The reception of Saint Anselm's logic in the 20th and 21st centuries

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St. Anselm of Canterbury's place in both the history of philosophy and the history of theology is firmly recognized, but his place in the history of logic is often overlooked. We argue that this is primarily the result of four factors: (1) the primary propagator of Anselm's logical works in the 20th century, D.P. Henry, used a system of logic unfamiliar and objectionable to most mainstream logicians, Leśniewski's Ontology; (2) a narrow view of logic in the middle of the 20th century which would preclude Anselm's writings, which are often heavily and inextricably steeped in philosophy, particularly metaphysics; (3) the lack of significant influence of Anselm's ideas on later medieval logicians; and (4) the effect of "ontological" argument on the reception of Anselm's other logical works.

1   Introduction

While Anselm's place in both the history of philosophy and the history of theology is firmly recognized, his place in the history of logic is often overlooked.

In last century's most comprehensive study of the history of logic, [Kneale and Kneale 1984], Anselm is afforded only two throwaway remarks:

> [I]n 1092 Roscellin was condemned at the instance of Anselm on a charge of tritheism [p. 200].

> Anselm, who described the *moderni* as heretics of dialectic and said that they were to be hissed away (*exsufflandi*) from discussion of spiritual questions, introduced in his own theology one of the most notable of all dialectical heresies [p. 201].

Anselm's connection to logic is only noted in so far as the argument for the existence of God "suggests strongly the influence of Stoic logic, exercised perhaps through St. Augustine" [p. 202].

[Dumitriu 1977] likewise mentions Anselm only in passing. Like the Kneales, Dumitriu comments on Anselm's condemnation of Roscelin (the famous '*flatus vocis*' slur) [p. 67], but his only mention of Anselm in connection with logic is when he calls him "the famous author of the ontological argument, who wrote *de Grammatica* [sic], also treating problems of logic (about correct syllogisms), etc." [p. 78].[1]

Discussions of Anselm in [Kretzmann et al. 1982] concentrate on his linguistic theory, particularly his views on grammar and paronymy [pp. 134–142]; his theory of truth [pp. 501–502]; and his views on freedom of the will and its relationship to future contingents [pp. 359–61, 632]. While the first certainly counts as "logic" if we consider the scope of the term in the Middle Ages, it would more likely be classified contemporarily as "philosophy of language", and similarly with his theory of truth. The last topic is the most closely related to logic as it was understood by logicians in the 20th century, but the CHLMP discussion focuses on the philosophical issues, rather than the

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[1] The other references are on p. 44, where he notes the translation of Anselm's *De processione spiriti sancti* into Greek by Demetrios Kydones; and p. 80, where he notes that Lullus's Augustinianism was transferred to him via the works of Anselm, Peter Lombard, and St. Bonaventure.

logical ones. What is even more telling is that there is no mention of Anselm in the chapter on modalities, where one would expect Anselm's works to have a prominent place. This latter fact can be at least partially explained by noting that Anselm doesn't fall wholly within the scope of [Kretzmann et al. 1982]; instead, he falls at the end of the scope of [Armstrong 1970]. However, [Armstrong 1970, ch. 38] says almost nothing about Anselm's logic, focusing almost exclusively on "the philosophical interpretation of faith" [chapter title].

Other 20th-century surveys of the history of logic similarly omit substantive discussion of Anselm's logical views. Moody, for example, completely ignores Anselm and instead says that the development of logic in the Middle Ages starts with Abelard [Moody 1953, pp. 1–2]. Geldsetzer's "Logic Bibliography up to 2008" [Geldsetzer 2008] lists, of Anselm's works, only the *Monologion*, *Proslogion*, and *De veritate*, with no mention of the more specifically logical works such as *De grammatico* and the Lambeth fragments. Even among studies focusing specifically on Anselm, his logic is significantly underrepresented; for example, the *Cambridge Companion to Anselm* [Davies and Leftow 2004] contains no chapter devoted to Anselm's logic, and doesn't even include the term 'logic' in the index. It isn't until [Marenbon 2008, ch. 1] that Anselm's place as a logician is seriously treated in a history of logic.[2]

Why is this?

In the succeeding sections we discuss four factors which have contributed to Anselm's lack of recognition in the history of logic in the 20th century and which demonstrate that now, in the early 21st century, the time is ripe for contemporary logicians to revisit the works of this most novel and innovative of logicians. The four factors are:

1. the primary propagator of Anselm's logical works in the 20th century, D.P. Henry, used Leśniewski's Ontology, a system of logic unfamiliar and often objectionable to most mainstream logicians (§2).
2. a narrow view of logic in the middle of the 20th century which would preclude Anselm's writings, which are often heavily and inextricably steeped in philosophy, particularly metaphysics, from counting as logic (§3).
3. the lack of significant influence of Anselm's ideas on later medieval logicians (§4).
4. the reception by logicians of Anselm's argument(s) for the existence of God (§5).

Once we have identified the factors contributing to the lack of recognition of Anselm as a logician in the 20th and 21st centuries, we then discuss the areas of logic where Anselm's influence should be recognized as part of the history of logic (§6).

