1. Indeterminacy

From time to time we find ourselves confronted with a question which, though perfectly intelligible on its face, admits of no determinate answer. For example: You and I are discussing the finer points of the 2012 presidential election. We both agree that, had Romney won, Obama would have conceded graciously, and that if Obama had conceded, Biden would have been by his side. But now you wonder: if Romney had won, would Biden have been standing to the left or to the right of Obama during his concession? No answer is forthcoming. It’s not just that we cannot know where exactly Biden would have been standing in this counterfactual scenario, but rather that there is, in some basic sense, no relevant fact to be known.

To acknowledge such cases is to recognize that, for certain matters \( p \), it is simply indeterminate — there is no fact of the matter — whether \( p \). With respect to our example, it is indeterminate whether Biden would have been standing to the left or to the right of Obama, had Romney won.

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1. Certain theories of counterfactuals may return the result that it is not the case that Biden would be standing to the left; nor is it the case that he would be standing to the right; rather, either of these might (but only might) have obtained. But I think there are strong intuitions that there is just no fact of the matter as to where exactly Biden would have been standing. In any case, you don’t need to agree with this particular example; there are plenty of others. For some nice examples of counterfactual indeterminacy and a discussion of how these cases relate to those of causal and moral indeterminacy, see Bernstein (2016).

2. As indicated, I am using ‘it is indeterminate whether \( p \)’ as equivalent to (or to at least entail) ‘there is no fact of the matter whether \( p \). This rules out so-called ‘epistemic’ accounts of indeterminacy. This is not a substantive assumption; it’s just a matter of how I’m using the word ‘indeterminacy’. See §2 below for a much fuller explanation of these and related points. See note 17 in particular for a thorough discussion of the phrase ‘no fact of the matter’.
Examples of indeterminacy abound. Some we run up against in the course of ordinary conversation or experience. Is her shirt red or orange? At what exact point did we leave Iowa and enter Minnesota? Would Biden have stood to the left or to the right? Others are more theoretical and contentious. Does ‘gavagai’ translate as ‘rabbit’ or as ‘undetached rabbit part’? Is A the same person as B or as C? Do these two objects compose to make a third?*

The phenomenon of indeterminacy has received considerable attention in the past few decades. This attention has tended to focus on the following two questions: First, what is the logic of indeterminacy? Specifically, what revisions to classical logic and semantics (if any) are required to accommodate indeterminate sentences in our language? Second, what is the nature or source of indeterminacy? Specifically, is indeterminacy a semantic or a metaphysical phenomenon? Is it a product of how we represent the world, or an objective feature of the world itself?*

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3. Or at least putative examples. You don’t have to agree that there is indeterminacy in all or any of the following cases in particular. Substitute in your own if you don’t like these. Of course, I am assuming that there is at least some indeterminacy out there — that it’s a real (or at least possible) phenomenon. I won’t be arguing for that general claim here. There are those who deny it (e.g. Williamson (1994) and Horwich (1990)), but I see this as a rather extreme (which is not to say entirely unmotivated) position. Moreover, skepticism about indeterminacy does not immediately undermine the value of what I will be talking about here. See note 25.

4. See Quine (1960), Parfit (1984) and van Inwagen (1990), respectively. Note that Parfit, strictly speaking, does not accept the conclusion of the indeterminacy arguments he considers, owing to his particular views on what matters in questions about personal survival.

5. By an ‘indeterminate sentence’ I mean any sentence ‘p’ which is such that it is indeterminate whether p. (Note: single quotation marks around schematic sentence letters should be understood as corner-quotes throughout.) Another question under the umbrella of this first question concerns the logical principles that should govern a determinacy operator in our language.

