradictory is possible. But if it is not brought into being, then the negative will be true, and consequently the affirmative contradictory is possible.

### **Fourth Conclusion**

My fourth conclusion is that no partial or universal affirmative factual proposition, which states that there will be some future contingent entity, is necessary.

This is proved because ‘no future contingent entity will exist’ is possible, therefore no such universal or partial [proposition] is necessary. The consequence is clear, because the antecedent is impossible with any such universal or partial [proposition]; and the antecedent is clear because it is possible that there will never be any such [entity], and consequently [it is possible] that no [such entity] will come about. On the assumption [that this possibility is realized], ‘no future contingent entity will exist’ will be true.

From this I deduce that certain doctors speak falsely when they take [the propositions] ‘every future contingent will exist’ and ‘some future contingent will exist’ to be necessary, if ‘future’ in each of these is taken for some future contingent entity. And this is clear because of the possibility of ‘no future contingent will exist’, which is the contradictory of the partial [proposition] and is contrary to the universal [proposition].<sup>56</sup> However, I say that each of these is necessary, if the subjects stand for the complex states of affairs expressible in both affirmative and negative propositions about the future. Proof: because it is impossible that of any contradiction about future contingents *neither* of the contradictory

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<sup>56</sup> Note the distinction between ‘contradictory’ and ‘contrary’. ‘Socrates is not white’ is the contradictory of ‘Socrates is white’; ‘Socrates is black’ is a contrary of ‘Socrates is white’. See the Glossary to Aristotle, *Selections*, trans. Terence Irwin and Gail Fine (1995), p. 601, under ‘OPPOSITE’; see further *De Interpretatione* §7 17b16-26.

toriorum enuntiabilium sit futurum. Hoc patet, quia ex opposito sequitur quod esset possibile esse aliquas duas enuntiationes de talibus futuris invicem contradictorias, quarum neutra esset vera; quod est falsum. Patet, quia illud enuntiabile dico futurum quod contingit enuntiari per enuntiationem de futuro veram affirmativam vel negativam, sicut, si haec est vera 'ego legam cras', dicimus quod futurum est quod ego cras legam, et, si ista sit vera 'ego non legam cras', dicimus quod futurum est ut ego cras non legam.

Hoc modo loquitur Augustinus<sup>7</sup> in sermone De uno martyre, cum ait: "Futurum erat ut reges terrae, qui propter idola persequebantur christianos, propter Christum idola delerent", dicens 'futurum' non quidem hanc enuntiationem, sed quod per ipsam significatur. Et eodem modo dici potest de enuntiabili enuntiationis negativae 'futurum erat ut reges propter Christum idola non adorarent' et, sicut talia enuntiabilia dicuntur futura, sic possunt dici quod erunt; quo modo loquendi frequenter utitur scriptura divina. Unde Osee 3 dicitur<sup>8</sup> "Et erit in die illo, ait dominus; vocabit me 'vir meus' et non vocabit me 'Baalim'", et loquitur de synagoga; ubi patet quod de utroque enuntiabili, scilicet affirmativae et negativae enuntiationis, dicit 'et erit'. Et hoc saepissime in scripturis prophetis invenitur, quae locutio utrum sit propria vel impropria, non curo. Igitur necesse est aliqua esse futura. Ex quo sequitur quod haec non potest esse falsa aut non esse vera 'omne futurum erit', ac per hoc est necessaria et per consequens etiam sua particularis. Quamvis autem ipsa sit necessaria, nulla eius singularis est necessaria, quia nullum tale futurum est de necessitate futurum, cum cuiuslibet oppositum sit possibile, et ideo nulla talis est necessaria 'hoc futurum erit', quia quaelibet huiusmodi implicat quod illud sit futurum, quod tamen contingit non esse futurum. Et per consequens quaelibet huiusmodi est contingens et non necessaria.

(Quinta conclusio)

Quinta conclusio, quod quaelibet talis singularis potest numquam fuisse vera.

Probatio: Quia, quodcumque per aliquam huiusmodi propositionem enuntiatur esse futurum, potest non esse futurum et, quodcumque enuntiatur non esse futurum, potest esse futurum; igitur quaelibet talis potest numquam fuisse vera. Antecedens est notum ex eo, quod illud est contingens ad utrumlibet. Consequentia probatur, quia de quolibet sequitur 'hoc non est futurum, igitur numquam fuit vera propositio enuntians ipsum esse futurum', quinim-

7 Ps-AuG Serm 315,1 (PL 39,2348-2349) = CAES AREL Serm 69,1

8 Os 2,16

states of affairs should be future. This is clear because from the opposite it follows that it is possible for there to be two mutually contradictory propositions about such futures, of which neither is true; which is false. This is clear because I call that state of affairs ‘future’ which can be expressed in a *true* affirmative or negative proposition about the future. For example, if ‘I will read tomorrow’ is true, we say that the future is that I will read tomorrow, and if ‘I will not read tomorrow’ is true, we say that the future is that I will not read tomorrow.

Augustine speaks in this way in his sermon *Concerning One Martyr*, when he says: ‘It was future that those kings of the earth, who persecuted the Christians for the sake of their idols, would destroy those idols for Christ’s sake’. He calls ‘future’ not the proposition itself, but what is signified by it. And in the same way we can talk of the state of affairs expressed in a negative proposition: ‘it was future that the kings would for Christ’s sake not worship their idols’. And just as such states of affairs are called ‘future’, it can also be said that they will be; holy scripture often uses this manner of speaking. Thus in Hosea 3 it is written: ‘And it shall be at that day, saith the Lord, thou shalt call me ‘my husband’; and shalt call me no more Baali,’ where he is speaking of the synagogue. Here it is clear that he says ‘and it shall be’ of both expressible states of affairs, i.e. that of the affirmative and that of the negative proposition. And this is found very often in prophetic scriptures, and I care not whether this is a strict or loose manner of speech. Therefore it is necessary for some things to be future. From this it follows that ‘every future [thing] will exist’ cannot be false or not be true, and for this reason it is necessary, and consequently so too is its partial [proposition].<sup>57</sup> But although this [proposition] is necessary, none of its singulars is necessary, because no such future is necessarily going to happen, since the opposite of any [such future] is possible, and therefore no proposition like ‘this future will be’ is necessary, because any such [proposition] entails that something will happen which may however not happen. And consequently any such [proposition] is contingent and not necessary.

### **Fifth Conclusion**

My fifth conclusion is that any such singular [proposition] is able never to have been true.

Proof: because whatever is stated to be future in any such proposition is able not to be future, and whatever is stated not to be future [in any such proposition] is able to be future; therefore any such [proposition] is able never to have been true. The antecedent is known from the fact that it is two-sidedly contingent. The consequence is proved because the following is valid for any X: ‘F is not going to happen, therefore the proposition stating that X is going to happen has never been true’.

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<sup>57</sup> That is, the partial proposition ‘some future [thing] will exist’.

mo, si aliqua enuntiavit ipsum esse futurum, ipsa fuit falsa; et intelligo semper quod pro eo tempore et illo modo enuntiaverit ipsum esse futurum, quo ponitur non esse futurum.

(Sexta conclusio)

Sexta conclusio, quod quaelibet talis singularis de futuro enuntians pro aliquo determinato tempore vel instanti futuro potest esse successive vera et falsa, sic tamen quod affirmativa potest esse falsa postquam fuit vera, non autem vera postquam fuit falsa, negativa vero econtra potest esse vera postquam fuit falsa, non autem falsa postquam fuit vera.

Prima pars probatur, scilicet de affirmativa, sic: Possibile est quod eius contradictio sit vera postquam ipsa fuit vera, igitur possibile est quod ipsa sit falsa postquam fuit vera. Consequentia patet, quia, quandocumque sua contradictoria est vera, ipsa, si est, est falsa. Antecedens probatur, quia, si ponatur in esse illud quod enuntiat futurum, postea sua contradictoria est vera, verbi gratia ista 'Antichristus erit in C' – sit C nomen proprium alicuius instantis determinati futuri –, si Antichristus erit in C, sicut sequitur, si ista sit vera, post C haec eius opposita erit vera 'Antichristus non erit in C', quia numquam C erit postea, et tunc illa affirmativa erit falsa et erit verum dicere de ipsa quod ipsa est falsa postquam fuit vera. Quod autem ipsa non possit esse vera postquam fuit falsa, probatur, quia ipsa non potest esse vera nisi ante C, supposito quod nullum instans praeteritum possit esse futurum, et sequitur, si ipsa in aliquo instanti ante C est vera, quod semper, quandocumque prius fuit, si fuit, fuit vera, ut patet<sup>9</sup> ex secunda conclusione. Si vero semper fuit vera, quandocumque fuit, posito quod fuerit, igitur numquam ante fuit falsa, et per consequens impossibile est quod ipsa sit vera postquam fuit falsa.

Secunda pars conclusionis, scilicet de negativa, probatur sic: Affirmativa potest esse falsa postquam fuit vera, ergo negativa eius opposita potest esse vera postquam fuit falsa. Antecedens probatum est. Consequentia vero patet, quia semper, quando affirmativa est vera, negativa, si est, est falsa et, quando affirmativa est falsa, negativa est vera. Quod autem ipsa non possit esse falsa postquam fuit vera, probo, quia ista 'Antichristus non erit in C' non potest esse falsa in C nec in aliquo alio instanti post C, patet. Igitur, si debeat esse falsa, hoc erit in aliquo instanti ante C. Quod si ponatur, sequitur, ut patet<sup>10</sup> ex secunda conclusione, quod semper, quandocumque prius fuit, si fuit, fuit falsa, et per consequens numquam fuit vera. Ex quo sequitur quod impossibile est ipsam esse falsam postquam fuit vera.

<sup>9</sup> cf p 252,20-32

<sup>10</sup> cf p 253,1-4

On the contrary, if any [proposition] stated that X would happen, then it was false; and I understand throughout that [such a proposition] would have stated that X would be future at the same time and in the same way as X is supposed not to be future.

### Sixth Conclusion

My sixth conclusion is that any such future singular which states [something] about some determinate future time or instant can be successively true and false, albeit in the way that an affirmative can be false after it has been true but not true after it has been false, and conversely that a negative can be true after it has been false but not false after it has been true.

The first part – that about an affirmative [A] – is proved as follows. It is possible for A's contradiction<sup>58</sup> to be true after A has been true, therefore it is possible for A to be false after it has been true. The consequence is valid because whenever A's contradictory is true, A itself (if it exists) is false. The antecedent is proved as follows: if what A states will happen is brought into being, then its contradictory is thereafter false. For example, [take A to be] 'Antichrist will come at T', letting 'T' be the proper name of some determinate future instant. If Antichrist comes at T, as will happen if A is true, then *after* T its opposite, 'Antichrist will not come at T', will be true – for T will never come thereafter, so that the affirmative A will be false, and it will be true to say of A that it is false after it has been true. However, we can prove that A cannot be true after it has been false, as follows. A can only be true before T, assuming that no past instant can be future; and it follows that, if A is true at some point before T, then it was true (if it existed) at any time before [that point], as is clear from my second conclusion. But if A was always true whenever it existed, supposing that it did exist, then it was never false before [it was true]; and consequently it is impossible that A should be true after it has been false.

The second part of my conclusion – that about a negative – is proved as follows. An affirmative can be false after it has been true, therefore its opposite, a negative, can be true after it has been false. We have proved the antecedent. And the consequence is valid because whenever an affirmative is true, its negative (if it exists) is false, and whenever an affirmative is false, its negative is true. And I prove that [a negative] cannot be false after it has been true as follows. [Take N to be] 'Antichrist will not come at T'. N cannot be false at T or at any other time after T, as is clear. Therefore if N is to be false, this must be the case at some instant before T. If we suppose this to be the case, it follows, as is clear from my second conclusion, that N was always false (if it existed) at any time before [that instant]; and consequently it was never true. From this it follows that it is impossible that N should be false after it has been true.

