Sec. 2 reconstructs, for the first time, Moore's epistemology of proof from overlooked lectures and archival manuscripts.
Sec. 3 identifies a new puzzle: why Moore abandons his own "fourth" condition in his 1939 "Proof of an External World."
Sec. 4 offers a solution, showing Moore wrestled with—rather than ignored—circularity worries.
Sec. 5 reinterprets "Proof" and uncovers its broader philosophical implications.

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Moore's Fourth Condition

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Abstract

G. E. Moore's proof of an external world has long stood as a mystery in the history of analytic epistemology. The question is how Moore could have regarded his proof as extending knowledge when, on its face, it seems palpably circular. Commentators have long taken Moore to be oblivious or indifferent to the problem, cementing the proof's reputation as philosophically naïve. Drawing on unpublished archival material and overlooked lecture passages, this paper challenges this widespread assumption. I argue that the proof embodies a richer and more ambitious account than commentators have recognized: Moore's effort to come to terms with an additional, "fourth condition" on proof—beyond validity, truth, and knowledge of the premises—concerning its capacity to establish new knowledge rather than merely restate what is already known. This interpretation clarifies both the paradoxical nature of the proof and the unease it has provoked in readers.

> Proof, refutation—these are dying words in philosophy, though G.E. Moore still 'proved' to a puzzled world that it exists. What can one say to this—save, perhaps, that he is a great prover before the Lord?
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> FRIEDRICH WAISMANN (*How I See Philosophy*, 1)

1 Introduction

In his 1942 autobiography, G. E. Moore wrote that it was not the puzzling questions of philosophy that drew him to the discipline, but the puzzling things that philosophers said about the world and the sciences. Somewhat ironically, three years prior, Moore's 1939 lecture, "Proof of an External World," would engender a similar sort of puzzlement. Not necessarily because of anything Moore said or the conclusion that he reached, but in *how* he reached it. Before a packed audience at the British Academy, Moore offered up his two hands—"Here is one hand . . . and here is another"—and scandalously concluded that since two human hands exist, at least two external things exist. *Proof* of an external world, plain for all to see.

Alas, few were convinced. While the philosophical significance of Moore's performance is indisputable, the overwhelming consensus among commentators is that, taken at face value, the proof is a "total failure."[1] The proof fails, so it is thought, because it begs the question.[2] But not blatantly, in the sense that its premises are repeated verbatim in the conclusion. As Moore himself urges, this is quite far from the case.[3] Rather, Moore's proof is thought to be epistemically circular: Moore does not seem to have any support for his belief that he has hands that does not already depend on his belief that there is an external world. As Crispin Wright has put it, "to take it that one knows [Moore's] premise (on occurrent perceptual grounds) is to presuppose that one already knows the conclusion."[4]

Moore's proof is puzzling, in part, because nowhere in "Proof," or in subsequent writings, does he appear to address or anticipate this worry. His apparent failure to engage with it leaves the impression that he was either somehow oblivious to the worry or manifestly indifferent to it, an impression that largely accounts for why his two-handed proof has struck so many readers as naïve.[5] Remarkably, this supposed

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[1] Baldwin, *G.E. Moore*, 295.

[2] Interestingly, both scholars of Moore and contemporary philosophers seem to have converged on this point despite not always characterizing the target of Moore's proof in the same way. The literature here is extensive. See e.g. Ambrose, "Three Aspects of Moore's Philosophy," 820; Baldwin, *G.E. Moore*, 295; Coliva, *Moore and Wittgenstein*; Coliva, "Paradox of Moore's Proof"; Coliva, "Scepticism and Knowledge"; Davies, "Externalism and Armchair Knowledge," 401; Sinnott-Armstrong, "Begging the Question," 187–90; Stroll, "Moore's Proof an External World," 396; Stroud, *Significance of Philosophical Scepticism*; Wright, "(Anti-)Sceptics Simple and Subtle"; Wright, "Perils of Dogmatism"; and Wright, "Warrant for Nothing." Some exceptions include Lycan, *On Evidence in Philosophy*; Morris and Preti, "How to Read Moore's 'Proof of an External World,' " 13; and Weatherall, "On G.E. Moore's 'Proof of an External World,' " all of whom, for different reasons, find the question-begging charge illegitimate. See also Neta, "Fixing the Transmission," who argues that the proof can rationally remove doubt even if it fails to 'transmit warrant,' and Sosa who considers the proof potentially persuasive against a Berkeleyan idealist ("Moore's Proof"; "Responses"). See Maddy, *Plea for Natural Philosophy*, 135–47, for an alternative defense in line with the stance of the 'Second Philosopher.' Less historically grounded defenses include, most notably, Pryor, "Skeptic and the Dogmatist"; and Pryor, "What's Wrong with Moore's Argument?" For broader defenses of 'Moorean' approaches to philosophy and epistemology, see Kelly, "Common Sense as Evidence"; Kelly, "Moorean Facts and Belief Revision"; Leite, *How to Take Skepticism Seriously*; and Lemos, *Common Sense: A Contemporary Defense*.

[3] Recall that Moore's proof wouldn't have been a proof unless, according to him, "three conditions were satisfied; namely (1) unless the premiss which I adduced as proof of the conclusion was different from the conclusion I adduced it to prove; (2) unless the premiss which I adduced was something which I *knew* to be the case, and not merely something which I believed but which was by no means certain, or something which, though in fact true, I did not know to be so; and (3) unless the conclusion did really follow from the premiss" (PEW 166).

[4] Wright, "Perils of Dogmatism," 27.

[5] This feeling is aptly captured by Juliet Floyd when she describes Moore's proof as "the sort of proof that can be reproduced, producing smiles, for just about any audience" ("Varieties of Rigorous

naivety has gone unexamined and unchallenged by commentators, scholars and contemporary philosophers alike, who seem to have accepted it without question.[6] To be sure, while ample ink has been spilt on the circularity of Moore's proof, Moore's own views on the matter have been entirely overlooked; indeed, they are presumed non-existent. This, however, has left the proof's rich historiography with a glaring lacuna: how, if at all, was *Moore* thinking about the problem of circular proof and how might his thinking about such issues clarify and deepen our understanding of his enigmatic proof of an external world?

The goal of this paper is to answer these questions and then some. Drawing on unpublished archival evidence and overlooked passages from Moore's posthumously published lectures,[7] I aim to tell a more complex story, one that proposes to overturn the standard account assumed by commentators above. I argue that, as early as 1928–29 and as late as 1938–39, Moore found himself deeply engaged with the problem of circular proof, distinguishing between what he referred to as an "unimportant" and an "important" sense of begging the question (section 2). A proof begs the question in the *unimportant* sense when one or more of its premises are identical to its conclusion, whereas a proof begs the question in the *important* sense when a subject fails to know one or more of its premises independently of knowing its conclusion. According to Moore, a genuine proof should be free from *both* forms of begging the question—a standard that disappears in "Proof," where this "important" sense is conspicuously absent from Moore's discussion.

