NORMATIVITY OF LOGIC: THE DIALOGICAL ACCOUNT AND THE AMBIGUITY OF 'LOGIC'

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ABSTRACT: In this paper, I will argue that the dialogical account of the normativity of logic does not succeed, and that a different direction will be required. I first present a recent challenge by Russell (2017), which argues that on a three-fold distinction of degrees of normative entanglement, logic is only normative in the weakest sense. I then examine Dutilh Novaes's (2015) recent dialogical account of normativity, and I sketch an alternative account that relies on a distinction between the broadest possible conception of logic and the narrower study of the many artificial language systems that tend to occupy most logicians' attention. I urge that a conflation of these two activities is the source of many disputes concerning the normativity of logic. My primary objective in this paper is to show that accounts of the normativity of logic require a clarification of what logic is about.

KEYWORDS: philosophy of logic, normativity, dialogical

I. Introduction

It is commonplace, both in academic settings and in ordinary discourse, to treat logic as a discipline that provides norms for thought. We often praise or blame a person's thinking based on whether or not it is 'logical.' Some philosophers (e.g., Harman 1986; Russell 2017) have challenged this commonplace assumption. They have either argued that logic is not the appropriate standard against which we should evaluate our thinking, or they have argued that logic is a purely descriptive field, inheriting normativity from other, perhaps epistemic sources. Against these sorts of challenges, defenders of the normativity of logic have used a variety of strategies. The recent work by Dutilh-Novaes (2015; 2020) aims to show that logic gets its normativity from its role in dialogue and debate. In this paper, I argue that the dialogical account of the normativity of logic does not succeed, and that a different direction will be required. While I agree that the dialectical origins of logic are important historically, and that dialectical applications of logic are philosophically important, the normativity of logic does not spring from that source. I propose an alternative that begins with its sights set on the subject matter of logic, and I sketch an account that relies on a distinction between the broadest possible conception of

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logic and the narrower study of the many artificial language systems that tend to occupy most logicians' attention. I urge that a conflation of these two activities is the source of many disputes concerning the normativity of logic. While there are many related questions concerning the source of the normativity of logic, my primary task in this paper is to show that accounts of the normativity of logic require a clarification of what logic is about.

II. The Ubiquitous Assumption that Logic Is Normative

In introductory logic textbooks, it is very common to find logic presented with a clear normative dimension. It isn't uncommon to see logic defined as something along the lines of 'the study of methods for evaluating arguments' (e.g., Howard-Snyders and Wasserman 2012; McKay 2008; Lemmon 1978). Much of the first chapters of these textbooks is devoted to situating the concepts and techniques of both deductive and inductive logic within the context of evaluation. An instructor will typically explain that such an evaluation enables the student of logic to distinguish good from bad reasoning. The examination of deductive arguments by testing for validity and soundness has a promising practical upshot. Often, students will self-report an improved ability to critically examine both texts and oral debates. At this entry-level familiarity with logic, its apparent normativity has some perceived payoff both for the students, and for the instructor seeking enrollment interest in the course, given the social climate where teaching 'critical thinking' is routinely promoted as an important pedagogical objective.

Yet there are additional reasons for conceiving of logic as having a normative dimension beyond those pedagogical reasons. There is the general question of what marks logic off as a distinctive discipline apart from, say, mathematics or psychology.¹ Logic doesn't merely document how people in fact reason, but how they ought to reason. It identifies patterns of reasoning and determines which are good and which are not, carrying normative weight for how we ought to think.² Although people have notoriously shown a tendency to employ invalid reasoning, as in the famous Wason card tests (1968), facts about how people actually reason are

¹ This is the "argument from demarcation" that Russell examines (2017, 7). I will return to this below, in Section III.

 $^{^2}$ This demarcation point is tricky; the comparison to mathematical thinking might hurt the supporter of the normativity of logic, as it isn't uncommon to hear people say that mathematics sets a standard for our thought as well. For that matter, people will frequently urge that the study of, say, geometry can help one sharpen one's critical thinking skills. Even Plato argued as much in The *Republic* (Book VII, 194). I'll return to this point later, near the end of the next section.

not central to the study of logic, and logic serves as a standard against which human reasoning might be measured.