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<sup>58</sup> Gregory, like Aristotle (see *De Interpretatione* 21a22), sometimes uses the word *contradictio* (ἀντιφασίς) to refer to one of the members of a contradictory pair rather than the pair itself.

## (Septima conclusio)

Septima conclusio est quod nulla talis propositio affirmativa vel negativa potest esse successive vera et falsa aut falsa et vera ante illud instans, pro quo enuntiat aliquod fore vel non fore.

Hoc patet, quia, pro quocumque instanti ante illud, pro quo enuntiat, aliqua talis propositio sit vera, sequitur quod numquam prius fuit falsa, sed, si fuit, quodcumque fuit, fuit vera. Et, si pro aliquo instanti ante illud ponitur esse falsa, consequens est quod numquam antea fuit vera, sed, si fuit, quodcumque fuit, fuit falsa. Et ista patent<sup>11</sup> ex secunda conclusione.

## (Octava conclusio)

Octava conclusio sit quod, si illa propositio dicatur mutabiliter vera, quae potest mutari de veritate in falsitatem – seu, magis proprie loquendo, quae potest esse vera et falsa successive, sic quod verum sit aliquando dicere de ipsa 'haec est falsa et prius fuit vera' –, illa vero dicatur immutabiliter vera, quae non sic mutari potest, et similiter falsa dicatur falsa mutabiliter vel immutabiliter in eodem sensu, quaelibet propositio talium affirmativa vera est simpliciter loquendo mutabiliter vera, et quaelibet negativa falsa est mutabiliter falsa, affirmativa vero falsa est immutabiliter falsa, et negativa vera est immutabiliter vera. Et patet<sup>12</sup> ex sexta conclusione. Non simpliciter autem loquendo, sed cum determinatione, scilicet quod sit vera vel falsa mutabiliter ante illud instans pro quo enuntiat, id est quod possit esse successive vera et falsa aut falsa et vera ante instans illud, sic dico quod nulla est mutabiliter vera vel falsa, sed quaelibet vera est immutabiliter vera, et quaelibet falsa immutabiliter falsa. Et totum patet<sup>13</sup> ex septima conclusione.

Ex praedictis etiam patet, quomodo propositiones tales possunt vel non possunt incipere esse verae vel falsae. Nam, sicut aliqua propositio potest vel non potest esse vera postquam fuit non vera aut falsa postquam fuit non falsa, sic potest incipere esse vera vel falsa. Affirmativa autem potest esse falsa postquam fuit non falsa, quia potest esse falsa postquam fuit vera, ut patet<sup>14</sup> ex sexta conclusione; igitur potest incipere esse falsa. Et quia non potest esse vera postquam fuit non vera, ut ibi patet, ideo non potest incipere esse vera. Et simili modo probatur quod negativa potest incipere esse vera et non potest incipere esse falsa.

11 *cf p* 252,20 sqq

12 *cf p* 255,5 sqq

13 *cf p* 256,2–9

14 *cf p* 255,5 sqq

### Seventh Conclusion

My seventh conclusion is that no such proposition, whether affirmative or negative, can be successively true and false, or vice versa, before that instant for which it states that something will happen or will not happen.

This is clear as follows. Suppose some such proposition is true at any instant whatsoever before the one about which it makes a claim. Then it follows that it has never been false before [that instant]; rather, whenever it existed, if it did exist, it was true. And if [some such proposition] is supposed to be false at some instant before [the one about which it makes a claim], it follows that it has never been false before [that instant]; rather, whenever it existed, if it did exist, it was false. And these are clear from my second conclusion.

### Eighth Conclusion

Let us call a proposition ‘mutably true’ if it can change from truth into falsity – or, more strictly speaking, if it can be true and false successively, so that it is at some point true to say of it ‘it is false, and previously it was true’ – and let us call [a proposition] ‘immutably true’ if it cannot change in this way. Likewise, let us call a false [proposition] ‘mutably false’ or ‘immutably false’ in the same sense. Then my eighth conclusion is that of such [propositions], speaking without qualification, every true affirmative is mutably true and every false negative is mutably false, while every false affirmative is immutably false and every true negative is immutably true. And this is clear from my sixth conclusion. But if we are speaking not without qualification, but rather with a restriction – that is, [the restriction] that it be mutably true or false *before* the instant about which it makes a claim – then I say that no proposition is mutably true or mutably false, but every true [proposition] is immutably true and every false [proposition] is immutably false. And all of this is clear from my seventh conclusion.

From the above it is also clear how such propositions can or cannot begin to be true or false. For inasmuch as a proposition can be or cannot be true after it has not been true or false after it has not been false, so it can begin to be true or false. And an affirmative can be false after it has not been false, because it can be false after it has been true, as is clear from my sixth conclusion; therefore it can begin to be false. And since it cannot be true after it has not been true, as is [also] clear from that conclusion, it therefore cannot begin to be true. And in the same way it is proved that a negative can begin to be true and cannot begin to be false.

Et adverte quod proprie non dicitur propositio incipere esse vera ex hoc praecise, quod ipsa est vera et non fuit prius vera, quia, si numquam ipsa fuit prius et modo sit et sit vera, verum est quod ipsa est vera et numquam prius fuit vera. Nec tamen quaelibet talis proprie dicitur incipere esse vera, sed illa tantum quae fuit prius non vera, aut, si fuisset, fuisset non vera; alioquin quaelibet propositio vera noviter formata diceretur incipere esse vera, et sic una conclusio geometrica inciperet esse vera, quod tamen in communi usu loquendi absurdum diceretur.

Quia vero ante instans vel tempus futurum, pro quo enuntiat propositio, nulla talis potest esse falsa postquam fuit non falsa aut vera postquam fuit non vera, ut patet<sup>15</sup> ex septima conclusione, patet quod nulla potest ante illud instans vel tempus incipere esse vera vel incipere esse falsa.

Sed contra potest argui sumendo aliquam talem propositionem, et sit exempli gratia B, sic: B non est vera et potest ante instans, pro quo enuntiat, esse vera; igitur B potest ante illud instans incipere esse vera. Antecedens patet<sup>16</sup> ex tertia conclusione. Et consequentia tenet ex eo, quod in antecedente includitur utraque exponens consequentis.

Et posset sic confirmari consequentia, nam sequitur 'B non est vera et erit ante illud instans vera, igitur B ante illud instans incipit vel incipiet esse vera', ergo eodem modo sequitur 'B non est vera, et potest etc, igitur potest incipere etc'.

Respondeo. Ad primum concedo antecedens, posito quod B sit propositio falsa, et nego consequentiam. Et est ratio, quia, esto quod illae essent exponentes consequentis, quia tamen illud verbum 'potest' non praecedit in antecedente nisi alteram earum et in consequente praecedit illum infinitivum 'incipere' et per consequens aequivalenter utramque exponentem consequentis, ideo per antecedens non denotatur quod copulativa de inesse composita ex illis exponentibus possit esse vera ante illud instans, sed solum denotatur quod una illarum, scilicet haec 'B est vera', sit possibilis ante illud instans. Sed in consequente denotatur quod tota copulativa possit esse vera ante illud instans, et ideo consequentia non valet.

Et per idem patet ad secundum quod prima consequentia, cuius antecedens et consequens sunt mere de inesse, est bona, quamvis antecedens includat impossibilia. Tamen secunda consequentia non valet nec sequitur ex prima propter causam dictam, sed bene sequeretur 'possibile est quod B non est vera et erit ante illud instans vera, igitur B potest incipere etc', sic tamen quod

15 *cf p* 256,2-9

16 *cf p* 253,6-15

And notice that a proposition is not strictly said to begin to be true just because it is true and it was not previously true; for if [a proposition] which had never existed beforehand now exists and is true, it is true that [this proposition] is true and never previously was it true. But no such [proposition] can properly be said to begin to be true; rather, only a [proposition] which was previously not true, or, if it had existed, would have been not true, [can properly be said to begin to be true]. Otherwise every true proposition which has just been formulated would be said to begin to be true, so that for instance a conclusion of geometry would ‘begin to be true’; but that would be called absurd in the common manner of speaking.

And since no such proposition can, before the future instant or time about which it makes a claim, be false after having been not false or true after having been not true, as is clear from my seventh conclusion, it is clear that no [such proposition] can, before that instant or time, begin to be true or begin to be false.

But someone could argue **against** this, taking such a proposition (say for example B), as follows. B is not true, and it can, before the instant about which it makes a claim, be true; therefore B can, before that instant, begin to be true. The antecedent is clear from my third conclusion. And the consequence holds good because the antecedent contains each *exponentes*<sup>59</sup> of the consequent.

And the consequence could thus be confirmed, for this follows: ‘B is not true, and it will be true before that instant, therefore B, before that instant, begins (or will begin) to be true’. Therefore in the same way this follows: ‘B is not true, and it can etc., therefore it can begin to etc.’

I **reply**. As for the first argument, I concede the antecedent, assuming that B is a false proposition, but I deny the consequence. And my reason is as follows. Suppose that those [propositions] are *exponentes* of the consequent. Nevertheless, because the word ‘can’ in the antecedent only precedes one of them whereas in the consequent it precedes the infinitive ‘begin’ (and therefore [precedes] both *exponentes* of the consequent equally), the antecedent therefore does not mean that the factual copulative composed from those *exponentes* can be true before that instant, but only that one of them, sc. ‘B is true’, is possible before that instant. But the consequent means that the whole copulative can be true before that instant, and therefore the consequence is invalid.

And via the same [reasoning] it is clear, with regard to the second argument, that the first consequence, whose antecedent and consequent are purely factual<sup>60</sup>, holds good, although the antecedent contains [two] impossibles. But the second consequence is not valid, nor does it follow from the first [consequence] for the reason given; rather, this would follow rightly: ‘it is possible that B is not true and will before that instant be true, therefore B can begin to etc.’ But nevertheless [this would follow] in such a way that

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<sup>59</sup> See Spade, ‘Why Don’t Mediaeval Logicians Ever Tell Us What They’re Doing?, or, What Is This, A Conspiracy?’ (2000), pp. 6-9.

<sup>60</sup> Note the contrast here between what concerns *fact* and what concerns *possibility*. Thus *de inesse* means, ever so roughly, ‘non-modal’.

antecedens sumeretur in sensu composito et denotaret totam copulativam sequentem esse possibilem, sed tunc tale antecedens est falsum.

### ARTICULUS 3

(Definitio contingentis)

Quantum ad tertium articulum, in quo videndum est, an contingens est contingens, quando est vel quando non est, praemitto quid intelligo per hoc nomen 'contingens'. Et dico iuxta sententiam Philosophi<sup>17</sup> 1 Priorum quod idem quod per hanc orationem 'possibile, non necessarium'. Nam impossibile non dicimus contingere neque etiam necessarium, nisi aequivoce, ut ibi dicit Philosophus, et ideo definiens contingens ait: "Dico autem contingere vel contingens quod, cum non sit necessarium, posito in esse nihil erit per hoc impossibile". Et quia possibile dicitur, quo posito non sequitur impossibile, idem est hoc totum dictu quod contingens est quod, cum non sit necessarium, est possibile. Est ergo definitio contingentis 'non necessarium, possibile' vel e converso 'possibile, non necessarium'.

Sicut ergo aliquid dicitur posse esse et non necesse esse aut posse non esse et non necesse non esse, sic dicitur contingens esse vel contingens non esse, et non solum, quando 'est' praedicatur secundum adiacens, sed etiam quando tertium quaecumque sit praedicatum.

Et quia non necesse esse et possibile non esse se consequuntur, ideo contingens, quod est possibile esse et non necesse esse, est possibile esse et possibile non esse. Et hinc est quod frequenter dicitur quod contingens est indeterminatum ad esse et non-esse, quod non debet intelligi de indeterminatione de inesse, videlicet quod contingens nec sit nec non sit, quia hoc est impossibile respectu cuiuscumque praedicati, alias esset possibile quod duo contradictoria essent simul falsa, sed intelligendum est vel de indeterminatione de necessario negative, videlicet quod non est necesse esse nec necesse non esse, vel de indeterminatione de possibili affirmative, videlicet quia potest esse et potest non esse; qui duo sensus sententialiter aequipollent.

