

MEDIEVAL THEORIES ON THE CONCEIVABILITY OF THE IMPOSSIBLE: A SURVEY OF IMPOSSIBLE *POSITIO* IN *ARS* *OBLIGATORIA* DURING THE 13TH-14TH CENTURIES

IRENE BININI*

Abstract: During the 13th century, several logicians in the Latin medieval tradition showed a special interest in the nature of impossibility, and in the different kinds or ‘degrees’ of impossibility that could be distinguished. This discussion resulted in an analysis of the modal concept with a fineness of grain unprecedented in earlier modal accounts. Of the several divisions of the term ‘impossible’ that were offered, one became particularly relevant in connection with the debate on *ars obligatoria* and *positio impossibilis*: the distinction between ‘intelligible’ and ‘unintelligible’ impossibilities. In this article, I consider some 13th-century tracts on obligations that provide an account of the relation between impossibility and intelligibility and discuss the inferential principles that are permissible when we reason from an impossible – but intelligible – premise. I also explore the way in which the 13th-century reflection on this topic survives, in a revised form, in some early 14th-century accounts of *positio*, namely, those of William of Ockham, Roger Swineshead and Thomas Bradwardine.

Keywords: Conceivable vs. inconceivable impossibility; *positio impossibilis*; *Tractatus Emmeranus*; William of Sherwood; Walter Burley; William of Ockham; Roger Swineshead; Thomas Bradwardine.

1. Introduction: *obligationes* and the analysis of impossibility

By the end of the 12th century several logicians in the Latin medieval tradition began to develop a special interest in logical argumentations based on impossible premises, and hence the “need for a form of consequence which

* This research has received funding from the European Union’s Horizon 2020 research and innovation programme, under the Marie Skłodowska-Curie grant agreement n° 845061.

could be used in reasoning about acknowledged impossibilities” arose.¹ This interest and need have their origin in the logical developments taking place in the first half of the century, more specifically in the ‘discovery’ of the difficulties related to the modal definition of *inferentia* and the paradoxes deriving from it, such as the principle that ‘anything follows from the impossible’. But the interest in the logical behaviour of impossible premises also stems from theological concerns, and particularly from the necessity to provide an account of doctrinal truths which are metaphysically or naturally impossible, such as the Trinity or the coexistence of human and divine nature in the same individual.

Not only were late-12th-century and 13th-century logicians interested in what validly follows from the impossible – they also paid special attention to *the nature of impossibility* itself, and to the *different kinds of impossibility* (or even, the different *degrees* of impossibility) that could be distinguished. This discussion resulted in an analysis of the modal concept with a fineness of grain unprecedented in earlier modal accounts. Several divisions of the term ‘impossible’ were proposed, such as that between *per se* and *per accidens* impossibilities; between absolute and qualified impossibilities; between the impossible in itself (*inquantum impossibile*) and the impossible derived from a union or division of terms; between syntactic and non-syntactic impossibilities; and finally – which will be the main interest of this article – between impossibilities that can be the object of understanding or belief and those that cannot, or, in other words, between what we would now call ‘conceivable’ and ‘inconceivable’ impossibilities.

The debate on the nature and taxonomy of impossibilities took place in several logical contexts in the 13th century, most prominently in the literature

1 MARTIN 2018, 354.

on *syncategoremata* and on *ars obligatoria*. To my knowledge, however, it is only in the latter that the distinction between conceivable and inconceivable impossibilities becomes particularly relevant, especially in connection with the discussion of what was called *positio impossibilis*. Impossible *positio* is a specific species of *positio* obligation in which the initial postulation, advanced by the opponent and conceded by the respondent at the start of the dispute, is an impossible statement – either a *natural* impossibility, such as ‘a man is a donkey’, or alternatively some metaphysical, doctrinal or pragmatic impossibility, like ‘an infinity exists in actuality’, ‘God is not three and one’, ‘you concede that you are dead’ or ‘Socrates ceases to know that there is nothing he ceases to know’. Not all authors agreed on the admissibility of an impossible *positum* in an obligatory dispute, but the logicians who did agree often claimed that an impossible premise could be accepted on two conditions: (i) as long as it does not entail a contradiction or anything ‘more impossible’ than the premise itself; and (ii) as long as it is an ‘intelligible impossibility’, one that is fit to be held as an opinion or entertained as a belief by a rational interlocutor. In this article, I consider some 13th-century tracts on obligations that provide an account of the relation between impossibility and intelligibility, and I examine the ideas that they offer on the nature of impossibility and the kind of inferential principles that are permissible when we reason from an impossible premise. I also explore some of the ways in which the 13th-century reflection on this topic survives, though in a revised form, in the early 14th century.

The distinction between conceivable and inconceivable impossibilities can be found in one of the earliest treatises we have available on this topic, the anonymous *Tractatus Emmeranus de impossibili positione*, which will be the subject of Section 2. The author of this tract presents some impossible state-

ments as ‘intelligible’, in the sense that we may form an understanding of one “as if it were true.”² Impossibilities like ‘God is a man’, ‘a man is a donkey’ and ‘Socrates is Brunellus’ are of this sort, and are contrasted with other kinds of impossibilities which are entirely unintelligible, such as ‘a man is not a man’ or ‘a whole has no parts’. Two later tracts on obligations – the one presumably written by Sherwood in the middle of the 13th century (analyzed in Section 3) and Burley’s composed in 1302 (Section 4) – report a similar division, namely one between *opinabiles* and *inopinabiles* impossibilities. The former are those whose falsity is not universally and immediately manifest and that may thus be entertained as the object of thought or even belief. This encompasses both physical impossibilities like ‘the Earth is greater than the Sun’, and natural or metaphysical impossibilities like, again, ‘a man is a donkey’ or ‘a man is not animal’. *Inopinabiles*, on the contrary, are impossibilities to which no rational understanding would ever assent, since their opposites’ truth is patently and *per se* known, like ‘a whole does not have parts’, ‘a good thing is a bad thing’ or ‘an animal is not an animal’.

Although the distinction between *opinabiles* and *inopinabiles* impossibilities is not to be found in later tracts, some of the ideas concerning the relation between impossibility and intelligibility developed in the 13th century do clearly underlie 14th-century theories of *positio*, such as Ockham’s theory of *ars obligatoria* included in the *Summa* (ca. 1324), Roger Swineshead’s tract on obligations (ca. 1330–5) and Thomas Bradwardine’s *De causa Dei* (1344). These 14th-century works will be considered in the final section of this article (Section 5).

2 DE RIJK 1974, 117–8.

2. *Tractatus Emmeranus de impossibili positione* and the intelligibility of some natural impossibilities

Among the oldest sources available to us that offer a discussion of impossible *positio* is the tract known as *Tractatus Emmeranus de impossibili positione* (*TEI*). This short but extremely interesting work offers both a justification of why impossible *posita* are admissible in *positio*, and an analysis of the nature of their impossibility and of the inferential principles that are applicable when reasoning from them. The tract is found in a Munich manuscript (clm 14458, f. 40^{va-vb}) that formerly belonged to the library of the monastery of Sankt Emmeran, from which its name is derived; It has been edited by De Rijk in 1974.³ It has received some attention in recent literature,⁴ where it is often discussed in parallel with the tract on *positio falsa* (*TEF*) that can be found in the same part of the manuscript and which, as De Rijk noticed, is written in the same mid-13th-century handwriting. We have no clear evidence on who the author of the two tracts was, nor when exactly they were composed. There are, however, elements indicating that the doctrines advanced in *TEI* still belong to the tradition of 12th-century Parisian logical schools: there is an explicit reference to the school of the *Parvipontani* (which the anonymous author calls *Adamiti*, as the school was sometimes called in England)⁵ and to one of the principles governing their logic for conditionals, namely that ‘anything follows from an impossible antecedent’. Moreover, the author relies on some of the key elements of Abelard’s theory of conditionals, as well as several is-

3 DE RIJK 1974, 96. Translation in YRJÖNSUURI 2001(1), 217–223. Unless otherwise specified translations of the text are taken from Yrjönsuuri.

4 Apart from DE RIJK 1974, see also MARTIN 1992; MARTIN 2001; YRJÖNSUURI 2001; MARTIN 2018.

5 See in particular DE RIJK 1974, 102. De Rijk takes this as the sign that the tract on impossible *positio*, although showing familiarity with the Parisian logical tradition, was not necessarily written in Paris, but might have been written in England, where some of the logical theories from the Continent migrated at the turn of the 13th century (*Ibid.*, 102–3).

sues and terminological features that were unique to Abelard's followers, the *Nominales*. For this reason, it has been proposed that the author of *TEI* might have belonged to the epigones of the school of the *Nominales*, and that the first years of the 13th century are the most plausible date for its composition.⁶ Even though there certainly is an Abelardian flavour to the theories advanced in this tract, it must be noted that there are also significant ways in which the author distances himself from Abelard's views, in fact reshaping some of his ideas on impossibility and entailment into a quite different paradigm, as we will see.

In the opening section of the tract, two arguments are advanced supporting the claim that (some) impossible statements can be used as *posita* in a logical disputation. The first argument establishes an analogy between the use of impossible and possible *positio*: just as we may postulate and concede a possible *positum* "in order to see what follows from it" (*ut videatur quid inde sequitur*), similarly, an impossibility may also be conceded "in order to see what would happen" (*ut videtur quid inde accidat*). This claim is based on the authority of Aristotle, who allegedly admitted that an impossibility could be used as a premise "to see what would follow."⁷ The author, however, does

6 On the connection between *Tractatus Emmeranus de positione impossibili* and Abelard's school see MARTIN 1992, 124; MARTIN 2018, 353–4.

7 DE RIJK 1974, 117–8. A similar claim may be found in another 13th-century text, the so-called *Obligationes Parisienses* (edited in DE RIJK 1975). Here, the anonymous author writes that "an impossibility must be posited in order to see what would follow from it" and attributes the idea to Aristotle (*Ibid.*, 52: "*Et hoc vult Aristoteles. Dicit enim: 'impossibile ponendum est ut videatur quid inde sequitur'*"). It is not clear to which Aristotelian passage the two authors are referring. As De Rijk writes in his edition of the *Parisienses*, the phrasing is not found in Aristotle. According to YRJÖNSUURI (2001(2), 25), this principle presents affinity with what Aristotle claims in the *Prior Analytics* on the idea of assuming a possibility "in order to see whether anything impossible follows." According to Martin, on the contrary, the textual basis for this principle is not found in Aristotle but rather in Boethius' *De Hypotheticis Syllogismis* (I, 2, 6), in which Eudemus' views are reported about those impossible hypotheses (*positiones*) that can be agreed upon "in order that reason may be pursued to its limit" – what Martin has called the "Eudemian procedure." (MARTIN 2001, 64–6)

not elaborate on this idea of ‘exploring what would happen’ once an impossibility is posited, nor does he comment further on the Aristotelian grounds supporting this idea.