Given the chronology, as well as the striking continuity between this material and "Proof," a question arises as to why Moore's standard for proof shifts in this way. In what follows, I develop this interpretative puzzle in more detail (section 3) before providing an explanation for this shift (section 4). This explanation suggests that Moore does not so much abandon this standard—that a rigorous proof must satisfy a 'fourth' *epistemic independence* condition—as he is compelled to question it, spurred by a philosophical dilemma in the brief period leading up to "Proof." This confrontation, I argue, leads to an impasse, one that lays bare an irreconcilable tension in Moore's characterization of his proof, which I speculatively attribute to his toggling between two senses of 'proof.' I propose that understanding Moore in

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Experience," 1014).

[6] Neta, "Fixing the Transmission," is possibly the only exception.

[7] I draw on Moore's personal and philosophical papers archived in the Cambridge University Library. All transcriptions are my own. Unpublished archival material is cited as 'MS Add. 8330' and 'MS Add. 8875' following library classmark convention. Unhappily, this material is unpaginated, hence the absent page numbers. I have also taken minor editorial liberties such as silently italicizing underlined content, expanding abbreviations, and integrating any text Moore added between the lines or in the margins. I have taken the same editorial liberties with respect to Moore's posthumously published lectures.

this way not only clarifies the air of paradox surrounding his proof but also provides a new diagnosis for the intellectual dissatisfaction many commentators feel when first confronted with it (section 5). Overall, what results is a new, deeper, and more contextually faithful reading of "Proof."

2 Epistemic Independence

The worry that Moore's proof is question-begging or circular in some way is not an anachronistic one. As Alice Ambrose reminds us, "Some of Moore's earlier contemporaries had charged him with begging the question."[8] Ambrose is referring here to Norman Malcolm where in his 1942 paper, "Moore and Ordinary Language," Malcolm charges Moore with precisely that.[9] As is known, Malcolm goes on to advance a reconstruction of Moore's proof that attempts to save it from circular disaster.[10] Notoriously, Moore rejects the ordinary language reconstruction offered by Malcolm in his reply[11] but, curiously, says nothing about Malcolm's initial charge—that his proof begs the question. In fact, nearly all Moore has to say about his proof in response is that given a certain usage of 'there are no material things,' his proof *does* successfully prove what it sets out to prove, namely, that such a statement is false.[12]

It is doubtful, though, that Malcolm's worry would have taken Moore by much surprise. If the worry was not already raised inside the halls of the British Academy that November 22 evening, then it was expressed in personal correspondence with Moore shortly thereafter. In a letter to Moore dated June 1, 1940—six months after Moore delivered his lecture and two years before the publication of Malcolm's article—the Welsh philosopher Richard Ithamar Aaron raises the issue explicitly. "Is there a *petitio principii* in your proof?" Aaron asks, before deciding for himself that there was: "There is *in respect to the being of external things* no more in your conclusion than in your premises" ("Difficulties with your Proof," MS Add. 8330 8A/1/5). Though Moore's marginalia indicate that he had read Aaron's letter, as far as I am able to uncover, there is no record of Moore's response.[13]

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[8] Ambrose, "Three Aspects of Moore's Philosophy," 820.

[9] See Malcolm, "Moore and Ordinary Language," 348.

[10] According to Malcolm's reading, Moore successfully refutes his skeptical and idealist opponents by showing how their statements "*go against ordinary language*" ("Moore and Ordinary Language," 349). Any charge of question-begging apparently dissolves in the face of linguistic felicity.

[11] See Moore, "Reply to My Critics," 674–75.

[12] Moore, "Reply to My Critics," 668–79.

[13] There is a short, incomplete draft of Moore's reply, but it makes no mention of Aaron's circularity concern. Aside from this, no record exists in either the Aaron archives or in Moore's own at Cambridge. Thanks to archivist Caronwen Samuel at the National Library of Wales for confirming

Moore was clearly not oblivious to the worry (his interlocutors ensured as much).[14] Yet, this only deepens the puzzle. Circularity remains the most formidable objection to Moore's proof. If Moore was indeed aware of this, why did he not take the time to address it in his later writings or correspondence? Was he merely indifferent, as so many commentators have assumed? This section demonstrates that Moore was far from.

Moore's most substantial and sustained discussions of circularity appear in two sets of lecture notes, each delivered by him for the Moral Sciences Tripos at Cambridge. These are his posthumously published *Lectures on Philosophy* (his 1928–29 lectures specifically)[15] and an unpublished set of lecture notes "Metaphysics Lectures 1938–39."[16] Moore's engagement with circularity in these lectures is both deep and characteristically irresolute. The issue was clearly one Moore took very seriously but also one that he was quite perplexed by: "I find this business of 'arguing in a circle' or 'giving a circular proof' very puzzling in many ways" (ML, MS Add. 8875 13/38/2). As I will eventually argue, some of these struggles are relevant to how Moore ultimately understood the epistemic structure of his 1939 proof.

My reconstruction of Moore's discussions below will draw extensively on both sets of lectures. Because there is considerable overlap between them and because in some instances the material is quite fragmentary, my discussion will therefore aim to synthesize both lectures and present them as a cohesive whole, although I will always indicate any important discrepancies or divergences that arise between them.

Throughout both the *Lectures* and "Metaphysics," Moore is concerned with understanding the precise sense in which an argument or proof may be said to be circular. Though Moore considers a wide variety of examples, he fixes on one of Descartes's

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the former.

[14] Moore was not, in general, unaware of the fallacy of circular reasoning. In earlier work, he recognizes that it would be "of the nature of a *petitio principii*" and "begging the question" to attempt refuting the skeptic "by bringing forward some instance of an external fact, which he does know" ("Hume's Philosophy," 159–60). The puzzle lies in Moore's apparent obliviousness—or indifference—to these worries as they pertain to his 1939 (anti-idealist) proof. One of my goals in this paper is to make sense of this.

[15] The *Lectures* were published in 1966 and are organized into three parts: Part I (1928–29), Part II (1925–26), and Part III (1933–34). The discussion of circularity that I reference here is found in Part I, at the very beginning of Lecture IV.

[16] Since the interpretative work I engage in here is chronologically sensitive, a brief note on the date "1938–39" is warranted. In titling this material, the cataloguer appears to have adhered to the titles inscribed by Moore himself on the documents. It is therefore likely—although impossible to determine with absolute certainty—that the date in the title refers to the academic year rather than the calendar year. We can therefore infer that these lectures were likely delivered no later than Easter Term in mid-June 1939, approximately five months before the delivery of "Proof" on November 22, 1939. I am grateful to archivists Frank Bowles and John Wells at the Cambridge University Library for confirmation of this.

arguments for the existence of God, an argument often regarded as a paradigm case of *petitio principii*.[17] Moore's reconstruction of that argument is as follows:

(i) God inspired the Bible.