6. A bit more exactly, the distinction between semantic and metaphysical indeterminacy can be put as follows: a case of indeterminacy as to whether p is metaphysical iff it obtains independently of how/if we represent matters p (either in thought or in language); otherwise it is semantic. And perhaps even this formulation is not exact enough, given cases that intuitively involve both semantic and metaphysical indeterminacy. (For instance, let p and q be cases of semantic and metaphysical indeterminacy, respectively; then presumably their conjunction is also indeterminate, but the indeterminacy of the conjunction would then arguably be both metaphysical and semantic.) Nothing that follows will depend on how exactly we formulate the distinction, and so I will ignore these niceties. Take note, however, that I am intentionally ignoring so-called “epistemic” accounts of indeterminacy, for reasons mentioned in note 2. One may also want to leave room for a sort of pluralism: some cases of indeterminacy are semantic, others metaphysical. I will discuss this in §5.

7. Another good question out there concerns the possibility of higher-order indeterminacy. But this is also not something that will directly occupy us here.

8. The exact sense and extent of the neutrality involved will be made more precise in the sections below.

9. The two projects out there that come closest to touching on this question are the following: First, Field (2000) and Williams (2014) are both concerned, in different ways, with providing an account of the cognitive role of indeterminacy. Both accounts are intended to be compatible with either a semantic or a metaphysical conception of indeterminacy, and so in this sense could be seen as somewhat “minimal”. However, there are plenty of other ways in which...
a minimal characterization, properly formulated, could have great theoretical value for debates about indeterminacy. It’s something we should be just as concerned with as we are with thinking about the nature and logic of indeterminacy. Or so I hope to show in this paper.

My plan will be as follows: In the next section I’ll say a bit more about what I mean by a minimal characterization (henceforth, “MC”). In §3 I’ll then outline a number of different ways in which I think providing such an MC has theoretical value. In §§4 and 5 I will establish some desiderata for a satisfactory MC, and use these to motivate a general strategy for formulating an MC. With these tools in hand, I will, in §6, look at some initially plausible proposals of MCs and argue that each is unsatisfactory, failing to meet one or another of our established desiderata. Finally, in §§7–9 I will sketch the beginnings of my own MC and respond to some objections.

2. Two Ways of Thinking about an MC

There are a number of different (though perfectly compatible) ways we might approach the idea of an MC, but here are two that I find particularly illuminating.

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*These theories are not at all neutral (e.g. on matters of logic), and so neither can be seen (nor is other intended) as being minimal in my sense. Moreover, while I’m not necessarily interested in a full-blown reduction or analysis of indeterminacy here (see §4), I am interested in more than merely an account of its cognitive role, and so again the question I am concerned with is distinct from that with which Field and Williams are concerned.

Second, in contrast to the situation with indeterminacy, there has been considerable attention paid to the parallel project of providing a minimal characterization of the closely related phenomenon of vagueness. Greenough (2003) makes this project explicit and nicely articulates its contours and virtues (in addition to providing a minimal characterization of vagueness himself). The project I am proposing here is greatly inspired by Greenough’s work. But it is distinct, given that the phenomena of indeterminacy and vagueness are distinct, and a minimal characterization of one does not translate to a minimal characterization of the other. I’ll have more to say about a minimal characterization of vagueness below (§3).

10. Not to mention the philosophical value of providing such a characterization in its own right. But I won’t lean too heavily on that virtue in what follows.

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A Minimal Characterization of Indeterminacy

The first way to think about an MC relates to how we theorize about indeterminacy, specifically as in contrast and relation to debates regarding the nature or source of indeterminacy. Suppose you and I are engaged in such a debate. To make things concrete, we focus our discussion on a simple example:

(S) It is indeterminate whether Suzan is rich.

You maintain that the indeterminacy in (S) is semantic: it consists in or is otherwise owing to the fact that the word ‘rich’ does not express a unique property. I maintain that (S) is metaphysical: it consists in the fact that being rich is itself a “fuzzy” property, of which Suzan is a borderline case. Evidently we have a disagreement about the nature of the indeterminacy in (S). But notice that this disagreement presupposes a prior point of agreement, namely our agreement on (S). We both agree, at least for the sake of argument, that it is indeterminate whether Suzan is rich. We just disagree about what this indeterminacy ultimately consists in. Now here’s how this relates to an MC: We can think of an MC as characterizing exactly that sense of “indeterminacy” that you and I both agree applies in (S), despite our disagreement as to that indeterminacy’s underlying nature.