The second argument advanced to justify the use of impossible *positio* is more engaging: the author claims that there are some impossibilities that we do in fact use in philosophical discourse, for instance when we say that ‘God is a man’, which is impossible by virtue of an incompatibility between the nature of *deitas* and that of *humanitas*. Not only do we use this statement as a premise, he continues, but we also *have an understanding* of what it says, meaning that we can conceive what things would be like if it were true (*nos possumus intelligere Deum esse hominem esse verum*). Analogously, we should admit that impossible statements like ‘a man is a donkey’ are similarly intelligible or conceivable. Indeed, a man being a donkey seems even more intelligible than God being a man, since humanity and deity are more ‘remote’ than *humanitas* and *asinitas* with respect to nature (*secundum naturam*).⁸

Note that the latter statement, which is often used to exemplify *positio impossibilis* in the medieval literature on the subject, is also mentioned in *TEF* as a case of *per se* impossibility, there contrasted with impossibility *per accidens*. A *per se* impossibility, in that context, is characterized in terms of an incompatibility with nature, as what can in no way be true because of a natural repugnance between the form that is predicated and the *res* which is the subject.⁹ A *per accidens* impossibility, on the contrary, is a statement that ‘be-

8 The parallel between the two cases of impossibility is not unmotivated: there is plenty of evidence of the application of impossible *positio* to doctrinal matters in theological contexts, where many natural impossibilities (the Trinity being the most patent example) are accepted as reasonable. On the use of *positio impossibilis* in theological contexts see MARTIN 2001; YRJÖNSUURI 2000; KNUUTTILA 1997.

9 DE RIJK 1974, 113, 12-5: “Impossibile per se est illud quod nullo modo potest esse verum, quando scilicet forma predicati naturaliter repugnat rei subiecti, sicut hoc ‘homo est asinus’.”

comes' impossible only by virtue of a certain determination added to it (*respectu alicuius determinationis*), like the temporal qualification 'in this instant' in 'It is impossible for Socrates to be white in this instance'.¹⁰ Assuming that the two tracts were written by the same author, we might infer that he maintains there are *per se* or 'absolute' (namely, non-qualified) impossibilities that are nevertheless intelligible.

Another intelligible impossibility that the author considers in *TEI* – which again he claims to be derived from Aristotle, although from which passage is not clear – is the scenario in which a fish is removed from the water in such a way that nothing else assumes its place. This is a different form of impossibility than the ones mentioned above, not consisting in the predication of naturally incompatible terms but rather in the violation of a law of physics, the impossibility of a void.¹¹ Despite it being physically impossible, the author again claims that we can have an understanding of this scenario, just as we can conceive of a man being a donkey or God being a man. It is indeed the intelligibility of such situations that ensures the admissibility of the corresponding statements as *posita*: the author repeatedly observes that any statement, possible or impossible, can be used in *positio* as long as it is conceivable. This is because “when we can understand, we can posit, and thus concede” (*Et ita cum possumus intelligere, possumus ponere, et ita concedere*).¹²

From the fact that some impossible statements are intelligible and thus

10 Although we rarely encounter this distinction between modalities *per se* and *per accidens* in the 12th century, the distinction proposed here strongly resembles the distinction between 'absolute' and 'qualified' or 'determinate' modalities that was advanced by Abelard and other 12th-century logicians. See on this BININI 2021, 33–44; 177–182.

11 For this interpretation of the passage see YRJÖNSUURI 2000, 59.

12 DE RIJK 1974, 118, 2. See also *Ibid.*, 118, 7–8: “Since we can posit that which we can understand, it is clear that an impossible *positio* must be admitted and an impossible conceded” (*cum possumus ponere illud quod possumus intelligere, patet quod impossibile positio est recipienda et impossibile est concedendum*). Both translations are from YRJÖNSUURI 2001(1), 217.

positable, however, it does not follow that any impossibility whatsoever should be admitted. The author stresses that not all statements including “two terms that are opposite in a contradictory way”¹³ (*duo contradictorie opposita*) should be used in *positio impossibilis*. The kind of impossibility that is brought about by the predication of contradictory opposites, as in ‘a man is not a man’, is thus seen as a different and more problematic impossibility than the one derived from the predication of physical or metaphysical incompatibles, like ‘man’ and ‘donkey’ or even ‘man’ and ‘God’. Statements predicating such contradictory impossibilities seem to be entirely *unintelligible*, perhaps because we could not form an understanding of what things would be like if they were true.

Other given examples of unintelligible impossibilities are statements that do not contain but nevertheless entail a predication of contradictory opposites. The *positum* ‘a man exists necessarily’, which is not unintelligible *per se*, becomes so when we specify that ‘being mortal’ is part of the definition of man. Adding this to the *positum* would lead to a predication of contradictory opposites (‘a man can and cannot die’), so that “this kind of impossible statement cannot be posited in any way” (*tale impossibile nullo modo potest poni*).¹⁴ This shows us that the intelligibility and admissibility of a given statement may be context-sensitive, depending on which other claims are used as assumptions. Another impossible statement which is ruled out as entirely inadmissible and unintelligible is the paradoxical claim ‘Socrates ceases to know that there is nothing he ceases to know’ which, as the author says, “*nullo modo potest poni*,” again for the reason that a predication of two contradictory opposites could be derived from it.

An objection is raised at this point: shouldn’t the statement ‘a man is a

13 DE RIJK 1974, 118, 14–5.

14 *Ibid.*, 119, 29–30.

donkey' be ruled out as inadmissible on the same grounds, because of the risk of entailing a contradiction? Indeed, if we take the *inferentia* (*) 'if something is a man, it is not a donkey' as valid, one could use it to derive that 'something which is a donkey is not a donkey', which is an unintelligible impossibility. And such an inference does seem valid because, as the author states, the consequent follows from the antecedent by virtue of nature (*naturaliter sequitur*). In answer to this objection, the author of *TEI* offers his views on the specific kind of *consequentia* that is permitted in the context of *positio impossibilis*. He says that inferences like (*) are not acceptable in this context because, just as we posit and concede *posita* not with respect to *what is possible in nature* but with respect to *what is intelligible or conceivable*, similarly we must evaluate consequences – and the inseparability relationship between things that a good *consequentia* is supposed to represent – not *secundum naturam*, but rather *quantum ad intellectum*, with respect to what can be conceived as united or separated. Because being a man and being a donkey, though naturally incompatible, can be understood as united in the same subject, it does not follow *quantum ad intellectum* that if something is a man, it is not a donkey. More generally, the author concludes, any consequence in which a negation follows from an affirmation is not permitted, because it would not follow with respect to the understanding.¹⁵

As Martin has pointed out, the latter principle to which the author appeals (that a negation cannot validly follow from an affirmation) was one of the distinguishing principles of Abelard's theory of conditionals (and, more

¹⁵ *Ibid.*, 119, 8–15: "Solutio. Cum impossibilis positio non habeat fieri respectu nature sed quantum ad intellectum, cum ille due forme non possint esse in eodem subiecto naturaliter, bene sequitur quantum ad naturam: 'si est homo, non est asinus'. Sed quia potest intelligi quod ille due forme sint in subiecto, quantum ad intellectum non sequitur. Unde cum impossibilis positio habeat quantum ad intellectum, patet quod in impossibili positione non debet concedi consequentia in qua negativa sequitur ex affirmatione."

specifically, that the *locus* from opposites is not an acceptable ground for a good *inferentia*). Also of Abelardian origin is another criterion that the author mentions, namely, that only consequences in which “the understanding of the consequent is contained in the understanding of the antecedent” (*intellectus consequentis clauditur in intellectu antecedentis*) are admissible in *positio impossibilis*.¹⁶ This clearly echoes what has been called Abelard’s ‘containment criterion’ for the truth of conditionals, expressed in the *Dialectica* as requiring, in order for an *inferentia* to be valid, that the *sensus* of the consequent be already contained in the *sensus* of the antecedent, so that the antecedent “by itself requires the consequent.”¹⁷ The author of *TEI* refers to these as *consequentiae rectae*.

Nevertheless, there are also some aspects of the view presented in *TEI* that are not found in Abelard, and indeed seem to go partly against his theory of conditionals. For one thing, the author stresses that the ‘containment’ which is supposed to be present between consequent and antecedent is purely *epistemic*, as the containment of an understanding in another understanding (*intellectus in intellectu*). Abelard, on the other hand, thought of the

16 *Ibid.*, 118, 17–22: “Preterea. Notandum quod eadem est ars falsi positionis et impossibilis positionis. Unde notandum quod sicuti in falsi positione omne hoc quod sequitur ex positio, est concedendum, sic in impossibili positione omne sequens ex positio est concedendum; ‘sequens’ dicitur secundum rectam consequentiam. Et est recta consequentia quando scilicet intellectus consequentis clauditur in intellectu antecedentis.” The author returns to the same point a few lines later, writing that: “Sed tantummodo illa consequentia est concedenda in hac questione in qua intellectus consequentis clauditur in intellectu antecedentis.” As has been noted, this criterion is the reason why the author excludes the principle *ex impossibili quodlibet sequitur* from impossible *positio*.

17 On Abelard’s criterion see in particular MARTIN 2004; MARTIN 2018. Note, however, that the terminology used by the author of *Tractatus Emmeranus* for his criterion – of an *intellectus* being included (*clauditur*) in another *intellectus* – is not exactly the same as the one that Abelard used in his *Dialectica*, where he rather speaks of the sense (*sensus*) of the antecedent requiring (*exigere*) that of the consequent, or alternatively of the sense of the consequent being contained (*continere*) in that of the antecedent. We find terminology similar to that of *Tractatus Emmeranus* in another 13th-century tract on obligations, which is attributed to Nicholas of Paris. Here, a good natural consequence is said to be “*cum consequens in antecedenti clauditur*,” see BRAAKHUIS 1998, 69, 27–8.

containment between antecedent and consequent as a metaphysical, semantic and epistemic relation: for him, an *inferentia* like ‘if something is a man, it is an animal’ is good and necessary because (i) being an animal is a property that is part of the nature of man; (ii) ‘animal’ is included in the meaning of ‘man’; and finally, (iii) the understanding (*intellectus*) of ‘animal’ is included in that of ‘man’.¹⁸ Even though the metaphysical relation expressed in (i) is the ultimate source for the validity of the inference – for Abelard takes the nature of things as the *vis inferentiae* of all good (non-formal) conditionals – he stills seems to use (i)–(iii) as if they were interchangeable. The reason for this might be that, according to Abelard, the domain of *intelligibility* is entirely coincident with the domain of *metaphysical possibility* – in the sense that what can be conceived coincides with what is compatible with the nature of things.¹⁹ The congruity between the domain of nature and the domain of *intellectus* allows him to pass from talking about metaphysical to talking about epistemic relations in a way that the author of *Tractatus Emmeranus* seems to find unacceptable. For him two things or two forms may be inseparable with respect to nature but perfectly separable in the intellect and, conversely, the relation of metaphysical containment between one substance and its essential forms may have no correspondent on the level of the understanding – one may be able to intellectually separate a human from their rationality or mortality, or to unite being man and being donkey in the same understanding. It does not seem to me that our author has misunderstood Abelard on this point, as Martin has suggested,²⁰ but rather that he has lost confidence in something that Abelard took for granted: that our ways of understanding and

18 There is some evidence, though, that when Abelard speaks of the containment of a *sensus* in a *sensus*, what he means is in fact the containment of an *intellectus* in another *intellectus*. Although he is not very explicit on this in the *Dialectica*, this is remarked at least once in his *De Intellectibus*: cf. MARTIN 2004, 183 on this point.

19 On this see CAMERON 2020, *passim*, and BININI 2021, p. 211–2.

20 MARTIN 2001, 67.

conceiving things necessarily mirror and replicate the way in which things naturally are. In his view, there is a mismatch between what is naturally (in)compatible and what is intellectually (im)possible, and this discrepancy is reflected in the two different ways of defining (im)possibility: according to nature and according to the intellect.