2   Henry on Anselm and Leśniewski's Ontology

Anselm's writings which contain the most interesting logical material are the *De grammatico*[3] [Anselm 1938–61, vol. 1] (and see also [Boschung 2006]), written in the

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[2] There Marenbon characterizes Anselm as an "outstanding philosopher…who [was] inter-ested in logic" [Marenbon 2008, p. 1], and later says that he was "an accomplished logician" even though "logic is on the margins of his life's work" [Marenbon 2008, p. 47].

[3] Sharpe calls it by its longer title, *Quomodo grammaticus sit substantia et qualitas* [Sharpe 2009, fn. 165].

early 1080s [Lewry 1981, p. 100][4], and the discussion of *facere* and similar terms preserved in Lambeth Palace MS 59 (hereafter referred to as the philosophical fragments or the Lambeth fragments). It is not clear the origin of these fragments; Sharpe says that they have "no clear status" and were "possibly relating to [Anselm's] thinking ahead of writing other works, some of them perhaps sketches towards unfulfilled intentions" [Sharpe 2009, pp. 75–76]. The Lambeth fragments were not included in Schmitt's edition of the complete works of Anselm [Anselm 1938–61], but were first edited in [Schmitt 1936] and then partially again in [Southern and Schmitt 1969]. The first edition rearranges the fragments into a more conceptually coherent organization; the second retains the original arrangement (and it is partly for this reason that Sharpe says the second edition supersedes the first [Sharpe 2009, fn. 12]). The text is partially translated with detailed commentary in [Henry 1967] and completely translated, with little commentary, in [Hopkins 1972].

In the 1950s and 1960s, Desmond P. Henry wrote extensively on Anselm's logical writings (cf. [Henry 1953, Henry 1959, Henry 1960a, Henry 1960b, Henry 1963, Henry 1964, Henry 1967, Henry 1972, Henry 1974, Henry 1981, Henry 1984]).[5] Throughout his works, Henry is keen on utilizing a system of logic called Ontology, introduced in [Leśniewski 1930] (see also [Leśniewski 1988, pt. 1, ch. 2]) and intended to be a logic of terms [Woleński 2009, §3.3.1], to shed light on various puzzles and peculiarities of medieval logic.[6] Leśniewski's systems were extensively developed and studied by Czeslaw Lejewski (cf., e.g., [Lejewski 1954, Lejewski 1958, Lejewski 1969, Lejewski 1989]), who was a colleague of Henry's at the University of Manchester and who introduced Henry to Ontology [Henry 1984, p. ix].

On the face of it, the use of Ontology seems like a good idea, for two reasons. First, as Ajdukiewicz notes, Leśniewski's definition of "exists", which forms the basis of his Ontology, "seems to be better fitted for common speech [than the 'exists' in Russell's system]" [Ajdukiewicz 1949–50, p. 7]. Because medieval logic was not conducted in an abstract formal language, but rather in ordinary language, a formal system which captures ordinary language notions may be able to capture some medieval insights that other systems might fail to. Second, medieval logic, particularly early medieval logic such Anselm's, is often inextricably linked with metaphysics[7], and, as Loux says, "Ontology was intended as a kind of metaphysics, an interpreted language whose theses are truths about 'things in general' " [Loux 1974, p. 607]. Sanders describes Ontology as "a theory

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[4] See also [Sharpe 2009, p. 13, 20–23] for a detailed discussion of the problems of dating De grammatico.

[5] When Pailin comments that "In view of the persistent philosophical debate about the significance of Anselm's ontological argument—it has many times been declared dead but refuses to lie down—…it is surprising that his work as a whole has not received more general attention" [Pailin 1980, p. 247], he makes it clear that Henry is an exception to this generality. But despite Henry's apologetic work on behalf of Anselm, many people remained unconvinced about his conclusions, e.g.:

> [Henry] has set out what is needed for an appreciation of Anselm's intellectual interests in so far as these depend upon his logical studies. But I do not think he has made out a case for saying that Anselm deserves to be remembered with much honour for his positive contribution to logic…Anselm should not get the congratulatory first that goes to Abelard [Kneale 1968, p. 82].

[6] This goal is most evinced in [Henry 1972]. Loux when reviewing this book characterizes it as follows: "Henry wants to argue that ontology, the system of logic developed by Stanislaw Lesniewski, provides a fruitful tool for understanding themes in medieval philosophy" [Loux 1974, p. 607].

[7] The connection between medieval logic and metaphysics is discussed extensively in [Henry 1984].

of what restrictions *pure logic* places on what can be" [Sanders 1996, p. 413]. Thus, Ontology seems at least superficially to be a suitable vehicle for the study of metaphysics-laden medieval logic. However, it is unclear how much benefit was in fact actually gained from this move by Henry.

