

The ontological foundation of possibilities in 12th century logic

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1. The potency-based account of possibility

Early medieval reflections on modalities are deeply indebted to the modal theories developed by Aristotle in *De Interpretatione*, to which scholars were acquainted through the mediation of Boethius' translation and commentaries. Eleventh- and early twelfth-century authors inherited from Aristotle and Boethius a specific syntactic structure, one that they used to construct propositions about possibility, impossibility, necessity and contingency, as well as a number of rules they applied to describe the logical behavior of such propositions. From the same sources, they also inherited a number of philosophical issues related to modalities, such as the discussion on what should be comprised within the realm of possibility (in particular, whether this should include possibilities that are never actualized), and the problems concerning future contingents and the existence of free agency. Even though these traditional modal views were considerably enriched in the early Middle Ages with a more sophisticated syntax for modal propositions and a more expressive logic, the general framework in which modal language was analyzed remained essentially Aristotelian in spirit. However, the theory of modalities reported by Aristotle and Boethius were also loaded with certain metaphysical assumptions that some early medieval authors felt uncomfortable carrying along. This metaphysical background was mostly connected to the Aristotelian interpretation of possibilities as ontologically funded in the *potencies* or *potentialities* of things, that is in the powers, tendencies or capacities that certain substances have of being otherwise than they actually are.

The term that Aristotle uses for the word “possible” (the Greek *dynatòn*) is said to derive its signification from that of “potency” (*dynamis*; see e.g. *Metaphysics* V 12, 1019b34 ff.), which according to Aristotle is the principle of motion or change that allows a substance to be mutable either with respect to its existence or its properties. For Aristotle, possibilities may be ascribed to individuals insofar as they possess such a principle of change, which enables them to activate or undergo a process in which they transition from being in a certain state to being in a different one. For instance, saying that “it is possible for a doctor to heal” or that “it is possible for a patient to heal” means that the doctor has the power or ability to activate a process of change through which someone goes from being ill to being healthy, and that the patient has the disposition to undergo such a process. This sort of possibilities cannot be attributed to substances that are not susceptible to change with respect to their nature or state. To this invariant and fixed part of reality Aristotle attributes the modality of necessity, which he characterizes in terms of immutability and impossibility of being otherwise (e.g. *Metaphysics* V 5, 1015a33-1015b15; Knuuttila 1993).

Now, as it is very often the case with Aristotle, things are more complicated than this article’s introduction acknowledges. For one thing, it is debatable whether Aristotle took every possibility to be reducible to a correspondent potentiality. In fact, there is at least one passage in which Aristotle affirms that some meanings of the term “*dunatòn*” are not related to the notion of potency, thereby suggesting that the extension of “possible” is wider than that of “potential” (*Metaphysics* V 12, 1019b27-35). Moreover, scholars have often highlighted that the potency-based account of possibility is only one out of several modal paradigms that are mixed together in Aristotle’s texts, and that such paradigms are not always consistent with one another (Knuuttila 1993). Nevertheless, at least in *De Interpretatione* - the only Aristotelian work dealing with modalities that medieval logicians up to the early twelfth-century had at hand - Aristotle seems indeed to analyse every possibility in terms of a corresponding potentiality. In chapters 12 and 13, devoted to the logic of possibility and necessity, Aristotle only takes into account examples of possibility-propositions whose meaning is spelled out in terms of a substance’s abilities or

dispositions, such as “it is possible for fire to warm”, “it is possible for someone to walk” or “it is possible for this cloth to be cut in two pieces”. Here, Aristotle’s claims that the truth conditions of such propositions depend on the fact that the corresponding potencies may come to actuality in present or future situations (e.g. *De Interpretatione* XIII, 23a6-15). The connection between possibility and potentiality is further strengthened by the association established in *De Interpretatione* (e.g. XIII, 23a21-3) between the notions of necessity and actuality: this way, that the pair of concepts *actual/potential* mirrors that of *necessary/possible*.

The potency-based account of possibility was further consolidated in Boethius’ commentaries on *De Interpretatione*. Here, Boethius treats possibility as a genus within which we may distinguish different aspects or species. In his *diuisio*, “possible” is first said of what is actually the case (*quod iam est*), as when we say that it is possible for someone to write because he is now writing: Boethius calls this ‘*possibile actu*’ or ‘*uerum possibile*’. Second, possible is what, though not actually being the case, might nonetheless be (*quod cum non sit esse potest*): this is referred to as ‘*possibile extra actum*’ or ‘*forsitaneum possibile*’ (Boethius 1880 p. 411 ff. and p. 454 ff.). Within the first species of possibility, Boethius further distinguishes possibilities that are always in act (which are in fact necessities), and possibilities that are presently in act, but have existed in potency before being realised and may return to being *extra actum* in the future, e.g. the possibility for a person to walk insofar as she is now walking, even though there are past or future times in which she is seating (e.g. Boethius 1877, p. 203). This second aspect of *possibile actu*, Boethius remarks, is specific to the mutable and corruptible part of the world, in which potency and actuality alternate. The second species of the possible – which includes things that are potentially, though not actually, the case – is itself divided into two categories. On the one hand, there are possibilities that will actualize in the future, on the other hand there are those that will never be actualized, but will

remain perpetually *in potestate*.¹ Except for the part of the possible coinciding with the necessary, every other possibility considered by Boethius in his *diuisio* is interpreted as being funded on a certain potentiality or power (*potentia, potestas*) possessed by a substance. The relation between possibility and potentiality is implicitly assumed throughout the entire commentaries on *De interpretatione* XII-XIII, where Boethius often goes from talking about the *possibilitates* pertaining to a certain individual to the *potestates* or *potentiae* it has to bring something about. On a few occasions, Boethius makes the connection between possibility and potentiality explicit, as for instance in (1880, p. 453), where he affirms that the signification of the term “possible” is derived from that of potency (*possibile a potestate trductum est*). Similarly, in (1877, p. 201-202) he draws a parallel between the multiple meanings of the term *potestas* and the semantic ambivalence of the modal term *possibile*.