Just as the inseparability between things can be considered with respect to nature or with respect to the intellect, so the relation of following – which represents such inseparability – can be distinguished as being valid *respectu naturae* or *quantum ad intellectum*. *Tractatus Emmeranus*, then, showcases what we may define as an ‘epistemic turn’ in the definition of *consequentia* and in the modal ideas of (in)compatibility or inseparability between things to which the notion of following was traditionally associated. This epistemic definition does not replace the nature-based account that was given by Abelard and others in the 12th century, but is proposed by the author as an alternative to it, and the two criteria for modality and consequence are said to be applicable in different contexts: the naturalistic one when we deal with possible postulations, the epistemic one when we reason starting from an impossible *positum*.

As we will see, the author of *TEI* is not the only author in the 13th century to relate modalities and *consequentiae* to psychological or epistemic notions. Indeed, the association between the notion of impossibility and the domain of intelligibility or conceivability was also acknowledged and suggested by others, especially in connection with impossible *positio* and, more generally, with the idea of reasoning from impossible premises. Some of these views will be the object of the next section.

3. William of Sherwood(?) on 'credible' and 'incredible' impossibilities

Another 13th-century tract containing an analysis of impossible *positio* is the *De Obligationibus* attributed to William of Sherwood, which Romuald Green provisionally edited in 1963.²¹ Four manuscripts preserve this work: (i) Paris, B.N. Ms. lat. 16617; (ii) Venice, San Marco, Ms. X 204 (Z.L. 302); (iii) Erfurt, Amplon, Ms. 4^o 259; and (iv) Paris, B.N. Ms. lat. 16130.²² The tract is particularly interesting because it is the only one, among the tracts on *ars obligatoria* written in the mid 13th century, to include a separate discussion of impossible *positio* and of the inferential rules that are admissible in such disputational contexts. Other works on obligations dated to the same period – like the *Obligationes Parisienses*,²³ the *De Petitionibus Contrariorum*²⁴ and Nicholas of Paris's *Obligationes*²⁵ – only seem to take false but possible statements as *posita*, and do not discuss *positio impossibilis* as such, even though they do offer views on the nature of impossible propositions and their logical behaviour, as we will see. It is significant, then, that Sherwood claims that at least some impossibilities are admissible in a *positio* dispute. Also significant is the reason offered to justify their admissibility, which echoes the one advanced in the earlier *Tractatus Emmeranus*: since some impossibilities are intelligible and may even constitute the object of an interlocutor's belief, Sherwood maintains, they should be conceded as premises in a disputation.

Before proceeding with the analysis of this text, something should be said on its paternity, which has been the object of some controversy. Green

21 GREEN 1963.

22 For a description of these manuscripts and their interrelation see SPADE, STUMP 1983, 11 ff.

23 DE RIJK 1975.

24 DE RIJK 1976. The text is preserved in the same manuscript that also contains Sherwood's (?) *De Obligationibus*: Ms. Paris, B. N. lat. 16. 617, f. 64v.

25 Preserved in Ms Paris, B. N. lat., 11.412 and edited in BRAAKHUIS 1998.

was the first to present the attribution to William of Sherwood as doubtful,²⁶ and Spade and Stump then added further reasons to object to it,²⁷ proposing that the treatise should rather be dated to a much later period, being written perhaps by Burley or by one of his contemporaries at the turn of the 14th century. This they argued by highlighting the level of sophistication of the theory advanced in the text (particularly, its appeal to a rather complex taxonomy of *consequentiae*), in addition to further reasons. More recently, however, other researchers put the question of paternity back on the table, presenting convincing arguments in favour of the attribution to Sherwood and thus dating the text to 1240–1260. They objected to the attribution to Burley by pointing out that the level of doctrinal sophistication that is found in these *obligationes* is in fact entirely compatible with the logical developments in the middle of the 13th century.²⁸ In addition, Braakhuis identified another tract on *ars obligatoria*, which he attributed to Nicholas of Paris and dated to 1230–1250, and which presents many doctrinal and terminological similarities to the tract attributed to Sherwood, suggesting that the latter was likely written around the same time.²⁹ Although none of these studies settle the question definitively, I do find the evidence provided by Martin, Braakhuis and others very compelling. If we also reconsider this question in light of the recent studies which have been done on mid-13th-century theories of *consequentiae*,³⁰ we get the clear impression that the views advanced in our tract are perfectly in tune with the logical climate in which Sherwood wrote and taught. Therefore, I will here refer to this tract as the product of William of Sherwood, and shall compare it with his *Syncategoremata* and his *Introductiones in Logicam*.

26 GREEN 1963; but see DE RIJK 1976, 28, note 11 questioning Green's reasons for doubting the attribution to Sherwood.

27 SPADE, STUMP 1983, *passim*.

28 D'ORS 1990; MARTIN 2001; BRAAKHUIS 1998; and VOS 2008.

29 BRAAKHUIS 1998, 152–3.

30 See in particular SPRUYT 2018.

According to Sherwood, all *positio* disputes start from a false *positum*. False *posita* are divided into two categories: possible and impossible ones, both of which are acceptable in *positio*. For impossible *posita*, however, the author puts forward two questions: (i) whether any impossibility whatsoever may be posited; and (ii) according to which inferential principles should the reasoning proceed once an impossibility is conceded? In answer to the first question, Sherwood observes that a *positum* always stands for an opinion (*opinio*), namely, for the object of thought or belief that a philosophical interlocutor may entertain in her mind, and based on which a dialectical dispute could be launched. If all *posita* are meant to represent an *opinio*, the author continues, it follows that only those impossibilities are admissible that can be entertained as the object of thought or belief (*quae possunt opinari*) – but not all impossibilities are of this sort. Impossibilities may indeed be divided into ‘credible’ and ‘incredible’ ones (*opinabiles vs inopinabiles*). Although Sherwood does not define the term (*in*)*opinabile*, in medieval logic and rhetoric this word was often used – along with others such as *probabilis*, *credibilis*, and *verisimilis* – to indicate an “eligible opinion,” namely “an opinion (or proposition) [that] was not only prima facie adoptable, but also fit to be held as true.”³¹

The distinction between *opinabiles* and *inopinabiles* impossibilities that Sherwood is presenting here – which is also found in Burley’s tract on obligations, as we will see in Section 4 – resembles the one between ‘intelligible’ and ‘unintelligible’ impossibilities that was evoked in *Tractatus Emmeranus*, where the anonymous author also presented the domain of ‘positability’ as coincid-

31 SCHUESSLER 2019, 37. In chapter 1 of this book, Schuessler argues that the terms ‘*opinabilis*’, ‘*credibilis*’ and ‘*probabilis*’ were used as synonymous either in the sense of ‘reputable’, ‘probable’ or ‘approvable’ opinion, or also in the sense that a certain proposition was “fit for adoption and sufficiently, although not optimally, backed by reasons for truth” (*Ibid.*, 37–8). Being fit for adoption in a dispute, i.e., being such that it could be held as true, seems to be exactly the meaning that Sherwood has in mind here.

ent with that of ‘intelligibility’. However, whereas in *Tractatus Emmeranus* the impossibilities categorized as ‘unintelligible’ were associated with the notion of contradiction and the predication of contradictory opposites (the author claimed that unintelligible statements are those that include or entail *duo contradictorie opposita*), Sherwood outlines the distinction between *opinabiles* and *inopinabiles* impossibilities not in strictly logical terms, but rather in epistemic ones. An ‘incredible’ impossibility is defined as the opposite of a statement the truth of which is certain and immediately manifest to everyone. Statements like ‘every whole is greater than its parts’, for instance, are evident in such a way that anyone, upon hearing them, believes that they are true. The opposites of these claims, thus, cannot be entertained as beliefs by any rational agent. On the other hand there are statements whose truth, despite being necessary, is hidden and not universally accessible, such as ‘the Sun is greater than the Earth’. The opposites of these claims are impossibilities that *can* be understood or believed, and as such can also be used in *positio*.³²

In his tract, Sherwood gives us a few examples of incredible impossibilities: apart from the aforementioned (i) ‘every whole is not greater than its parts’, (ii) ‘a good thing is a bad thing’ and (iii) ‘a man is not a man’ are also presented as entirely *inopinabiles*, and thus unusable as *posita*. These are contrasted with other predications of natural opposites, such as (iv) ‘a man is a donkey’ and (v) ‘a man is not an animal’, which the author rather takes as intelligible and credible, and therefore admissible in *positio*. It is important to

32 See GREEN 1963, 24: “Habito de positione possibili, sequitur de impossibili, et primo videndum est an quodlibet impossibile possit poni. Secundo, qualiter procedendum est in tali positione. Cum igitur positio est opinio, impossibile quod non potest opinari, non potest poni ut patet, et huius sunt aliqua. Sunt enim quaedam quae ita sunt vera et manifesta, quae, mox audita, sunt manifesta, quale est hoc quod opinatur: ‘omne totum est maius sua parte’. Et horum opposita nullo modo possunt opinari nec poni. Iterum, sunt alia latentia, quorum opposita possunt opinari, et huius possunt poni.” [I have slightly changed Green’s punctuation.]

notice that contradictory statements like (iii), which we would now categorize as *syntactic* or *formal impossibilities*, are included in the domain of unbelievability but do not exhaust it. The reason for their incredibility seems unrelated to their structural or syntactic features. Nor do incredible impossibilities appear to coincide with *natural* or *metaphysical* impossibilities, otherwise statements like (iv) and (v) would be the most plausible candidates. On the contrary, Sherwood suggests that (i)-(iii)'s being *inopinabiles* depends on something to do with our epistemic faculties: these propositions' falsity, he claims, is so beyond doubt that no rational interlocutor may ever entertain them in her mind and believe that they are true, since the truth of their opposites is immediately obvious, as was said. Sherwood's claim that the truth of statements like 'a whole is greater than its parts' is such that, "as soon as we hear them" (*mox audita*), we believe that it is true seems to mean that our knowledge of these claims is not the product of a process of reasoning, and is thus not mediated by our knowledge of other claims.

We may think that statements like (iv) 'a man is a donkey' or (v) 'a man is not an animal' are also immediately and manifestly false, and thus unintelligible. One reason in favour of this view is their similarity to statements like (ii) 'a good thing is a bad thing', which Sherwood holds as 'incredible' on the basis of the authority of Aristotle. Another reason is that believing that 'a man is a donkey' or 'a man is not an animal' seems to be, at least at first sight, the same as believing that (iii) 'a man is not a man' or (vi) 'an animal not an animal', which are "even more incredible" (*multo fortius non potest opinari*) than (ii). Moreover, just as the author of *Tractatus Emmeranus*, Sherwood also thinks that predications like 'a man is a donkey' are *per se* impossibilities, that is to say, they are impossible in every moment of time and in an absolute

sense.³³ Notwithstanding these reasons, Sherwood argues that metaphysical impossibilities like (iv) and (v) are in fact believable, unlike (ii) or (iii). This has to do, once again, with the way in which we know things, rather than with these things' natures or with the formal structure of a statement: even though we could never intellectually separate *being a man* from *not being a man*, nor reasonably conceive *being good* and *being bad* as united in the same thing (as the knowledge of one is intrinsically connected to the knowledge of the other), it is nevertheless possible to conceive *being a man* and *being a don-*