First, there is question whether Henry's formalization is an adequate representation of Anselm's views. Horwich argues that Henry's formalization of Anselm's discussion of "nothing" in *Monologion* in Ontology is not adequate. For example, he concludes that

> In order to commit Anselm's statements to the mold of Ontology, Henry is compelled to a multiple construal of the copula, which is not founded in Anselm's writings. Yet Henry claims that those statements find a natural expression in Ontology [Horwich 1975, p. 365].

and also

> Therefore according to Ontology there is a sense in which both 'Nothing is nothing' and 'Nothing is a human being' can be formalized as theses. This, it seems to me, detracts from the significance of Anselm's claim that nothing is nothing…Thus, Henry's plan to give sense to Anselm's claim by formalizing it in Ontology, succeeds only at the cost of trivializing it [Horwich 1975, p. 367].

However, since Horwich offers an alternative formalization in Ontology of the same citations from Anselm, this objection may not be a very strong one, if Horwich's alternative is legitimate.

Other people have also argued against the interpretation of Anselm's logic that Henry gained through the use of Ontology. Marenbon notes of Henry's use of Leśniewski's system to model *De Grammatico* that "[f]ew have fully accepted Henry's reading and recently it has been intelligently criticized by Marilyn Adams [2000, 90–105]" [Marenbon 2008, p. 55], and Loux says that while sometimes Henry's use of ontology is illuminating, "In other contexts, however, [Henry's] appeal to Lesniewski's system seems rather to hinder than further the understanding of medieval texts" [Loux 1974, p. 608].

More problematic, for the propagation of Anselm among logicians, is the general reception of Ontology among logicians in the second half of the 20th century and the beginning of the 21st. As Sagal says, when discussing Prior's interpretation of Ontology, "Philosophers find familiar logical systems very comforting" [Sagal 1973, p. 259]. Ontology is not one of these familiar logical systems. Woleński calls Ontology "not an orthodox system" and says that it "lies on the margin of contemporary research in logic" [Woleński 2009, §3.3.1]. [Simons 2008] notes that Leśniewski's "logic never became widely accepted, even in Poland". This lack of acceptance can be primarily attributed to two main reasons: First, it is unfamiliar to mainstream logicians.[8] Formal logic was developed at the end of the 19th century and the beginning of the 20th century as a tool for working with mathematics. One of the primary desideratum of mathematical logicians in the early 20th century was that logic should be *abstract*, not depending on any ontological features about particular objects. Leśniewski's Ontology cannot be

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[8] It is even less familiar to philosophers. Loux when reviewing [Henry 1972] comments that "Henry's exposition of Lesniewski's system…represents the first general account of ontology geared to the needs of the non-logician" [Loux 1974, p. 607], and it is not generally discussed, or even mentioned, in books on philosophical logic, philosophy of language, or analytic philosophy more generally.

separated from ontological features, a fact which many mathematical logicians find abhorrent on philosophical grounds.

A second reason for the lack of acceptance of Ontology among traditional logicians is that it can be argued that Leśniewski's system does not add anything to traditional mathematical logic. Krajewski and Woleński mention "Grzegorczyk's famous and controversial interpretation (see [25]) of Lesniewski's ontology as Boolean algebra without θ. According to Grzegorczyk, this interpretation shows that Leśniewski's calculus of names adds nothing interesting to logic" [Krajewski and Woleński 2007, p. 7]. Krajewski and Woleński's [25] is our [Grzegorczyk 1955]. If this characterization is correct (Krajewski and Woleński note that some people object to it), then a logician who is faced with a familiar system of logic and an unfamiliar one which is not significantly different in expressive power will go for the familiar logic almost every time.

Thus, even if Leśniewski's system is well-suited or even better-suited for formally modeling Anselm's logic, its marginalization and lack of familiarity among logicians in the second half of the 20th century likely contributed to the lack of reception of Anselm's logic among those logicians.

3   Recent changes in the scope of logic

Anselm's logic can be found in two contexts. On the one hand, there are the purely logical works mentioned earlier, the *De Grammatico* and the Lambeth fragments.[9] On the other hand, much of his logic can be found in the logical reasoning and techniques in his theological writings (cf. [Marenbon 2008, pp. 47–51]). The material that is most recognizable as "logic" to the present-day logician is the modal material found in the Lambeth fragments, where Anselm discusses words such as *facere*, *velle*, and *posse*.[10]
Anselm discusses how *facere esse*, *facere non esse*, *non facere esse*, and *non facere non esse* can be put into a square of opposition similar to the modal square of opposition which can be found in Aristotle [Aristotle 1984, *De Interpretatione*, 12–13]; he likely was familiar with Boëthius's translation of this work[11], and the grammatical parallels between the four agentive phrases and the modal phrases *possibile esse*, *possibile non esse*, *non possibile esse,* and *non possibile non esse* would have been obvious to him. Given these parallels, it is natural for Anselm to consider *facere* and similar words as

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[9] It is somewhat shocking that in the discussion of Anselm [§5.3], Marenbon explicitly says that the material in the Lambeth fragments "would be out of place…in an account of his logic since he develops it in the course of thinking about the philosophy of action and of will" [Marenbon 2008, p. 51]. Why should the mere fact that the logical development occurs in a discussion of a philosophical topic make it inappropriate to discuss it in the context of the history of logic? Since this is where the most interesting and relevant material for modern logicians is found, omitting discussion of it in a *Handbook of the History of Logic* at least partly aimed towards logicians seems a serious mistake.