(ii) Whatever the Bible says is true.

(iii) The Bible says God exists.

(iv) God exists.

As Moore himself says, this argument "certainly does beg the question," but in what sense exactly? Two senses of begging the question must be distinguished. Here is Moore:

> (1) an *unimportant* one in which what is meant is merely that the conclusion is identical with one of the premises . . . (2) an important one, in which to say [an argument] begs the question *entails* that the argument gives no good reason for the conclusion and therefore *a fortiori* doesn't prove it. (ML, MS Add. 8875 13/38/2)

Moore's "unimportant" sense of circularity captures a familiar and straightforward way in which we might say an argument is circular: when its premise and conclusion are identical in some respect, whether orthographically or propositionally.[18] An argument that begs the question in this way will involve some sort of premise circularity.

What about this second "important" sense of begging the question?[19] What does Moore mean when he says an argument is circular (in the important sense) when it "gives no good reason for the conclusion"? The answer that Moore hits on time and again in both lectures is this one: the premises of an argument "give no good reason for the conclusion" when one's knowledge of the major premise *depends* on or fails

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[17] The argument is mentioned by Descartes in the preface to his *Meditations* where he acknowledges its question-begging nature.

[18] How exactly this gets cashed out will ultimately depend on one's account of propositional identity. Interpreted in one way, for example, circularity could be avoided by simply conjoining the premise with any arbitrary proposition (although this would surely fail most philosophers' circularity tests). Moore's entry in his *Commonplace Book* suggests that he may have anticipated a move like this. For example, he takes "cats meow" to express the same proposition as "¬(¬(cats meow)" (*Commonplace Book 1919–1953,* 256). Yet, if these are taken by Moore to express the same proposition, then conjoining the premise with an orthographically distinct, but logically equivalent proposition, would not be a plausible way (by Moore's lights) to avoid this "unimportant" sense of circularity.

[19] Hereafter, "important" and "unimportant" will be refereed to without quotation marks.

to be *independent* of one's knowledge of the conclusion.[20] It is in this sense that an argument fails to prove anything:

> You are guilty of *petitio principii* in offering p as a proof of q, only if your knowledge that p, or that p is probable, was not *independent* of your knowledge that q or that q is probable, i.e. was based upon it. (*LP* 45)

> A circular argument is an argument *such* that if one of the two propositions of which a proof has been given, was such that it can't be known independently of the other, then that other [proposition] would not have been proved. (ML, MS Add. 8875 13/38/2)

The key word for Moore is "independent," which is to be taken in an epistemic sense. Circularity for Moore is the result of failing to establish some sort of *epistemic independence* between the major premise of an argument and its conclusion. The epistemic gloss is important insofar as it speaks to the epistemic conditions of an argument, which relate an ordered set of propositions (as represented by an argument's premises and conclusion) to what a given subject believes or knows.[21]

Epistemic conditions can be contrasted with constitutive conditions.[22] While the conclusion of any deductively valid argument must be such that it is implied by the premises, this *constitutive* condition only tells us about the logical relation between some ordered set of propositions (e.g. that q can be inferred from p, should p be true), not necessarily whether the conclusion has been *proved* by the premises. To determine whether an argument has done that—whether an argument may serve as a genuine 'proof'—some *epistemic* condition must be met. For Moore, that condition is instantiated by epistemic independence.

To further illustrate the constitutive/epistemic distinction and clarify what is at stake, we can consider an example from the *Lectures* where Moore introduces a philosophical proof of his own and defends it against the charge that it begs the question in (what he would ten years later call) the important sense.

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[20] Moore's account here closely follows those of his senior colleagues, the Cambridge logicians, J. N. Keynes and W. E. Johnson. Indeed, Keynes's *Studies and Exercises in Formal Logic* and Johnson's *Logic* are touchstones for Moore in both lectures and his discussions of circularity build on the approaches developed in these two texts. Moore likely lifted the expression 'independent' from Keynes who uses it once (and as far as I am aware, *only* once) in his discussion of the fallacy of the *petitio principii* (cf. Keynes, *Studies and Exercises in Formal Logic*, 27). Keynes's usage likely derives from Hermann Lotze (see his *Logic*, 83).

[21] Importantly, though Moore talks specifically of *knowledge* in the passages above, he also speaks of belief and reason in other passages. So, we should be cautious in assuming that Moore's account of circularity applies *only* to knowledge.

[22] The constitutive/epistemic distinction assumed by Moore comes specifically from Johnson (see his *Logic,* 10). Moore also picks up on this distinction in Keynes's discussion, although Keynes does not explicitly reference it. See Keynes, *Studies and Exercises in Formal Logic*, 425.

"I refute 'Nothing has shape or size,' " Moore begins, "by pointing to the proposition 'This desk has shape and size' " (*LP* 44). Though Moore takes this to be a conclusive refutation, he anticipates objections, among them being that his proof is guilty of *petitio principii*. How so? "It is perfectly true that 'This desk has shape' is something which can only be true if 'Nothing has shape' is false . . . that 'something has shape' is *contained* in it" (*LP* 44–45). To take this to imply that his proof is circular, however, is to conflate the constitutive conditions of an argument with its epistemic conditions. It is true, Moore says, the conclusion of his proof is in *some* sense implied or "contained" in its premise—that is, necessitated by the premise. But this, he thinks, is no objection. That the conclusion is necessitated by the premise is just what it means for an argument to be deductively valid. Moore says he is only guilty of *petitio principii* if his *knowledge* that this desk has shape and size was "based on a prior knowledge that 'Some things have shape': only if we could say, 'I shouldn't have known this, if I hadn't first known the other' " (*LP* 44–45). And according to Moore "obviously this isn't true" (*LP* 44–45).

When Moore talks about one's knowledge that p not being "based" or "dependent" on one's prior knowledge that q, he means that one's knowledge of the former is 'epistemically independent' of one's knowledge of the latter. Yet, we have so far left the notion of epistemic independence largely unexplicated—what exactly does Moore mean by it?

While we will not find a detailed explanation anywhere on Moore's account, the general idea is largely a familiar one.[23] Given a valid argument from p to q, if in knowing that p one must have already gained knowledge that q, then we might say that one's knowledge that p is "dependent" on their knowledge that q, making their reasoning circular. Here is how Moore typically puts things. A subject's knowledge of the major premise *fails* to be epistemically independent of their knowledge of the conclusion when they cannot come to know the premises without dependence on prior knowledge of the conclusion. "If his knowledge of [the premise] is dependent on his knowledge of [the conclusion]" or "dependent on a previous knowledge of something else from which [the conclusion] follows" (*LP* 45). Put another way, if one cannot know the major premise without *previously* knowing the conclusion, then the argument is circular, and so one's knowledge of the major premise fails to be independent of one's knowledge of the conclusion.[24]

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[23] While we should be wary of anachronism, it is common, for example, to understand an argument as cogent just in case the evidence or warrant one has for the premises are 'independent' of the evidence or warrant one has for the conclusion. An argument begs the question, then, when one's "basis for one of the premises is dependent on the truth of the conclusion" (McLaughlin, "Self-Knowledge, Externalism, and Skepticism," 104). Whether and to what extent Moore's discussions overlap with contemporary discussions is an interesting question but one that I leave to future work.