Hoc praemisso patet quod tunc contingens est contingens, quando potest esse et potest non esse.

17 ARISTOT Analyt priora 1,13 (32a 18–21; Juntina 1',34M = cap 13)

the antecedent would be taken in a composite sense and would mean that the whole subsequent copulative was possible; but then such an antecedent would be false.

### ARTICLE 3

#### Definition of the Contingent

As for the third article, in which we must see whether a contingent is contingent, when it is and when it is not, I begin by stating what I understand by the name ‘contingent’. And I say in accordance with the opinion of the Philosopher in *Prior Analytics* 1 that [I understand] the same as [I understand] by the phrase ‘possible, not necessary’. For as the Philosopher says in that book, we do not say that the impossible is contingent, and [we do not say that the] necessary [is contingent] either (except ambiguously<sup>61</sup>). That is why the Philosopher, in defining the contingent, writes: ‘And I call ‘contingent’<sup>62</sup> that which, while it is not necessary, can be supposed to exist without anything impossible resulting’. And since we call a thing ‘possible’ if it can be posited without anything impossible resulting, the whole following [definition] says the same: the contingent is that which, while it is not necessary, is possible. Therefore the definition of the contingent is ‘not necessary, [but] possible’, or the other way round, ‘possible, [but] not necessary’.

Therefore just as we say that a thing can exist but does not have to, or that it can be non-existent but does not have to, so we say that it can possibly exist or can possibly not exist<sup>63</sup> – and not only when ‘is’ is predicated as a second adjacent, but also when [it is predicated] as a third [adjacent], no matter what the predicate is.<sup>64</sup>

And since ‘it does not have to exist’ and ‘it can be non-existent’ entail each other, the contingent, which can exist but does not have to, can exist and can be non-existent. And it is for this reason that the contingent is often called indeterminate towards being and non-being. This should not be understood [as being] about factual<sup>65</sup> indeterminacy, that is, [as claiming] that a contingent neither exists nor does not exist; for that is impossible in the case of any predicate whatsoever, [because] otherwise it would be possible for two contradictories to be false at the same time. Rather, it should be understood either as a negative [claim] about necessity (viz. that it is not necessary either for it to be or for it not to be), or as an affirmative [claim] about possibility (viz. that it is possible both for it to be and for it not to be); these two senses are propositionally equipollent.

Having stated this, it is now clear that a contingent is contingent when it can exist and can be non-existent.

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<sup>61</sup> The idea is that we can call what is necessary ‘contingent’ in the sense that we can call it ‘possible’.

<sup>62</sup> There seems little point in trying to replicate the *contingere/contingens* alternative in English.

<sup>63</sup> This is an attempt to render *contingere/contingens esse* whilst retaining the same person. Schabel and Friedman have instead ‘we also say it is contingent that something exist or contingent that something not exist’.

<sup>64</sup> Schabel and Friedman give an explanatory note: the second-adjacent use of ‘is’ is the existential use (‘X is’, meaning ‘X exists’ or ‘there is X’), while the third-adjacent use is predicative (‘X is F’).

<sup>65</sup> *De inesse*. Schabel and Friedman have ‘inherence [of a predicate in a subject]’.

## (Triplex sensus articuli)

Ad videndum ergo, utrum, quando res est, sit contingens esse, aut quando non est, videndum est, utrum, quando res est, possit non esse, an quando non est. Hoc autem potest dupliciter intelligi: Uno modo quod, quando res est, tunc sit in potentia ut in futuro non sit. Alio modo, quod tunc sit in potentia ut non sit tunc; et hoc adhuc dupliciter: Uno modo sic, quod propositio enuntians ipsam non esse tunc possit esse vera in futuro; alio modo quod sit possibile ipsam esse veram etiam tunc. Verbi gratia sit A aliquid singulare actu existens nunc, sive in instanti praesente, quod vocetur B. Quod nunc A possit non esse, potest intelligi tripliciter: Uno modo quod nunc A potest in futuro non esse, ita quod possibile est post nunc, seu post instans B, hanc esse veram 'A non est'. Secundus sensus est quod nunc A potest in futuro non esse in isto instanti, quod est B, ita quod possibile est quod post B haec sit vera 'A non est in B'. Tertius sensus est quod nunc A potest non esse nunc, sic quod possibile sit hanc 'A non est vel A non est in B' esse nunc veram. Et eodem modo potest tripliciter intelligi quod res, quae nunc non est, potest esse.

Secundum primum sensum articulus iste non habet difficultatem, nam certum est quod sic. Quod potest sic breviter probari: Aliquid nunc est, quod non est impossibile non esse; igitur aliquid nunc est, quod nunc potest non esse, et ultra, igitur aliquid, quando est, potest non esse. Et eodem modo potest argui quod aliquid, quando non est, potest esse, quia aliquid nunc non est, quod non est impossibile esse etc. Antecedens primum patet, quia multa sunt singularia corruptibilia et annihilabilia, et per consequens non impossibilia non esse, quae tamen nunc actu sunt in rerum natura. Et consequentiae sunt satis evidentes.

Praeterea, si hoc non sit verum, sequitur quod nihil sit possibile non esse, nisi quando non est, nec aliquid possibile esse, nisi quando est, sicut opinati sunt Megarici, quorum opinionem reprobatur Philosophus<sup>18</sup> 9 Metaphysicae. Sic enim, ut dicit ibi Philosophus, sequeretur et quod habens visum non potest videre, nisi quando actu videt, nec aedificator potest aedificare, nisi quando actu aedificat, nec aliquid, quod non fit, potest fieri, aut quod non movetur, moveri, et generaliter tollitur omnis possibilitas generationis vel corruptionis vel novae mutationis in entibus; quae omnia sunt absurda.

Sed contra hoc potest argui<sup>19</sup>, quia, "si aliquid quando est potest non esse", igitur "quando aliquid potest esse potest non esse", et ultra, "igitur aliquid simul et semel potest esse et non esse". Prima consequentia patet,

18 cf ARISTOT Metaph 8,3 (1046b 29–1047a 20; Juntina 8,229FH et 230FG = tc 5–6)

19 *Gregorius in mg* (X fol 149P): Monachus q 2 art 3. – MONACHUS NIGER Quaestiones seu Determinationes q 2 'Utrum circumstantia temporis gratiae ex se causet aliquam bonitatem in opere virtuoso' art 3 dubium 1 (cod Fribourg Cordeliers 26, fol 92rb)

## The Three Senses of the Article

Therefore in order to see whether when a thing exists its existence is contingent, and [likewise for] when [a thing] does not exist, we must see whether when a thing exists it can be non-existent, and [likewise for] when [a thing] does not exist.<sup>66</sup> But this can be understood in two ways: firstly, that when a thing exists it may then be in its power<sup>67</sup> not to exist *in the future*; and secondly, that [when a thing exists] it may then be in its power not to exist *at that time*. And still the latter [can be understood] in two ways: firstly, that a proposition stating that the thing does not exist at that time can be true in the future; and secondly, that it is possible for that [proposition] to be true even at that time. For example, let A be some singular which actually is the case now, i.e. at the present instant, and let us call this [instant] B. [Then the statement] that now A can not be the case can be understood in three ways. The first sense is that now A can in the future not be the case, so that it is possible after now, i.e. after instant B, for ‘A is not the case’ to be true. The second sense is that now A can in the future not be the case at instant B, so that it is possible after B for ‘A is not the case at B’ to be true. The third sense is that now A can now not be the case, so that it is possible for ‘A is not the case’ or ‘A is not the case at B’<sup>68</sup> to be now true. And likewise [the statement] that a now non-existent thing can exist can be understood in three ways.

In the **first sense**, this article does not present a difficulty, for it is certain that the answer is yes. This can be briefly proved as follows. Some thing now exists and it is not impossible for it to be non-existent; therefore some thing now exists which now can be non-existent; and furthermore therefore some thing, when it exists, can be non-existent. And likewise it can be argued that some thing, when it is non-existent, can exist: some thing now is non-existent and it is not impossible for it to exist, etc. The first antecedent is clear because there are many corruptible and annihilable individuals – and consequently [individuals] for which it is not impossible that they be non-existent – which nevertheless now actually exist in the world. And the consequences are clear enough.

Moreover, if this is not true, it follows that it is not possible for anything to be non-existent except when it does not exist, nor is it possible for anything to exist except when it does exist; the Megarians<sup>69</sup> were of this opinion, which the Philosopher refuted in *Metaphysics* 9. For as the Philosopher says in that book, it would also thus follow that a man with sight is only capable of seeing when he is actually [engaged in] seeing; that a builder is only capable of building when he is actually [engaged in] building; that nothing which is not [actually] happening can happen; that nothing which is not [actually] moving can move; and in general that all possibility of generation or corruption or new change in existent objects is done away with. But these are all absurd.

But against this it can be argued that ‘if some thing, when it exists, can be non-existent’, then ‘when some thing can exist it can be non-existent’, and furthermore, ‘then some thing at one and the same time can exist and not exist’. The first consequence is clear,

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<sup>66</sup> Throughout this article, my decision between translating *est* (etc.) as ‘exists’ (etc.) and as ‘is the case’ (etc.) is governed merely by stylistic concerns. The difference is unimportant here; perhaps it is best to think of the *res* as *enuntiabilia*.

<sup>67</sup> Lit. ‘it may be in potency (*potentia*) in order that in the future it should not exist’.

<sup>68</sup> Gregory clearly does not mean the disjunction ‘A does not exist or A does not exist at B’; hence my punctuation.

<sup>69</sup> School of philosophy founded c. 400BC by Euclides of Megara. They apparently denied all change and motion.

"quia quando aliquid est potest esse"; et secunda patet, quia idem est dictu "'quando potest esse, potest non esse' et 'simul et semel potest esse et non esse'".

Ad hoc aliqui<sup>20</sup> dicunt argumentationem esse necessariam et concedunt consequens, quod dicunt esse verum, licet non in sensu composito, quia impossibile est quod idem simul sit et non sit.

Sed istud non est bene dictum, nam sequitur 'aliquid simul et semel potest esse et non esse, igitur aliquid potest esse et non esse'. Signetur igitur aliquod tale et eo demonstrato arguo: Hoc potest esse et non esse, igitur ista est possibilis 'hoc est et non est'; quod tamen est falsum. Et consequentia patet, quia quaelibet singularis categorica de possibili, cuius subiectum est nomen proprium aut pronomen demonstrativum praecise, si est vera, habet aliquam de inesse possibilem, ita quod quaelibet talis, si est vera, est vera tam in sensu composito quam divisio.

Respondeo igitur aliter, et nego consequentiam secundam. Non enim sequitur 'aliquid, quando potest esse, potest non esse; igitur aliquid simul potest esse et non esse', sed sequitur 'igitur aliquid simul potest esse et potest non esse', ita quod consequens sit una copulativa composita ex duabus de possibili. Ista autem non infert primam, sicut etiam non sequitur 'hoc, demonstrato Petro, potest portare hunc lapidem' – sit ille lapis pondus adaequatum virtuti Petri – 'et potest portare hunc lapidem, demonstrato alio eiusdem ponderis, igitur Petrus vel hoc, eo demonstrato, potest portare hunc lapidem et hunc, utroque demonstrato'. Similiter ista copulativa de possibili non requirit ad eius veritatem unam de inesse copulativam possibilem, sed sufficit quod utraque eius pars divisim sit possibilis, sicut patet etiam in exemplo adducto.

Tunc ad probationem consequentiae dico quod 'non est idem dictu etc', sed est idem dictu 'quando potest esse, potest non esse' et 'simul et semel potest esse et potest non esse'.

Secundum autem sensum secundum adhuc minus habet difficultatem articulus iste. Nam per solam praeteritionem instantis B – sit B instans, in quo Petrus est –, sive Petrus corrumpatur sive maneat, haec erit vera 'Petrus non est in B', et ideo haec est vera in illo sensu 'Petrus, qui est in B, potest non esse in B'.