[10] For a full discussion of both the formal side of Anselm's theory of agency as expressed in his consideration of *facere* as well as the philosophical and theological foundations underpinning his discussion, see [Uckelman 2009].

[11] Kneale says that "[Anselm's] reflexions on the result of combining negative particles in various ways with modal words are inspired by what Aristotle says in *De Interpretatione* 13" [Kneale 1968, p. 82]. Adams's statement that Anselm "surely knew *of* and read a little Aristotle (probably the *Categories* and *De Interpretatione*)" [Davies and Leftow 2004, p. 51] can be strengthened: "In the *Cur Deus Homo*, from the years 1094–1098, when he discusses necessity or impossibility in God, there is explicit reference to Aristotle's teaching for the notion of a 'necessitas sequens' which excludes alternatives." [Lewry 1981, p. 102].

modal operators.

In the development of modal logic in the 20th century, however, such a view was not standard. Even as late as the last decade of the century, the term "modal logic" was almost exclusively restricted to the study of alethic modalities; Hughes and Cresswell open their *New Introduction to Modal Logic* with the statement that:

> Modal logic is the logic of necessity and possibility, of 'must be' and 'may
> be' [Hughes and Creswell 1996, p. ix].

The widening of modal logic to cover modalities other than the alethic ones is an ongoing process which has still not reached to all the corners of the logical world. If one thinks that the proper definition of "modal logic" just contains the alethic modalities, then Anselm's writings in the Lambeth fragments are not writings on modal logic, but something else.

This phenomenon, namely, the different ways that a term like "modal logic" can be defined, and how these differences affect what counts as modal logic and what is excluded, is symptomatic of a wider phenomenon in logic, where the definition of "logic" has changed over the years. It may seem rather trivial to point this out, but who one counts as a logician depends on one's definition of logic. For example, I.M. Bocheński criticizes Adamson's approach to logic [Adamson c1962], who devotes 16 pages to Kant, but affords only five pages to "logic from Aristotle to Bacon and Descartes", of which "scholastic logic" gets one paragraph [pp. 82–83].[12] He says that this is because Adamson, following earlier writers on the history of logic, such as Prantl, who followed Kant's view of formal logic, and thus that medieval writers "were not formal logicians and by 'logic' they mostly understood methodology, epistemology and onto-logy" [Bocheński 1963, p. 5].[13] It's clear that Bocheński thinks that he has a much more liberal and broad view on what counts as logic and who counts as a logician, by including not just Aristotle but also the Stoic and Megarian logicians, and also later people such as Boëthius. Boëthius is the chronologically latest writer he considers (so it is understandable that he makes no mention of Anselm), but since his focus so heavily stresses the *formal* (by which means "easily symbolized in mathematical logic") aspect of logic, it's questionable whether he would have included Anselm in his survey even if it had extended beyond Boëthius. Similarly, it only makes sense to say, as Moody does, that "Anselm wrote no treatise on formal logic…" [Moody 1970, p. 274], if one takes a very narrow view of what "formal logic" is.

One area where Anselm's novel contributions to logic have been recognized in recent years is in the development of formal theories of agency. The current standard for formal theories of agency and agentive logics is stit-theory. stit-theory was introduced in [Belnap and Perloff 1988] in an attempt to "augment the language with a class of sentences whose fundamental syntactic and semantic structures are so well designed and easily understood that they illuminate not only their own operations but the nature and structure of the linguistic settings in which they function" so that we can "progress toward a deeper understanding of an agent doing an action" [Belnap and Perloff 1988, p. 175]. More recent developments and extensions of basic stit-theory often cite Anselm as

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[12] There is no mention of Anselm in [Adamson c1962]; in fact, no scholastic logician is mentioned by name.

[13] Prantl's disparaging view of Anselm, particularly of his ontological argument and *De Grammatico*, which influenced the work's reception among later philosophers and historians [Moody 1965, p. 239], can be found in [Prantl 1955, pp. 84–96].

the inspiration for the treatment of agency as a modal notion:

> The idea of treating agency as a modality—representing through an intensional operator the agency, or action, of some individual in bringing about a particular state of affairs—is an old idea, whose roots go back at least as far as St. Anselm [Horty and Belnap 1995, p. 583].

> For a long time philosophers and logicians have characterized agency or action of an individual by, via a modal operator, a particular state of affairs that the individual brings about. This tradition has been traced at least as far back as St. Anselm [Xu 1995, p. 459].

> The key idea sometimes dubbed the "Anselmian approach" since there is textual evidence for the analysis in some writings of St. Anselm's, is that acting is best described in terms of an agent's bringing about some state of affairs [Müller 2005, p. 191].

> The key idea of agency comes from Anselm around the year 1100, who argued that acting is best described by what an agent brings about or, in STIT terms, "sees to it that" is true [Troquard et al. 2006, p. 179].

(Note, though, that, as we argue in [Uckelman 2009, § 3], stit-theory itself should not be taken as formalization of Anselm's theory of agency.)