33 Although Sherwood does not elaborate on the distinction between *per se* and *per accidens* modalities in this tract (he uses this terminology in his discussion of *positio*, but never defines it), he does provide a characterization of these concepts elsewhere, in both his *Introductiones in Logicam* and his *Syncategoremata*. Not dissimilarly from his contemporaries, Sherwood thinks that a *per se* impossibility, which he also labels 'absolute', is an impossibility with respect to any moment of time, either past, present, or future; a *per accidens* impossibility is one that cannot be true with respect to the present or the future, but could have been true in the past. Examples offered for the latter kind of impossibility are past statements like 'I did not walk', whereas 'a man is a donkey' is the standard example for *per se* or absolute impossibility. See e.g. SHERWOOD 1983, 232, 37–41: "Et sciendum, quod impossibile dicitur duobus modis: (1) uno modo, quod non potest nec poterit nec potuit esse verum, et est impossibile per se, ut: 'Homo est asinus'. (2) Alio modo, quod non potest nec poterit esse verum, potuit tamen, ut cum dicam: 'Ego non ambulavi'. Et est impossibile per accidens." See also Sherwood's *Syncategoremata* (Sherwood 2012, 152) where the distinction between absolute and *per accidens* impossibility is discussed in the section devoted to the syncategorema *si* and in connection with the distinction between natural and nonnatural consequences. It is worth noting here that the way in which Sherwood presents the distinction between two kinds of impossibility, in purely temporal terms, slightly differs from the characterization of the same distinction given in *TEF*, where the author presents *per accidens* impossibility as a generally 'qualified' form of impossibility, as impossibility "respectu alicuius determinationis," in contrast to an absolute or unqualified one. For *Tractatus Emmeranus*, temporal determinations are just one of the several determinations that may qualify impossibility, thus rendering it *per accidens*. Moreover, *Tractatus Emmeranus* presented absolute impossibility not simply as the sempiternal impossibility of being true but rather as general "incompatibility with the nature of things." These features indicate that *Tractatus Emmeranus* more closely resembles 12th-century Parisian logic, whereas the characterization of *per se/per accidens* modalities that is offered by Sherwood is in line with the later, mid-13th-century way of categorizing modalities. We find a distinction between *per se* (or *simpliciter*) and *per accidens* impossibilities similar to that of Sherwood in both Nicholas of Paris' *Obligaciones* (BRAAKHUIS 1998, 165 and 189, 31–7) and in *Obligaciones Parisienses* (DE RIJK 1975, 32, 24–28). In both 'a man is a donkey' exemplifies *per se* impossibility.

key as united in one subject, or *being man* and *being animal* as separated. This may happen if the knowledge we have of humans is imperfect and not *per se*.³⁴ Again, what Sherwood says on this point echoes an idea that was already present in *Tractatus Emmeranus*, even though less emphasis was placed on the notion of knowledge in the earlier tract: the two texts are similar in that they both distinguish (in)separability *at the level of nature* from (in)separability *at the level of the intellect*. The distinction that both treatises advance between intelligible and unintelligible (or credible and incredible) impossibilities is aimed at capturing this mismatch between nature and our understanding of things.

Just as in *Tractatus Emmeranus*, the admissibility of statements like ‘a man is a donkey’ or ‘a man is not an animal’ as *posita* has repercussions for the kind of inferential principles that are accepted in *positio impossibilis*. As one might know, Sherwood denies that *consequentiae infinitae* can be used in this disputational context, meaning by this the two principles according to which ‘anything follows from the impossible’ and ‘the necessary follows from anything’.³⁵ In doing so he is once again on the same page as the author of *Tractatus Emmeranus*, who also denied the validity of the *ex impossibili* principle in *positio impossibilis*.³⁶ Sherwood thinks that in a *positio* of any sort, both

34 GREEN 1963, 25, 11–22: “Contingit enim cognoscere hominem imperfecte cognoscendo ex quibus est secundum naturam, ut materiam et formam suam, vel ex quibus secundum rationem, ut genus et differentiam. Cognoscens ergo hominem primo modo solum potest opinari hominem non esse animal, nec est idem quod opinari animal non esse animal. Contingit etiam opinari hominem esse asinum, vel primo modo vel secundo modo cognoscendo hominem; asinum, tamen, cognoscendo opposito modo. Et sic ista possunt poni. Bonum, tamen, esse malum non potest opinari, quia quantum habet aliquis de cognitione boni, tantum habet de cognitione mali, cum malum sit privatio et recessus a bono.”

35 In the *Synkategoremata*, consequences of this sort were labelled as *innaturales*, as opposed to natural consequences. The same distinction may be found in Nicholas of Paris, and other 13th-century logicians advance similar divisions. Cf. SPRUYT 2018, 337.

36 The *Tractatus Emmeranus*, however, only spoke of the principle concerning impossible antecedents, without taking into consideration the case of necessary consequents. Nich-

possible and impossible, only *consequentiae finitae* are permitted, and these include two kinds of inference: those in which the antecedent *cannot be true without* the consequent, like: ‘if something is a man, it is able to laugh’ or ‘if something is a man, it is not a donkey’; and those in which the consequent is ‘understood’ (*intelligitur*) in the antecedent, as e.g. ‘if something is a man, it is an animal’.³⁷

These examples may sound puzzling, given what Sherwood had said so far on the admissibility of statements like ‘a man is a donkey’ or ‘a man is not an animal’ as the starting point of a *positio* argument. For these premises, in addition to the inferential principles just mentioned, would result in a very short and uninteresting dispute, since the conjunction of the *positum* ‘a man is a donkey’ with the inference ‘if something is a man, it is not a donkey’ would immediately lead to a contradiction and, consequently, to a termination of the dispute. What Sherwood adds, however, is that the validity of the aforemen-

olas of Paris, who wrote a tract on obligations presumably in the same time period as Sherwood did, also denied the validity of the two principles ‘anything follows from the impossible’ and ‘the necessary follows from anything’ in *positio* disputations in which impossibilities or necessities *per accidens* are conceded. See BRAAKHUIS 1998, 220, 25–31: “Quod concedimus de necessario per accidens, sicut impossibile per accidens potest poni, dicentes quod in his obligationibus attendende sunt tantummodo antecedentia et consequentia naturalis, scilicet cum consequens in antecedenti clauditur, et cum antecedens sine consequenti esse non potest, et cum consequens de necessitate est, si antecedens est; et ita non habebit(?) hic locum illa regula: ‘ex impossibili quiclibet’, ‘necessarium <ad> quiclibet sequitur’.”

³⁷ GREEN 1963, 26, 11–24: “Quaeritur quae consequentia attendenda est in hac positione. Est enim consequentia duplex: aut finita, aut infinita. Infinita dupliciter: aut ex parte ante, qua dicitur quod necessarium sequitur ad quodlibet, aut ex parte post, qua dicitur quod ex impossibili sequitur quodlibet. Neutra istarum est hic attendenda, tum, quia infinita, et ob hoc, extra artem, cum, quia sic omnia essent sequentia, et sic non esset hic meta. Finita autem dupliciter est: quando consequens intelligitur in antecedente, et quando consequens non potest esse verum sine antecedente, cum non intelligitur in ipso. Exemplum primae: ‘si homo est, animal est’. Exemplum secundae est: ‘si homo est, risibile est’, vel: ‘si Socrates est homo, non est asinus’.” In this respect, the theory advanced by Sherwood differs from that put forward in *Tractatus Emmeranus*, which only admitted the latter *consequentiae*, those based on containment, as valid in impossible *positio*.

tioned inferential principles is somehow context-sensitive, in the sense that it depends on the premises of the disputation itself. If one posits, at the beginning of the dispute, that a man is not an animal, and this is conceded by the opponent as positable (and thus, as credible), then the *ratio* by virtue of which the inference ‘if something is a man, it is an animal’ was supposed to be valid – namely, the fact that being animal *is contained* in being man – is “destroyed” by the *positio*, because by positing such a statement we are agreeing upon the fact that being an animal is in fact not contained in the understanding of being a man (“*ponimus quod ‘animal’ non sit in intellectu ‘hominis’*”).³⁸

The same is the case for other impossible *posita*, like ‘a man is a donkey’, whose use in *positio* invalidates some inferential principles – for instance the consequence ‘if something is man, it is not donkey’ – by “destroying the *ratio*” on which those inferences were based. What Sherwood says on this point clarifies that like the author of *Tractatus Emmeranus* he, too, intends the containment at the basis of the validity of consequences as an *epistemic containment*, of one *intellectus* in another.³⁹ Unlike metaphysical containment, which should be invariable and independent of our ways of understanding and speaking of things, the epistemic containment that Sherwood has in mind here is context-dependent in various ways: it may depend on the agents participating in the disputation, on the knowledge that they have of the things under discussion (and thus on what they count as believable), or on which

³⁸ *Ibid.*, 27, 4–14: “Ad alia dicendum quod reliquae duae consequentiae [namely, ‘*si est homo, est animal*’ and ‘*si est homo, non est asinus*’] sunt sustinendae in omnibus positionibus, in quibus causa et ratio istarum consequentiarum non destruuntur ex positione. Et propterea, si ponamus hominem non esse animal, ponimus quod ‘animal’ non sit in intellectu ‘hominis’, et sic destruimus causam praedictae consequentiae. Item, si ponamus hominem esse asinum, ponimus per consequens hominem et asinum non esse opposite, et sic destruimus causam praedicate consequentiae. In quibuscumque, ergo, istarum consequentiarum causae non destruuntur ex positione, in his sunt sustinendae haec consequentiae, in aliis autem non.”

³⁹ For this interpretation see also YRJÖNSUURI 1990, who speaks of ‘conceptual containment’ in relation to Sherwood’s theory of obligations.

other postulations are made at the beginning of the dispute. Consequently, the inferential principles that are admitted in this sort of dispute are similarly context- (and maybe even agent-)dependent.

4. Impossibility and intelligibility in the early 14th century: the *De Obligationibus* of Walter Burley

The distinction between *opinabiles* and *inopinabiles* impossibilities can also be found in the treatise on obligations composed by Walter Burley in 1302.⁴⁰ As Sherwood before him, Burley points out at the beginning of his discussion of *positio impossibilis* that one cannot posit any impossibility whatsoever in disputes of this sort, but only those impossibilities that some have called ‘credible’ (*opinabiles*). Statements like ‘a man is not an animal’ are of this sort, as opposed to others like ‘an animal is not an animal’. Just as Sherwood and the author of *Tractatus Emmeranus*, Burley points out that when a credible impossibility is used in *positio*, the inferential rules that we admit must be restrained: he discards the two principles *ex impossibili sequitur quodlibet* and *necessarium sequitur ad quodlibet* as invalid, for otherwise any statement would both follow and contradict the same *positum*, and thus there would be nothing irrelevant to it.⁴¹ Burley then claims that the consequences which are

40 For a provisional edition and a description of this text, see GREEN 1963. The discussion of *positio impossibilis* is found on pp. 83–4.

41 See *Ibid.*, 83, 10–26: “Sequitur de positione impossibili, et est positio impossibilis quando propositio impossibilis ponitur. Et ideo, in hac positione nihil debet poni nisi impossibile. Non tamen est quodlibet impossibile ponendum, quia impossibile formaliter includens opposita non debet hic poni. Quia, si poneretur, repugnans posito esset concedendum, quia repugnans posito esset consequens ad positum. Et ideo, solum impossibile non includens opposita formaliter debet hic poni. Et quidam dicunt quod solum impossibile opinabile debet hic poni. Et sciendum quod in hac positione non sunt istae regulae sustinendae: ex impossibili sequitur quodlibet; necessarium sequitur ad quodlibet. Nec debet in hac positione sustineri aliqua consequentia infinita, quia si consequentia infinita esset hic sustinenda, posito impossibili quodlibet esset concedendum quia sequens, et quodlibet esset negandum quia repugnans; nam, si quodlibet sequatur, quod-

properly applicable when reasoning from an impossibility are the ‘natural’ ones, which he opposes to *consequentiae infinitae* (or, elsewhere, to ‘accidental’ consequences). Although he does not elaborate on the idea of *consequentia naturalis* in this context, in other writings of his natural consequences are defined in terms of the epistemic or conceptual containment that we have come across in earlier 13th-century texts on impossible *positio*. In his *De Consequentibus*, for instance, Burley says that “*consequentia naturalis est quando consequens est de intellectu antecedentis*,”⁴² using an expression that, as Read has noticed,

pervade[s] English treatments of consequences in the fourteenth century, in particular in the works of Richard Billingham, Robert Eland, Ralph Strode, Richard Lavenham and others.⁴³

Even the validity of natural consequences, though, should be further limited in *positio impossibilis* according to Burley. Only those *consequentiae naturales* are permitted whose truth is manifest and indubitable to everyone, which is the case when the opposites of these consequences cannot be conceived or believed. The natural consequence ‘if something is a man, it is an animal’ is not of this sort, since the opposite of what it says (a man not being an animal) is taken as conceivable or believable. On the contrary, consequences like ‘if this

libet repugnat, et ita esset concedendum et negandum. Et praeter hic, nihil esset impertinens posito.” [I have slightly changed Green’s punctuation.]