Sed in tertio sensu articulus est difficilis et circa ipsum sunt opiniones contrariae.

<sup>20</sup> cf *ibid* (fol 92va)

‘because when some thing exists it can exist’; and the second is clear, because “‘when it can exist, it can not exist” and “at one and the same time it can exist and not exist” say the same thing.

Faced with this, some people say that the reasoning is watertight, and they concede the consequent, saying that it is true, albeit not in the composite sense, because it is impossible that the same thing should at the same time exist and not exist.

But that is not well said, for [this consequence] is valid: ‘something at one and the same time can exist and not exist, therefore something can exist and not exist’. So let some such thing be picked out; referring to it, I argue as follows. This thing can exist and not exist, therefore ‘this thing exists and does not exist’ is possible; but that is false. And the consequence is clear, because any singular categorical [proposition] about what is possible, whose subject is a proper name or a specific demonstrative pronoun, if it is true, corresponds to some proposition about factual possibility, so that any such [proposition], if it is true, is true as much in the composite sense as in the divided sense.

Therefore I give a different reply: I deny the second consequence. For ‘some thing, when it can exist, can not exist; therefore some thing at the same time can exist and not exist’ is not valid. Rather, what follows is ‘therefore some thing at the same time can exist and can not exist’, so that the consequent is a conjunction composed of two [propositions] about what is possible. But this does not imply the original [consequent], for the same reason that this [inference] is invalid: ‘this man (pointing to Peter) can carry this stone’, supposing the stone’s weight to be the equal of Peter’s strength, ‘and he can carry that stone (pointing to another stone of the same weight), therefore Peter’ (or ‘this man’, pointing to Peter) ‘can carry this stone and that stone (pointing to both)’.<sup>70</sup> Likewise, that conjunction about what is possible does not require for its truth one single copulative [proposition] about factual possibility; rather, it is sufficient that either of its parts taken separately should be possible, as is clear in the given example.

Then in reply to the proof of the consequence I say that ‘they do *not* say the same thing’; but ‘when it can exist, it can be non-existent’ and ‘at one and the same time it can exist and can be non-existent’ *do* say the same thing.

And in the **second sense** this article has even less difficulty. For through the pastness of instant B alone – letting B be an instant at which Peter exists – whether Peter is corrupted or not, ‘Peter does not exist at B’ will be true, and therefore in the same sense ‘Peter, who exists at B, can not exist at B’ is true.<sup>71</sup>

But in the third sense the article is difficult, and there are contrary opinions about it.

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<sup>70</sup> What convolution! Brief equivalent: ‘I can carry 49kg and I can carry 50kg, therefore I can carry 99kg.’

<sup>71</sup> This looks odd, but presumably just rests on the present tense of *est*. Not sure if Gregory is consistent on this.

(Conclusio pro articulo in tertio sensu)

Mihi tamen apparet vera ea, quae dicit quod aliquid, quod est nunc, potest non esse nunc, sic quod propositio enuntians ipsum non esse sit nunc vera.

Hanc conclusionem probo, et suppono communiter cum aliis quod est aliqua causa libera et quod causa libera in hoc differt a naturali, quia positis omnibus requisitis ad agendum potest agere et potest non agere, naturalis autem non potest non agere, sed necessario agit, sicut patet<sup>1</sup> 9 Metaphysicae. Et utriusque partis doctores hoc concedunt.

Tunc sumo aliquam causam liberam, et sit voluntas Petri, quae vocetur A, quae positis omnibus requisitis ad volendum C potest elicere volitionem circa C et potest non elicere; et suppono aliud satis communiter concessum, quod voluntas potest volitionem producere in instanti – quod suo loco probabitur<sup>2</sup> –, sit igitur instans, in quo omnia requisita ad volendum C occurrunt, B. Et arguo sic: A potest elicere volitionem circa C in instanti B et potest non elicere illam volitionem in instanti B; et A vel elicit talem volitionem in B vel non elicit talem volitionem in B; igitur vel A potest elicere volitionem circa C in instanti B, et tamen tunc non elicit, vel potest non elicere huiusmodi volitionem in instanti B, et tamen tunc elicit. Et vocetur volitio illa D, et tunc ulterius infero: Igitur vel haec propositio 'D non est' potest esse vera in instanti B, et tamen tunc haec est vera 'D est', vel haec propositio 'D est' potest esse vera in instanti B, et tamen tunc haec est vera 'D non est'. Et, sive hoc detur sive illud, habetur propositum.

Antecedens primum patet quoad primam partem eius ex suppositione prima; quoad secundam vero ex virtute primi principii. Consequentia etiam prima clara est, quia, si A elicit huiusmodi volitionem in instanti B et potest elicere eam in B et potest etiam non elicere in B, igitur elicit in B et potest non elicere in B. Eodem modo patet quod, si ipsa non elicit, quod ipsa non elicit, et tamen potest elicere. Consequentia etiam secunda evidens est, quia, si A potest non elicere D in instanti B, haec potest esse vera in instanti B, 'A non elicit D', et per consequens haec etiam potest tunc esse vera 'D non est', et similiter, si A potest elicere D in instanti B, haec propositio 'A elicit D' potest esse vera in instanti B, et per consequens etiam haec 'D est' potest tunc esse vera. Ex quo patet quod utraque istarum 'D est', 'D non est' divisim potest esse vera in instanti B, et constat quod altera tantum est vera. Si ergo haec sit vera 'D est', igitur tunc ipsa est vera in instanti B, et tamen haec 'D non est' potest tunc esse vera, quamvis non sit possibile quod utraque coniunctim et simul sit vera, sed, si affirmativa sit vera, negativa est falsa, et econtra, si

1 cf ARISTOT Metaph 8,5 (1047b 35-1048a 8; Juntina 8,233LM = tc 10)

2 cf GREG In 2 Sent dist 3–5 q 1 art 1 (tom IV, p 351,18 sqq)

### Conclusion for the Article in the Third Sense

Nevertheless, that [opinion] seems true to me which says that a thing which exists now can not exist now, in such a way that the proposition stating that it does not exist would be true now.

In proving this conclusion, I suppose (in common with others) that there are free causes and that free causes differ from natural ones in that, given all the prerequisites, they can act and can not act. Natural [causes], by contrast, cannot not act; rather, they act of necessity, as is clear from *Metaphysics* 9. And learned men grant this [supposition] on both counts.

Now take some free cause – let it be Peter’s will, which we shall call A – which, given all the prerequisites for willing C, can elicit a volition about C and can not elicit [such a volition]. Suppose further (as is granted commonly enough) that the will can produce a volition at an instant – which we will prove in due course – and then let B be an instant at which all the prerequisites for willing C are met. Then I argue as follows. A can elicit a volition about C at instant B, and it can not elicit this volition at instant B; and A either elicits such a volition at B or does not elicit such a volition at B. Therefore either A can elicit a volition about C at instant B, but nevertheless does not elicit it at that time; or A can not elicit such a volition at instant B, but nevertheless does elicit it at that time. Call this volition D. Then I further deduce that therefore either the proposition ‘D does not exist’ can be true at instant B, but nevertheless ‘D exists’ is true at that time; or the proposition ‘D exists’ can be true at instant B, but nevertheless ‘D does not exist’ is true at that time. And whichever case is granted, my suggestion holds.

The first antecedent is clear as far as its first part is concerned from our first assumption; as for the second [part], [that is clear] by virtue of the first principle.<sup>72</sup> The first consequence is also clear, because if A elicits such a volition at instant B and can elicit it at B and can also not elicit it at B, then A elicits it at B and can not elicit it at B. In the same way it is clear because if A does not elicit, then what it does not elicit it also can elicit. The second consequence is also clear because if A can not elicit D at instant B then ‘A does not elicit D’ can be true at instant B, and consequently ‘D does not exist’ can also be true at that time, and likewise if A can elicit D at instant B then the proposition ‘A elicits D’ can be true at instant B, and consequently ‘D exists’ also can be true at that time. From this it is clear that both ‘D exists’ and ‘D does not exist’, taken separately, can be true at instant B, though it is obvious that only one [of them] is true. Therefore if ‘D exists’ is true then it is true at instant B, and nevertheless ‘D does not exist’ can be true at that time, although it is not possible for both of them to be true taken together and at the same time; rather, if the affirmative is true then the negative is false, and conversely if

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<sup>72</sup> Rule of Contradictory Pairs: of every contrary pair, one member is true and the other is false.

negativa sit vera, affirmativa est falsa. Si quis autem secundam suppositionem praemissam, scilicet quod voluntas potest elicere volitionem in instanti, non admitteret, formetur ratio de deo et aliqua creatura quam potest deus in instanti libere producere, et pariter concluditur propositum.

Praeterea, sit B instans praesens, et arguo sic: Haec consequentia 'deus potest producere in B unum angelum, igitur deus producit in B unum angelum' non est bona in B. Et antecedens est verum, ut patet ex suppositionibus et quia non implicat contradictionem. Igitur oppositum consequentis potest esse verum simul cum antecedente in instanti B; alias contingeret quod et consequens et eius oppositum essent simul falsa in B. Et sic haec 'deus non producit unum angelum in B' et haec 'deus potest producere unum angelum in B' possunt simul esse verae in B. Ponatur ergo in esse, et habetur propositum, quia tunc simul, dum ista est vera 'deus non producit unum angelum in B', haec est possibilis 'deus producit unum angelum in B', licet ipsa sit falsa nec possit esse simul vera cum prima.

Quod autem prima consequentia sic simpliciter sumpta non sit bona in B, ut primo assumpsi, proba primo, quia, si illa esset tunc bona, eadem ratione haec esset tunc bona 'deus potest producere duos angelos in B, ergo producit duos angelos in B', et similiter haec 'deus potest producere tres in B, igitur producit tres in B', et ultra 'igitur quotcumque potest producere in B, tot producit in B'; quod tamen est falsum, quia in nullo instanti deus potest tot producere, quin possit tunc plures producere.

Secundo, quia, si illa esset bona consequentia, eadem ratione haec esset bona 'deus potest non producere unum angelum in B, igitur deus non producit unum angelum in B', et per consequens haec etiam esset bona 'deus potest non producere unum angelum in B et potest producere unum angelum in B, igitur deus producit unum angelum in B et non producit unum angelum in B'. Sed constat quod ista non est bona, quia antecedens est verum et consequens implicat contradictionem.

Tertio, quod consequentia non sit bona, patet ex differentia agentis liberi et agentis naturaliter supra<sup>3</sup> praemissa.

Hanc conclusionem tenere habent quicumque tenent deum potuisse producere creaturam aliquam ab aeterno, et quicumque etiam tenent quod possibile fuit angelum mereri in primo instanti sui esse, de quibus videbitur<sup>4</sup> suis locis.

3 cf p 216,18sq

4 cf GREG *loc cit* dist 1 q 3 art 1 et dist 3–5 q 1 art 2 (tom IV, p 104,2 sqq et 369,27 sqq)

the negative is true then the affirmative is false. But if anyone does not admit the second assumption given above, sc. that the will can elicit a volition at an instant, we may formulate the argument about God and about any creature which God can freely produce at an instant, and my point will be equally proved.

Moreover, let B be the present instant and I shall argue as follows. The inference 'God can produce an angel at B, therefore God does produce an angel at B' does not hold good at B.<sup>73</sup> But the antecedent is true, as is clear from our assumptions and because no contradiction follows. Therefore the opposite of the consequent can be true simultaneously with the antecedent at instant B; otherwise it would be possible for both the consequent and its opposite to be simultaneously false at B. And thus 'God does not produce an angel at B' and 'God can produce an angel at B' can be simultaneously true at B. So if we suppose that this is the case, then my point holds; for in that case at the same time as 'God does not produce an angel at B' is true, 'God does produce an angel at B' is possible, even though the latter is false and cannot be true at the same time as the former.

And that the first consequence (taken thus without qualification) does not hold good at B, as I initially took for granted, I prove [in three ways].