According to Boethius’ reading, possibilities that are *extra actum* can also be accounted for in terms of potencies whose ends are unrealized at the time of predication. He thinks that when we affirm that something non-actual is possible, the affirmation is true if the predicated possibility corresponds to a potency or power that exists in a latent, ‘inactive’ state (*potestate tantum*) in the subject. For instance, he says that certain capacities remain in their bearer even when they are not manifest, and because of this we can say that, for instance, it is not impossible for a man who is not walking to walk, insofar as he possesses the *potestas* to do so.² A special case of *extra actum* possibilities are those that may be antecedently attributed to a bearer before their manifestation. Indeed, Boethius thinks that every property or action manifested in a (contingent) subject is preceded by the corresponding potentiality to have that property or perform that action. For instance, he affirms that before I started to write, a *potentia scribendi* existed in me, which

¹ Of this last category, there are some possibilities that remain eternally unrealized because of some contingent development of events, as that of the cloth which can be cut in half but will wear out first (the example is from Aristotle’s *De Interpretatione* IX 19a12-14), and some that are in principle unrealizable, as for instance the existence of an infinite number (Boethius 1877, p. 207 and Boethius 1880, p. 463).

² See e.g. Boethius 1880, p. 203: “nam et quae actu quidem non est, esse tamen poterat, ut homo cum non ambulat, ambulandi tamen retinet potestatem, non est eum impossibile ambulare”.

eventually came to actualization thus allowing me to write (e.g. Boethius 1880, p. 413). At times, Boethius speaks as if antecedent possibilities of this sort could also be truly predicated of subjects that do not yet exist. For instance, he says that Socrates “can be” (*potest esse*) in those times that precede his existence, just as all other mortal beings are first potentially than actually alive.³ He also considers the case of a yet non-existing house, saying that the potency of it being built exists before the house's construction, and it is in virtue of this potency that we could have truly said that ‘it is possible for the house to be’, when in fact there was no such house.⁴

Borrowing the terminology used in contemporary debates on the metaphysics of modality, we could say that Aristotle’s and Boethius’ potency-account of possibility is *realist*, in the sense that possibility is interpreted as a *real and mind-independent feature of reality*, being based on some real features - namely, the abilities, capacities or powers - of real individuals, that is, the substances which bear them (Vetter 2018, p. 291).⁵ In recent years, the interpretation of possibility in terms of potentiality has returned into fashion in contemporary metaphysics of modality, where it is usually defended by claiming that it is more intuitive and closer to common sense than other accounts of possibility, and that is “firmly rooted in everyday life”, for potentialities are “ubiquitous in our ordinary thought about, and dealing with, the world” (Vetter 2018, p. 292). A further advantage of this interpretation is that grounding possibilities in potentialities, that are specific to individuals, allows for a finer-grained treatment of modality than the one permitted by the more classical possible-worlds framework (Borghini 2016, p. 159).

As Knuuttila has pointed out, many philosophers throughout the Middle Ages interpreted modalities by applying the potency-based account of possibility inspired by the works of Aristotle

³ See Boethius 1880, p. 411: “In mortalibus enim Socrates potest esse cum non fuit, sicut ipsi quoque mortales, qui sunt id quod antea non fuerunt.”

⁴ See Boethius 1877, p. 206: ‘quae actu sunt cum potestate, id est quae et actum habent et aliquando habuerunt potestatem, ut fabricata iam domus aliquando potuit fabricari et prius habuit potestatem secundum tempus, postea uero actum.’

⁵ On the existence of powers in Aristotle’s ontology see Marmodoro 2018.

and Boethius (Knuuttila 1993; 2017). As I mention above, however, this understanding of possibility was received with some discomfort by early medieval logicians, who were particularly interested in the nature of *extra actum* possibilities predicated of future individuals or non-existent substances. Their reflection on this sort of modalities uncovered some gaps in the traditional reading of possibilities in terms of potency. For instance, such a framework cannot satisfactorily explain the meaning of propositions like “it is possible for my future son to exist”, in which a possibility is attributed to an object that - not being yet in existence - can bear no capacity. As I propose in section 2, concerns of this sort were already advanced in the works of Anselm of Canterbury, who asked whether we may antecedently attribute potencies to future objects, as when we say that a house can exist before its fabrication, or that the world can exist before creation. In section 3 and 4, I show that Anselm’s examples, together with many other cases of the same sort, return in the texts of Abelard and his contemporaries in the early twelfth century. I then present some of the doubts that logicians of that time raised concerning the possibilities of future individuals and non-existent things, and their attempts towards a new interpretation of possibility that could account for such cases.

2. Anselm on the predication of antecedent possibilities

One early discussion on the relation between potency and possibility - and on how this relation should work when possibilities are ascribed to non-things - is the one found in the *Philosophical Fragments*, an incomplete work by Anselm of Canterbury. In the opening lines of this work, which has the form of a dialogue between a student and a master, the former begins with a question concerning the puzzling notions of potency and impotency (*potestas et impotentia*), possibility and impossibility (*possibilitas et impossibilitas*). One problem emerges from the fact that at times we ascribe possibility to things that cannot bear any *potestas*. For instance, we can say that a house which does not yet exist “can be” (*potest esse*), and by saying this we are attributing a

certain potency (*potestas*) to it. Indeed, Anselm remarks, every ascription of possibility involves the ascription of a potency, for no one doubts that whenever we say that something “can”, it does so in virtue of a potency (*Nullus enim negat omne, quod potest, potestate posse*).⁶ The case under consideration is the same used by Boethius in his first commentary on *De interpretatione* to exemplify possibilities *extra actum*, and in this case the student, who assumes that no *potest*-phrase could be true without an ascription of *potestas* being implicitly involved, seems to adopt the Boethian understanding of possibility as potency described in section 1. The student then proceeds by construing an argument *ad absurdum*, stating that since a non-existing thing cannot bear any potency, it possesses neither the potency to exist nor the potency not to exist. From this follows that (i) *it is not possible for it to exist* and that (ii) *it is not possible for it not to exist*. But from (i) follows that *it is necessary for it not to exist*, and from (ii) follows that *it is necessary for it to exist*, in virtue of the inferential rules holding among modal propositions. We may then conclude that for the same (non-existent) thing it is both necessary to be and not to be, which is absurd (Anselm of Canterbury 1969, 341, 12-39).⁷