III. Arguments Against the Normativity of Logic

The case against the view that logic is normative is presented in Harman's highly influential work (1986), and in many other places (e.g., Field 2009). Since I am concerned primarily with the dialogical account as a response to these challenges, I will restrict my attention to two sources: some of the general points raised by Harman, and the recent argument offered by Russell (2017). Harman argues that necessary truth preservation (NTP) and the tools developed by modern formal logicians are neither necessary nor sufficient for guiding thought. For simplicity, let us restrict our attention to the artificial language system of classical propositional logic, as it is typically taught in undergraduate introductory courses.³ For propositional logic, an argument with a set of premises Γ and conclusion φ is valid if and only if necessarily, if all the members of Γ are true, then φ will also be true. Hence NTP is necessary and sufficient for validity in propositional logic: $\Gamma \vdash \varphi$ is valid only if it's impossible for Γ to be true while φ is false, and if that's so, then $\Gamma \vdash$ φ is valid.⁴ Eventually, however, we run into puzzling cases. For example, suppose we have some inconsistent set of premises \Im . By this conception of validity, we could take any arbitrary conclusion \mathfrak{C} and the resulting argument $\mathfrak{I} \vdash \mathfrak{C}$ would be valid. Yet such an argument wouldn't at all qualify as a good one in any useful sense. Moreover, for any necessarily true sentence \mathfrak{S} , any random set of premises \mathfrak{J} (even the empty set)—consistent or not—would yield a valid argument $\Im \vdash \mathfrak{S}$, which again would hardly qualify as a good argument. It is common for a logic instructor to note these sorts of cases as they arise, shrug them off, and give an explanation along the lines that these are just quirky consequences of the artificial language system. It is also common to redirect attention to the concept of soundness: although such cases are valid by default, no argument of the sort $\mathfrak{I} \vdash \mathfrak{C}$ could ever be sound. While that answer might placate some, however, some arguments of the sort $\mathfrak{I} \vdash \mathfrak{S}$ are sound, and so some explanation appealing to persuasiveness or utility might enter the discourse.5

³ We'll return to the wide variety of 'non-classical logics' shortly, in Section VI.

⁴ Here I follow the standard interpretation of '⊢' as an entailment relation from the left to the right side. ⁵ Additionally, sound arguments are not all that difficult to come by, and although we could

populate the forefront of our minds with arguments such as:

[&]quot;1. If the sky is blue, then the grass is green.

^{2.} The sky is blue.

^{3.} So, the grass is green.", this is not a worthwhile activity.

Suppose, however, that one believes a true proposition \Re , one could entertain an infinite number of valid inferences: $\Re \vdash \Re \lor \mathfrak{S}$, or $\Re \vdash \Re \lor \mathfrak{T}$, or $\Re \vdash \Re \lor (\mathfrak{S} \lor \mathfrak{T})$, and so on. What is needed here, Harman argues, are some more substantive conditions, such as a principle of clutter avoidance: "One should not clutter one's mind with trivialities" (Harman 1986, 12). Principles such as this seem to be what does most of the work in guiding our reasoning. Such principles would need to incorporate empirical information from psychology, linguistics, sociology, and so on, in order to determine what is relevant and what is not.

More recently, Russell (2017) has taken a very different approach to challenge the view that logic is normative. She has argued that logic isn't normative because it is ultimately descriptive. She surveys three different arguments for the view that logic is normative: the argument from normative consequences, the argument from error, and the argument from demarcation.⁶ Ultimately, and for reasons that I don't take issue with here, Russell finds fault with all three of these arguments, and she provides her own positive account as an alternative. To defend her view, she distinguishes three varieties of normative entanglement, each with varying degrees of strength (2017, 9). In the strongest sense, a theory is normative insofar as being normative is what it takes to count as a theory of that kind. On the second, weaker sort, a theory is normative if it entails normative consequences. On the third, weakest sort of entanglement, a theory is normative only to the extent that its normative consequences are derived alongside other normative assumptions. Russell contends that logic is normative only in this third, weakest sense. She supports her case by appealing to a comparison with arithmetic or physics: in many ways these are arguably normative for thought, as well. Her argument, then, might be reconstructed as follows:

- 1. In cases where logical knowledge plays a role in belief-formation, norms about commitment to truth and avoidance of falsity carry the substantial normative burden (2017, 11).
- 2. If that's right, then the nature of normative entanglement in logic is the same in all relevant respects to physics or mathematics.
- 3. Physics and mathematics have normative entanglement only in the weakest

⁶ The argument from demarcation was briefly sketched above in Section II. I've wondered, however, about alternative arguments for the normativity of logic that Russell doesn't survey. For example, what about the argument from the appalling consequences of relativism? Roughly, the idea would go like this: if logic isn't normative, then there aren't objective standards for reasoning apart from cultural, linguistic norms, and so on. Such a result is undesirable; so, logic is normative. Admittedly, such an argument seems quick-and-dirty, but it is analogous to the sorts of standard arguments one finds in introductory textbooks against ethical relativism.

Normativity of Logic: The Dialogical Account and the Ambiguity of 'Logic' sense (degree 3).

4. Therefore, logic isn't normative, but is only entangled to degree 3.

My own positive account will take issue with premise 2 of this argument. To explain why, let us first examine recent attempts to salvage the normativity of logic. While I agree that her argument applies to the many formal systems, there's a broader sense of 'logic' that is left out, most importantly in premise 2.

In a widely read paper, MacFarlane (2004) attempted to answer challenges like these by providing 'bridge principles' which carry the normative work that is typically supposed to belong to logic.⁷ However, MacFarlane, Steinberger (2016), among others find that the search for plausible bridge principles inconclusive. If we take Russell's three-fold distinction between varieties of normative entanglement to heart, it appears that even if such bridge principles were found, the best case scenario is that such bridge principles are only providing logic with normativity in the weakest sense, as such principles are coming from outside of logic itself. A dialogical conception of logic, however, promises to provide an alternative which will show that logic is normative in Russell's first sense.

IV. The Dialogical Account

Dutilh Novaes has recently argued (2015, 2020) that a multi-agent conception of logic will fare better than a single-agent conception when it comes to accounting for the normativity of logic. She reminds us that originally, and for most of the history of logic, the field was thought of as providing rules for dialogue and debate between two or more parties.⁸ Dutilh Novaes argues that it was with Descartes's inward turn

⁷ This paper is not the appropriate space to devote to the details of MacFarlane's proposal, but to give a sense of the project, here is a sampling:

If A, $B \models C$, then ...

⁽Co-) if you belief A and you believe B, you ought not disbelieve C.

⁽Bp+) if you may believe A and believe B, you may believe C.

⁽Wr+) you have reason to see to it that if you believe A and you believe B, you believe C. (2004, p. 7)

Some of the many candidate bridge principles are more promising than others, by MacFarlane's own admission.

⁸ By many scholarly accounts, the importance of structured, reasoned oral debate in the ancient Greek schools and even through medieval European universities appears to show that logic had a privileged position in this social academic context. Zeno and the other presocratics seemed to regard patterns such as *reductio ad absurdum* as principles of dialectic (Austin 2007). Plato appears to conceive of dialectic as central to one's philosophical education, as it brings the student closest to the truth (*Republic*, Book VII, 204).

to a single-agent using pure reason to discover truth that logic began to be conceived in a way that didn't involve a multi-agent set of norms. This single-agent conception became deeply entrenched with Frege's development of modern formal logic, and with the ongoing project that follows afterwards. All through this relatively short span of history, we see a tendency to conceive of logic as providing norms for thought. Along the way, we lose the traditional conception of logic as norms for dialogue (2020, 143).