A second place where the widening of the scope of logic has had an effect on recent views of Anselm's logic is the ontological argument. Regarding a version of the ontological argument which crucially involves the use of free logic, Oppenheimer and Zalta say:

> It is instructive to enquire why this conception of the argument has just now surfaced. The reason is that it has only been in the past ten years that logical systems have been constructed in which the distinction between being and existence have been combined…It is, therefore, a recent innovation in intensional logic that has made our reading of the argument possible [Oppenheimer and Zalta 1991, p. 532].

It is only with the sophisticated logical tools developed in the last few decades that we can be in a position to properly appreciate the logical structure of the ontological argument. We discuss the ontological argument and its reception in the 20th century further in §5.

4 Anselm's influence on later medieval logicians

A third reason why historians of logic tend to overlook Anselm's role is that his logical writings do not appear to have significantly affected the development of logic in the immediately succeeding centuries. This lack of influence can be attributed to at least two factors: the reception of Anselm's logical works in the 12th century and the rise of another star among the constellation of logicians, Peter Abelard.

To take the first point first: As we noted earlier, the most interesting logical writings, the philosophical fragments, were not written up and published during his lifetime. The primary witness for the philosophical fragments is Lambeth Palace MS 59

(L), which can be tentatively dated to 1119x1124 (and more certainly to 1119x1130) [Niskanen 2009, p. 87; Sharpe 2009, p. 54]. [Southern and Schmitt 1969, p. 334] identify the philosophical fragments as the works appearing in ff. 161–161v, 169v–175, 187–188, and 188v–189 of (L). Sharpe says that these fragments are "sketches made in 1107 and not destroyed" [Sharpe 2009, fn. 158]. While much of the material in Lambeth 59 is witnessed elsewhere (in Cambridge, Corpus Christi College 135 (E), Trier, Stadtbibliothek 728/282 (G) [Niskanen 2009, §§2.1, 2.3]), only a small portion of the philosophical fragments appear in all three of (L), (E), and (G), and the discussion of *facere* and *velle* appears only in (L) and (E).[14] The fact that (E) is a copy of (L), whereas (G) is independent of (L), may account for this discrepancy.

It isn't clear what the extent of the circulation of the fragments is, beyond that it was likely limited; Sharpe calls the fragments "scraps" and says that they "appear to have had no circulation" [Sharpe 2009, fn. 201]. However, Hunt discusses a 12th century *Liber Florum* witnessed in eight manuscripts, dating from the middle of the 12th century through the third quarter of the 13th century, which is of interest because it contains

> long extracts from the drafts of Anselm, which were first published by Schmitt. These have hitherto only been known to exist in the great Canterbury collection of the letters of Anselm (Lambeth Palace Library, MS. 59) [Hunt 1980, p. 140–141].[15]

The number of manuscripts containing this *Liber* indicate that it was an important and often used text. Hunt comments of (O) that "I have hardly ever seen a manuscript which shows more evidence by its annotations of use right down to the late sixteenth century" [Hunt 1980, p. 147]. Thus, these manuscripts give evidence that the circulation of the philosophical fragments was not as restricted as Sharpe suggests.

More importantly, the fragments on *facere*, *velle*, etc., do not appear in Oxford, MS Bodley 271 (SC1938), an early 12th century manuscript which is of great importance for understanding the dissemination of Anselm's writings to future generations, because, as Logan argues, it was a concerted attempt "to establish a canon of [Anselm's] works" [Logan 2004, p. 78], done if not during his lifetime then only very shortly after his death. The manuscript "excludes works which Anselm and/or those close to him considered unfinished or unready for publication or simply not worth retaining in the corpus of his works" [Logan 2004, p. 78]. Thus, their lack of inclusion in the 'canon' of Anselm's works, even more so than their fragmentary nature, would have contributed to their limited influence on 12th-century logical developments.

Additionally, there is also little evidence that another part of Anselm's writings which has gained a lot of attention from 20th-century philosophers and logicians, namely the ontological argument, was widely circulated or discussed in the 12th century. McGill says that "For as far as we can tell today, Anselm's argument [in the *Proslogion*] was totally ignored throughout the twelfth century" [McGill 1968, p. 38].[16] Thus, there was

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[14] In fols. 169v–171v and fols. 154r–155v, respectively. The philosophical fragments do not appear in Paris lat. 2478 (P), which is a copy of (L).

[15] Hunt discusses only one of the eight manuscripts, Oxford, Bodleian Library, MS. Lat. th. d. 30 (O), dating from the middle of the 12th century [Hunt 1980, p. 137].

[16] For this fact, he references [Daniels 1909]. This is corroborated by the tables at the end of [Sharpe 2009], which list only four extant 12th-century MS containing the *Proslogion*, BAV Vat. lat. 532, fols. 219v–226v; Douai 354, fols. 1–109; Cambridge Jesus College QG 16 (cat. 64), fols. 16–85; and Rouen A. 366 (cat. 539).

not even a roundabout influence on logic via discussions of the ontological argument; the first serious discussions of the argument appear in the early 13th-century, and it is not clear to what extent the people discussing the ontological argument had access to Anselm's actual writings on the subject [Logan 2009, p. 131], [McGill 1968, p. 38].