Firstly, because if that [consequence] did hold good at that time, then for the same reason the following would hold good at that time: 'God can produce two angels at B, therefore he does produce two angels at B'. And so would 'God can produce three [angels] at B, therefore he does produce three [angels] at B', and furthermore, 'therefore however many [angels God] can produce at B, he does produce that many [angels] at B'. But this latter is false, however, because at no instant can God produce a certain number [of angels] without His being able to produce even more [angels] at the same time.<sup>74</sup>

Secondly, because if that consequence did hold good, then for the same reason the following would hold good: 'God can not produce an angel at B, therefore God does not produce an angel at B'. Consequently the following would also hold good: 'God can not produce an angel at B and he can produce an angel at B, therefore God does produce an angel at B and does not produce an angel at B'. But it is obvious that this last [consequence] does not hold good, because its antecedent is true and its consequent implies a contradiction.

Thirdly, it is clear that the consequence does not hold good because of the difference between free agents and natural agents which we set out above.

This conclusion must be upheld by anyone who holds that God could have produced some creature from eternity, and also by anyone who holds that it was possible for an angel to be praiseworthy at the first instant of its existence. [But] we will see more about such matters in due course.

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<sup>73</sup> Gregory proves the invalidity of this inference in the next paragraph; for the moment it is taken for granted.

<sup>74</sup> Gregory, theoretician of the infinite, you should be ashamed. This 'but the latter is false' relies on an implicitly supposed inconsistency between 'God produces n angels' and 'God produces n + 1 angels'. In fact, the latter entails the former. If God produces infinitely many angels, then the sentences 'God produces n angels' and 'God can produce n angels' are true for all natural numbers n. Gregory's next argument is better.

## (Rationes contrariae)

Sed contra eam arguit quidam doctor<sup>5</sup> tenens partem oppositam, et supponit unum, quod dicit esse "communiter tam a theologis quam philosophis concessum", scilicet quod per nullam potentiam etiam divinam fieri potest "de praeterito non praeteritum, quin semper sit post verum dicere quod fuit praeteritum".

Quo supposito arguit sic<sup>6</sup>: Haec modo est vera 'voluntas vult C in instanti B', ponatur quod ita sit, igitur post B semper haec erit vera 'voluntas voluit C in B', immo et necessaria, quia omnis propositio vera mere de praesenti habet aliquam de praeterito necessariam, et per consequens sua opposita erit impossibilis. Ex quo sequitur quod, si ista modo sit vera in instanti B, per nullam potentiam poterit umquam fieri quod ipsa sit falsa in instanti B, et per consequens nec quod ista sit vera in B 'voluntas non vult C in B'.

Secundo, ad idem potest argui ex intentione Magistri<sup>7</sup> 2 Sententiarum distinctione 25, ubi ait: "Sciendum est quod liberum arbitrium ad praesens vel ad praeteritum non refertur, sed ad futura contingentia. Quod enim in praesenti est, determinatum est nec enim in potestate nostra est ut tunc sit vel non sit quando est; potest enim non esse vel aliud esse postea, sed non potest non esse dum est, vel aliud esse dum id est quod est. Sed in futuro an hoc sit vel illud, ad potestatem liberi arbitrii spectat". Eandem sententiam ponit Hugo<sup>8</sup> libro 1 De sacramentis parte 5 capitulo 22.

Tertio, si in instanti B est volitio, vel aliquid aliud, et possibile est quod in illo instanti ipsa non sit, ponatur in esse. Et tunc sequitur quod in eodem instanti sit et non sit; quod est impossibile.

Quarto, argui potest per illam propositionem Philosophi<sup>9</sup> "omne quod est, quando est, necesse est esse".

## (Ad rationes contrarias)

Pro solutione praedictorum praemitto quod aliquid, quod est in aliquo instanti, possit non esse in illo instanti, sic quod propositio enuntians illud

5 *Gregorius in mg* (2 fol 150E): Ockham libro primo distinctione 38 et in quaestione de praedestinatione. – OCKHAM In 1 Sent dist 38 q 1 (ed Etzkorn – Kelley, tom IV, St. Bonaventure N. Y. 1979, p 578,20–579,2)

6 cf OCKHAM Tractatus de praedestinatione et de praescientia divina q 3 (ed Boehner, Opera philosophica, tom II, St. Bonaventure N. Y. 1978, p 534,46–52)

7 LOMBARDUS 2 Sent dist 25 cap 1,3

8 cf HUGO DE ST VICTORE De sacr 1,5,22 (PL 176,256A)

9 ARISTOT De interpretatione 9 (19a 23-24; Juntina 1<sup>1</sup>,80M-81A = cap 6)

## Arguments to the Contrary

But a certain doctor who holds the opposite view argues against this conclusion, using one assumption which he says is ‘commonly granted by both theologians and philosophers’ – namely, that through no power (even if divine) can it happen that ‘something which is not past should become past, without it always being true afterwards to say that it was past’.

On this assumption, he argues as follows. ‘The will wills C at instant B’ is now true (supposing that it is), therefore ‘the will willed C at B’ will always be true after B – nay, [it will] be necessary, for every true proposition regarding only the present corresponds to some necessary [proposition] about the past, and consequently its opposite will be impossible. From this it follows that if that [first] proposition is true now at instant B, it will never be able to happen through any power that it should be false at instant B, nor, consequently, that ‘The will does not will C at B’ should be true at B.

Secondly, for the same [purpose] one can argue from the Master’s opinion in *Sentences* 2, distinction 25, where he writes: ‘We must understand that free will does not concern the present or the past, but future contingents. For what is the case in the present is determined, for it is not in our power that what is now the case should be the case or no; for it can not be the case, or can be otherwise, *afterwards*, but it cannot not be the case while it is the case, or be otherwise while it is what it is. But what awaits<sup>75</sup> the power of free will is whether this or that is the case in the *future*.’ Hugh sets out the same opinion in book 1 of *On the Sacraments*, in chapter 22 of part 5.

Thirdly, if at instant B there is a volition, or anything else, and it is possible that in that instant this [thing] should not exist, suppose that in fact [it does not exist]. It then follows that in the same instant it exists and does not exist; which is impossible.

Fourthly, one can argue using the Philosopher’s proposition ‘everything that is, when it is, necessarily is’.

## Against the Arguments to the Contrary

In order to address the above points, I say first that something which exists at a given instant can not exist at that instant, in such a way that the proposition stating that it

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<sup>75</sup> *spectat ad*. Schabel and Friedman have ‘depends on’.

non esse possit esse vera in illo instanti, potest tripliciter concipi: Uno modo quod hoc sit possibile in sensu composito, sic quod in illo instanti illa res simul cum hoc, quod ipsa est, non sit in illo instanti, et quod tam propositio enuntians ipsam esse quam propositio enuntians ipsam non esse coniunctim et simul in illo instanti sint verae; et ille sensus est penitus impossibilis propter implicationem contradictionis.

Alio modo potest concipi hoc esse possibile in sensu diviso, et hoc adhuc dupliciter: Uno modo quod illa res, quae est in aliquo instanti dato, possit iam posita in esse desinere esse et de esse transmutari in non-esse in eodem dato instanti et quod propositio enuntians ipsam esse desinat esse vera et de vera fiat falsa, sic quod in illo instanti ipsa sit falsa et econtra sua opposita desinat esse falsa et fiat vera; et iste sensus etiam est impossibilis, quoniam talis transmutatio et successio non est possibilis in instanti. Alio modo quod absolute et simpliciter sit possibile illam rem non tunc esse et non poni per suam causam in esse, et propositionem enuntiantem illam non esse esse in illo instanti veram, et iste sensus verus est et nihil inconvenientis includit.

Tunc ad rationes. Ad primam, concessa pro nunc illa suppositione, quamvis oppositum eius tenuerint aliqui et magni doctores<sup>10</sup> theologi, dico quod, si voluntas vult aliquid in instanti B, postea semper erit haec vera 'voluntas voluit hoc in instanti B', ita quod ista consequentia est necessaria 'voluntas vult hoc in B, igitur post B semper erit vera haec, si formabitur, 'voluntas voluit hoc in B"', sed dico quod antecedens est contingens et potest non esse verum, etiam in instanti B, ut prius probatum est. Et, si ponatur ipsum non esse verum in B, sicut est possibile iuxta tertium sensum praemissum, ista 'voluntas voluit hoc in B' non erit vera post B, et per consequens nec necessaria nec eius opposita impossibilis. Si tamen ponatur antecedens verum in B, quia non est possibile quod cum hac suppositione eius oppositum sit verum in B, nec in primo nec in secundo sensu, ideo nec post B erit ista possibilis 'voluntas non voluit hoc in B' et, ut dicit arguens, 'per nullam potentiam poterit umquam fieri quod ista sit falsa in B 'voluntas vult hoc in B''. Sic enim sequeretur quod ipsa fuisset vera in B et adhuc fuisset falsa in B, et per consequens eius opposita etiam fuisset vera in B; quod est impossibile.

Et ita patet quod haec ratio procedit contra primum sensum et secundum, non autem contra tertium. Et revera dictus arguens, si consequenter velit loqui, hoc ipsum haberet tenere; nam in suo 2 Quodlibet quaestione 6 tenet<sup>11</sup> quod "angelus potuit mereri et demereri in primo instanti". Et ad hoc pro-

<sup>10</sup> cf p 369,32 sqq

<sup>11</sup> OCKHAM Quodlib 2 q 6 (ed Wey, tom IX, St. Bonaventure N. Y, 1980, p 136,2–3)

does not exist can be true at that instant. This can be understood in three ways. **One way** is that this is possible in the *composite* sense, so that at that instant that thing, at the same time as it exists, would not exist at that instant; and so that both the proposition stating that it exists and the proposition stating that it does not exist would be true at that instant, taken together and simultaneously. And that sense is thoroughly impossible because it entails a contradiction.

The other way it can be understood to be possible is in the *divided* sense, and this in turn [can be understood] in two ways. **One way** is that that thing which exists at some given instant can now, having [once] been brought into being, cease to exist, and be changed from existence into non-existence at the same given instant; [so] that the proposition stating that it exists ceases to be true and goes from being true to being false, so that at that instant it is false, and conversely its opposite ceases to be false and becomes true. And this sense is also impossible, because such a change and succession is not possible at an instant. **The other way** is that it is absolutely and without qualification possible for that thing not to exist at that time and not to be brought into being by its cause, and for the proposition stating that it does not exist to be true at that instant. And this sense is true and harbours no inconsistency.

Now for the arguments. Against the **first**, let us temporarily grant its assumption, even though certain great doctors of theology have held its opposite.<sup>76</sup> I reply that if the will wills something at instant B, then afterwards ‘the will willed this at instant B’ will always be true, so that the following consequence is necessary: ‘the will wills this at B, therefore after B ‘the will willed this at B’ will always be true, if it is formulated’. But I say that the antecedent is contingent and can not be true, even at instant B, as we showed earlier. And if we suppose that [the antecedent] is *not* true at B, as is possible in accordance with the third sense given above, then ‘the will willed this at B’ will not be true after B, and consequently neither [will it be] necessary nor [will] its opposite [be] impossible. If, however, we suppose that the antecedent *is* true at B, then since it is not possible under this assumption that its opposite should be true at B, in either the first or the second sense [of ‘possible’], for this reason ‘the will did not will this at B’ will not be possible after B, and, as the arguer says, ‘through no power will it ever be able to happen that ‘the will wills this at B’ should be false at B’. For in that case it would follow that that [proposition] was true at B and yet was false at B, and consequently its opposite would also have been true at B; which is impossible.

And so it is clear that this argument works against the first and second senses [given above], but not against the third. And in fact the said arguer, if he wished to speak consistently<sup>77</sup>, would have to hold this [view]. For in question 6 of his second Quodlibet he has it that ‘an angel could be praiseworthy and blameworthy in [its] first instant’. And in order to prove this

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<sup>76</sup> Schabel and Friedman give these as Gilbert of Poitiers and William of Auxerre, as in *S I.42-44.1*, 369:32 – 370:14.