To be clear, Dutilh Novaes emphasizes that her account is inspired by the history of logic, but is itself a philosophical conception of the normativity of logic (2015, 599). It's not intended as a merely historical view. She urges that by taking the multi-agent perspective, we can secure the normativity of logic in a way that cannot be secured by a single-agent view. For one, the dialogical account is independently supported by speech act accounts of the normativity of logic, similar to the ones defended by Milne (2009). By placing the normativity of logic in the social/linguistic setting, as opposed to the internal/psychological one, Dutilh Novaes's dialogical account dovetails nicely with those other, language-based views. Thus, we may summarize Dutilh Novaes's argument as follows:

1. Single-agent views have well-known difficulties accounting for the normativity of logic. (2015, 592)

2. Multi-agent accounts take their inspiration from historically influential but largely forgotten views of logic as norms for dialogue and debate. (2015, 595)

3. If logic provides norms for dialogue and debate, then the normativity is derived from social/linguistic norms, and multi-agent accounts avoid many of the problems that befall single-agent accounts.

4. If single-agent accounts have well-known difficulties accounting for normativity, but multi-agent accounts do not, then multi-agent accounts are preferable.

5. Norms of assertion from the philosophy of language independently motivate multi-agent accounts, as do multi-agent versions of bridge principles. (2015, 606)

6. If that is right and multi-agent accounts are preferable to single-agent accounts, then the normativity of logic is best understood as deriving from logic's role in dialogue and debate.

7. Therefore, the normativity of logic is best understood as deriving from logic's role in dialogue and debate.

I agree that there are benefits to conceiving of logic as dialectical. Logic, and arguably philosophy in general, is often misleadingly portrayed as a solitary activity, and the social dimension and social origins of the discipline should be promoted Normativity of Logic: The Dialogical Account and the Ambiguity of 'Logic'

more forcefully.⁹ However, I will argue that such a dialectical account doesn't secure the normativity that we are looking for. I will argue that what is needed is a clarification of some presuppositions that underlie both the single-agent and dialogical accounts.

V. Problems for the Dialogical Account

To begin, it isn't clear how the dialogical conception avoids Russell's argument, as it appears that the normativity is supplied by additional assumptions, and doesn't come from logic itself. Thus, we are still left only with entanglement in the weakest sense (degree 3). Even if we modify MacFarlane's bridge principles to be more explicitly dialogical, these are norms that are about social-linguistic interaction or truthcommitments, and are not constitutive of logic itself. Thus, the initially plausible advantage in Dutilh Novaes's premise 5 ends up cutting against the view. The apparent normativity is coming from the outside, not from logic itself. What we need is to think of the normativity of logic in an altogether different way.

Even more fundamentally, there is a more serious problem that arises for the dialogical attempt to salvage the normativity of logic. A dialogical view can successfully account for the normativity of logic only if there is a clear way to demarcate norms for multi-agent discourse from norms for single agent thought. And that can be accomplished only if there is a promising way to distinguish activity that happens between two or more agents, on the one hand, and activity that occurs within a single agent's mind, on the other. The problem is, such a demarcation is not forthcoming. After all, the normatively sanctioned transmission of thoughts, ideas, or propositions from one person to another serves as a model for how one ought to think internally. It's part of how we learn to speak, think, read, or write. And learning how to do these things well involves an interplay between learning the norms for discourse, dialogue, and debate. Even when one is alone, one's internal single-agent train of thinking isn't evaluated by some different standard than the ones used for multi-agent dialogue.¹⁰ These norms are just the same as the norms that govern multi-agent dialogue. Thus, I deny premise 3 in the reconstruction of Dutilh Novaes's argument above.

⁹ Such social accounts are present in non-Western logical traditions, as in Matilal's (1998) discussion of the history of logic in India.

¹⁰ To that end, I think that we ought to avoid colloquial expressions such as 'internal monologue': there is no such thing as an internal monologue. Rather, there is an internal dialogue when one mulls over a series of propositions, even when one is drawing deductive inferences or checking sets of one's beliefs for consistency.