42 See GREEN-PEDERSEN 1981, 128, par. 70. For Burley’s theory of consequences see D’ORS 1990 and ARCHAMBAULT 2018. See also BOSMAN 2018, 225–7 for a brief introduction to the interpretation of the ‘containment criterion’ in this tradition, and the literature quoted there (BOH 2000, NORMORE 1993, DUTILH NOVAES 2007) for the epistemic reading of this criterion.

43 READ 2020, 283–4. Read provides a survey of the criteria for the validity of consequences in the 14th-century Oxonian tradition, and a comparison with the Parisian tradition on the same issue. For this analysis of treatments of consequences in late medieval England, Read refers to WEBER 2003.

is a whole, it has parts', or 'if this is a whole, it is bigger than each of its parts' are such that they cannot be put into doubt, and so preserve their validity even when we reason from impossible premises. Thus Burley seems to be following a quite established tradition in characterizing both the notion of impossibility and that of reasoning from an impossibility by appealing to the epistemic or doxastic notions of conceivability, believability, and the distinction of evident vs dubitable truth.

Yet two ideas that emerge during his discussion of impossible *positio* seem to be rather innovative in comparison to the tracts discussed in Sections 2 and 3 above. One is Burley's identification of credible and incredible impossibilities as being different 'degrees' of impossibility: statements like 'an animal is not an animal' are said to be "more impossible" (*magis impossibile*) than, e.g., 'a man is not an animal', even though both are equally impossible with respect to the nature of things. This idea of a 'gradability' of modalities, and of impossibility in particular, is not extraneous to Burley's modal thought. In his *De Puritate Artis Logicae* (the shorter version, written in the 1320s), when discussing the validity of *ex impossibili sequitur quodlibet*, Burley says that such a principle, so formulated, is too coarse-grained: there are in fact different sorts of impossibility, and even though he admits that both the contingent and the necessary follow from an impossible antecedent, it would still be improper to say that the more impossible validly follows from the less impossible. These degrees of impossibility are connected, in that context, to degrees of *apparency* or *evidentness*, whereas in the longer version of *De Puritate* Burley speaks of degrees of truth. Burley makes a similar point in his *quaestio* 'Utrum contradictio sit maxima oppositio', where he again denies that a *minus impossibilis* may follow from something more impossible, and adds that the relation between the less and the more impossible is analogous to that

between the possible and the impossible, that is to say, with respect to the more impossible the less impossible "*habet rationem possibilis*."⁴⁴

Another important innovation of Burley's is his characterization of the distinction between credible and incredible impossibilities in purely syntactic terms, as a distinction between statements that are 'formally impossible', in that they include a predication of terms that are formally opposites (e.g., 'animal' and 'non-animal') and those that include opposites which are incompatible but not formally so (e.g., 'man' and 'non-animal'). Burley equates the idea of formal impossibility to that of repugnancy. Sherwood, as we saw, seemed to have a wider notion of *inopinabilitas*, which included formally contradictory statements but also impossibilities of other sorts: 'a whole is not greater than its parts' and 'a good thing is a bad thing', for instance, counted as entirely *inopinabile* for him. Like Burley, the author of *Tractatus Emmeranus* also characterized the unintelligibility of statements in terms of a predication of contradictory opposites, but did not make clear whether this opposition was conceived in purely formal or syntactic terms. For Burley, on the contrary, the domain of credibility or conceivability seems to coincide with that of syntactic possibility.

Interestingly, this tract on obligations is not the only text in which Burley connects the notion of *propositio opinabilis* with the idea of syntactic or formal possibility. In one of his treatises on Aristotle's *Physics*,⁴⁵ Burley defines as *opinabilis* any proposition which "does not include a formal contra-

44 DE RIJK 1996, 181, par. 24: "Contra: Si consequens plus repugnat alicui quam antecedens, ergo magis impossibile est consequens esse verum cum illo quam antecedens. Sed ad antecedens esse verum cum aliquo sequitur consequens esse verum cum illo. Ergo ex minus impossibili sequeretur magis impossibile, et hoc per se et formaliter. Sed hoc est impossibile, quia minus impossibile respectu magis impossibilis habet rationem possibilis. Sed ex possibili numquam sequitur impossibile formaliter et per se. <Ergo ex minus impossibili numquam sequitur magis impossibile formaliter et per se>."

45 BURLEY 1972. This is the last commentary that Burley wrote on Aristotle's *Physics*, and was written around 1324–1337; cf. ASHWORTH 2013, 136.

diction in virtue of its terms" (*omnis propositio quae non includit contradictionem formaliter ex terminis*).⁴⁶ Interestingly, in this treatise Burley also equates the notion of *believability* with that of *imaginability*, using the two as synonymous and saying that any proposition which is not syntactically contradictory is both believable and imaginable (*opinabilis et imaginabilis*). Burley uses this idea of *opinabilitas* to describe the sorts of propositions that are employed in mathematics or geometry which involve entities and facts that are impossible with respect to the way things actually are but, being noncontradictory, are nevertheless imaginable and conceivable. The natural impossibilities that Burley has in mind are, for instance, the fact that for any given quantity another bigger quantity could be provided, or that the movement of a point creates a line.

The distinction between *opinabile* and *inopinabile* impossibilities is not echoed in obligational treatises after Burley, and seems to be abandoned in favour of other divisions of the modal term – like the one between impossibility *per se* and *per accidens*, or that between *absolute* (or *simpliciter*) and qualified impossibility – which remain in vogue in late medieval theories of obligations like those of Paul of Venice, Tarteys, Wyclif, Peter of Mantua and Paul of Pergola, to mention just a few.⁴⁷ Nevertheless, the association between impossibility and epistemic notions like intelligibility, believability or imaginability does not remain without followers in the first half of the 14th century. In the final section of this article, I will briefly consider three 14th-century accounts of *positio* in which an analysis of (im)possibility is offered and which echo, in different ways, the distinction between intelligible and unintelligible im-

46 BURLEY 1972, III f.81 ra. The passage is quoted and commented on in THIJSSEN 1985, 73.

47 See ASHWORTH 2015, 233 for the idea of *per se* impossibility in Tarteys and Paul of Venice; see PAUL OF PERGOLA 1966, 31 for Paul of Pergola; see STROBINO 2009, e.g. 82–4, 145–7 for Peter of Mantua. Another distinction that is found in early 14th-century Oxonian logic is the one between *impossibilis per se* and *de facto* (cf. KILVINGTON 1990, 249).

possibility that was developed in *Tractatus Emmeranus*, and then revisited by Sherwood and Burley. Although no author will use their exact terminology, the idea of this distinction seems to always lie in the background. The authors that I will consider here are William of Ockham (c. 1287–1347) and the two so-called ‘Calculators’ Thomas Bradwardine (c. 1300–1349) and Roger Swineshead (d. 1365?).

5. (Im)possibility and *positio* in Ockham, Bradwardine and Swineshead

5.1 William of Ockham

Ockham discussed the relation between impossibility and intelligibility in the part of the *Summa* devoted to consequences and to the art of obligations. As one might know, he believed that modal terms should not be restricted to the traditional alethic ones that were acknowledged by Aristotle, but that rather “almost innumerable” modalities exist,⁴⁸ among which many that we would now call epistemic modes, such as the terms ‘intelligible’ (*intelligibilis*), ‘believable’ (*opinabile*) and ‘credible’ (*credibile*) – the latter two being defined as “that to which the intellect could assent.”⁴⁹ Although Ockham does not divide impossibility into the two categories of *opinabiles* and *inopinabiles* used by Sherwood and Burley, there is some evidence that he accepts some impossibilities as being intelligible and believable. For instance, in the *Summa* Ockham mentions a rule according to which it would be invalid to infer, from the fact that something is intelligible or believable (*opinabile*), that it is also possible, although he maintains that the converted inference (from possibility to opin-

48 OCKHAM 1974, 341.

49 *Ibid.*, 398. Ockham seems to treat *opinabile* and *credibile* as synonymous here, as he states that “accipiendo ‘credibile’ pro illo cui potest intellectus assentire sive evidenter sive non evidenter.”

ability) is always valid.⁵⁰ Elsewhere in the same work, Ockham states that *opinabile* can be said of some things whose existence is entirely impossible, such as a chimera, an infinite line, or the void, which are thus intelligible and believable or imaginable.⁵¹ It seems, then, that Ockham – in contrast to some of his Parisian contemporaries like Buridan, for example – does not take the notions of intelligibility and believability as confined to the domain of possibility, but rather as intersecting that of impossibility as well.

Another piece of evidence relevant to reconstructing Ockham's view on the relation between impossibility and intelligibility is his discussion of *positio impossibilis*, which is also included in the theory of consequences advanced in the *Summa*, and was written around 1324.⁵² Here, Ockham states that in the species of obligation known as *positio*, both possible and impossible propositions are admissible as *posita* and could be conceded for the duration of the discussion.⁵³ The notion of impossibility (and that of its modal counterpart, necessity) is not treated as a 'monolithic' notion, though, but is further analyzed and divided into its different species. First, Ockham distinguishes between what has always been impossible (or necessary), and thus was so even before the beginning of the disputation, from what 'becomes' impossible or necessary *infra tempus obligationis*, that is, once the disputation has started

50 *Ibid.*, 641: "Tertio notandum quod omnis propositio in qua ponitur aliquis modus qui non potest competere nisi propositioni verae, infert illam de possibili; sicut sequitur 'omnem hominem esse animal est scitum, igitur omnem hominem esse animal est possibile'. Sed e converso non sequitur, nisi aliquando gratia materiae. Si autem talis modus possit competere propositioni falsae, tunc non infert illam de possibili, quamvis aliquando sequatur e converso. Unde non sequitur 'intellectum non esse animam intellectivam est opinabile, igitur intellectum non esse animam intellectivam est possibile'; sed e converso bene sequitur, quia omne possibile est opinabile."

51 *Ibid.*, 366.