[24] An alternative, but not incompatible, account is offered by Susan Stebbing in her discussion of

Returning to the proof of God's existence above, we can now better understand the way in which Moore diagnoses its circularity, specifically the way in which he thinks its premises give "no good reason for the conclusion."

First, the proof is not circular in Moore's *unimportant* sense, for its premises all certainly seem to be different from the conclusion.[25] In this sense, then, the proof can be said to be non-circular. Yet, the proof seems circular in a different sense, in the *important* epistemic sense identified by Moore. The proof seems unconvincing because one would have to already believe that God exists to believe that its premises are true. Indeed, if the Bible just *is* God's word, what reason could one have for thinking that the Bible is true that does not *already depend* on one's belief in God? As Moore says, "You can't know that God inspired the Bible, without knowing that God exists" (ML, MS Add. 8875 13/38/2). In this respect, one's knowledge of the premises fails to be epistemically independent of one's knowledge of the conclusion. The proof is therefore circular in the epistemic sense and "*therefore* not a good proof" (ML, MS Add. 8875 13/38/2).

> S will not have proved that God exists, unless *the* knowledge of p from which he inferred q was *independent of* any knowledge of q: = unless he would have had *that* knowledge of p, even if he had not known q previously, nor known previously anything else from which q followed. (*LP* 45)

Importantly, this does not necessarily mean the conclusion of your proof is untrue or that you do not know it. As Moore explains: "It only says you've got no [good] reason for it; [therefore] you've not got a proof of it" (ML, MS Add. 8875 13/38/2). It also does not mean that your proof is *necessarily* circular. According to Moore, Descartes's proof of God would cease to be circular in the important epistemic sense "if the arguer *did* know [(i) God inspired the Bible], independently of [(iv) God exists]" (ML, MS Add. 8875 13/38/2, emphasis added).

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the fallacy of the *petitio principii*: "The question is whether the conclusion forms *part of the evidence* upon which the major premiss is based. If it does, then the reasoning is circular" (*Modern Introduction to Logic*, 218). Following Stebbing, we might say that when a subject's knowledge of the major premise depends on their knowledge of the conclusion it is because the conclusion in some way forms part of the evidence upon which the major premise is based. Accordingly, epistemic independence would imply that the evidence a subject has for the major premise is not partly (or entirely) based on the conclusion. While Moore does not himself put it exactly this way, the idea is consistent with his remarks in both lectures and helps further clarify the idea of epistemic independence.

[25] Though obviously this is arguable. Moore notes, for example, that the argument may "beg the question in a second unimportant sense," which he takes to mean that one of the premises are related to the conclusion in "some special way in which [(i)] is related [(iv)]" (ML, Add. Ms. 8875 13/38/2). It is unclear, however, what exactly Moore means here or how this second unimportant sense of begging the question is different from the first unimportant sense.

3 A Condition Lost

The previous section illuminates just how sustained Moore's engagement was with the problem of circular proof, an issue that is notably absent from "Proof," as any reader will notice. After all, nowhere in "Proof" does Moore explicitly broach the issue of circularity; nowhere does he differentiate between its two forms. Yet, when "Proof" is read in the context of the preceding discussion, new and striking continuities and discontinues emerge. We turn to these now.

When Moore presents his 1939 proof, he does not just leave it at that. Perhaps sensing opposition (and incredulous stares), he goes on to defend his proof by reassuring his audience that the proof he just gave "was a perfectly rigorous one; and that it is perhaps impossible to give a better or more rigorous proof of anything whatever" (PEW 166). He attempts to demonstrate this by arguing that his proof satisfies several conditions:[26]

> Of course, it would not have been a proof unless three conditions were satisfied; namely [(3)] unless the premiss which I adduced as proof of the conclusion was different from the conclusion I adduced it to prove; [(1)] unless the premiss which I adduced was something which I *knew* to be the case, and not merely something which I believed but which was by no means certain, or something which, though in fact true, I did not know to be so; and [(2)] unless the conclusion did really follow from the premiss. (PEW 166)

The condition to pay attention to here is (3). Though in "Proof" Moore does not explicitly characterize this condition as an anti-circularity condition, it is playing just such a role. Notice that (3) guards against what Moore in "Metaphysics" calls an unimportant form of circularity, a form of premise circularity wherein one or more of an argument's premises are identical to its conclusion. While obviously any proof exhibiting this kind of circularity would be considered fallacious,[27] most proofs are not typically deficient in this way. This is because most proofs satisfy a *non-identity* condition: a rigorous proof requires that its premises and conclusion be non-identical.[28] Moore clearly takes his proof to satisfy this condition. As he urges, the premises adduced in his proof are "quite certainly different from the conclusion" (PEW 166).

Now, while a proof may avoid circularity in this sense, it can still be circular in another. This point was brought out in the previous section by Moore himself, in his diagnosis of Descartes's proof of God. Such a proof, though non-circular in

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[26] The point in the numbering will become clear shortly.

[27] Although see Sorensen, " 'P, Therefore, P' Without Circularity."

[28] Again, how this gets cashed out will depend on one's account of propositional identity. See note 18.

the unimportant sense, could still be circular in Moore's important sense, failing to satisfy what we can call Moore's *epistemic independence* condition: one's knowledge of the major premise must be epistemically independent of their knowledge of the conclusion. Importantly, then, while satisfying epistemic independence seems to entail satisfying non-identity, the converse clearly is not true: satisfying non-identity does not entail satisfying epistemic independence. So, when Moore writes in "Proof" that it is impossible to provide a better or more rigorous proof than the one he has offered, he appears to be mistaken. A better or more rigorous proof would be one that satisfies Moore's 'fourth' condition:

The premises are known to be true.	(KNOWLEDGE)
The conclusion follows from the premises.	(VALIDITY)
The premises are different from the conclusion.	(NON-IDENTITY)
Knowledge of the major premise is independent of the conclusion.	(EPISTEMIC INDEPENDENCE)

What is puzzling here is not just that Moore is mistaken about this in "Proof"—it is that he is mistaken *by his own lights.* Despite having previously emphasized the importance of this fourth condition, Moore makes no mention of it in "Proof." Aside from a somewhat cryptic allusion to possible additional conditions for proof, [29] no further anti-circularity condition is discussed. And yet we know that in his 1938–39 lectures, only a year or less prior, this condition features prominently in his account of circular proof. We also know that it features prominently in his earlier 1928–29 lectures, where, in fact, *it is* explicitly included as a condition for proof:

> In order to refute a given proposition q, all that you need to do is to find some proposition p, which [(1*)] you know to be true, which [(2*)] is inconsistent with the proposition in question, and [(3*)] is such that in arguing "Since p therefore not q" you are not arguing in a circle: e.g. in order to refute "There are no black swans" you have only to find a black swan, i.e. to find a proposition of the form "This is a swan and is black", which you *know* to be true. (*LP* 44)

The similarities between this passage and the one from "Proof" above are striking.[30] Conditions (1) and (1*) both say that a proof requires knowledge of the premises;

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[29] "Are there any other conditions necessary for a rigorous proof, such that perhaps it did not satisfy one of them? Perhaps there may be; I do not know" (PEW 167).