Because the *Fragments* are interrupted before the master in the dialogue advances his solution to the student’s puzzle, one can only try to reconstruct Anselm’s way out of the paradox. As Serene (1981) notes, one way to solve cases such as the one raised by the student would be to “transfer” the ability that cannot be ascribed to the non-existent thing (in this case, the future house) to some other subject. This way, one could paraphrase the modal proposition about the house’s possibility as being in fact about some other subject’s capacities, e.g. the house’s constructor. This however does not seem to be Anselm’s strategy here, as he relies instead on distinguishing between

⁶ See Anselm of Canterbury 1969, p. 341, 1-12: “DISCIPULUS. Plura sunt, de quibus tuam diu desidero responcionem. Ex quibus sunt postestas et impotentia, possibilitas et impossibilitas, necessitas atque libertas. Quas idcirco simul quaerendo connumero, quia earum mihi mixta uidetur cognitio. In quibus quid me moueat, ex parte aperiam, ut cum de his mihi satisfeceris, ad alia, ad quae intendo, facilius progrediar. Dicimus namque potestatem esse aliquando, in quo nulla est potestas. Nullus enim negat omne, quod potest, potestate posse. Cum ergo asserimus, quod non est, posse esse, dicimus potestatem esse in eo, quod non est; quod intelligere nequeo, uelut cum dicimus domum posse esse, quae nondum est. In eo namque, quod non est, nulla potestas est.”

⁷ For a more detailed analysis of this argument, see Serene 1981; Knuuttila 2004.

proper and improper ascriptions of the term “possible”. Anselm does not reject the traditional view according to which the term “possible” properly expresses a potency or capacity existing in a subject, but he rather suggests that in certain cases the modal term is used improperly. This happens in cases when the thing to which the capacity is attributed could be considered a subject only in an improper sense, e.g. when it is a non-existing being (Serene 1981, p. 120). Rather than understanding the details of Anselm’s solution, what is important here is that his argument unveils a fragility in the traditional explanation of possibilities as potencies, and suggests that the interrelation between possibility and potency needs to be further explained in cases of non-existing subjects.

Similar concerns about the ascription of possibilities to things that are yet to exist are raised by Anselm in twelfth chapter of *De Casu Diaboli*. Here, while seeking an answer to the problem of whether an angel has the ability to will even though he has never exercised it, another discussion between master and student begins concerning those possibilities that are predicated antecedently to their actualization (*de potestate quae praecedit rem*). According to the student, everything which is at a certain time actual was possible before being actualized. Indeed, he points out, if it was not possible for something to be, then it would never have actualized (*Si enim non potuisset, numquam esset*). The master replies that if something did not exist at an earlier time, it did not possess the potency to exist nor any other potency (*potestas*) before its actualization, for something which does not exist is nothing, and therefore it would seem that no possibility could be predicated of it (*quod nihil est omnino nihil habet, et ideo nullam habet potestatem, et sine potestate omnino nihil potest*). Their discussion is then applied to a specific case: was it possible for the world to exist before its creation? On the one hand, one would intuitively say that it was, since there could be no actuality without a former potentiality and possibility. On the other hand, because the world was nothing before its creation, it had no capability, and therefore no “*potest*”-phrase about it could have been true. The teacher then ‘solves’ the puzzle by saying that it was both impossible and possible that the world existed before creation: impossible because no potency could be predicated of a non-existing subject; possible because another agent (God) had the ability to cause the world to exist before he

actually did so.⁸ Therefore, a modal proposition like “it is possible for an S to be P” is said to be true in two senses: when “S” has the potency (*potestas*) of being P, or when some other thing has the potency to actualise what the proposition “S is P” says.⁹ However, the teacher remarks that the latter is an improper ascription of possibility, for the proper sense of the term “possible” is to ascribe a certain ability to the proposition’s subject, that is, to the thing denoted by “S”. If we speak properly, then, no possibility can be predicated of subjects that do not yet exist (Serene 1981, p. 126; Knuuttila 2004, p. 119).

Both examples employed by Anselm - the possibility that a house has of being fabricated before its actual existence and the possibility of the world to exist before creation - recur in logical sources from the early twelfth-century, together with new cases involving the possibilities of non-existing things like chimaeras or future sons. Similarly to Anselm, twelfth-century authors asked what is signified by the term “possible” in such cases, where there is no proper subject in which to ground the relevant potentialities. Differently from what Anselm suggests in *De Casu Diaboli*, though, early twelfth century logicians did not turn to the idea that these sorts of possibilities could be ontologically grounded in God and his power. As far as I know, there is only one text in which this strategy is mentioned, namely the *Dialectica* of Garlandus, a logical treatise whose dating is still uncertain but that was probably written in the first decades of the twelfth century.¹⁰ While distinguishing between absolute and determinate modal propositions, Garlandus considers the claim “it is possible for birds to fly” (*Possibile est auem volare*), which was employed in Boethius’ *De Hypotheticis Syllogismis* as an example of *absolute* modal proposition, namely a proposition in

⁸ Anselm of Canterbury 1946-61, vol. I, p. 253: “Et possibile et impossibile erat antequam esset. Ei quidem in cuius potestate non erat ut esset, erat impossibile; sed deo in cuius potestate erat ut fieret, erat possibile. Quia ergo deus prius potuit facere mundum quam fieret, ideo est mundus, non quia ipse mundus potuit prius esse.”

⁹ Anselm of Canterbury 1946-61, vol. I, p. 253-4: “Ita ergo quidquid non est, antequam sit sua potestate non potest esse; sed si potest alia res facere ut sit, hoc modo aliena potestate potest esse.”