52 For a discussion of this part of Ockham's text, see STUMP 1989, 262 ff.; YRJÖNSUURI 2000, 65–6; GELBER 2004, 187–8.

53 As Ockham points out, this is one of the differences that distinguish *positio* from *casus*, since the latter can only be used to discuss a possible – but counterfactual – situation.

and in consequence to something that has been put forward within it. This distinction resembles the one between *per se* (or absolute) and *per accidens* impossibilities that was common in the 13th century. Whereas impossibilities *per accidens* may be admitted and conceded in any disputation, even those that take their move from a possible *positum*,⁵⁴ Ockham thinks that propositions that are *per se* and sempiternally impossible are admissible only in the species of *positio* that starts with an impossible *positum*. However, not any impossibility is admissible, and Ockham further distinguishes between two categories of *per se* impossibilities: those that are explicitly contradictory or evidently entail contradictions, and do so with respect to any possible interpretation (“*illa propositio impossibilis quae manifeste apud omnem intellectum infert contradictoria*”), and those that are not patently contradictory, nor entail contradictions by means of self-evident inferential rules. While the latter are admissible as *posita*, the former are not. Ockham provides numerous examples of admissible *per se* impossibilities, including pragmatic, natural or doctrinal impossibilities: it is admissible, for instance, that: (i) you respond in *positio* conceding that you are dead; (ii) a man is capable of braying; (iii) a man is not capable of laughter; (iv) God does not exist; (v) God is not three persons; (vi) the Holy Spirit does not proceed from the Son; (vii) God is not wise. Unfortunately, we are not provided with any examples of self-evident and inadmissible impossibilities, but what Ockham probably has in mind are the impossibilities that Sherwood and Burley also called *inopinabiles*, such as ‘a man is not a man’, uttered in a situation in which men exist.

Notice that both admissible and inadmissible impossibilities – ‘a man is capable of braying’ or ‘God does not exist’ on the one hand, and ‘a man is not

⁵⁴ When an impossibility or necessity of this sort is conceded in a disputation of *positio possibilis*, however, the respondent must make sure to react to this proposition (either granting or denying it) consistently throughout the entire disputation, in line with the first reaction that he provided to them.

a man' on the other – all include some sort of contradiction in them or lead to contradiction by means of valid consequences, as Ockham explicitly remarks.⁵⁵ Thus it is not their contradictory nature that discriminates admissible from inadmissible impossibilities, but rather the evident vs implicit quality of the impossibility involved. What Ockham seems to have in mind is thus the same demarcation used in earlier discussions on *positio impossibilis* between impossibilities that are intelligible or believable (for example those impossibilities that are indeed actually believed by “the infidels,” such as that God exists but is not *trinus et unus*)⁵⁶ and impossibilities that are utterly absurd and could not be entertained as an object of thought or belief by any rational interlocutor.

As in the case of earlier discussions of *positio impossibilis*, Ockham too believes that, in order to reason with impossible *posita*, a number of constraints should be placed on the inferential principles that we admit. Just like his predecessors, Ockham denies the validity of principles like *ex impossibili quodlibet*⁵⁷ and provides an epistemic definition of consequence according to which only *consequentiae* that are universally self-evident are to be accepted in such *positiones*. Therefore, even consequences like ‘if the Holy Spirit does not proceed from the Son, the Holy Spirit is not distinct from the Son’, which are

55 OCKHAM 1974, 741: “Ex istis patet quod multae propositiones includentes contradictionem, hoc est inferentes contradictoria, possunt poni positione impossibili, nec propter hoc sunt contradictoria concedenda, quia facta positione tali non omne sequens exposito est concedendum, sed multa sequentia sunt neganda vel non concedenda. Omnia enim quae non sequuntur evidenter, ita quod consequentia talis non potest fieri evidens ex naturalibus, non sunt concedenda propter positum; et hoc sive positum sit una propositio categorica sive sit copulativa ex multis categoricis.”

56 *Ibid.*, 740–1: “Unde multae consequentiae bonae sunt et multae condicionales verae, quamvis non sint evidentes nobis. Similiter, si quaeratur ‘an si Deus sit, Deus sit trinus et unus’, respondendum est quod sic, quamvis infidelis errans aliter responderet, quia illa condicionalis vera est, quamvis non sit evidens.”

57 More generally, any consequence that is material or *ut nunc* is inadmissible when dealing with impossible propositions.

formally and simply valid for Ockham, are inadmissible in the context of *positio impossibilis*, as are all those consequences in which the relation of following is not self-evident.⁵⁸ Similarly, Ockham denies the validity of consequences in which from a certain affirmation the negation of a natural opposite is inferred, such as ‘if something is a man, it is not a donkey’.⁵⁹

We thus have a number of elements in Ockham’s analysis of impossible *positio* that seem to take their origin from the textual tradition explored in the previous sections: the connection between impossibility and believability; the distinction between two kinds of *per se* impossibilities, which are divided on the basis of an epistemic criterion (being believable or manifestly unbelievable); and the correspondent epistemic characterization of the *consequentiae* that are applicable when reasoning from an impossible premise.

It has been noticed by some scholars that the use of *positio impossibilis* came to a decline after Ockham,⁶⁰ and indeed we do not find any analysis specifically devoted to this subject in later literature on obligations, which nevertheless continues to flourish in the 14th century. This does not mean, however, that the notion of impossibility plays no role in 14th-century accounts of *positio*. Quite to the contrary, reflections on the practice of *positio* continued to stimulate a debate on the nature and categories of impossibility. Two interesting cases are those of Roger Swineshead and Thomas Bradwardine, to whom I would like to turn in conclusion of this survey.

58 See e.g. OCKHAM 1974, 741: “Omnia enim quae non sequuntur evidenter, ita quod consequentia talis non potest fieri evidens ex naturalibus, non sunt concedenda propter positum; et hoc sive positum sit una propositio categorica sive sit copulativa ex multis categoricis.”

59 Ockham does not give this example, but he speaks of the invalidity of consequences *de negatione repugnanti*, which makes me think that he has the *locus ab oppositis* in mind: “Omnia enim quae non sequuntur evidenter, ita quod consequentia talis non potest fieri evidens ex naturalibus, non sunt concedenda propter positum; et hoc sive positum sit una propositio categorica sive sit copulativa ex multis categoricis.”

60 Cf. SPADE 1982, 5; MARTIN 1992, 126; GELBER 2004, 189.

5.2 Roger Swineshead

Roger Swineshead's tract on obligations, written around 1330–1335, marks a significant departure from the previous rules of *ars obligatoria*, initiating what was called the 'new way' of answering to obligational disputes, as opposed to the 'old way', represented by Burley.⁶¹ As some scholars have remarked, Swineshead did not admit impossible propositions as *posita* in obligational disputes, limiting himself to the domain of possible (though usually false) postulations.⁶² This is clear when he lists the twelve *suppositiones* at the basis of *ars obligatoria*. Here, he maintains that a proposition whose truth value is not subject to change beyond the limits of the disputation may not be posited. What he means is that all propositions that are necessary or impossible *per se* – that is to say, sempiternally and invariably so – are inadmissible as *posita*. As Ashworth has shown, this seems to have been a widely shared view in the literature on obligations in the period of the Calculators, and especially in the second half of the 14th century, when several authors explicitly restrained *posita* to propositions that are not *per se* impossible or impossible *simpliciter*.⁶³ A man being a donkey was the standard example for this sort of impossibility.

This does not exclude, though, the admissibility of other kinds of impossible statements, namely, those that 'become' impossible by virtue of a certain fact happening in the course of time (*per accidens* impossibilities) or as a result of something that has occurred in the dispute itself, such as the phrase 'nothing has been posited to you' (which we could call, again follow-

61 Swineshead's *Obligationes* are edited in SPADE 1977. See Spade's introduction to this edition for a discussion of the dating, influence, and content of Swineshead's work.

62 Cf SPADE 1977, 254 n. 10; see also DUTILH NOVAES 2006, 129.

63 See for instance Tarteys and Paul of Venice, quoted in ASHWORTH 2015, 233. Peter of Mantua denies that propositions that are impossible *simpliciter* could be admitted and conceded (see ed. STROBINO 2009 81, 26–9; 82, 46–7).

ing Ashworth,⁶⁴ pragmatic impossibilities). So there are at least *some* impossibilities that can be used as *posita* according to Swineshead and his contemporaries. And in fact, the impossibilities that Swineshead considers inadmissible can be restricted further to only those *per se* impossibilities that would entail, by virtue of a valid consequence, something that is ‘more improbable’ (*improbabilius*) and ‘more absurd’ (*maius inconveniens*) than they are – in other words, impossibilities whose admission would lead to something more impossible and thus to an explicit contradiction.

Swineshead’s use of the distinction between the probability and improbability of propositions is worth briefly considering at this point. It is a distinction that is put forward at the beginning of his tract on obligations, where Swineshead says that every proposition is either probable or improbable, and that both categories may be admitted in *positio*. These two kinds of propositions are then distinguished into those that are *simpliciter* and *non simpliciter* (im)probable. A proposition is probable *simpliciter* if it is correctly demonstrable, and improbable *simpliciter* if it is contradictory (*repugnans*) to something that can be or has been demonstrated. Propositions are probable *non simpliciter* if we have reasons to hold them as true and believe that they can be demonstrated – reasons that can be either well-grounded or simply apparent; and propositions are *non simpliciter* improbable if we have reasons to believe that their opposite can be demonstrated and should be held as true.⁶⁵ Now, it becomes clear from what Swineshead says next that propositions which are improbable *simpliciter* (i.e., incompatible with evident and demonstrable truths) cannot be held as *posita* in an obligation, whereas prob-

64 ASHWORTH 2015, 234.

65 Notice that the same proposition, if it is neither evidently true nor evidently false, can be both probable and improbable *non simpliciter*, i.e., there may be reasons to justify both its truth and its falsity. ‘The Sun is bigger than the Earth’ is one such propositions, Swineshead says.

abilities and improbabilities *non simpliciter* ('the Sun is not bigger than the Earth' being the example provided) are admissible in *positio*, so the respondent can be obligated to concede them. Improbable propositions are only admissible insofar as they do not entail anything more improbable: this is because a good consequence, according to Swineshead, should always lead from what is more improbable to what is less improbable, and never the other way around. Swineshead also rephrases this rule by saying that one is never entitled to infer something which is 'more absurd' (*majus inconveniens*) from something 'less absurd' (*minor inconveniens*).

The terminology and the principles invoked by Swineshead at this point have not been fully understood by modern commentators. Yrjönsuuri proposed that, when advancing the aforementioned principle from *majus* to *minus inconveniens*, Swineshead is putting forward an innovative rule, which has no precedents in the earlier literature on obligations.⁶⁶ In my view, however, what Swineshead says at this point on *probabiles* vs *improbabiles* propositions, and on the inferential rules governing them, actually echoes what earlier obligational treatises said on *opinabiles* and *inopinabiles* propositions and on the logical relationship between the two. Swineshead's terminology may very well be a reformulation of that very same distinction, since – as was already mentioned in Section 3 – the term '(in)*opinabilis*' was often used as synonymous with '(in)*probabilis*' in the context of medieval dialectic, to indicate a proposition that is fit to be held as an opinion or entertained as a belief, without being evidently or uncontroversially true (false). As was said in Sections 3 and 4, both Sherwood and Burley admitted that impossible propositions could be held as *posita* (even *per se* impossibilities, like 'a man is a donkey') – but only insofar as such impossibilities did not entail something entirely *inop-*

66 YRJÖNSUURI 2001(2), 21.

inabile, that is, something unbelievable or evidently false, like a patent contradiction. Although reshaping this matter substantially, Swineshead seems to appeal to the same intuition when saying that (some) impossibilities are inadmissible because they would entail something more improbable or improbable *simpliciter* (that is, incompatible with an evident or demonstrable truth). Sherwood and Burley also agreed that the believability of a proposition comes in degrees: one proposition may be more believable than others. Burley associated the different degrees of (un)believability with degrees of impossibility, saying that one should never allow for something that is unbelievable to follow from something believable, or for something that is more impossible to follow what is less impossible, whereas the converse entailment (from more to less impossible) is valid. All this strikingly resembles Swineshead's view that the more improbable cannot follow from the less improbable (whereas the converted entailment is valid), and that something which is more *inconveniens* cannot be conceded on account of what is less *inconveniens*. Rather than introducing an innovative principle in his theory, what Swineshead seems to be doing is providing new terminology and a new systematization to concepts and rules that were developed in the context of *positio impossibilis*.