[30] Other similarities abound. For reasons of space and continuity, I refrain from reproducing passages here. For the interested reader, I recommend comparing the following: on 'conclusive' proof, see *LP* 44, 46 alongside PEW 167; on knowledge without proof, compare *LP* 52 to PEW 170; on the difference between faith and knowledge, see *LP* 47 and PEW 170.

conditions (2) and (2*) both imply that the proof must be valid; and conditions (3) and (3*) both stipulate an anti-circularity condition: that a genuine proof cannot be circular. Crucially, however, the anti-circularity condition that Moore stipulates between "Proof" and the *Lectures* is different. Whereas condition (3) in "Proof" guards against Moore's unimportant sense of begging the question, condition (3*) in the *Lectures* guards against his important sense. When Moore writes in the *Lectures* that one must not be "arguing in a circle," he means that one's knowledge of the premises must not depend on one's knowledge of the conclusion.[31]

The absence of Moore's fourth condition seems unlikely to be a mere oversight. The chronology, coupled with his earlier emphasis on its significance, suggests that its omission was deliberate, perhaps reflecting how he ultimately intended his proof to be understood. If Moore *did* have reasons for abandoning his fourth condition, what might those reasons have been, and how might they help shed philosophical light on his proof? Clarifying the circumstances that led to its absence in "Proof" will be our focus in the next section.

4 Explaining What Is Lost

A natural place to start is with the following idea: Moore's views on the nature of circular proof underwent a shift—somewhere between his 1928–29 and 1938–39 lectures and 1939 "Proof"—ultimately leading him to abandon his fourth condition. But what was the impetus for this shift? And is there any evidence of it? I propose that the shift can be traced to an impasse Moore reaches in his 1938–39 lectures, one that left him conflicted over what a rigorous proof should entail. This impasse, I suggest, provides the key to understanding both the shift in Moore's view and, ultimately, his 1939 proof.[32]

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[31] What of the condition that guards against Moore's unimportant kind of circularity? Surely, as "Proof" shows, Moore did not tolerate such circularity in any proof. Its omission in the *Lectures* might reflect his view—later echoed in "Metaphysics" a decade later—that this kind of circularity was largely *unimportant* and peripheral to his focus on defending his proof against a more serious and *important* form of circularity. Given that satisfying epistemic independence entails satisfying non-identity, a second explanation is simply that Moore may have found the condition redundant.

[32] A second explanation may plausibly involve Moore's views on perceptual knowledge at this time (see e.g. Moore, "Four Forms of Scepticism," 225–26; cf. Moore, *Commonplace Book 1919–1953*, 173–76). Moore, that is, might have been led to recognize the circular nature of his proof by grappling with the epistemological implications of his view that our knowledge of material objects is indirect and not immediate (see Neta, "Fixing the Transmission," 80, who explores a similar idea). Overall, however, this explanation remains speculative, primarily due to the publication gap in Moore's discussions on perception between 1930 and 1940, which makes it largely inconclusive what his settled views on immediate knowledge were in the late 1930s. Any supporting evidence would therefore be indirect, inferred from his discussions of perception after 1939. Archival evidence may yet prove useful here.

As I noted in section 2, though there is significant continuity between the *Lectures* and "Metaphysics," one important difference between them (aside from the comparative brevity in which Moore discusses circularity issues in the former) is that Moore seems less confident of his grasp of circular proof in the latter. Among the many cross-outs, false starts, and question marks, remarks about finding circular proof "very puzzling in many ways" (ML, MS Add. 8875 13/38/2) are not an unfamiliar occurrence.

But Moore also seems less confident about what it means for a proof to beg the question in the important sense. He writes, for example, that the circularity we find in Descartes's proof of God is due to a certain relation that obtains between the premise and the conclusion but finds the nature of this relation unclear, calling it a "puzzle": "one puzzle is what relation must hold between two propositions p and q, in order that we may rightfully say that: p proves r and r proves q is circular" (ML, MS Add. 8875 13/38/2).

Several pages later, after characterizing this relation in terms of epistemic independence—or, rather, *failing* to establish such independence—Moore still seems perplexed. He correctly notes that if one cannot give a proof of 'God exists' independent of 'God inspired the Bible' then one has failed to *prove* that God exists. "But why?" Moore asks. Answer: "Because of some special relation between ['God inspired the Bible'] and ['God exists']: *What relation?*" (ML, MS Add. 8875 13/38/2, emphasis added). It appears that Moore was not fully satisfied with conceiving of this "special relation" in terms of epistemic dependence, as failing to satisfy his fourth condition. (We will soon discover why, although a deeper explanation will be postponed until section 5.)

Perhaps these moments of doubt and diffidence are not unusual for lecture notes, but they do suggest that Moore was struggling with something. Yet, there is one passage where these struggles vividly come to a head:

> I'm not going to say any more about begging the question, because I can't find anything clear to say. I can't see what the answer is to the following question.
>
> [Case 1] Why are you begging the question, if, in answer to a challenge, to give some good reason for asserting that (2) God exists you say: (1) "He inspired the Bible"?
>
> [Case 2] Whereas in answer to a challenge to give some good reason for implying that (4) J.N. Keynes was alive in 1884, you give (3) "He wrote the Preface to his *Formal Logic* in 1884", you are not.
>
> One can easily see a difference between the two cases: namely this one; you can have no good reason at all for "God inspired the Bible", and you can for "Keynes wrote the Preface". But this won't make one a case of begging the question [and] the other not.
>
> The answer: you couldn't know (1) without knowing (2), doesn't seem a good answer; since it seems to be equally true of (3) and (4).

> This question is what I can't answer. (ML, MS Add. 8875 13/38/2)

This passage requires some care in unpacking. Let us start with the difference that Moore says one can "easily see" between these two cases. The difference has to do with the kind of *reasons* one has for 'God inspired the Bible' versus 'Keynes wrote the Preface.' This difference in reasons, Moore thinks, explains why the former proof begs the question while the latter proof does not (at least initially).