Second, if one was to look for innovation and novelty in logic in the late 11th century and early 12th century, the star to which one's eyes are drawn is not Anselm, but Peter Abelard. Because of both his charisma and his logical acumen, Abelard to a large extent eclipsed Anselm's logical illumination in the 12th century[17], and this darkening of Anselm's star continued for many centuries after. Our best witness for intellectual culture in the mid-12th century is John of Salisbury. John was writing his *Metalogicon* in the 1150s, only a few decades after the death of Anselm and only a decade after the death of Abelard. McGarry in his introduction to his English translation [John 1955] says

> The list of sources drawn on in composing the *Metalogicon* reads much as might the index for a condensed and combined edition of Greek and Roman classical authors, together with Patristic and mediaeval Christian writers (to the middle of the twelfth century)…Extensive use is made of the works of Church Fathers and subsequent mediaeval writers: Sts. Hilary of Poitiers, Jerome, Ambrose, Augustine, and Gregory the Great, together with Dionysius the Pseudo-Areopagite, Nemesius the Bishop, St. Fulgentius, Claudianus Mamertus, Boethius, Cassiodorous, St. Benedict, Alcuin, Angelomus of Luxeuil, Abelard, Gilbert de la Porée, Hugh of St. Victor, Adam du Petit Pont, William of Conches, and Bernard of Chartres" [John 1955, pp. xxiii–xxiv].

It is remarkable both that Anselm's name does not show up on this "who's who" list. Even more remarkable is that there is not a single mention of Anselm in the *Metalogicon*, whereas, in contrast, Abelard's virtues are painted quite strongly. Abelard is first mentioned in Book I, Ch. 5:

> *Sed et alii uiri, amatores litterarum, utpote…Peripateticus Palatinus, qui logice opinionem preripuit omnibus coetaneis suis, adeo ut solus Aristotilis crederetur usus colloquio; se omnes opposuerunt errori* [John 1929, pp. 16–17].

John later says that Abelard was a *clarus doctor et admirabilis omnibus* [John 1929, p. 78], and in Book III, Ch. 6, he says that

> *Ergo non modo Temistio, Ciceroni, Apuleio, et Boetio, adiectorum habemus gratiam, sed Peripatetico Palatino, et aliis preceptoribus nostris, qui nobis proficere studuerunt uel in explanatione ueterum uel in inuentione nouorum* [John 1929, pp. 143–144].

If recent scholarship (cf. [Adams 2000], [Sharpe 2009, p. 22]) is correct, and Anselm's *De grammatico* was intended to be textbook introducing scholars to Aristotle's *Categories*, then it's significant that Anselm is not mentioned here (unless he is one of the "others of our teachers").

It's not that John was unfamiliar with Anselm or his works; in 1163 at the request of Thomas Becket, John wrote a *Vita Anselmi* [John 2006], which was intended to

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[17] As Sharpe notes, "Peter Abelard was an instantly popular teacher and writer…" [Sharpe 2009, p. 5]. See also [Lewry 1981, p. 104].

supplement Eadmer's *Vita* and to help further Becket's goal of canonization of Anselm [Jackson 1953, p. 215]. However, there is little in it to serve as a witness to Anselm's logical developments. The *Vita* does not mention either *logica* or *dialectica*, and the logical writings are referenced only in passing, in Cap. V.[18]

From John's works alone we cannot say for sure *why* Anselm was not including among discussions of logic in the 12th century, but the fact that at least some of his logical writings had almost no circulation until they were edited at the beginning of the 20th century is one strong reason.

5   Anselm's logic and the ontological argument

Another contributing factor is that most modern logicians, if they are familiar with any of Anselm's works, are familiar with the ontological argument(s).[19,20] But the ontological argument itself is notoriously slippery. Superficially, the premises appear reasonable, and the argument structure valid. But few people are willing to accept the strong conclusion.[21] Thus, many logicians have devoted their only comment on Anselm to a discussion of the soundness and validity of the argument.[22] In this section we discuss (but do not attempt to give an exhaustive summary[23]) the reception of the ontological argument in the last half-century or so.

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[18] *His temporibus Anselmus scripsit tres libros, unum* De veritate*, alterum* De libertate arbitrii*, tertium* De casu diaboli. *Scripsit autem dialogum cujus inscriptio est,* De grammatico… [John 2006, 1017A].

[19] For example, [Bastable 1975] makes no mention of Anselm in the text; in the bibliography of medieval logic [pp. 398–399], only his *Monologion*, *Proslogion*, and *De Veritate* are cited. Russell in his monumental *History of Western Philosophy* says that "[Anselm] is chiefly known to fame as the inventor of the 'ontological argument' for the existence of God" [Russell 1945, 417].

[20] Some modern scholars object to calling the argument in the *Proslogion* an 'ontological' argument (cf. [Anscombe 1985]); because the argument is familiar to modern readers under this name, we will continue to call it such in this section, without intending to take a stand on the issue.