¹⁰ The authorship of this logical textbook is still debatable. Iwakuma (1992) argued that the author should be identified with Gerlandus of Besancon, who died after 1148, and not with the earlier Garlandus, who was believed to be the author by De Rijk. Because of the uncertainty concerning the authorship, the dating of the *Dialectica* also remains an open question. Marenbon suggests that the text could have been written anytime from the 1080s (or even earlier) to the 1120s Marenbon (2011).

which the modal term is not qualified by any temporal determination, and that as such must be applied to all times (“*omni tempore*”; see Boethius 1969 p. 238). For the proposition to be true, Garlandus notes that it must be possible for birds to fly even in those times in which birds do not exist. Garlandus maintains that this proposition is indeed omnitemporally true, because even when there are no birds it would still be *possible for God* to create them and make them fly (Garlandus Compotista 1959, p. 84).¹¹ Not dissimilarly from what Anselm proposes in *De casu Diaboli*, then, Garlandus suggests that the possibilities of non-existent things are ontologically grounded in the power that God has to bring them about. This is to my knowledge the only case, however, in which such an explanation is used in early twelfth-century logical sources.¹² Rather, the common strategy to deal with modalities of non-things and *extra-actum* possibilities was to reject the traditional idea that modal terms refer to potencies embedded in things, in favour of a different reading of the term “possible”, as I show in the next section.

3. Early twelfth-century logicians on the signification of modal terms

Many sources from the first decades of the twelfth-century raise questions concerning the proper interpretation of the modal terms “possible” and “necessary”, and many authors attempt to develop a semantics for propositions including them. A question about the signification of modes that often returns in sources of this time is whether or not the term “*possibile*” has *denotation*, that is, whether there is some existing *res* to which it refers. More specifically, Abelard’s contemporaries were interested in whether this term denotes a form or property existing in things, so that when we say “It is possible for Socrates to be a man”, what we mean is that a *possibilitas* of some sort inheres in Socrates. A discussion of this topic may be found in Abelard’s *Dialectica*

¹¹ “Item possibile est quod absolute omni tempore contingere potest, ut “possibile est avem volare”: licet enim avis omni tempore non sit, potest tamen contingere ut fiat a Deo et ut volet”.

¹² If Garlandus’ *Dialectica* is indeed from the early twelfth-century; see footnote 10 on this.

(circa 1110-15), as well and in an anonymous commentary on *De Interpretatione* labelled *H9*¹³ and in a brief treatise on modalities, also anonymous but containing references to masters of the time such as William of Champeaux and Goselin of Soissons, labelled *M3*.¹⁴ These last two texts are preserved in the same manuscript and are probably to be dated around the same time period in which Abelard wrote the *Dialectica*, with *H9* being supposedly the oldest among the three texts, and perhaps a common source for both Abelard and the author of *M3*. Despite maintaining very different opinions with respect to the logic of modal propositions, the authors of these three texts answer in the negative as to whether the term “possible” signifies a property inhering in things, and they employ similar arguments to justify their position. This may lead us suppose that this was a shared opinion in their time, and indeed there is no evidence of people defending the opposite view.

In the *Dialectica*, Abelard reports that it is opinion of “some” that by predicating terms like “possible” and “necessary”, one attributes a certain property (*aliqua proprietas*) to things. This cannot be the case, Abelard continues, for if modal terms signified an intrinsic feature of things, then every modal proposition about non-existent objects should turn out to be false, because non-things can bear no property. But evidently there are many such propositions that are true, like “it is possible for my future son to exist” (*filium futurum possibile est esse*)¹⁵ or “it is necessary for chimaeras not to be humans” (*necesse est chimaeram non esse hominem*). Therefore, he concludes that nothing is attributed to non-things by means of modal terms:

¹³ *H9*: Orléans, Bibl. Municipale, 266, 5a-43a; Assisi, Bibl. Conv. Franc., 573, 48rb-67vb. I am very grateful to C.H. Kneepkens for giving me access to his in-progress transcription of *H9*.

¹⁴ *M3* = Orléans, Bibl. Municipale, 266: 252b-257b. A catalogue of twelfth-century logical texts, including the unpublished sources to which I will refer in this article, may be found in Marenbon (1993) and Marenbon (2000a).

¹⁵ In the glosses on *De Interpretatione* contained in the *Logica Ingredientibus*, Abelard offers a different reading of such modal propositions, stating that all claims about possibility and necessity (with the exception of those that are impersonal in both grammatical construction and meaning) have an implicit existential import. Recurring to the same example used in the *Dialectica*, he affirms that the proposition “it is possible for my future son to exist” is false if there is no actual object to which the subject term refers (Abelard 2010, p. 417.639-650). See Binini (2018) on this.

We shall now investigate whether any property is predicated by means of nominal modes,¹⁶ as some people want. They say that by the noun “possible” a possibility is predicated, and a necessity by the noun “necessary”, so that when we say “It is possible (or necessary) for Socrates to be” we attribute a certain possibility or a certain necessity to him. But this is false. There are many affirmations of this sort that are true even though they are about non-existent things, which – being non-existent – admit no property of accidents. Indeed, what does not exist cannot bear anything existent. Of this sort of modals [that is, nominal modal claims], the following are true: ‘It is possible for my future son to exist’, ‘It is possible for a chimaera not to exist’ or ‘It is necessary for chimaeras not to be human’; nonetheless, nothing is taken to be attributed to non-existent things by means of these propositions.¹⁷

Moreover, Abelard continues, paradoxical consequences would follow from interpreting modes as attributing properties to substances, as for instance that “if S will exist, then S actually exists”. Suppose in fact that a certain thing S will exist in some future time. We may then infer that it is possible for S to exist (Abelard does not justify this inference here, but he uses it elsewhere by arguing that “whatever is future is possible”).¹⁸ But if we take the term “possible” to refer to a certain property of *possibilitas* existing in the subject, this implies that “S has the *possibilitas* to exist” (*possibilitatem existendi habet*), and therefore that it itself exists now, which contradicts the premise. Similarly, we may argue that “if S does not exist, it exists”, for if the subject does not exist then it is possible for it not to exist (it would seem, by virtue of the principle - commonly accepted in early medieval logic - that whatever is actual is possible), and therefore S has the possibility not to exist, which implies that S exists.¹⁹ Note that although Abelard uses these arguments to deny that the term “possible” refers to a form of “*possibilitas*”, what they in fact show is more general,

¹⁶ In logical sources of this time, nominal modes (*casuales modi*) are opposed to adverbial ones. Propositions containing adverbial and nominal modes are considered by some authors as having a different nature and a different semantics. Other authors, such as Abelard, argue instead that every nominal proposition, despite a few exceptions, may be rephrased as having a corresponding adverbial form. On the relation between these two categories of modals see Binini (forthcoming).