Importantly, Moore is not using the word 'reason' in the strict logical sense. It is clear from "Metaphysics" that his use of the word is consonant with his usage in previous work, with what he takes to be its "wide and popular sense": a "good reason" is one that renders a statement "*positively probable*" (NROP 41).[33] In this context, to say that one has a good reason for thinking that God inspired the Bible is to say something like: "That the Bible says so either *renders it likely* or *proves* [it]" (ML, MS Add. 8875 13/38/2).

So, one way of putting the difference that Moore sees above is to first recognize that the reasons one might give for 'God inspired the Bible' (if any reasons can be given) will probably look quite different from the reasons one might give for 'Keynes wrote the Preface in 1884.' In fact, in an early text from 1901, Moore is quite clear about where he stands with respect to these reasons: "It is mere faith, not proof, which justifies your statement: 'God exists' " (VR 95). So, if 'God inspired the Bible' is true it is certainly not a truth that can ultimately be inferred from what Moore calls the "facts of common life . . . the facts with which natural science and history deal" (VR 94).[34] But if not, then for Moore these do not constitute *good* reasons if they constitute reasons at all. To base one's belief in the existence of God on the reasons one has for 'God inspired the Bible' is to base one's reasons on faith, revelation, divine intuition, and so on, which is just to say, as Moore sees it, are not reasons capable of rendering the truth of this statement probable.

Moore understands the Keynes proof differently. Contrary to the reasons one might have for believing that God inspired the Bible, the reasons for believing that Keynes wrote the Preface in 1884 *are*, we might put it, inferred from the "facts of common life," that is, from having "discovered this by looking in the book and finding [the] Preface to the First Edition dated Jan. 1884" (ML, MS Add. 8875 13/38/2). Such reasons are based not on faith or anything *a priori*, but on the respectable methods of analogy and induction which serve as the basis for much of our empirical knowledge about the world. So, according to Moore, one has good reason to believe that Keynes

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[33] "I do *not* mean to restrict the words 'reason for a belief' to propositions from which the laws of Formal Logic state that the belief could be deduced" (NROP 40).

[34] Moore puts the point even stronger in a different passage, comparing the evidence one has for 'I exist' versus the evidence one has for 'God exists': "But when we come to the question of evidence and probability, then there is all the difference in the world between [these two propositions]. There is evidence, in plenty, that I exist and there is none that God exists" (VR 89).

was alive in 1884 because one has good reason to believe that Keynes wrote the Preface in 1884; this reason renders the truth of this statement highly probable.

At least, this is what Moore *seems* to mean when he says that there is a difference we can "easily see" between both proofs. Now, despite this difference, Moore nevertheless concludes that this difference in reasons "won't make one a case of begging the question [and] the other not" (ML, MS Add. 8875 13/38/2). The reason why not is because, as Moore urges, in *both* cases one's reason for the premise fails to be independent of the reason one has for the conclusion. In other words, both proofs fail to satisfy what we have been calling Moore's fourth condition. For Moore, then, even if your reason for believing that Keynes was alive in 1884 is a paradigmatic *good* one (in the sense that Moore takes it to be above), this will not necessarily furnish you with a *non-question-begging* reason for believing the conclusion. As Moore argues, just as one could not know that God inspired the Bible without previously knowing that God exists, one could not know that Keynes wrote the Preface in 1884 without previously knowing that Keynes was alive in 1884.[35]

The upshot is that Moore is led to a dilemma, to a question that he "can't answer." We are now in a better position to more precisely formulate that question: If failing to satisfy the fourth condition (the epistemic independence condition) does not distinguish a paradigmatic bad proof from a paradigmatic good one, then what exactly does? Moore offers no answer to this question. His remarks, however, suggest that satisfying his fourth condition may not be strictly necessary for a rigorous proof; failing to satisfy it may not pose a decisive threat to a proof's overall cogency. (Moore's remarks also seem to suggest that his fourth condition may not be sufficient for circular proof: while circular proof might require failing to satisfy the fourth condition, failing to satisfy it does not guarantee circular proof.) After all, for Moore, the Keynes proof serves as a paradigmatic example of a *good* proof, even though he maintains that one could not know its premise without previously knowing its conclusion.

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[35] Moore's explanation for why the Keynes proof suffers the same circular fate as the proof of God is left as an exercise for the reader. This makes pinning down what exactly he meant tricky. Moore may have confused himself here, but before settling on that verdict, it is worth considering another possibility. We might think that the Keynes proof begs the question in the sense that a preface is not *on its own* a reliable indicator that the person who wrote it was alive at the date indicated in the preface. Rather, (3) Keynes wrote the Preface—in *conjunction* with other kinds of background knowledge, (3*) There are no historical records indicating that Keynes died before 1884, that Keynes was cogent at the time of writing, and so on—seems to provide one with a non-question-begging reason to believe (4) Keynes was alive in 1884. But this is just to say that the (3) can only provide a reason for (4) if one already has an *independent* reason to accept (4). This is a somewhat anachronistic way of putting things, but it may not be so far off from what Moore was thinking here. In this respect, the Keynes proof is epistemically circular in a similar way as the proof of God. In both proofs, one's knowledge of the premise (or reason or belief), in one way or another, depends on one's knowledge of the conclusion.

I take the passage above to suggest that by 1938–39, by the time of "Metaphysics," Moore had reached an aporia regarding circular proof.[36] Recognizing that both a paradigmatic 'good' proof (such as the Keynes proof) and a paradigmatic 'bad' proof (such as the proof of God) can fail to satisfy his fourth condition in similar ways, Moore, keen on saving the *apparent* differences between these proofs, finds himself at an intractable standstill. Unable to identify further criteria to distinguish the "special relation" characteristic of genuinely circular proofs, Moore is forced to retreat into silence. It is this impasse, I submit, that accounts for Moore's shift in views from the *Lectures* to the "Metaphysics" and, ultimately, to "Proof." While Moore's 1928–29 lectures offer no indication that he so much as even questioned the significance of his fourth condition, his 1938–39 lectures, by contrast, reveal a palpable ambivalence—perhaps even a skepticism about its explanatory power—that leads him to forgo the condition entirely in "Proof."

5 Exposing a Tension, Diagnosing a Failure

So, what does all this mean for how Moore understood his actual proof? There are two pieces of data that need to be reconciled here:

M1. Moore has reason to think his 1939 proof fails to satisfy his fourth condition (or else that a good proof may not need to satisfy it).

M2. Moore regards his 1939 proof as a good proof, that "it is perhaps impossible to give a better or more rigorous proof of anything whatever" (PEW 166).

I have just motivated M1, and M2 is uncontroversial.[37] The crucial question is therefore this: what exactly does Moore mean by "rigorous proof"—or more simply, 'proof'?