<sup>77</sup> *consequenter*: in accordance with the laws of consequences, i.e. the laws of logic.

bandum in quadam ratione assumit<sup>12</sup> quod "angelus potuit in primo instanti se libere conformare rectae rationi et non conformare"; et infra in solvendo quandam obiectionem, quae<sup>13</sup> est quod "actus non est imputabilis ad meritum vel demeritum, nisi fiat scienter et contingenter, ita quod possit oppositum elicere", concedit<sup>14</sup> utramque condicionem esse necessariam ad actum meritorium et dicit quod utraque potest esse in instanti. Ex quibus evidenter patet quod in illa quaestione vult expresse quod angelus in illo instanti, quo se conformavit rationi rectae et habuit actum meritorium, si ita fuit, potuit non conformare se tunc et habere tunc actum demeritorium et non habere meritorium.

Praeterea, ibidem dicit<sup>15</sup> quod deliberatio vel perfecta cognitio aut syllogismus practicus requisitus ad actum meritorium possunt esse non solum in tempore et respectu actus futuri, sed etiam in instanti et respectu actus, qui elicitur in illo instanti; ex quo etiam patet quod dictum est.

Ad secundum dicendum quod intentio Hugonis et Magistri directe vadit contra secundum sensum. Nam potestas nostri liberi arbitrii non est respectu eius quod fuit, ut scilicet per nos fieri possit quod non fuerit, nec etiam respectu eius quod iam actu est, ut possimus facere ipsum, quod actu est, non esse in hoc instanti in quo est, quamvis possimus facere ipsum in futuro non esse. Sed contra tertium sensum nec intentio eorum nec verba procedunt, sicut statim patet consideranti.

Ad tertium dico quod absolute et simpliciter loquendo potest poni in esse quod illa volitio non sit in illo instanti, quia possibile est quod eius causa non producat eam in illo instanti. Et, si ita ponatur, tunc oppositum nec ponitur nec positum est, nec ipsa est in illo instanti, sicut nec ipsam producit sua causa. Et sic non sequitur contradictio. Sequeretur autem, si ipsa ponatur in esse et simul cum hoc esset possibile illam non tunc esse, ita quod haec propositio enuntians illam non esse posset esse tunc vera; quod ego non dico.

Ad quartum dico quod illa dictio 'quando' potest stare in dicta propositione adverbialiter vel coniunctionaliter, ita quod aequivaleat huic coniunctioni 'si'. Nam, ut dicit Boethius 1 libro De syllogismis hypotheticis<sup>16</sup>, ita potest fieri condicionalis cum hac dictione 'cum', sicut cum hac dictione 'si'. Unde ita est condicionalis ista 'cum homo est, animal est', sicut ista 'si homo

12 *ibid* (p 137,38–39)

13 *ibid* (p 138,55-56); cf GUALTERUS CHATTON Reportatio 2 dist 5 et 6 q 1 art 2 (cod Paris nat lat 15887, fol 107rb): "Nullus actus imputatur ad meritum vel demeritum nisi deliberatio praecedat".

14 cf OCKHAM *loc cit* (p 140,103–110)

15 cf *ibid* (p 139,79-85)

16 BOETH De syll hyp 1 (PL 64,834C)

in an argument he assumes that ‘an angel could in [its] first instant freely conform to right reason or not [so] conform’; and later on, in addressing a certain objection – namely, that ‘praise and blame can only be ascribed to an act if it is done knowingly and contingently, so that one could have brought about its opposite’ – he concedes that both conditions are necessary for a praiseworthy act and says that they can both be fulfilled at an instant. From this it is manifestly clear that in that question he expressly has it that an angel, at the very instant at which it conformed to right reason and carried out a praiseworthy action (assuming this was so), was able not to conform itself at that time, [able] to carry out a blameworthy action at that time, and [able] not to carry out a praiseworthy [action at that time].

Moreover, in the same place he says that the deliberation or perfect cognition or practical reasoning necessary for praiseworthy action can exist not only over time and with respect to a future act, but also at an instant and with respect to an act which is brought about at that instant. From this, too, what we have said is clear.

Against the **second** [argument], it must be said that the opinion of Hugh and the Master proceeds squarely against the second sense. For our free will does have no power over what has happened, that is, in such a way that through us it could come about that it did not happen. Nor [does our free will have power] even over what is actually happening now, in such a way that we could make what actually is happening not happen at the very instant at which it is happening, even if we are able to make it not happen in the future. But neither their opinion nor their words work against the third sense, as is readily apparent to anyone who thinks about it.

Against the **third** [argument], I say that, speaking absolutely and without qualification, we can suppose<sup>78</sup> that that volition does not exist at that instant, because it is possible for its cause not to produce it at that instant. And if we do suppose this to be so, then its opposite neither is nor has been supposed, nor does that [volition] exist at that instant, since its cause does not produce it. And thus no contradiction follows. One *would* follow, however, if [the volition] were supposed to exist and, together with this, it were possible for it not to exist at that time, so that the proposition stating that it did not exist could be true at that time; but I am not saying this.<sup>79</sup>

Against the **fourth** [argument], I say that the word *quando* can be placed in the same proposition as an adverb or as a conjunction, in which case it is equivalent to the conjunction *si*. For as Boethius says in book 1 of his *On hypothetical syllogisms*, one can make a conditional with the word *cum* just as much as with the word *si*. Hence ‘when there is a man, there is an animal’ is just as much a conditional as ‘if there is a man,

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<sup>78</sup> Often when we get *ponere in esse* I am unsure as to whether the state of affairs in question is said to be ‘brought into being’ or ‘supposed to be the case’. The difference is whether the subsequent entailments are thought of as the speaker’s commitments or as what follows in reality. I don’t think it matters either way. The evidence in favour of ‘supposed to be the case’, used by Schabel and Friedman, is that e.g. *non sequitur contradictio*. But on the other hand *nec ipsa est in illo instanti* tells in favour of the other stance. I doubt Gregory cares, at least in the present context.

<sup>79</sup> It seems to me that Gregory’s tying himself in knots. The key may be ‘(logically) necessary’ vs ‘unavoidable’.

est, animal est', et sunt "eiusdem potestatis", ut dicit. Et idem iudicium potest esse de 'quando', sicut de 'cum'.

Si autem ly 'quando' stet ibi adverbialiter, vel illa propositio sumetur in sensu compositionis, et sic est vera, nam per ipsam denotatur quod haec sit necessaria 'omne quod est, quando est, est', et hoc est verum, licet non habeat aliquam singularem necessariam praeter hanc 'deus vel hoc, demonstrato eo quod est deus, est, quando est', nam quolibet alio demonstrato singularis quaecumque est contingens, verbi gratia ista 'hoc, demonstrato Petro, est, quando est' est contingens, nam Petro non existente ipsa esset falsa, et ita quaelibet alia.

Vel illa propositio sumitur in sensu diviso, et adhuc dupliciter hoc contingit, quia vel ipsa est temporalis, et tunc aequivalet huic copulativae 'omne quod est, aliquando est, et omne tale tunc est necesse esse', et sic ipsa est falsa, sicut et secunda pars huius copulativae, quia nulla res praeter deum aliquando est necesse esse. Vel potest esse de temporali extremo, et tunc vel de temporali subiecto, et sic totum hoc 'omne quod est, quando est' erit subiectum et reliquum erit praedicatum, quod denotatur verificari de illo subiecto cum modo necessitatis, et sic etiam est falsa. Quod patet arguendo sic: 'Omne quod est, quando est, necesse est esse'; sed Petrus est, quando est; ergo Petrus necesse est esse. Minor est vera, ponatur quod Petrus sit aliquis homo existens, et tamen conclusio est falsa. Vel potest esse de temporali praedicato, et tunc hoc tantum 'quod est' erit subiectum, et reliquum praedicatum. Et sic adhuc dico quod est falsa, quamvis aliqui<sup>17</sup> dicant oppositum, sic arguendo: Omne quod est necesse vel de necessitate, quando est, est; sed Petrus est; ergo Petrus de necessitate, quando est, est. Quae conclusio est falsa. Et idem iudicium erit, si dicatur 'omne quod est, de necessitate est, quando est', quia tunc sequeretur 'igitur Petrus de necessitate est, quando est', quae etiam pariter est falsa. Cuius probatio est, quia, cum ista sit singularis habens pro subiecto nomen proprium praecise, si ipsa sit vera in sensu diviso, est etiam vera in sensu composito, et per consequens haec erit necessaria 'Petrus est, quando est'. Sed constat quod hoc est falsum; nam, posito quod Petrus non sit, sicut est possibile, tunc ipsa erit falsa, nam sequitur 'Petrus est, quando est; igitur Petrus aliquando est', et ultra, 'ergo Petrus est'. Et constat quod tunc consequens est falsum, ergo et antecedens.

Et ideo dico quod, si illa propositio 'omne quod est etc' sumatur in sensu diviso, et ly 'quando' stet adverbialiter, quomodocumque accipiatur, ipsa est

17 *Gregorius in mg* (L, fol 150M): Burlaeus in logica capitulo de propositione temporali. – Cf BURLAEUS De puritate artis logicae tractatus longior, tract 2 pars 3 particula 1 (ed Boehner, St. Bonaventure N. Y. 1955, p 130,5-19)

there is an animal', and they are 'of the same power', as he says. And the same verdict can be made for *quando* as for *cum*.

But if the *quando* is used adverbially there, then that proposition can be taken in the composite sense, in which case it is true. For [in this case] it means that 'everything that is, when it is, is' is necessary, and this is true. However, it only has one corresponding necessary singular [proposition], namely 'God (or 'this', pointing to that which is God) exists, when he exists'; for any singular [proposition] is contingent if it refers to any other [individual], as for instance 'this man (pointing to Peter) exists, when he exists' is contingent, for if Peter did not exist then it would be false, and the same goes for any other [such proposition].

Or the proposition can be taken in the divided sense; and again this is possible in two ways. For it can be temporal, in which case it is equivalent to the conjunction 'everything that is, at some time is, and every such thing necessarily is at that time'. In this sense it is false, because the second part of this conjunction is [false], for nothing except for God necessarily exists at any time.

Or it can be about a temporal limit, in which case it can be about a temporal subject, so that the whole [expression] 'everything that is, when it is' will be the subject and the rest will be the predicate, which is said to be satisfied by that subject with the mode of necessity; and in this sense too it is false. This is clear from the following argument. 'Everything that is, when it is, necessarily is'; but Peter is, when he is; therefore Peter necessarily is. The minor premiss is true, supposing that Peter is some existent man; but nonetheless the conclusion is false.

Or [if it is about a temporal limit] it can be about a temporal predicate, so that only 'that is' will be the subject, and the rest [will be] the predicate. And in this sense I still say that it is false, even though some people say the opposite, arguing as follows. Everything that is, necessarily or of necessity, when it is, is; but Peter is; therefore Peter, of necessity, when he is, is. But this conclusion is false. And the same verdict will result if someone says 'everything that is, of necessity is, when it is', for then this would follow: 'therefore Peter of necessity is, when he is'. But this, too, is equally false. The proof of this is that since this [proposition] is a singular which has for its subject a specific proper name, if it is true in the divided sense, it is also true in the composite sense, and consequently 'Peter is, when he is' will be necessary. But it is obvious that this is false; for, supposing that Peter does not exist, as is possible, it will then be false, for the following is valid: 'Peter exists, when he exists; therefore Peter exists at some time', and furthermore, 'therefore Peter exists'.<sup>80</sup> And it is clear that at the time in question [i.e. the time at which it is supposed that Peter does not exist], the consequent is false; and therefore so is the antecedent.

And therefore I say that if the proposition 'everything that is, etc.' is taken in the divided sense, and the *quando* is used adverbially, it is false no matter in what way it is taken.