¹⁷ Abelard 1970, p. 204: “Nunc autem utrum aliqua proprietas per modalia nomina, ut quidam uolunt, praedic[ar]etur, persequamur. Aiunt enim per “*possibile*” possibilitatem praedicari, per “*necesse*” necessitatem, ut, cum dicimus: “*possibile est Socratem esse uel necesse*”, possibilitatem aut necessitatem ei attribuimus. Sed falso est. Multae uerae sunt affirmationes huiusmodi etiam de non existentibus rebus, quae, cum non sint, nullorum accidentium proprietates recipiunt. Quod enim non est, id quod est sustentare non potest. Sunt itaque huiusmodi uerae: “*filium futurum possibile est esse*”, “*chimaeram possibile est non esse*”, uel “*necesse est non esse hominem*”; nihil tamen attribui per ista his quae non sunt, intelligitur.”

¹⁸ “*Quod futurum est, possibile est*” (Abelard 1970, p. 196).

¹⁹ Abelard 1970, p. 204: “Alioquin haberemus quod, si erit, tunc est, vel, si non est, est. Quod sic ostenditur: “si erit, possibile est esse;” unde “et possibilitatem existendi habet”, unde “et est”; qua re “si erit, et est”. Sic quoque: “si non est, est”, ostenditur: “si non est, possibile est non esse”; unde “et possibilitatem non-existendi habet”; unde “est”; “si non est, est”.”

namely that modal terms do not denote *any form* or intrinsic feature of the things that are denoted by the proposition's subject.

In at least two other occasions, Abelard denies that the predication of a possibility amounts to the ascription of a property to a thing. In Abelard (1970, p. 98), he writes that when we say that someone *is able* (not) to be something, we understand no form as being posited by the term “able” (*potens*), but we only intend that being in a certain way is not repugnant to the nature of the subject. This is the signification that we attribute to the term “possible” when it is included in modal propositions.²⁰ The same idea is repeated once more in the *Dialectica*, where Abelard says that when affirming that “it is possible for Socrates to be a man”, we do not attribute any property to anyone (*non aliquam alicui attribuimus proprietatem*), but we simply say that the content of the proposition “Socrates is a man” is one of the things that “nature allows” (*unum de his quae natura patitur esse*).²¹

The idea that the predication of modal terms does not amount to a predication of forms or properties of things is also proposed also in the commentary *H9* (whose arguments Abelard might be in fact rehearsing), in which the author concludes that the modal terms “possible”, “impossible” and “necessary” “do not posit the existence of *anything* in the substances that modal propositions are about” (*nichil ponunt in rebus de quibus agitur in propositionibus illis*). The author of *H9* proposes an argument *ad absurdum* that starts by considering a case in which no thing exists. He then considers the proposition “it is not possible for Socrates to be a stone”, which he takes as evidently true. He then infers the truth of “it is impossible for Socrates to exist”, in virtue of the laws of equipollence among modes, replacing “not possible” with “impossible”. Finally, he says

²⁰ Abelard 1970, p. 98: “Sic quoque et potentiae non esse album, cum sit actus non esse album, ipsi tamen universaliter subdi non potest, ut videlicet dicamus omne quod non est album potentiam illam habere, sed fortasse ita: '*potens non esse album*', ut nullam formam in nomine '*potentis*' intelligamus, sed id tantum quod naturae non repugnet; in qua quidem significatione nomine '*possibilis*' in modalibus propositionibus utimur.”

²¹ Abelard 1970, p. 205: “Similiter et quando dicimus: '*possibile est Socratem esse hominem*', non aliquam alicui attribuimus proprietatem, sed id dicimus quod id quod dicit haec propositio: '*Socrates est homo*', est unum de his quae natura patitur esse.”

that if we intend this affirmation as positing the existence of an *impossibilitas* in the subject, then we must admit that the subject is actually existing, which contradicts the premise. “For this reason - the author concludes - we should say that, when “possible”, “impossible” and “necessary” are predicated in modal claims, they signify possibility, impossibility and necessity, but they do not posit the existence of anything in the substances that modal propositions are about (*nihil ponunt circa res de quibus agitur in propositionibus modalibus*)”.²²

In the treatise *M3*, where the author advances a theory on the signification of modal propositions that is in many respects opposite to Abelard’s,²³ we again find the question on whether the existence of any property is predicated by means of modal nouns (*utrum aliqua proprietas per modalia nomina ponatur*). And, again, we find the idea that this view leads to paradoxical consequences, such as that “if something does not exist, it exists” (*si non est, est*) or “if something will exist, it exists now” (*si erit, est*).²⁴ Having offered this and other arguments, the author of *M3* insists that “clearly many inconveniences follow if we admit that the existence of something is posited by modal words” (*uideamus utrum aliqua proprietas per modalia nomina ponatur. Si enim per ea aliquid ponitur, multa sequentur inconuenientia*).

In another passage of *M3*, the author considers modal propositions about non-things and points out that they reveal important aspects concerning the signification of modal terms. He says

²² See *H9*: Orléans 266, p. 37a-37b: “Notandum etiam quod iste uoces “*possibile*”, “*necessarium*” et alii modi qui predicantur, nichil ponunt in rebus de quibus agitur in propositionibus illis. Si enim ponerent, sequeretur: “*si nichil est, aliquid est*” hoc modo. Verum est enim “*si non est possibile Socratem esse lapidem, tunc impossibile est Socratem esse lapidem*”. Et si quia non est possibile Socratem esse lapidem, impossibile est Socratem esse lapidem. Et quia non est possibile Socratem esse lapidem, Socrates habet impossibile, et ita Socrates est. Et si quia non est possibile Socratem esse lapidem, Socrates est. Et quia nichil est, Socrates est, ab antecedenti, quia si nichil est, Socrates non est; si Socrates non est, non habet possibile, et ita non est possibile, et ita non est eum esse lapidem. Quare si nichil est, aliquid est. Quare dicendum est – quando “*possibile*” et “*impossibile*” et “*necesse*” in modalibus praedicantur – quod significant possibilitatem et impossibilitatem et necessitatem, sed nihil ponunt circa res de quibus agitur in propositionibus modalibus.”