It might be thought that a tension exists here. For if M1 is true, then how *can* Moore maintain that his proof is a good or rigorous one? If to know the premises of Moore's proof one would have to already know the truth of its conclusion, it is unclear how someone who had antecedent doubts about the conclusion could be rationally moved to believe it on the basis of Moore's premises. If we take proofs to be the sort of things that *extend* or *advance* our knowledge, then it is obvious that proofs exhibiting such structure are unpersuasive precisely because they seem incapable of doing this; they extend and advance nothing; they are epistemically moot.

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[36] This might also potentially explain why there is no record of Moore's response to Aaron or other interlocutors; Moore might not have had anything decisive to say in response.

[37] Moore's opinion does not seem to waver when, several years later, he remarks that his proof "really does prove this" i.e. that there *are* external objects ("Reply to My Critics," 674).

This line of reasoning, however, assumes two things. That all proofs, or all good "rigorous" proofs, are *persuasive proofs*: valid arguments that can be used to rationally persuade someone of their conclusions (on the basis of their premises) if those conclusions have been put into doubt (where 'doubt' is understood as disbelief).[38] And second, that Moore conceives of his 1939 proof as a persuasive proof roughly in line with the conception of proof he defends in both of his lectures, as satisfying his fourth condition.

Now, the first assumption is false. Proofs can be used to do many things. Persuading is one thing, but proofs can also be used to 'tease out' our commitments,[39] to remind us of beliefs we are antecedently committed to, beliefs that we simply forgot we had, or beliefs that we failed to realize were entailed by other beliefs. I might, for instance, know that the bill before tip was $114.50 and that I tipped 20%, but only now come to see, after being presented with the following argument, that the total bill was $137.40.

(1) The bill (before tip) is $114.50 and the tip is 20%.

(2) If the bill (before tip) is $114.50 and the tip is 20%, then the total (after tip) is $137.40. [$114.50 + (0.20 \times 114.50) = 137.40$]

(3) So, the total (after tip) is $137.40.

The argument is valid, and the conclusion is different from the premises. I might also already independently know each of the premises here but only now competently deduce the conclusion after working my way through the proof. Of course, if you had antecedent doubts about the conclusion, such a proof could not be used to rationally overcome those doubts—it would be question-begging. Nevertheless, lacking such doubts, the proof is effective in 'teasing out' my commitments (or antecedent beliefs) by allowing me to use its premises to rationally base my belief in the conclusion. In this sense, the proof is a perfectly rigorous one.

Philosophers sometimes refer to proofs like these as *display proofs*. The idea is that while a display proof cannot be used to rationally persuade someone who antecedently doubted its conclusion (unlike a persuasive proof), it can 'display' premises on which someone can rationally base their belief in the conclusion.

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[38] See e.g. Sosa, "Moore's Proof," 51. In fact, Sosa thinks Moore's proof may be persuasive against a Berkeleyan idealist, someone who does not deny Moore's first premise (that there are hands) but denies the second premise (that hands are externally constituted). However, this reading is hard to reconcile with Moore's comments in his "Reply to My Critics." There, Moore is quite clear that his target is the kind of idealist who, in denying the existence of external objects, denies that material objects like hands exist ("Reply to My Critics," 670). Such an idealist, however, cannot be a Berkeleyan idealist—pace Sosa.

[39] À la Jackson, *Conditionals*, 101–104. For further discussion see Coliva, "Moore's Proof and Martin Davies's Epistemic Projects"; and Davies, "Two Purposes of Arguing."

Now, while Moore made no explicit distinction between persuasive proofs and display proofs, by "rigorous proof" could he have had in mind something like a display proof? Some commentators have suggested just this.[40] For our purposes, however, if the answer to this question is 'Yes,' this suggests that Moore's views about proof *did* change from the *Lectures* and the "Metaphysics" to "Proof": from conceiving of rigorous proofs as *persuasive* proofs to conceiving them as *display* proofs. If so, the tension between M1 and M2 disappears.

When we take the evidence of the previous section into account, there is some motivation for this claim. Consider again why, on my reading, Moore enumerates only three conditions in "Proof": shortly prior to "Proof," Moore was wrestling with whether failing to satisfy his 'fourth' condition was enough to render a proof entirely defective. Moore implies that while all circular proofs might fail to satisfy his fourth condition, not all proofs failing to satisfy it are necessarily circular; not all such proofs are bad proofs. So, according to Moore, there are *good* proofs that fail to satisfy his fourth condition. Now, I have suggested that Moore never seems to fully resolve these issues, but perhaps this is not the full story. Perhaps Moore conceived of his 1939 proof in a similar way to the Keynes proof: as a good proof that nonetheless fails to satisfy his fourth condition. The idea would be that Moore does not merely *settle* for these three conditions but instead has a principled reason for deeming them sufficient for a rigorous proof, what we might characterize as a display proof.

While I am not claiming that Moore explicitly conceived of his 1939 proof in display terms, the fact that he is convinced his proof is a good one, combined with the fact that his three conditions are characteristic of what *we* would call a display proof, make this a possibility worth seriously entertaining. Despite, then, being unpersuasive to those with prior doubts about its conclusion, Moore's proof offers premises on which one can rationally base their belief in the conclusion. Understood in this way—as a display proof—Moore's proof *is* a perfectly good and perfectly rigorous proof.

This would be a nice ending to the story, but Moore's remarks elsewhere in "Proof" give us reason to think that it cannot be the whole truth. Shortly after Moore characterizes his proof in terms of these three conditions, we are met with the fact that "perfectly conclusive" (PEW 168) is also a word that Moore uses to describe his

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[40] See Neta, "Fixing the Transmission"; Sosa, "Moore's Proof"; and Sosa, "Responses," who interpret Moore's proof as functioning in this way. Notably, Sosa also argues it may succeed as a persuasive proof (see note 38). Interestingly, Neta thinks that, even understood as a display of knowledge, Moore's proof is capable of rationally overcoming doubts—provided the doubt is "unreasonable" ("Fixing the Transmission," 79). For Neta's Moore, knowledge is compatible with doubt. It is not clear, though, whether Neta attributes this view explicitly to Moore or imposes it onto him. If the former, Neta's attribution lacks textual support; if the latter, Neta cannot be talking about the historical G. E. Moore. For critical discussion of both views, see Carter, "Recent Work on Moore's Proof."

proof. In fact, according to Moore, his proof is capable of "settling certain questions, as to which we were previously in doubt" (PEW 167). What these remarks suggest is that Moore also took his proof to be capable of rationally *persuading* someone of its conclusion. If, say, someone was to *doubt* the existence of external objects, Moore's proof, seemingly by his own lights, should be able to rationally put those doubts to rest by providing such a person with a reason to believe that external objects do exist after all. That Moore seems to understand his proof in this way is, I think, evident in his remarks above, but is bolstered by a proof that he takes to be analogous to his proof of an external world:

> Suppose, for instance, it were a question whether there were as many as three misprints on a certain page in a certain book. A says there are, B is inclined to doubt it. How could A prove that he is right? Surely he *could* prove it by taking the book, turning to the page, and pointing to three separate places on it, saying 'There's one misprint here, another here, and another here': surely that is a method by which it *might* be proved! (PEW 167)

Notice that Moore is no longer just claiming that his proof is a rigorous one, but that "we all of us do constantly take proofs of this sort as absolutely conclusive proofs of certain conclusions—as finally settling certain questions, *as to which we were previously in doubt*" (PEW 166, emphasis added). In short, Moore seems to demand of his proof not merely that it 'display' premises on which to rationally base one's belief in the conclusion, but that it also *silence* any doubts one might harbor about the existence of external things. But if so, it is hard to see how Moore can coherently regard his proof as rationally persuasive in this way given its failure to satisfy his fourth condition.