[21] As Viger puts it, "Despite its simplicity and elegance, there is something deeply disturbing about arriving at such a powerful conclusion from what seems to be such a modest premise" [Viger 2002, p. 123]. [Nelson 1963, fn. 3] notes this objection is what Hartshorne calls the "common sense objection". Many who believe that there is at least one form of the argu-ment which is valid still agree that the argument is not probative (cf. [Barnes 1972, p. 80] and [Millican 2004, pp. 438–439]). Barnes when reviewing [Oppy 1995] quotes some of Oppy's damning evaluations of ontological arguments (" 'Ontological arguments are completely worth-less' (p. 199), 'Ontological arguments are just bad arguments' (p. 335)") and says that when Oppy "concludes that ontological arguments are 'worthless' or 'bad' he means in particular that no such argument offers a reasonable agnostic reason for apostasy" [Barnes 1998, p. 553, 554].

[22] Pailin wryly notes, "According to the treatment that he as received from many philosophers, Anselm might only have written the three very short chapters of the *Proslogion* which contain his so-called ontological argument and the *Reply* to Gaunilo's criticism of that argument" [Pailin 1980, p. 247]. Similarly, Kneale says that Anselm "has not hitherto had much praise from logicians. On the contrary his ontological argument has been held up as an awful warning of what may happen to clever men who do not study quantification theory, and his *De Grammatico*…has been regarded as a tedious example of useless hairsplitting" [Kneale 1968, p. 82]. There is a tension between this view of Anselm's logical works and his otherwise positive reception among theologians; as McGill says, "It hardly seems likely that a man of [Anselm's] obvious intellectual capacity and dialectical skill could search for an argument with intense effort over a long period of time and then produce only a pure paralogism, which he would mistakenly find so compelling for his purposes that he would see it as a gift from God himself" [McGill 1968, p. 37].

[23] An overview of the reception of the ontological argument in both historical and modern contexts can be found in [Hick and McGill 1968] and [Plantinga 1968]. These demonstrate the wide variety of problems people have purportedly identified in the ontological argument.

Recent literature disagrees on almost every aspect of the argument: Some people argue that there is but one argument, found in *Proslogion* II, whereas others see a distinct argument in *Proslogion* III, and still others identify a further third argument in the reply to Gaunilo.[24] The verdict on the premises range from "obviously true" to "obviously false", and similarly for the validity of the argument(s).[25] The difficulty of determining the soundness and validity of the argument is also located in different places, with some of the various possibilities put forward including the problem of counterfactual reasoning [Adams 1971, p. 41], the role played by the term 'God' [Barnes 1972, pp. 80–81], the analysis of definite descriptions [Hochberg 1959, Oppenheimer and Zalta 1991], substitution into opaque contexts [Jacquette 1997, pp. 170–171], [Millican 2004, p. 460], the definition of perfection [Hartshorne 1944, p. 228], and the nature of possibility ([Hartshorne 1944, p. 226], [Hale and Wright 1994, p. 173], and [McGrath 1990, p. 203]). Others believe that the real error of the proof is still to be found ([Millican 2004, p. 437], [Stone 1989, p. 79], [van Inwagen 1977, p. 375])[26], while some believe that the error is as simple as begging the question ([McGrath 1990, p. 195] and [Millican 2004, p. 468]) or the fallacy of equivocation ([Hick 1968, p. 341] and [Nelson 1963, pp. 236, 241]).

Taylor in the introduction to [Plantinga 1968] expresses the situation succinctly:
Every reader must decide for himself the validity of this extraordinary proof and its importance. He will find among his predecessors a great diversity of views and interpretations [Plantinga 1968, pp. vii– viii].

The problem is that if the premises of the ontological argument are *prima facie* acceptable (if perhaps a bit difficult to understand on the first reading), the validity of the argument at least not outright dismissible (which we hope to have shown in the canvassing of various opinions above), but the conclusion unpalatable (for whatever diverse reasons), then there is clearly something extremely slippery going on with the logic, and if there is a logical problem in the ontological argument, it is a very insidious one. There is a very real worry, then, that whatever the logical flaw in the argument is, be it deep, like Russell's paradox [Viger 2002, pp. 123, 125], or shallow, mere ambiguity of terms [Millican 2004, pp. 437, 465], that this is flaw not unique to the ontological

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[24] Those who find more than one ontological argument include [Adams 1971, esp. pp. 28, 47], [Forti and Honsell 2000], [LaCroix 1972], [Leftow 2002], [Malcolm 1960], and Taylor in the introduction of [Plantinga 1968]. In favor of a single argument is Barnes, who disputes LaCroix's argument in [Barnes 1975].

[25] People who conclude that ontological argument is invalid or fallacious include [Harrison 1999, p. 16], [Hochberg 1959, p. 319], [Lewis 1970, p. 187], [Jacquette 1997, p. 163], [Malcolm 1960, p. 44], [Nelson 1963], and [Russell 1945, p. 787]; arguments for the va-lidity and soundness of (at least some version of) the argument have been advanced by [Adams 1971, p. 32], [Hartshorne 1961], [van Inwagen 1977, p. 375], [Millican 2004, pp. 464], [Pottinger 1983, p. 37], [Oppenheimer and Zalta 1991, p. 521], Leibniz [Malcolm 1960, p. 59] (though he agreed that the argument was incomplete as stated by Anselm), and [Lewis 1970, p. 175] (!).