5.3 Thomas Bradwardine

Gelber argues that the use of impossible *positio* disappeared after Ockham not because of a lack of interest in the postulation of impossibilities, but rather because "impossible *positio* was subordinate to some greater frame of possibility," so that the discussion about the notion of possibility ultimately "swallowed up the impossible."⁶⁷ Even though Gelber advanced this interpretation

⁶⁷ GELBER 2004, 189.

thinking of Robert Holcot's use of *positio*, I believe that her suggestion fits well with the interpretation of another use of *positio* in the first half of the 14th century: the one advanced by Thomas Bradwardine in *De causa Dei* (1344).⁶⁸ Bradwardine's use of *positio* in this work is limited to what he calls *positio possibilis*, so he seems to exclude the use of impossible propositions as initial postulations in a dispute. But his notion of possibility is formulated in such a way that some of the impossibilities that Sherwood, Burley and Ockham considered as intelligible or believable – and as such, as positable – are now subsumed under the category of absolute or *per se* possibility, as Bradwardine labels it. According to his definition of 'possible' – which Bradwardine describes as the usual understanding of the word at the time – any statement is possible which does not include, formally and by virtue of itself (*per se*), an unqualified contradiction. Any statement which satisfies this criterion can be posited and conceded "*pro possibili*" in a *positio* disputation. The admission of any such possibility, Bradwardine points out, never entails a formal contradiction, provided that the inferential principles that are used are "good and formal consequences."⁶⁹ Possibility in this sense is contrasted with what Bradwardine calls absolute or *per se* impossibility, which applies to what *per se* and formally includes a contradiction. Including a contradiction is the same as in-

68 BRADWARDINE 1964. For Bradwardine's use of *positio*, see also MARTIN 1990.

69 BRADWARDINE 1964 I.1, 2: "Sumatur quoque possibile ad communem modum loquendi, vel si oporteat maxime absolute, pro illo videlicet quod per se et formaliter simpliciter contradictionem, seu repugnantiam non includit: Ex quo scilicet, posito et admissio pro possibili absolute secundum speciem obligationum, quae positio nominatur, nusquam in consequentia bona et formali simpliciter, sequitur impossibile absolute, quod scilicet per se et formaliter simpliciter contradictionem includit. Omnis namque repugnantia contradictionem importat et parit." Later in the text, Bradwardine states that this meaning of possibility is the one that is in use among logicians (*apud Logicos*): see *Ibid.* I.1, 4. The definition that Bradwardine gives here of what we may call a 'logical possibility' seems to clash, at least to the modern reader, with the temporal idea of possibility that Bradwardine uses later in the same passage of the text, where he claims that 'absolute possibility' is what *can be*, what *could have been* and what *will be able to be*. On Bradwardine's temporal account of the possible see also MARTIN 1990, 583 ff.

cluding some incompatibility (*repugnantia*), he goes on, because any incompatibility either entails or is equivalent to a contradiction.⁷⁰

The sense of possibility that Bradwardine proposes here is wide enough to include several entities, facts or statements that were earlier categorized as impossible – perhaps conceivable or imaginable, but nonetheless impossible. For instance, Bradwardine says that if we take ‘possible’ in the sense of *per se* and absolute possibility, entities like an infinite straight line or an infinitely rarefied medium are also possible insofar as they do not entail any contradiction, although they are *per naturam* impossible.⁷¹ Similarly possible, on such an account, are situations in which God creates something out of nothing and instantaneously.

With respect to his understanding of modalities, Bradwardine seems to go in the opposite direction from the one that was taken by the authors in the preceding sections, from the anonymous author of *Tractatus Emmeranus* to Burley and Ockham. During the 13th and the early 14th century, logicians made an effort to provide an analysis of impossibility more fine-grained than the one inherited from their predecessors, distinguishing between various senses and even various degrees of impossibility, and providing logical rules to model the behaviour of these different kinds of impossibility. The discussion of obligations, and particularly of *positio*, provided a good context for this analysis of impossibility (together with other contexts, such as the discussion of *syncategoremata*), and the distinction between conceivable and inconceivable impossibilities seems to have arisen in connection with this interest

⁷⁰ This is a point on which Bradwardine differs from what Ockham said in his account of *positio* included in the *Summa*: Ockham claimed that, even though any impossible proposition contains some sort of incompatibility (repugnancy), not all of them give rise to a formal contradiction. Bradwardine, on the contrary, thinks that any impossibility either entails or is equivalent to a contradiction.

⁷¹ BRADWARDINE 1964 I.1, 4.

in the nature of the impossible. Bradwardine's interest and aim in discussing *positio*, on the other hand, is not in the analysis of impossibility, but rather in subsuming some of the things that were earlier categorized as impossible under the wider category of absolute possibility. The latter, and not the former, is the central modal notion of Bradwardine's theory, whereas impossibility is defined and treated as ancillary to it.

Bradwardine has both metaphysical and theological reasons for giving such priority to possibility over its modal counterpart. As has been argued by other scholars, the argumentation that he offers in *De Causa Dei* is centrally based on a metaphysical foundation of modalities in God: Bradwardine thinks that necessity, possibility and impossibility all have their ultimate cause in God and thus depend on his existence and nature.⁷² What has not been highlighted, however, is that such a metaphysical and theological plan also requires a rigid hierarchical ordering among modalities, according to which the possible is (causally and conceptually) dependent on the necessary,⁷³ and the impossible on the possible. Impossibility is thus said to be both metaphysically and logically subordinate to the possible, and its definition entirely reducible to it.⁷⁴ Within this conceptual framework, it is not surpris-

72 On this view see in particular KNUUTTILA 2003 and FROST 2012.

73 'Pure necessity' is said to be the "*radix prima et fundamentum*" of the other modalities, cf. BRADWARDINE 1964, I, 13, 203.

74 *Ibid.*, I, 13, 203–208. Here, Bradwardine also says that the possible 'causes' the impossible. (*Ibid.* I, 13, 207) God, being the cause of necessity and of possibility, is thus the ultimate cause of impossibility as well. For an analysis of Bradwardine's idea that impossibilities are metaphysically founded in God, see FROST 2012, 372–3. See for instance these short extracts from chapter I of *De Causa Dei*: "Ex hoc potest cognosci quòd necessarium est prius impossibili: Possibile enim est prius impossibili sicut affirmatio negatione, habitus privatione, et esse non esse; et necessarium est prius possibili, sicut novissime probatur"; "Item impossibile et possibile dicuntur ad invicem relative secundum privationem [...]; sed de impossibili cum sit pure non ens, nulla relatio per se et essentialiter potest consurgere seu fundari, quia tunc duo pure non entia possent referri ad invicem per se et essentialiter, sine coexigentia alicuius existentis omnino: Ista ergo relatio per se et primo fundatur in extremo positivo, scilicet in possibili, et emanet ab eo, et sic attribuitur, et accidit quodammodo extremo alteri privativo, sicut de relativis tertij

ing that we find no mention of impossible *positio* in Bradwardine. Possibility indeed “swallowed up the impossible,” to quote Gelber once again.

6. Conclusion

The distinction between *conceivable* and *inconceivable* impossibilities, which emerges in the 13th century as part of the general re-analysis of the nature and kinds of impossibility, is closely connected to the development of *ars obligatoria* and the use of *positio*. While discussing the subspecies of obligation called *positio impossibilis*, several authors claimed that an impossible premise could be posited and conceded at the beginning of a dispute at the condition that: (i) this impossibility does not entail anything ‘more impossible’ or outright contradictory; and that (ii) the impossibility involved is an ‘intelligible impossibility’: one that is fit to be held as an opinion or entertained as a belief by a rational interlocutor. A debate then arose on two main issues: which impossibilities count as intelligible (and particularly, whether natural impossibilities like ‘a man is a donkey’ or ‘a man is not an animal’ are among these), and which sort of *inferentiae* are admissible when reasoning from statements of this sort.

The most interesting feature emerging from this debate is that the standard criterion for the validity of natural consequences, which required a metaphysical or semantic connection between antecedent and consequent, was called into question. Authors who accepted impossible *posita* also thought that nature cannot serve as the proper *vis inferentiae* when reasoning

modi proximo dicebatur. Possibile ergo causat istam relationem et impossibilitatem, et necesse est prius possibili esse, et cause illius, sicut superius est ostensum, et Deus est prima causa omnium possibilium et necessariorum, ac omnium causationum illorum”; “Possibile ergo est prima causa huius repugnantiae et impossibilitates, et Deus est prima causa omnis alterius causationis et causae.”

from the impossible, and rather turned to epistemic, doxastic or psychological principles to define the relation of following. The author of *Tractatus Emmeranus* contrasted consequences that are valid *respectu naturae* with those that are valid *quantum ad intellectum*, thinking that only the latter are applicable to intelligible impossibilities; Sherwood thought that positing an impossibility as *opinabile* would ‘destroy’ the source of validity of a natural consequence; both Burley and Ockham restrain *consequentiae naturales* only to those the truth of which is indubitable and manifest to every rational agent. All these analyses of *positio impossibilis* thus stand in contrast with the naturalistic account of consequence and of the relation of (in)separability between things that a consequence is supposed to capture. In the first half of the 14th century, for either logical or theological reasons, the main interest of authors discussing *positio* shifted from the notion of impossibility to that of possibility. Nevertheless, some ideas that were developed by earlier authors about the connection between impossibility and intelligibility survive in a revised form, as both Swineshead and Bradwardine’s uses of *positio* demonstrate.

IRENE BININI

UNIVERSITÀ DEGLI STUDI DI PARMA – UNIVERSITY OF TORONTO*

* irene.binini@unipr.it; Dipartimento di Discipline Umanistiche Sociali e delle Imprese Culturali, Via M. D’Azeglio 85, 43125 Parma PR, Italy.

BIBLIOGRAPHY

ANONYMOUS 2001(1) = ANONYMOUS, “The Emmeran Treatise on False *Positio*”, translated by MIKKO YRJÖNSUURI, in MIKKO YRJÖNSUURI (ed.), *Medieval Formal Logic*, Dordrecht, Kluwer Academic Publishers, 199–216.

ANONYMOUS 2001(2) = ANONYMOUS, “The Emmeran Treatise on Impossible *Positio*”, translated by MIKKO YRJÖNSUURI, in MIKKO YRJÖNSUURI (ed.), *Medieval Formal Logic*, Dordrecht, Kluwer Academic Publishers, 217–223.

ABELARD 1970 = PETER ABELARD, *Dialectica*, edited and with an introduction by LAMBERTUS MARIE DE RIJK, Assen, Van Gorcum.

ARCHAMBAULT 2018 = JACOB ARCHAMBAULT, “Consequence and Formality in the Logic of Walter Burley”, *Vivarium* 56(3–4) (2018), 292–319.

ASHWORTH 2013 = E. JENNIFER ASHWORTH, “Being and Analogy”, in ALESSANDRO CONTI (ed.), *A Companion to Walter Burley*, Leiden, Brill, 135–165.

ASHWORTH 2015 = E. JENNIFER ASHWORTH, “Richard Billingham and the Oxford *Obligaciones* Texts: Restrictions on *Positio*”, in PALOMA PÉREZ-ILZARBE and MARÍA CEREZO (eds.), *History of Logic and Semantics: Studies on the Aristotelian and Terminist Traditions*, Leiden, Brill, 227–245.