Another way to get at the same point is to ask about what constitutes the difference between multiple agents and single agents. Without departing too far into the highly contentious and perhaps intractable debates concerning personal identity, I think that there's a worthwhile challenge from the no-self camp, even if one isn't persuaded to accept the position completely. Such a view was recently considered in a technological context, somewhat sympathetically, in Schneider's new book (2019, 76). The line between single- and multi-agent gets blurred when we take into consideration real-life split-brain cases, or Parfit's well-known fusion and fission cases (1986). Without the ability to maintain a strong demarcation between singleand multi-agents, the dialogical conception doesn't gain any momentum. To be clear, the objection I'm raising here does not presuppose any language-of-thought or any particular theory of mind. I am not arguing that because whatever activity that happens between, say, two hemispheres of the brain or between two neurons must be a language in all relevant senses, the dialogical account fails. Rather, I am arguing that there isn't enough reason to suppose that there is the sort of demarcation necessary for the dialogical view to establish that it is a viable alternative to the single-agent approach.

VI. A Different Approach: What Is the Subject of Logic?

Here I will sketch my proposal for tackling the normativity of logic puzzle, and show how it avoids the problems that beset the dialogical account while addressing Russell's challenge. To do so, I will shift focus in order to show that properly addressing the normativity topic requires first that we get clear on a slightly different but related question: what is logic about? It might seem that this topic is too different or unrelated from the main task at hand; however, I will argue that lack of agreement about the subject matter of logic is the source of disputes about the normativity question. To begin, we should address what logic is not about, or at least what it's not solely about: logic isn't solely about highly artificial social contexts such as the context where one engages in a formal debate. Logic might have a useful application in such contexts, but that isn't the subject matter of logic.¹¹ On some construals, logic is the study of relations of propositions; within classical logic, that means the study of methods for identifying NTP. On some other conceptions, logic is not so narrowly restricted to the study of relations between propositions, but is instead concerned

¹¹ In the early twentieth century, around the time Frege was developing his concept notation, it was controversial that logic even had a subject matter at all; see Husserl 2001. This controversy continues to this day; cf. Maddy 2012. As I will explain later, my task in this paper isn't to settle the aboutness question; rather, it is just to show the importance of the connection between the aboutness question and the normativity question.

with the evaluations of arguments in a more general sense. Both of these different ways to use the term 'logic' are acceptable.¹² However the conflation of both senses or the complete disregard of one sense is the source of some confusion in the context of determining whether logic is normative.

In order to avoid such pitfalls, I propose a distinction between two different senses of the term. By 'logics', I mean the study of various artificial language systems such as classical propositional logic, the system LP, families of modal logics, and the many other non-classical systems used to examine relations between premises and conclusions, etc (Haack 1978; Priest 2008). By 'Logic', I mean to refer to the broader concern of determining what makes for a good argument, how that applies to reasoning, and so on.¹³ This conception is the sort that motivates the inquiry into logics in the first place, and is the general subject referred to by introductory textbook definitions of the discipline.

Priest (2016) observes a similar point, albeit in a different context. He writes:

'Logic' is ambiguous. It can mean both the theory of an investigation and the subject of the investigation. In the same way, the word 'dynamics' is ambiguous. It can mean a theory, as in 'Newtonian dynamics', and it can mean the way that a body actually moves, as in 'the dynamics of the Earth'. It is logic in the first of these senses that I am talking about in this essay. Theories come and go, and a dominant theory can be replaced by another. Logic, in this sense can clearly change. Logic in the latter sense is a different matter. It is constituted by the norms of correct reasoning, that is, the norms of what follows from what, and it is the theorising of these that logic in the first sense is aimed at. (2016, 354)

Here, what Priest refers to as 'Logic in the latter sense' is what I refer to as the broadest-scope, capital 'L' sense of 'Logic'. Normativity flows from this most general inquiry since the primary aim of the inquiry is to make sense of what is considered good reasoning, where that is represented by collections of statements representing reasons for a belief. On a related note, Priest observes elsewhere (2006) that the 'canonical application' of logic is the application of logic or system of logic to the evaluation of reasoning, "to determine what follows from what" (2006, 196). In other