²³ For the analysis of the theory of modals included in *M3* and a comparison with Abelard see Binini (forthcoming).

²⁴ See *M3*, 254b: “Inuestigato sensu modalium, uideamus utrum aliqua proprietas per modalia nomina ponatur. Si enim per ea aliquid ponitur, multa sequentur inconuenientia. [...] Si Socrates erit, possibile est esse Socratem; et sic Socrates habet possibilitatem existendi; et ita est. Item si non est, non possibile est esse, quia si est possibile esse, et est. Si Socratem esse est possibile, Socrates habet possibilitatem existendi; et ita possibilitas est in Socrate; et ita est.”

that there are some who interpret modal claims like “for every human it is possible to be an animal” as if the modal term posited the existence of something (a *possibilitas*) possessed by the subject. This interpretation, however, fails to account for the many cases in which modal claims are true despite their dealing with *non-existent things*, such as “It is possible for a chimaera not to be a goat-stag” or even “It is possible for the world to be created” (*possibile mundum fieri*), if uttered before the creation of the world. The author takes both propositions to be evidently true, and yet, he wonders which thing would be the “possessor” of the possibility, if nothing exists:

There are some who expound [nominal propositions such as] “for every man to be an animal is possible” in this way: “things have the possibility that every man is an animal”. But this cannot be right. Indeed, it is true that “for chimaeras not to be goat-stags is possible”, but if we said that things have the possibility that chimaeras were not goat-stags there would be no thing having that possibility, because neither chimaeras nor the others would exist. And yet the proposition is true. In the same way, if before the creation of the world one said “It is possible for the world to be made”, this proposition would be true, but which things would have the possibility of the world being made, if no thing whatsoever existed? Thanks to this and many other examples, it can be shown that their exposition [of modals] is incorrect.²⁵

The author of *M3* seems to suggest that not only modal terms fail to denote the *possibilitates* existing in the modal proposition’s subject, but also that we cannot “relocate” these possibilities as existing in any other subject. In a case in which the world does not yet exist, there would be no *res* bearing the relevant potency, but it would still be true to predicate the possibility of its existence. The example concerning the antecedent possibility of the world to exist is the same as the one brought up by Anselm in *De Casu Diaboli*, as I mention in the previous section. However, differently from what Anselm says there, the idea that God’s power may grant the truth of propositions like “it is possible for the world to exist” is not mentioned in this nor in similar twelfth-century logical sources. Rather, their authors seem to lean towards the idea that some

²⁵ See *M3* Orléans 266, p. 254b: “Sunt qui exponant ita “*Omnem hominem esse animal est possibile*”: res habent possibilitatem quod omnis homo sit animal. Sed hoc nihil est. Vera est enim “*chimaeram non esse hircocervum est possibile*”; dicemus uero quod res habent possibilitatem quod chimaera non sit hircocervus, quippe nullae res habent illam possibilitatem, quia neque chimaera neque alia, tamen uera est illa propositio. Item antequam mundus fieret, si diceretur “*possibile mundum fieri*”, uera esset talis propositio; sed cum nulla res esset, quae res habebant possibilitatem ut mundus fieret? His et multis aliis exemplis nulla esse ostenditur illa expositio.”

possibilities could be admitted without being analysed in terms of properties or intrinsic features that substances possess, thereby abandoning the traditional potency account of possibility.

Were early twelfth-century authors aware that, by rejecting the traditional potency account, they were also discarding part of Aristotle's theory of modalities? At least Abelard seems conscious of this, as in the *Logica Ingredientibus* he counters Aristotle's view of possibility with his own, by saying that Aristotle interpreted the term "*possibile*" as referring to some *possibilitas* or *potestas*, that is to some form or property existing in a substance, and therefore he made "possible" "a name of things" (*nomen rerum*), that is a name denoting some real component of reality. Abelard claims to have abandoned this idea, and thinks that no form or property is understood when one says "possibility" or "necessity":

Note that, from the words of Aristotle, when he speaks of 'possibilities' (*potestates*) it seems that in the name 'possible' he understands a certain form, that is, a certain potency or possibility, which seems to make [the name 'possible'] a name of things (*nomen rerum*) – a position that we have rejected above. We, on the contrary, do not understand any form when speaking of 'possibility' or 'necessity', but we expound [these terms] according to the meaning of modals.²⁶

In the *Logica*, Abelard further stresses this *de-reification* of the notion of possibility. Appealing to his twofold theory of signification, he argues that modal terms have no denotation (*nominatio*), for they do not refer to substances or to any form possessed by a subject, and that they even no signification (*significatio*), for no image is caused in the hearer's mind when they are uttered outside a context.²⁷ After rehearsing what he has already said in the *Dialectica* - namely that "we cannot take modal terms as forms inhering in things" (*quasi formas aliquas in rebus*), otherwise modal propositions about non-existent beings could not be true - he goes on by saying that

²⁶ Abelard (2010, p. 472): "Nota etiam quod ex verbis Aristotelis, cum ait "*potestates*", uidetur ipse in hoc nomine "*possibile*" (quod etiam nomen rerum facere uidetur) potestatem siue possibilitatem, quandam formam, intelligere, cum ipsum in modalibus propositionibus ponit; quod supra negauimus. Nos tamen, cum dicit "*potestatem*" uel "*necessitatem*," nullas intelligimus formas sed iuxta sensum modalium omnia exponimus."

²⁷ On the notion of *consignificatio* in Abelard and in the grammatical tradition of the late eleventh-century *Glosulae* on Priscian see Rosier-Catach (2003).