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<sup>80</sup> Modern logicians would deny the validity of these inferences.

falsa. Si vero ly 'quando' stet coniunctionaliter modo praemisso, sic dico quod illa propositio potest esse condicionalis vel de condicionali extremo. Si sit condicionalis, tunc ly 'necesse' potest denotare consequentiam esse necessariam, et sic propositio est vera, nam haec est necessaria 'omne quod est, si est, est' vel sic 'si omne quod est, est, ipsum est'. Et potest denotare necessitatem consequentis, et tunc denotatur quod, si aliquid est, quodcumque illud sit, ipsum de necessitate est; et patet quod hoc est falsum. Si vero sit de condicionali subiecto, tunc etiam est falsa, quia significatur per eam quod, de quocumque dicitur 'hoc subiectum condicionatum est, si est', dicitur hoc praedicatum 'est' cum modo necessitatis; quod falsum est. Nam vere dicitur quod Petrus est, si est; et tamen haec est falsa 'Petrus de necessitate est'. Sed, si praedicatum sit condicionalis, tunc propositio est vera, quoniam tunc eius subiectum est tantum 'hoc quod est' et denotatur quod, de quocumque dicitur 'est', dicatur mediante modo necessitatis 'est, si est'; et hoc est verum. Unde, quocumque 'quod est' demonstrato, haec est vera 'hoc de necessitate est, si est', ex qua non sequitur 'igitur hoc de necessitate est', sed est fallacia 'secundum quid et simpliciter'. Et hoc est quod Philosophus<sup>18</sup> dicit: "Non enim idem est, inquit, omne esse necessario, quando est, et simpliciter esse ex necessitate"; et accipit 'quando est' pro 'si est'. Tunc applicando ad propositum dico quod, quamvis volitio vel aliqua alia res contingens, quae est in aliquo instanti, de necessitate sit in illo instanti, si est in illo instanti, non tamen de necessitate est in illo instanti.

(Ad rationes Aristotelis in primo articulo)

Nunc respondeo ad rationes<sup>19</sup> Philosophi pro prima sua conclusione, et, cum primo arguit quod, 'si omnis affirmatio vel negatio est vera vel falsa', sequitur quod 'omne vel est necesse esse vel necesse non esse', nego consequentiam.

Ad probationem, cum dicitur quod, 'si est verum dicere, quoniam aliquid est album, necesse est illud esse album' et eodem modo, 'si verum est dicere, quoniam aliquid erit album, necesse est illud fore album', dico quod, si ly 'necesse' notet necessitatem consequentis, utraque propositio falsa est; unde, posito quod Petrus sit albus, verum est dicere 'Petrus est albus', et tamen non est necesse Petrum esse album. Si vero notet necessitatem consequentiae, concedo utramque, sed tunc non probatur propositum, quia, licet consequentia illa sit necessaria, tamen tam antecedens quam consequens est simpliciter contingens, et ideo, esto quod ista sit vera 'Petrus erit albus', adhuc Petrus

18 ARISTOT De interpretatione 9 (19a 25-26; Juntina 1<sup>1</sup>,81A = cap 6)

19 *cf p* 239,28 sqq

But if the *quando* is used as a conjunction in the manner stated above, then I say that that proposition can be a conditional or about a conditional limit. If it is a conditional, then the ‘necessarily’ can mean that the consequence is necessary, in which case the proposition is true, for ‘everything that is, if it is, is’ is necessary, as is ‘if everything that is, is, then that thing is’. Or it can mean that the consequent is necessary, in which case it means that if something is, whatever it may be, it necessarily is; and it is clear that this is false.

But if it is about a conditional *subject*, then it is still false, because it then means that, of whatever ‘this conditionally-limited subject exists, if it exists’ is said, the predicate ‘exists’ is said with the mode of necessity. But this is false. For it is true to say that Peter exists, if he exists; and nevertheless ‘Peter of necessity exists’ is false.

But if the predicate is *conditional* then the proposition is true, because in that case its subject is simply ‘this thing which exists’, and it means that, of whatever ‘exists’ is said, ‘it exists, if it exists’ may be said with an intervening mode of necessity. And this is true. Therefore when anything ‘which exists’ is picked out, ‘this thing of necessity exists, if it exists’ is true; but ‘therefore this thing of necessity exists’ does not follow from this. Rather, this [invalid inference] is the ‘in-a-certain-respect-and-without-qualification’ fallacy. And this is what the Philosopher says: ‘For it is not the same thing for everything to exist necessarily, when it exists, and for [everything] to exist of necessity without qualification.’ [Here] he takes *quando est* as [meaning] *si est*.

Now, applying this to the [current] topic, I say that although a volition (or any other contingent thing) which exists at some instant, of necessity exists at that instant if it exists at that instant, nevertheless it does not exist of necessity at that instant.<sup>81</sup>

### **Against the Arguments of Aristotle in the First Article**

I now reply to the Philosopher’s arguments for his first conclusion, and since he argues first that ‘if every affirmation or negation is true or false’ it follows that ‘everything either necessarily exists or necessarily does not exist’, I reject the consequence.

Now for the proof. When it is said that ‘if it is true to say that something is white, it is necessary for that thing to be white’, and in the same way ‘if it is true to say that something will be white, it is necessary for that thing to become white’, I reply that if the ‘necessary’ refers to the necessity of the consequent then both propositions are false. Hence, supposing that Peter is white, it is true to say ‘Peter is white’, and nonetheless it is not necessary for Peter to be white. But if it refers to the necessity of the consequence, then I grant both [propositions]; but in that case [Aristotle’s] point is not proved, for although that consequence is necessary, nevertheless both the antecedent and the consequent are without qualification contingent, and therefore, supposing that ‘Peter will be white’ is true, Peter still

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<sup>81</sup> This whole argument would be made simpler by formalization. The question is one of scope.

poterit non fore albus, sicut etiam ipsa potest non esse vera et potest numquam fuisse vera. Cum dicitur 'si affirmatio est vera, ita erit etc', concedo; et nego aliam, qua infertur 'igitur nihil erit ad utrumlibet', nec valet probatio, quia non dicitur aliquid ad utrumlibet, quia non magis erit quam non erit, aut econverso, sed quia non magis potest esse quam non esse nec econverso seu quia et potest esse et potest non esse, cum quo bene stat quod ipsum determinate erit, aut determinate non erit.

Ad secundam probationem concedo, 'quoniam quodlibet eorum, quae facta sunt, semper fuit verum dicere, quoniam erit', et, quandocumque propositio fuisset formata, fuisset vera. Et similiter de quolibet eorum, quae futura sunt, verum est dicere 'quoniam erit', et sic fuit etiam semper verum dicere. Cum hoc tamen stat quod etiam ea, quae facta sunt, contingenter fuerunt facta, et propositiones enuntiantes 'quoniam erunt' contingenter fuerunt verae et potuerunt numquam fuisse verae, et ea, quae erunt, contingenter erunt et possunt non fore, et ipsae propositiones et possunt numquam fuisse verae.

Unde, ut patet, utraque probatio, quae tamen est unica in virtute, innititur super hoc, quod, si propositio de futuro sit vera et fuerit vera, sit de necessitate vera et non possit non esse ac non fuisse vera; quod, si verum esset, utique probatio esset efficax, sed illud, ut supra<sup>20</sup> probatum est, est prorsus falsum et ideo probatio, quae exinde procedit, nullius momenti existit.

Ad secundam rationem concedo quod, 'sicut res se habent ad esse vel non-esse, sic orationes ad veritatem et falsitatem', sic scilicet intelligendo quod, sicut res se habent ad esse vel non-esse in praesenti, sic orationes de praesenti enuntiantes eas esse vel non esse ad veritatem et falsitatem. Et, sicut se habent ad fuisse in praeterito vel non-fuisse, sic orationes de praeterito ad veritatem et falsitatem, et, sicut se habent ad futurum esse vel non-esse, sic et orationes de futuro ad veritatem et falsitatem. Et patet quod sic debet intelligi propositio et aliter non habet veritatem.

Et tunc ad minorem dico quod contingentia sunt determinata ad futurum esse vel non-esse, hoc est dictu, determinate erunt vel determinate non erunt, quamvis contingenter et non necessario. Et ideo similiter orationes tales de futuro sunt determinatae ad veritatem et falsitatem, quamvis contingenter. Unde talis determinatio de inesse tantum non tollit contingentiam futuri, quae consistit in indeterminatione de possibili, quia scilicet potest fore et potest non fore, et non in indeterminatione de inesse, qua scilicet dicatur quod neque erit neque non erit, quia hoc est impossibile, et oportet alterum tantum determinate fore, contingenter tamen, quamvis utrumque eorum sit nobis ignotum. Et ideo patet quod illa ratio est potior ad oppositum.

<sup>20</sup> cf p 254,28 sqq et 264,17 sqq

could not become white, just as that [proposition] also can not be true and can have never been true.<sup>82</sup> When it is said ‘if an affirmation is true, then there will be etc.’, I agree; but I deny the other [consequence] by which [Aristotle] infers ‘therefore nothing will be two-sidedly [contingent]’. Nor is the proof valid, because something is said to be two-sided not because it no more will be than will not be (and vice versa), but because it no more *can* be than not be (and vice versa), or because it both can be and can not be; and it goes well with this that that thing determinately will be or determinately will not be.<sup>83</sup>

Now for [Aristotle’s] second proof. I grant ‘that of anything that has been, it was always true to say that it would be’, and [that] whenever [such] a proposition was formulated, it was true. And likewise of anything that will be, it is true to say that it will be, and so it was also always true to say [this]. However, together with this it remains [true] that even those things which have happened happened contingently, and the propositions stating that they will be were true contingently and could have never been true; and that those things which will happen will happen contingently and can not come about, and the propositions in this case also can have never been true.

Hence, as is clear, both proofs – which are, however, equal in force – depend on [the premiss] that if a proposition about the future is true and has been true, then it is necessarily true and cannot not be or not have been true. Now if this were true then both proofs would work; but, as we proved above, it is absolutely false. Therefore a proof which starts out from that [premiss] does not last for a moment.

As to the second argument, I grant that ‘just as things correspond to being or non-being, so sentences [correspond] to truth and falsity’, that is, if we understand by this that just as things correspond to being or non-being in the present, so sentences about the present stating that they are or are not [correspond] to truth and falsity. And just as [things] correspond to past being or past non-being in the past, so sentences about the past [correspond] to truth and falsity; and just as [things] correspond to future being or future non-being, so too sentences about the future [correspond] to truth and falsity. And it is clear that the proposition must be understood in this way; otherwise it has no truth.

And now for the minor [premiss]. I reply that contingents are determined with respect to future being or non-being; that is to say, determinately they will be or determinately they will not be, albeit contingently and not of necessity. And therefore likewise such sentences about the future are determined with respect to truth and falsity, albeit contingently. Hence such a merely factual determinacy does not destroy the contingency of the future, which depends on the indeterminacy of the possible (that is, that it can happen and can not happen) and not on the indeterminacy of facts (that is, that by which it may be said that it neither will happen nor will not happen), because the latter is impossible. It is necessary that one and only one of them should determinately happen, but contingently, even though we do not know either of them. And therefore it is clear that the argument in question does more work for the opposite position.

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<sup>82</sup> Not in a very real sense of ‘can’! *The necessity of the past*. (Gregory’s sense is that of logical possibility.)

<sup>83</sup> When Gregory says that something that is or was the case ‘can be’ otherwise, he means what we’d express by ‘could have been’. This expression covers present and past. There is *no* equivalent way of saying that the future ‘could have’ turned out differently. The nearest is ‘could have been going to be’, but that’s about present tendencies.

Ad rationes secundae conclusionis non oportet respondere, quia conclusio vera est, et illam ego concedo.

(Ad rationes Petri Aureoli in primo articulo)

Nunc ad rationes<sup>1</sup> illius doctoris pro prima sua conclusione respondeo, et praemitto quod propositionem esse immutabiliter veram potest dupliciter intelligi: Uno modo immutabiliter, id est quod est vera necessario et inevitabiliter et non contingenter, in qua significatione iste videtur aliquando uti hoc vocabulo 'immutabiliter'. Alio modo immutabiliter, id est quod non possit esse falsa vel non vera, postquam fuit vera, sic quod aliquando sit veram dicere 'haec nunc est falsa et prius fuit vera', et sic non est aliud propositionem veram esse immutabiliter veram quam non posse mutari de veritate in falsitatem, vel magis proprie loquendo non posse esse prius veram et post falsam.