¹² The ambiguity of the term 'logic' has, as Kneale and Kneale point out (1978, 7), historical antecedents traceable to Aristotle, Plato and even the presocratics Zeno of Elea and Parmenides. ¹³ While the term 'the philosophy of logic' might be an appropriate label for such an enterprise, I wouldn't want to restrict the philosophy of logic to those concerns alone, as there may be other concerns distinguishing Logic from the philosophy of logic. One such concern is the debate about logical pluralism: while it is related to the general question of "what makes for a good argument?", it is distinct enough to warrant belonging to the philosophy of logic courses, the one that the study of logics is meant to aid the student in evaluating reasoning.

words, the lower-case 'l' 'logics' are systems that may have many interesting technical consequences and applications, but their role as part of the study of logic is dictated by the canonical application, and is described by the broader aims of capital 'L' 'Logic.'¹⁴

With a distinction such as this in place, we can return to Russell's argument that logic is descriptive, not prescriptive. On the present view, logics is descriptive, while Logic is normative. Thus, while I agree with Russell that there is a way in which logics is analogous to physics or arithmetic, the broader set of questions addressed by Logic are ultimately normative in her first degree. It is constitutive of the discipline of Logic that it answers normative questions, and it does so with an inherently normative view. By selecting results from a given artificial language system and endorsing it as a good inference, a stance in Logic is a normative position, through and through.¹⁵

To summarize my core argument, then:

- 1. Distinctions between single-agent norms and multi-agent norms are not so easily drawn: there's no substantial difference between internal and external dialogue.
- 2. If that's right, then multi-agent accounts of the normativity of logic do not succeed over single-agent accounts.
- 3. Either multi-agent accounts succeed single-agent accounts, or the normativity question is secondary to the aboutness question.
- 4. (A proposal) The aboutness question can be addressed by first distinguishing Logic from logics: normativity of logic comes straightforwardly from Logic, though not from logics.
- 5. Therefore, normativity of logic is supported by neither single- nor multi-agent accounts, but is gained with a clarification of the subject matter of logic.

While the dialogical account of the normativity of logic may bring important benefits to the philosophy of logic—such as improved bridge principles—it must address the more fundamental question of what logic is about first.

¹⁴ This sort of ambiguity is also relevant in Matilal's historical account of logic in India (1998, section 1.1 "Logic' in What Sense?")

¹⁵ On either conception, the subject matter is ultimately about abstract objects (cf. Balaguer's 'fullblooded platonism', 2001). For a given system within logics, we have various relations, functions, and so on. Articulating and grasping these entities is a purely descriptive enterprise. On the other hand, Logic is concerned with which among the study of logics is ideal. In either case, then, the subject matter is the study of certain abstract entities.

VII. Conclusion: Objections and Replies

One might object that the shift from addressing the normativity of logic to the question of what logic is about is only piling mystery upon mystery, making the task more obscure unnecessarily. I don't agree. Logic is often presented as one of the four main branches of philosophy, and philosophers have every right to be proud of the discoveries and ongoing controversies in the field. That said, I submit that it is a scandal of philosophy that in the early twenty-first century, we still can't find consensus on an answer to the question "what is logic about?" The proposal I offer here is only a sketch, and is not intended to settle the issue. My agenda here is only to establish the priority of the aboutness question over the normativity question.

Someone might object that the distinction between logic and logics only adds a label to the problem, and that marking off Logic as a distinct enterprise in its own right either loads the position in such a way that it guarantees the normativity of logic trivially, or it invents a category for which there is no corresponding field. If the label 'Logic' merely provides a name for a cluster of normative principles but isn't motivated by any other consideration for belonging to the study of logic proper, then such a field is no more a solution to the problem of normativity than simply declaring that logic is normative. However, I don't think that the proposal is guilty of begging the question in this way. To cut out the area of inquiry that is explicitly concerned with evaluating arguments, determining which patterns are good and which are not, is more arbitrary than to include it as a part of the general discipline. After all, the motivation behind the descriptive study of logics is arguably the background normative motivation from Logic in the first place, lest we are devising technical systems without any direction. Excluding the normative dimension from the purview of logic taken as a whole would be more extreme than not. Furthermore, debates within the philosophy of logic over classical logic vs. intuitionism, e.g., is importantly tied to the general agenda of settling disputes about which inferences are ideal and which are not.16