The claim that Moore's views about proof changed from the *Lectures* and the "Metaphysics" to "Proof" (from conceiving of rigorous proofs as persuasive proofs to conceiving them as display proofs) is therefore untenable. If Moore's views did genuinely change in this way, there should be some evidence in "Proof" that they did. But the evidence in "Proof" is not decisive; indeed, it supports both display and persuasive readings. So long as that is the case, M1 and M2 cannot be fully reconciled.

It is tempting to take all of this to suggest that Moore toggled between *both* conceptions in "Proof," between conceiving of his proof as a persuasive proof *and* conceiving of it as a display proof. Understanding Moore in this way would go some way towards explaining why M1 and M2 may be fundamentally irreconcilable. We might put it like this. M1 and M2 are irreconcilable because Moore engages in a subtle form of equivocation in "Proof," equivocating between two senses of 'proof': proof *qua* display proof and proof *qua* persuasive proof. This equivocation is not an intentional sleight of hand, but the result of Moore's largely unresolved struggles with the philosophical significance of his fourth condition, struggles that (if not directly coinciding with the drafting of "Proof") transpire shortly before its publication, as

we have seen. The unsettled state in which Moore leaves the issue of circular proof in his 1938–39 lectures—exemplified by a question he "can't answer" and his inability to "find anything clear to say"—leads to the inconsistent characterization of his 1939 proof.[41]

This is all very speculative, of course, but, interestingly, if what I am suggesting is roughly correct, it has the potential to shed new light on the proof's seemingly paradoxical nature as well as the intellectual dissatisfaction that many readers experience when first encountering the proof.[42] Before concluding, I would like to briefly explore this line of thought.

An air of paradox surrounds Moore's proof.[43] Moore's reasoning seems impeccable, and who could doubt his premises? Better proofs in philosophy are few and far between. And yet, "*Something* about [Moore's] argument sounds funny."[44] For some, what is "funny" is that the proof is ultimately found to be question-begging or circular; for others, only dialectically ineffective.[45] In either case, the paradox is discharged, and the source of intellectual dissatisfaction is explained by *either* diagnosing the epistemic structure of Moore's proof as defective, or else locating its defectiveness elsewhere, for example, at the dialectical level. In other words, either the proof fails epistemically, or succeeds epistemically—but not both.

Now, if Moore is toggling between two conceptions of proof, as I suggest, we might understand his proof as constituting both an epistemic success *and* an epistemic failure. What my diagnosis therefore reveals is that the two horns of the paradox—that Moore's proof strikes the reader as both an epistemic success and an epistemic

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[41] Moore's struggles with the apparent irreconcilability of M1 and M2 suggest that he, like Wittgenstein, was grappling with the limitations of proof. For Wittgenstein, of course, the very notion of 'proving' propositions like Moore's is fundamentally misguided. As he suggests in *On Certainty* (§115, §117, §136, §250, §§341–43, §655), such propositions function as *hinges*—foundational certainties that underpin our epistemic practices but are themselves exempt from proof and doubt. By contrast, as I have shown, Moore attempts to articulate criteria to distinguish circular from non-circular proofs but encounters persistent difficulties in applying these criteria consistently. Still, this tension between Moore's commitment to the possibility of proof and the epistemic constraints he uncovers reflects, in some respects, Wittgenstein's critique of the limits of justification. In their own ways, both philosophers illuminate the boundaries where proof falters.

[42] Stroud's reaction is representative: "we immediately feel that Moore's proof is inadequate" (*Significance of Philosophical Scepticism*, 86).

[43] Indeed, Coliva suggests that Moore's proof can be understood as a distinctive kind of paradox, "one which employs obviously valid forms of reasoning, starts from undisputed premises which, in context, are justified (or even known), leads to a perfectly acceptable conclusion, yet is still such that it seems evidently flawed" ("Paradox of Moore's Proof," 234).

[44] Pryor, "What's Wrong with Moore's Argument?" 349.

[45] See e.g. Wright, "(Anti-)Sceptics Simple and Subtle" and Wright, "Warrant for Nothing," who thinks Moore's proof suffers from 'transmission failure'; see Pryor, "What's Wrong with Moore's Argument?" who thinks that it is only dialectically ineffective.

failure—are, in fact, consistent. We might think that this is because our reactions to Moore's proof unfold diachronically across the text, that they shift with Moore's own shifting sense of 'proof' alluded to above. The reader of "Proof" is thereby compelled in both directions at different places in the text, from thinking that Moore is right to say that no better proof could exist—recognizing the indisputable rigor exemplified by a *display* proof—to coming to terms with the fact that the proof fails to live up to the persuasive standards that Moore has seemingly set for himself, that is, reckoning with its limitations as a *persuasive* proof. Hence, when Moore's proof initially strikes readers as a good one it is because *it is* a good one *when understood as a display proof*. And when it strikes readers as a bad one it is because *it is* a bad one *when understood as a persuasive proof*.[46]

The intellectual dissatisfaction that we experience, then, is not due to the proof's defective epistemic structure or dialectical ineffectiveness, as is typically argued, but rather to the inconsistency in which Moore uses the word 'proof,' which ultimately stems from his own unsettled conception of proof.[47] If the proof fails, it fails because of Moore's failure to distinguish and disambiguate between these two senses of proof—for his readers, but also for himself.[48]

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[46] Again, I am not claiming that Moore explicitly conceived of his proof in these terms. I am also not claiming that, as readers of "Proof," we have these precise characterizations of proof in mind when the proof (intuitively) strikes us as both epistemically successful and epistemically problematic.

[47] One additional virtue of the account sketched here is that it avoids the somewhat awkward consequences that result from both these diagnoses. If, on the one hand, the proof's failure is explained by its defective epistemic structure (by its epistemic circularity), it is challenging to understand how we could have ever been impressed by the proof in the first place. On the other hand, if the proof *is not* thought to be epistemically flawed—if, that is, it is thought to be cogent, albeit dialectically ineffective—it is difficult to explain why the proof is widely felt to be so "immediately" unsatisfying (cf. note 42).

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