“possible” and “necessary” only signify when they are considered in the linguistic context in which they are embedded, as they express a *way of conceiving* the things that are conjoined to them:

Since [the modal nouns] “possible” and “necessary” are not derived (*sumpta*) expressions, and they neither contain any thing by denoting it nor determine any form, it should be asked what is it that they signify. Indeed, when it is said ‘It is possible for what is not to be’, or ‘It is necessary for God to exist’ or again ‘It is necessary for chimaeras not to exist’, we do not intend it in the sense that certain forms exist in these things. We say that in propositions of this sort [the terms] ‘necessary’ and ‘possible’ co-signify rather than having a signification of their own, because nothing is understood in them unless they are applied to the phrase (*oratio*) that is the subject. And therefore, these terms express a way of conceiving the things that the subject phrase is about, just as an interposed verb or the conjunction ‘if’ (which expresses a necessity of conjunction) would do. And, just as in the case of these last expressions no image is created in the understanding, but by means of the verb or the conjunction the mind captures a certain way of conceiving those things that are adjoined to them, the same happens for the terms ‘possible’ and ‘necessary’. And here with ‘necessary’ the meaning is what is inevitable, and with ‘possible’ what is not incompatible with nature.²⁸

4. A new understanding of possibility

At the end of the passage from the *Logica Ingredientibus* quoted above, Abelard mentions his idea, already encountered in other passages, that the modal term “possible” should be understood in terms of “what is not incompatible with nature” (*non repugnans naturae*). This characterisation of possibility often recurs both in the *Dialectica*²⁹ and in the *Logica Ingredientibus*,³⁰ and is at the basis of Abelard’s theory of modalities.³¹ Indeed, as Martin (2016) has recently pointed out, the same definition returns in other logical sources from the early twelfth century, and seems to be a standard characterization of the modal term in this period. In Abelard’s

²⁸ See Abelard (2010, p. 407-408): “At uero cum “*possibile*” uel “*necessarium*” sumpta non sint nec res aliquas nominando contineant nec formas determinant, quid significant quaerendum est; non enim, cum dicitur: “*Id quod non est possibile est esse*” uel: “*Deum necesse est esse*” uel: “*Chimaeram necesse est non esse*” quasi formas aliquas in rebus accipimus. Dicimus itaque necessarium siue possibile in huiusmodi enuntiationibus magis consignificare quam per se significationem habere; nil quippe in eis est intelligendum nisi subiectae orationi applicentur, et tunc modum concipiendi faciunt circa res subiectae orationis sicut facit uerbum interpositum uel coniunctio *si*, quae ad necessitatem copulat; ac, sicut in istis nulla imagine nititur intellectus sed quendam concipiendi modum anima capit per uerbum uel per coniunctionem circa res earum uocum quibus adiunguntur, ita per *possibile* et *necessarium*. Et est hoc loco necessarium pro ineuitabili, possibile quasi non repugnans naturae”.

²⁹ See e.g. Abelard (1970, p. 98; 176; 196-198; 200-204; 385).

³⁰ See e.g. Abelard (2010, p. 266; 408; 414-415).

³¹ On Abelard’s paradigm of possibility as non-repugnance with nature see Knuuttila (1993); Martin (2001); Martin (2004); Thom (2003); Marenbon (2000b).

Dialectica, the definition of possibility as non-repugnancy with nature is presented in connection with his explanation of unrealised possibilities: in a famous passage, he states that the truth value of propositions about possibility does not depend on the actual happening (or non-happening) of things, for there are certain things that are possible even though they are never actualised, such as for instance that Socrates is a bishop. What is needed for a proposition like “it is possible for Socrates to be a bishop” to be true is the absence of an incompatibility relation (*non repugnantia*) between what is expressed by the predicate and the nature of the thing denoted by the subject, namely, Socrates.³²

Similarly to Abelard, also Garlandus advances the same understanding of possibility in connection to the notion of *extra actum* possibilities: while commenting on Aristotle’s idea at the end of *De Interpretatione* 13 concerning the existence of some “pure potencies”, Garlandus states that these are said to be “possible”, though never actualized, insofar as they are not incompatible with nature (*nec natura repugnat nec tamen umquam erit*).³³ As Martin (2016) highlights, early twelfth-century logicians were particularly attracted to possibilities that remain perpetually *extra actum*, and indeed we may suppose that they may have favoured the explanation of possibility in terms of non-repugnancy with nature in order to account for unactualised (and unactualisable) possibilities.

At least two other mentions of this same definition of possibility can be found in sources of the time. Though brief, these mentions are interesting because they suggest that this particular interpretation of possibility might have been elaborated in the early twelfth-century also in response

³² See Abelard (1970, pp. 193-194): ““*Possibile*” quidem et “*contingens*” idem prorsus sonant. Nam “*contingens*” hoc loco <non> quod actu contingit accipimus, sed quod contingere potest, si etiam numquam contingat, dummodo natura rei non repugnet ad hoc ut contingat, sed patiatur contingere; ut, cum dicimus: “*Socratem possibile est esse episcopum*”, etsi numquam sit, tamen uerum est, cum natura ipsius episcopo non repugnet; quod ex aliis eiusdem speciei indiuiduis perpendimus, quae proprietatem episcopi iam actu participare uidemus. Quicquid enim actu contingit in uno, idem in omnibus eiusdem speciei indiuiduis contingere posse arbitramur, quippe eiusdem sunt omnino naturae.”

³³ See (Garlandus Compotista 1959, p. 83-84): “Potentia uero extra actum quam effectus non consequitur, est illa cui nec natura repugnat nec tamen umquam erit, ut cum dico: “*possibile est Iarlandum fieri episcopum*”, numquam tamen episcopus erit.” Notice that, differently from Abelard in the *Dialectica*, Garlandus does not speak here of the nature of a thing but of nature in general.

to the ontological concerns related to “problematic” possibilities, such as those that are predicated of non-existent or future things, that could not be accounted for in terms of properties or potentialities inhering in substances. The first occurrence is in the commentary *H9*, where the anonymous author, while presenting Boethius’ *diuisio* of the many species of “possible”, argues that some *possibilia* may come to actualization after having existed in potency at an earlier time. Borrowing the example that Boethius uses in his first commentary on *De Interpretatione*, the author of *H9* claims that a house that now exists in act was already existing *potestate*, as an *extra actum* potency, before it was fabricated. Perhaps willing to further explain how possibility can be predicated of something that does not yet exist, the author remarks that things of this sort are said to be possible before their existence (*prius potuerunt existere quam fuerunt*) in the sense that their existence is not incompatible with nature (*ita quod natura non repugnat*).³⁴ Although this passage is so brief that any conclusions drawn from it should be regarded as speculative, it is interesting that the analysis of possibility as “non-incompatibility with nature” is used here in connection to the same example that puzzled Anselm’s student in the *Philosophical Fragments*. As I discuss in section 2, the student wondered how one could account for possibilities that are antecedently ascribed to a particular subject, given that no capacity or power could be provided to ground them. While treating the same example, the author of *H9* seems to suggest that no ontological foundation is needed for possibilities of this sort, for he takes the term “possible” to mean the absence of an incompatibility between a certain predication and the nature of things.