¹⁶ I am grateful to the audiences at the 2019 Northwest Philosophy Conference, the 2019 Illinois Philosophical Association, the 2020 South Carolina Society for Philosophy/North Carolina Philosophical Society Conference, and the 2022 Augustana Celebration of Learning. I am especially indebted to Emil Badici, Robert Farley, and Jarl Carlander for their helpful comments on earlier versions of this paper. Thanks also to the Socratic Society for giving helpful feedback, especially Syd Yontez, Rae Gibson, Lucas Fahnoe, John Le, Luca Barba, Joey Kries, and Wendy Dykstra.

References

Austin, S. 2007. Parmenides and the History of Dialectic. Parmenides Publishing.

- Balaguer, Mark. 1998. *Platonism and Anti-Platonism in Mathematics*. Oxford University Press.
- Dutilh Novaes, C. 2015. "A Dialogical, Multi-Agent Account of the Normativity of Logic." *Dialectica* 69(4): 587-609.
- Dutilh Novaes, C. 2020. *The Dialogical Roots of Deduction: Historical, Cognitive, and Philosophical Perspectives on Reasoning.* Cambridge University Press.
- Field, H. 2009. "The Normative Role of Logic." *Proceedings of the Aristotelian Society* 83: 251-268.
- Frege, G. 1972. *Conceptual Notation and Related Articles.* Translated and edited by Terrell Ward Bynum. Oxford University Press.
- Haack, S. 1978. The Philosophy of Logics. Cambridge University Press.
- Howard-Snyder, F., and Howard-Snyder, D., and Wasserman, R. 2012. *The Power* of Logic. 5th ed. McGraw-Hill.
- Husserl, E. 2001. The Shorter Logical Investigations. Routledge.
- Kneale, W., and Kneale, M. 1962. *The Development of Logic*. Oxford University Press.
- Lemmon, E. 1978. Beginning Logic. Hackett Publishing Company.

MacFarlane, J. 2004. "In What Sense (If Any) Is Logic Normative for Thought?" unpublished manuscript. URL: https://johnmacfarlane.net/ normativity_of_logic.pdf.

- Maddy, P. 2012. "The Philosophy of Logic." *Bulletin of Symbolic Logic* 18(4): 481-504.
- Matilal, B. 1998. *The Character of Logic in India*. Edited by Jonardon Ganeri and Heeraman Tiwari. SUNY Press.
- McKay, T. 2008. Modern Formal Logic, Second Edition. Cengage Learning.
- Milne, P. 2009. "What is the Normative Role of Logic?" *Proceedings of the Aristotelian Society* 83: 269-298.
- Parfit, D. 1986. Reasons and Persons. Oxford University Press.
- Plato. 1992/375 BCE. *The Republic*. 2nd ed. Translated by G.M.A. Grube and C.D.C. Reeve. Hackett Publishing Company.
- Priest, G. 2006. Doubt Truth to be the Liar. Oxford University Press.
- Priest, G. 2008. *An Introduction to Non-Classical Logic: From If to Is.* 2nd ed. Cambridge University Press.
- Priest, G. 2016. "Logical Disputes and the A Priori." *Logique et Analyse* (59): 347-366.
- Russell, G. 2017. "Logic Isn't Normative." Inquiry: 1-18.

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- Schneider, S. 2019. Artificial You. Princeton University Press.
- Steinberger, F. 2016. "Explosion and the Normativity of Logic." *Mind* 125(498): 385-419.
- Wason, P. 1968. "Reasoning about a Rule." *The Quarterly Journal of Experimental Psychology* 20(3): 273-281.