BININI 2021 = IRENE BININI, *Possibility and Necessity in the Time of Peter Abelard*, Leiden, Brill.

BOH 2000 = IVAN BOH, “Four Phases of Medieval Epistemic Logic”, *Theoria* 66 (2) (2000), 129–144.

BOSMAN 2018 = BIANCA BOSMAN, “The Roots of the Notion of Containment in Theories of Consequence: Boethius on Topics, Containment, and Consequence”, *Vivarium* 56(3–4) (2018), 222–240.

BRAAKHUIS 1998 = HENK A. G. BRAAKHUIS, “Obligations in Early Thirteenth Century Paris: The *Obligaciones* of Nicholas of Paris (?)”, *Vivarium* 36(2) (1998), 152–231.

BRADWARDINE 1964 = THOMAS BRADWARDINE, *De causa Dei contra Pelagium et de virtute causarum ad suos Mertonensis, Libri tres*, edited by HENRY SAVILE, Frankfurt am Main, Minerva (1st ed. 1618).

BROWN 1966 = MARY ANTHONY BROWN, "The Role of the *Tractatus de Obligationibus* in Medieval Logic", *Franciscan Studies* 26 (1966), 26–35.

BURLEY 1972 = WALTER BURLEY, *In Physicam Aristotelis Expositio et quaestiones*, Hildesheim-New York, Olms (1st ed. 1501).

CAMERON 2020 = MARGARET CAMERON, "The Constraints of Nature(s): Abelard on Modality, Understanding and Linguistic Meaning", in NADJA GERMANN and STEVEN HARVEY (eds.), *The Origin and Nature of Language and Logic: Perspectives in Medieval Islamic, Jewish, and Christian Thought*, Turnhout, Brepols, 369–386.

CONTI 2013 = ALESSANDRO CONTI (ed.), *A Companion to Walter Burley*, Leiden, Brill.

DE RIJK 1974 = LAMBERTUS MARIE DE RIJK, "Some Thirteenth Century Tracts on the Game of Obligation", *Vivarium* 12 (1974), 94–123.

DE RIJK 1975 = LAMBERTUS MARIE DE RIJK, "Some Thirteenth Century Tracts on the Game of Obligation II", *Vivarium* 13 (1975), 22–54.

DE RIJK 1976 = LAMBERTUS MARIE DE RIJK, "Some Thirteenth Century Tracts on the Game of Obligation III", *Vivarium* 14 (1976), 26–49.

DE RIJK 1996 = LAMBERTUS MARIE DE RIJK, "Burley's So-Called *Tractatus Primus*, with an Edition of the Additional *Quaestio 'Utrum contradictio sit maxima oppositio'*", *Vivarium* 34(2) (1996), 161–191.

D'ORS 1990 = ÁNGEL D'ORS, "Ex impossibili quodlibet sequitur (Walter Burley)", *Archives d'Histoire Doctrinale et Littéraire du Moyen Age* 57 (1990), 121–154.

DUTILH NOVAES 2006 = CATARINA DUTILH NOVAES, "Roger Swyneshed's *Obligationes*: A Logical Game of Inference Recognition?" *Synthese* 151(1) (2006), 125–153.

DUTILH NOVAES 2007 = CATARINA DUTILH NOVAES, *Formalizing Medieval Logical Theories: Suppositio, Obligationes and Consequentia*, Dordrecht, Springer.

FROST 2012 = GLORIA FROST, "Thomas Bradwardine on God and the Foundations of Modality", *British Journal for the History of Philosophy* 21 (2012), 368–380.

GELBER 2004 = HESTER GOODENOUGH GELBER, *It Could Have Been Otherwise: Contingency and Necessity in Dominican Theology at Oxford, 1300–1350*, Leiden, Brill.

GREEN 1963 = ROMUALD GREEN, *An Introduction to the Logical Treatise De Obligationibus, With Critical Texts of William of Sherwood [?] and Walter Burley*. PhD thesis, Katholieke Universiteit Leuven.

GREEN-PEDERSEN 1981 = NIELS JØRGEN GREEN-PEDERSEN, Walter Burley, “*De Consequentis* and the Origin of the Theory of Consequence”, in HENK A. G. BRAAKHUIS, CORNEILLE H. J. M. KNEEPKENS, and LAMBERTUS MARIE DE RIJK (eds.), *English Logic and Semantics, from the End of the Twelfth Century to the Time of Ockham and Burleigh: Acts of the 4th European Symposium on Mediaeval Logic and Semantics, Leiden-Nijmegen, 23–27 April 1979*, Turnhout, Brepols, 279–304.

KILVINGTON 1990 = RICHARD KILVINGTON. *The Sophismata of Richard Kilvington. Introduction, Translation, and Commentary*, edited and translated by NORMAN KRETZMANN and BARBARA ENSIGN KRETZMANN, New York, Cambridge University Press (1st ed. 1990).

KNUUTTILA 1997 = SIMO KNUUTTILA, “*Positio impossibilis* in Medieval Discussion of the Trinity”, in CONSTANTINO MARMO (ed.), *Vestigia, imagines, verba: Semiotics and Logic in Medieval Theological Texts (XIIth–XIVth Century)*, Turnhout, Brepols, 277–288.

KNUUTTILA 2003 = SIMO KNUUTTILA, “The Question of the Validity of Logic in Late Medieval Thought”, in RUSSELL FRIEDMANN and LAUGE OLAF NIELSEN (eds.), *The Medieval Heritage in Early Modern Metaphysics and Modal Theory, 1400–1700*, Dordrecht, Kluwer Academic Publishers, 121–142.

MARTIN 1990 = CHRISTOPHER J. MARTIN, “Bradwardine and the Use of *Positio* as a Test of Possibility”, In SIMO KNUUTTILA, REIJO TYÖORINOJA, and STEN EBBESEN (eds.), *Knowledge and the Sciences in Medieval Philosophy: Proceedings of the Eighth International Congress of Medieval Philosophy, Helsinki, 24–29 August 1987*, Helsinki, Yliopistopaino, vol. II, 574–585.

MARTIN 1992 = CHRISTOPHER J. MARTIN, “The Logic of the *Nominales*, or the Rise and Fall of Impossible *Positio*”, *Vivarium* 30(1) (1992), 110–126.

MARTIN 1997 = CHRISTOPHER J. MARTIN, “Impossible *Positio* as the Foundation of Metaphysics or Logic on the Scotist Plan?” in CONSTANTINO MARMO (ed.),

Vestigia, imagines, verba: *Semiotics and Logic in Medieval Theological Texts (XIIth–XIVth century)*, Turnhout, Brepols, 255–276.

MARTIN 2001 = CHRISTOPHER J. MARTIN, “Obligations and Liars”, in M. YRJÖNSUURI (ed.), *Medieval Formal Logic*, Dordrecht, Kluwer Academic Publishers, 63–94.

MARTIN 2004 = CHRISTOPHER J. MARTIN, “Logic”, in JEFFREY E. BROWER and KEVIN GUILFOY (eds.), *The Cambridge Companion to Abelard*, Cambridge, Cambridge University Press, 158–199.

MARTIN 2018 = CHRISTOPHER J. MARTIN, “The Theory of Natural Consequence”, *Vivarium* 56(3–4) (2018), 340–366.

NORMORE 1993 = CALVIN NORMORE, “The Necessity in Deduction: Cartesian Inference and Its Medieval Background”, *Synthese* 96 (1993), 437–454.

OCKHAM 1974 = WILLIAM OCKHAM, *Summa logicae*, in *Opera philosophica et theologica*, vol. I, PHILOTHEUS BOEHNER, GEDEON GÁL, and STEPHANUS BROWN (eds.), St. Bonaventure (NY), Editiones Instituti Franciscani Universitatis S. Bonaventurae.

PAUL OF PERGOLA 1961 = PAUL OF PERGOLA, “*Obligationes*”, in MARY ANTHONY BROWN (ed.), *Logica and Tractatus de Sensu Composito et Diviso*, St. Bonaventure (NY), Franciscan Institute, 102–133.

PICH 2009 = ROBERTO H. PICH, “*Positio impossibilis* and Concept Formation: Duns Scotus on the Concept of Infinite Being”, *Patristica et Mediaevalia* 30 (2009), 45–82.

READ 2020 = STEPHEN READ, “The Rule of Contradictory Pairs, Insolubles and Validity”, *Vivarium* 58(4) (2020), 275–304.

SCHUESSLER 2019 = RUDOLF SCHUESSLER, *The Debate on Probable Opinions in the Scholastic Tradition*, Leiden, Brill.

SHERWOOD 1983 = “William of Sherwood, *Introductiones in logicam*”, edited by CHARLES H. LOHR, PETER C. KUNZE, and BERNHARD MUSSLER, *Traditio* 39 (1983), 219–299.

SHERWOOD 2012 = WILLIAM OF SHERWOOD, *Synkategoremata*, edited and trans-

lated by CHRISTOPH KANN and RAINA KIRCHHOFF, Hamburg: Meiner.

SPADE 1977 = PAUL VINCENT SPADE, "Roger Swyneshed's *Obligationes*: Edition and Comments", *Archives d'Histoire Doctrinale et Littéraire du Moyen Age* 44 (1977), 243–285.

SPADE 1982 = PAUL VINCENT SPADE, "Three Theories of *Obligationes*: Burley, Kilvington and Swyneshed on Counterfactual Reasoning", *History and Philosophy of Logic* 3 (1982), 1–32.

SPADE, STUMP 1983 = PAUL VINCENT SPADE, ELEONORE STUMP, "Walter Burley and the *Obligationes* Attributed to William of Sherwood", *History and Philosophy of Logic* 4 (1983), 9–26.

SPRUYT 2018 = JOKE SPRUYT, "Consequence and 'Cause': Thirteenth-Century Reflections on the Nature of Consequences", *Vivarium* 56(3–4) (2018), 320–229.

STROBINO 2009 = RICCARDO STROBINO, *Concedere, negare, dubitare: Peter of Mantua's Treatise on Obligations*, PhD thesis, Scuola Normale Superiore, Pisa.

STUMP 1989 = ELEONORE STUMP, *Dialectic and Its Place in the Development of Medieval Logic*, Ithaca, Cornell University Press.

THIJSSSEN 1985 = J. M. THIJSSSEN, "Buridan on Mathematics", *Vivarium* 23 (1985), 55–77.

VOS 2006 = ANTONIE VOS, *The Philosophy of John Duns Scotus*, Edinburgh, Edinburgh University Press.

WEBER 2003 = STEPHANIE WEBER, *Richard Billingham "De Consequentibus" mit Toledo-Kommentar*, Amsterdam, B.R. Grüner.

YRJÖNSUURI 1998 = MIKKO YRJÖNSUURI, "The Compossibility of Impossibilities and *Ars obligatoria*", *History and Philosophy of Logic* 19 (1998), 235–248.

YRJÖNSUURI 2000 = MIKKO YRJÖNSUURI, "The Trinity and *positio impossibilis*: Some Remarks on Inconsistence", in GHITA HOLMSTRÖM-HINTIKKA (eds.), *Medieval Philosophy and Modern Times*, Dordrecht, Kluwer, 59–68.

YRJÖNSUURI 2001(1) = MIKKO YRJÖNSUURI (ed.), *Medieval Formal Logic*, Dordrecht,

Kluwer Academic Publishers.

YRJÖNSUURI 2001(2) = MIKKO YRJÖNSUURI, "Duties, Rules and Interpretations in Obligational Disputations", in MIKKO YRJÖNSUURI (ed.), *Medieval Formal Logic*, Dordrecht, Kluwer Academic Publishers, 3-34.