[26] The first person to express, at least implicitly, the idea that there is *some* error in the proof, without identifying precisely *what* that error is, is Gaunilo. As Millican explains,

If there is *any* flaw in Anselm's premises or in his reasoning, then *some* parody argument is likely to be able to exploit it, no matter what that flaw may be…[but] the very generality of the method makes it totally non-specific and hence ill-suited for identifying the flaw in question…although Gaunilo *reductios* continue to cast very serious doubt on its validity, they unfortunately do nothing to show us where the logical error is to be found [Millican 2004, pp. 462, 463].

argument, but is pervasive throughout Anselm's entire logical theory. If there is such a pernicious logical problem in the ontological argument, then one will be automatically suspicious of any logical system put forward by the author of the ontological argument, unless there is clear evidence indicating that the same or similar insidious problems do not also affect it. Even though some have tried to argue that the problem is not logical, but *ontological* (cf. [Hartshorne 1968, p. 337]), until there is wide-spread agreement on this point, the fears concerning Anselm's general logical theory are likely to remain.

6 Anselm's place in the history of logic

We've now seen a number of reasons why Anselm has not generally been given any place in the history of logic. What reasons are there in favor of giving him a place, and what place should that be?

Marenbon says that Anselm is "one of the very few medieval logicians capable, by his own extraordinary mental powers, of exploring areas of metaphysicological argumentation that Aristotle and his followers never touched on" [Marenbon 2008, pp. 55–56]. If this assessment is correct, and we believe it is, then it alone demonstrates that he is worthy of our note. More specifically, in this section we comment briefly on three particular aspects of Anselm's logic that we feel merit a place in the history of logic.

(1)**Modal logic**. As we discussed in §3, in the Lambeth fragments, Anselm considers a wide variety of modalities, including many terms which some modern logicians might balk at calling modalities. Many medieval logicians were quite liberal in what they counted as 'modalities'; for example, Pseudo-Scotus's oft-quoted list includes, in addition to the standard alethic modalities, *per se*, *scitum*, *dubium*, *opinatur*, *apparens*, *notum*, *volitum*, and *dilectum* [McDermott 1972, p. 274]. However, this liberality is somewhat circumscribed by the fact that few of the non-standard modalities were ever treated with in great detail; for the most part, they were included in the list of modalities, but then the primary focus was on the alethic and epistemic modalities. The fact that Anselm actually treated with the non-alethic and -epistemic modalities in a serious fashion is one point of primacy in his favor. And if we contrast this with modern approaches, we see that Anselm again is one up. Formal modal logic when it was developed in the early part of the previous century took only 'necessity' and 'possibility' as operators; more recently, time, knowledge, belief, obligation, and action are regularly studied as modal operators. The list of operators discussed by Anselm in the Lambeth fragments extends the list significantly: To my knowledge, there is no discussion of 'to will' as a modal operator in contemporary modal logic. Perhaps we could learn from Anselm's example?

(2)**Scholastic logic**. Anselm's methodology in all things, both logical and theological, can be characterized by his slogan of "Faith seeking understanding". By taking seriously this idea of Augustine's, Anselm laid the foundation for later Scholastic use of logic / reason / dialectic in the discussion of theological problems, such as the problem of future contingents and God's omniscience. When we wish to characterize Anselm's role in the history of logic, we must not forget his well-deserved title as the "Father of Scholasticism".

(3) **Logical form vs. grammatical form**. We agree with Henry's point that Anselm, not Russell as Wittgenstein thought, should be credited with having "'shown that the apparent logical form of the proposition need not be its real form' (*Tractatus* 4.0031)" [Henry 1981, p. 349]. His distinction between the *usus proprie* and the *usus loquendi* of terms forms the basis of his analysis of the modal terms in the Lambeth fragments. He also uses it elsewhere. Though we may use the statements "There is no Antichrist" and "Antichrist doesn't exist" interchangeably, the latter is in fact not proper usage, but only improper, or common usage. As a result, we should not be surprised if the proper form of the sentence is not subject-predicate (cf. [Henry 1981, p. 345]). By making this division between the proper use and the common use of terms and sentences, Anselm laid the foundation for the development of the artificialization, or regimentation, of the Latin language used by later Scholastics [Kneale 1968, p. 82], [Moody 1970, p. 275]. In this, Anselm differs from his successor Abelard. As Henry notes, "Anselm…is at pains to remind the reader of the way in which common speech can deviate from the standard of precise signification, whereas it is plain that Abelard assumes that *usus locutionis* is sufficiently reliable to be used as a guide in the discussion of capacities and liabilities" [Henry 1959, p. 21].

Anselm's contributions in all three of these areas are significant and as they are made better-known, they will hopefully be respected in future histories of logic.

7   Conclusion

In this paper we have argued that there are four reasons why Anselm's place in the history of logic has not been recognized by many in the 20th century, and also pointed out some factors explaining why this recognition has become possible in the 21st century. We have also briefly, but with no attempt at being comprehensive, discussed some arguments in favor of according him a more prominent place in the history of logic than he has been hitherto given. We have not attempted to make a systematic study of his logic; such a study would take us beyond the scope and constraints of this paper.

8   Acknowledgments

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