Hoc praemisso dico quod illa sua prima propositio in utroque sensu est falsa. Nam, ut patet<sup>2</sup> ex secundo articulo, quaelibet talis propositio vera de futuro est contingenter vera et potest fore et esse et fuisse non vera. Et ideo nulla talis est immutabiliter vera in primo sensu. Item propositio talis vera potest esse falsa postquam fuit vera, et per consequens non est immutabiliter vera in secundo sensu.

Tunc ad primam rationem, cum dicit 'si potest mutari, ne sit vera, aut in instanti in quo est vera aut in praecedenti etc', dico quod aut intelligitur quod possit mutari, ne sit vera, id est quod simpliciter possit non esse vera, aut quod possit non esse vera postquam fuit vera. Si primo modo, dico quod et in instanti in quo est vera, et in praecedenti et sequenti. Et, cum arguitur contra primum quod non, quia tunc simul esset vera et non vera, nego consequentiam; nam, quamvis ista nunc sit vera 'Antichristus erit', quia tamen possibile est Antichristum non fore, possibile est istam non esse veram nec umquam fuisse veram, et, si poneretur in esse, ista non esset tantum non vera, nec tunc nec antea umquam fuisset vera.

Et per idem patet ad primam probationem, qua probatur quod non in instanti praecedente. Secunda vero probatio et ea similiter, quae sequitur contra, non vadunt secundum istum sensum, sed secundum secundum de mutari, in quo sensu secundo dico quod talis propositio potest mutari de veritate in instanti, in quo res fiet, non autem in aliquo praecedenti. Et ad primam probationem contra hoc, cum dicitur quod tunc 'illa veritas transit in praeteri-

1 *cf* p 244,8 sqq

2 *cf* p 254,28 sqq

I do not need to reply to the arguments for [Aristotle's] second conclusion, because that conclusion is true and I grant it.

### **Against the Arguments of Peter Aureol in the First Article**

Now I reply to the arguments of that doctor for his first conclusion. And I say first that a proposition's being immutably true can be understood in two ways. In one way [a proposition can be understood as] immutably [true] in that it is true necessarily and inevitably and not contingently; he sometimes seems to use the word 'immutably' in this sense. In another way [a proposition can be understood as] immutably [true] in that it cannot be false or not true after it has been true, in such a way that it would sometimes be true to say 'this now is true and before was false', and in this sense for a true proposition to be immutably true is nothing other than for it to be unable to change from truth into falsity, or, more strictly speaking, for it to be unable to be true beforehand and false afterwards.

After this preamble I say that [Peter Aureol's] first proposition is false in both senses. For as is clear from my second article, any such true proposition about the future is contingently true and can become and be and have been not true. And therefore no such [proposition] is immutably true in the first sense. Again, such a true proposition can be false after it has been true, and consequently it is not immutably true in the second sense.

Now for his first argument. When he says 'if it can be changed so that it is not true, then [it can be changed] either at the moment when it is true or at a preceding [moment] etc.', I reply that it is understood either that it can be changed so that it is not true, that is, that without qualification it can not be true, or that it can not be true after it has been false. If [it is understood] in the first way, then I say that [it can be changed] at the instant when it is true, *and* at a preceding instant, *and* in a subsequent instant. And when he argues against the first [of these] that it is not so, because in that case it would at the same time be true and not true, I deny the consequence. For even if 'Antichrist will come' is now true, because it is nonetheless possible that Antichrist should not come it is possible for that [proposition] not to be true, nor to have even been true, and if this [the non-coming of the Antichrist] were brought into being, then that [proposition] not only would be not true, but it would *never* have been true, then or previously.

And the same argument is clear against his first proof, in which he showed that [it cannot be changed] at a preceding instant. But the second contrary proof, and likewise the next one, proceed in accordance with not this sense of change but the second one, the sense in which I say that any such proposition can be changed from truth at the instant at which the thing happens, but not at any previous [instant]. And against the first proof against this, when it is said that in that case 'that truth moves into the past',

tum', dico quod probatio est ad oppositum. Nam, quia transit in praeteritum, ideo non remanet vera; sed ex tunc illa de praeterito est vera et ipsa, quia enuntiat futurum, quod non est futurum, est falsa. Unde nunc ista est falsa et haeretica 'Christus crucifigetur', et tamen fuit vera, antequam Christus crucifigeretur. Ad secundam probationem dico quod ideo mutatur, quia suum significatum ponitur in esse et fit praesens nec amplius est futurum, nec ex hoc confirmatur in sua veritate, ut dictum est.

Et sic patet quod prima ratio eius non valet. Dico ulterius quod, si valeret, probaretur quod nulla propositio de praesenti est contingens, sed quaelibet necessaria; quod tamen est evidenter falsum etiam secundum omnes. Probatio: Sumo istam 'Petrus sedet', quam quilibet concederet non esse necessariam, et ponatur quod nunc primo sit vera. Probo hoc posito quod sit immutabiliter vera, quia, si posset mutari, aut in instanti in quo est vera, et tunc simul esset vera et non vera, quod est impossibile, aut in instanti aliquo praecedenti, et hoc non, quia ante non fuit vera et non potest perdere veritatem antequam illam habeat, nec in instanti sequente, quia tunc illa veritas transit in praeteritum etc. Igitur, cum non inveniatur instans, in quo possit mutari, ipsa est immutabiliter vera. Probationes omnes sunt suae<sup>3</sup>, et tamen conclusio est falsa.

Ad aliam rationem, si distributio illa sit communis pro omnibus instantibus praeteritis et futuris, patet ex dictis quod minor est falsa; si vero sit restricta ad instantia praecedentia instans factionis rei et intelligatur quod sit immutabiliter, id est necessario, vera, tunc maior est falsa, et patet ex dictis et ex secunda et tertia conclusione secundi<sup>4</sup> articuli.

Secunda propositio eius est vera nec contra praedicta, ideo ad eius rationes non oportet respondere.

(Ad rationes principales quaestionis)

Ad primam rationem principalem<sup>5</sup> patet ex dictis. Nam, licet contingens non sit determinatum determinatione de necessario, quia scilicet de necessitate sit futurum vel de necessitate sit non futurum, quinimmo sit indeterminatum determinatione de necessario negative vel de possibili affirmative, ut supra<sup>6</sup> dictum est, est tamen determinatum determinatione de inesse, quia scilicet vel determinate erit vel determinate non erit, et ideo una propositio de futuro est determinate vera et altera determinate falsa, contingenter tamen.

3 *cf* PETRUS AUREOLI In 1 Sent dist 38 art 3 (ed Romae 1596, p 884aEF-884bA)

4 *cf* p 252,20-253,15

5 *cf* p 237,10 sqq

6 *cf* p 258,5-31

I reply that the proof is [rather a proof] of the opposite. For because it passes into the past, it therefore does not remain true; but from that time onwards the [proposition] about the past is true, while the former [proposition], since it states as future something which is not future, is false. Hence now 'Christ will be crucified' is false and heretical, and nevertheless it was true before Christ was crucified. Against the second proof, I say that it is changed in that its significate is brought into being and becomes present, and is no longer future. And it is not confirmed in its truth by this [change], as has been said.

And thus it is clear that his first argument is not valid. I add further that if it were valid, it would have been proved that no present proposition is contingent, but that they are all necessary; which however is evidently false, according to even anyone. To prove this, take 'Peter is sitting', which anyone would allow is not necessary, and suppose that it is now true for the first time. I prove this by supposing that it is immutably true, as follows: if it could be changed, [that would happen] either at the instant at which it is true, in which case it would at the same time be true and false, which is impossible; or at some earlier instant, but this is not so because it was not true beforehand and it cannot lose its truth before it has it; or at a later instant, but [this is not so] because in that case that truth passes into the past etc. Therefore, since we find no instant at which it can be changed, it is immutably true. All the proofs [here] are his, and even so the conclusion is false.

Against his other argument, if that distribution is common to all past and future instants, it is clear from what we have said that the minor premiss is false; but if it is restricted to the instants which precede the instant at which the thing is made, and it is understood that it is immutably (that is, necessarily) true, then the major premiss is false, which is clear from what has been said and from the second and third conclusion of the second article.

His second proposition is true and not contrary to the foregoing, so we do not need to reply to his arguments.

### **Against the Principal Arguments of the Question**

[The response] to the first principal argument is clear from what has been said. For a contingent is not determined by the determinacy of the necessary, that is, because it is going to happen of necessity or of necessity it is not going to happen; rather, it is undetermined by the determinacy of necessity (negatively) or of possibility (affirmatively), as we said above. But it is determined by the determinacy of facts, that is, because either determinately it will be or determinately it will not be. And therefore one proposition about the future is determinately true and the other determinately false – but contingently.

Ad secundam rationem dico quod talis propositio est contingens, nec idem est apud me propositionem hanc vel illam determinate esse verum et eam esse necessariam. Et quid sit respondendum ad ulteriorem processum, patet ex dictis. Unde, sicut dicebatur<sup>7</sup> quod illa 'omne quod est quando est etc' est tantum vera, si sit condicionalis et denotetur necessitas consequentiae, aut si sit de condicionali praedicato, qui forte modi mutuo convertuntur, sic dico quod similiter tantum in altero duorum sensuum vel utroque haec est vera 'omne quod est verum, quando est verum, de necessitate est verum', cum hoc tamen stat quod simpliciter sit contingenter verum; et hoc quoad primam formam. Quoad secundam etiam eodem modo dico quod 'omne quod est futurum, quando est futurum, de necessitate est futurum', et cum hoc stat quod simpliciter loquendo sit futurum contingenter.

Ad tertiam dico quod in hac parte Philosophus deceptus est et turpiter et philosophice et logice erravit, ut patet ex dictis, et virtualiter suis dictis alibi contradixit, sicut 4 Metaphysicae<sup>8</sup>, ut patet in articulo secundo, et in libello<sup>9</sup> De bona fortuna, ubi dicit deum videre futura, sicut patet<sup>10</sup> in praecedenti quaestione. Et ideo non solum a nobis, sed a se ipso etiam in hac parte negandus est.

<sup>7</sup> cf p 265,29 sqq

<sup>8</sup> cf ARISTOT Metaph 3,6-7 (101 lb 15-27; Juntina 8,95AC = tc 27); cf p 247

<sup>9</sup> cf ARISTOT Eth Eudem 7,14 (1248a 38-39); *vide etiam* J. Hamesse, *Les Auctoritates Aristotelis*, Louvain – Paris 1974, p 249 no 9

<sup>10</sup> cf p 221, nota 12

Against the second argument, I say that such a proposition is contingent, and that as far as I am concerned it is not the same thing for one proposition or another to be determinately true as for it to be necessary. And it is clear from the above what we should say in response to the next stretch [of argument]. Hence, just as it was said that ‘everything that is, when it is, etc.’ is only true if it is a conditional which states the necessity of the consequence, or if it is about a conditional predicate – and perhaps these ways entail one another – so I say likewise that ‘everything that is true, when it is true, necessarily is true’ is true only in one or both of the two senses; though with this it remains [true] that without qualification it is true contingently. And so much for the first form. As for the second [form], I also say in the same way that ‘everything which is going to happen, when it is going to happen, necessarily is going to happen’, and with this it remains [true] that speaking without qualification it is going to happen contingently.

Against the third [argument], I say that in this matter Aristotle is deceived and that he has erred shamefully, philosophically and logically, as is clear from what has been said, and he virtually contradicted his own words elsewhere, as in *Metaphysics* 4, as we saw in the second article, or in his little book *On Good Fortune*, where he says that God sees future things, as we saw in the previous question. And therefore in this matter he is to be gainsaid not only by us but also by himself.

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