A passage of the treatise *M3* also suggests that this new account of possibility was developed to avoid the embarrassment of providing an ontological foundation for possibilities of

³⁴ See *H9*: Orléans 266, p. 39b: “Possibilia alia sunt in actu, alia numquam in actu. Subdiuidit ea etiam que sunt in actu, sic: quod alia sunt in actu sine precedente potestate, ut diuine substantie, alia uero sunt in actu cum precedente potestate, idest prius habuerunt potestatem quam actum, ut fabricata domus. [...] Que, scilicet ea que sunt in actu, priora sunt et digniora scilicet potestatibus natura, idest per naturam ipsius actus. Actus namque natura et dignitate precedunt solas potestates, sed uera sunt posteriora in tempore ipsis potestatibus. Potestas namque, ut dictum est, eos actus secundum tempus precedit. Vel sic. Que priora sunt natura, idest naturaliter, prius potuerunt existere quam fuerunt et *ita quod natura non repugnat*; tempore uero, idest secundum tempus existendi actu, sunt posteriora se ipsis quantum ad hoc quod natura prius potuerunt existere. Alia uero numquam sunt, sed potestate sola, ut quod rusticus fiat episcopus uel rex.”

non-things. As I mention above, the author of this treatise rejects the idea that modal terms signify properties existing in things, because he thinks that propositions like “It is possible for Socrates to be an animal” are true even though Socrates does not actually exist and therefore cannot bear any property. Once presented the many difficulties that would follow from interpreting possibilities as forms existing in things, the author mentions a strategy designed by “Master W.” (probably, William of Champeaux) to expound the signification of modes without an undesired ontological commitment to special kinds of properties or to these properties’ bearers. According to Master W’s interpretation, propositions like “It is possible for Socrates to be an animal” should be expounded “in a negative sense” (*in negativo sensu*), that is to mean that “It is not repugnant to the nature of the thing that Socrates is an animal” (*Socratem esse animal est possibile, id est non repugnat natura rei Socratem esse animal*).³⁵ Again, saying that something is possible amounts to saying that no relation of incompatibility exists between a certain predication and the nature of things, and this could be the case even if the thing in question does not exist.

5. Conclusion

The interest in the modalities of non-existent things or future things pushed logicians from the early twelfth-century to reconsider the semantics of modal propositions and the nature of possibility. As was seen in section 2, concerns about the signification of the term “possible” were present already in the works of Anselm of Canterbury, who wondered how the reading of possibilities in terms of potencies, inherited by Aristotle and Boethius, could be compatible with attributing possibilities to not yet existing things, such as when predicating the possibility of a

³⁵ See *M3*, 255a: “Investigato sensu modalium, videamus utrum aliqua proprietas per modalia nomina ponatur. Si enim per ea aliquid ponitur, multa sequentur inconuenientia. [...] Item si non est, non possibile est esse, quia si est possibile esse, et est. Si Socratem esse est possibile, Socrates habet possibilitatem existendi; et ita possibilitas est in Socrate; et ita est. Quare si possibile est esse, et est. Quare “*si non est, non est possibile esse*” haec et plura alia inconuenientia, si per modales uoces aliquid ponatur, sequi manifestum est. Undem. W. exponebat eas in negativo sensu, ut istam: “*Socratem esse animal est possibile*”, id est non repugnat natura rei Socratem esse animal.”

future house to be fabricated or the possibility of the world to exist before creation. Anselm did not abandon the idea that the term “possible” properly denotes a potentiality or a power embedded in a subject, but he unveils a gap in the traditional explanation of possibilities as potencies, suggesting that this explanation could hardly account for cases in which possibilities are truly predicated of non-existent objects.

As I show in section 3, in early twelfth-century logical sources examples concerning the modalities of non-things and future beings are multiplied, highlighting their authors’ interest in the ontology of modalities. Logicians of this time wanted to speak about things having certain possibilities without committing to the existence of either modal properties or of these properties’ bearers, and in order to do so they unanimously ruled out the idea that modal nouns denote properties existing in substances. To defend this view, all authors of the time recurred to arguments having a similar structure: they admit that certain modal propositions are true even though they predicate the possibilities of a non-existent subject, like “it is possible for my future son to exist” or “it is not possible for (a non-existing) Socrates to be a stone”, and they show that if the term “possible” is taken to refer to a form inhering in the subject, then paradoxical consequences would follow. They therefore deny that the predication of a possibility amounts to the ascription of a property to a thing, and say that terms like “possible” and “necessary” do not posit the existence of anything in the substances that modal propositions are about (“*nihil ponunt circa res de quibus agitur in propositionibus modalibus*”, as the author of *H9* claims). It is interesting that there is agreement on this view between logicians that offer otherwise a very different doctrine on modal propositions. The inclination that these authors show towards a “de-reified” understanding of possibility is further stressed by Abelard in the *Logica Ingredientibus*, where he claims that modal terms “possible” and “necessary” have entirely no denotation or signification, and that they simply convey to the mind a certain “way of conceiving” the things of which they are predicated. It is difficult to imagine a more *anti-realist* account of modalities.

In section 4, I advance the idea that the definition of possibility as “non-repugnancy with nature”, which we often find in Abelard’s texts and in other sources from the early twelfth-century, might have been developed by logicians of Abelard’s time as a way out from problems related to the metaphysics of possibilities. This new account of possibility - which only demanded the absence of a contradictoriness relation between a given predicate and the nature of things, and did not require to locate possibilities in the potentialities or the properties of substances - paved the way to early twelfth century logicians for an analysis of the possibilities of non-things, possibilities of future states of affairs and generally every sort of *extra actum* possibility.

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