11. For the purposes of the example, I will assume that whether or not someone is rich depends only on how much money is currently in her bank account. I am imagining that Suzan is a borderline case of being rich, given her account balance.

12. These particular conceptions of semantic and metaphysical indeterminacy, respectively, are not the only ones possible. I use them for concreteness. See Barnes and Williams (2011) for a much different conception of metaphysical indeterminacy.

13. In supposing that you and I both agree on (S), I don’t mean to suggest that everyone will happily acknowledge the existence of indeterminacy (in this case or any other). For those generally skeptical of indeterminacy, see note 3. Such skeptics will deny (S), and in general won’t be engaged in debates about the nature of indeterminacy at all (they don’t think there is any). By contrast, I’m imagining two characters who agree that there is indeterminacy out there and that (S) is as good a case as any to focus on for the purposes of their debate regarding the nature of indeterminacy. As mentioned in note 3, it isn’t my goal in this paper to defend the possibility of indeterminacy against the skeptic’s general worries.
The second way of thinking about an MC relates to the way in which we appeal to indeterminacy in our theorizing about and describing other matters. In the opening, we provided a sampling of indeterminacy attributions, some contentious, others mundane, and one could easily think of more. But notice that usually these uses of ‘indeterminacy’ contain no commitment, in and of themselves, to any theory of an underlying nature or logic of indeterminacy. Take Parfit. No part of his argument suggests that the relevant indeterminacy in personal identity is owing to (say) the meaning of ‘person’. Or take Quine. No part of his argument suggests that the relevant indeterminacy in translation results in (say) truth-value gaps. Or think of our opening example, where we concluded that (at least prima facie) there is no fact of the matter as to where exactly Biden would have stood. Did that conclusion really involve any commitment to a specific nature or logic of this indeterminacy? Certainly not. Evidently there is a sort of “generic” or “minimal” concept of indeterminacy at work in each of these cases. And we can think of an MC as providing a relatively precise and informative explication of this generic concept.\textsuperscript{14}

It’s important to emphasize that indeterminacy is not primarily an epistemological phenomenon. It’s metaphysical, in a broad sense of the term. Indeterminacy does not consist in an inability to know an otherwise determinate fact. Rather, the idea, as we expressed it in the opening, is that there is just no relevant fact there to be known. There’s a terminological issue here that should be addressed. The word ‘indeterminacy’ can be used with either a narrow or a wide sense. Understood narrowly, its being indeterminate whether \( p \) entails that there is genuinely no fact of the matter whether \( p \). Understood broadly, its being indeterminate whether \( p \) entails only that, in some suitable sense, it is impossible to come to know whether \( p \), leaving open the question of whether there is nevertheless a fact of the matter whether \( p \). Both senses are used in the literature. I am using the term in its narrow sense. I will reserve the term ‘indefiniteness’ for the wider sense. Note that any given case of indeterminacy will result in a case of indefiniteness — intuitively, if there is no fact of the matter, then there is nothing there to be known in the first place. But to maintain the reverse, that indefiniteness is ever owing to indeterminacy, is to take on a substantive position regarding the nature of indefiniteness.

This contrast between indefiniteness and indeterminacy does, however, raise a certain worry for the current project. We’ve begun with indeterminacy, and we’ve said that there are two general and competing ways of conceiving of the nature of indeterminacy: as semantic and as metaphysical. An MC is intended to be neutral between these two substantive conceptions. But here’s an alternative way of looking at things: Begin with indefiniteness, and distinguish three substantive conceptions of this phenomenon: as semantic, as metaphysical and as (purely) epistemic. From this perspective, our use of ‘indeterminacy’ can look like just an arbitrary way of carving out two particular types of the overarching phenomenon of indefiniteness (metaphysical and semantic) while excluding a third such type (epistemic), in which case ‘indeterminacy’ now looks like a stipulative term of art. But if so, then why should we expect an MC of indeterminacy, so understood, to be forthcoming or valuable? The real notion we should be trying to give an MC of is that of indefiniteness.

To be clear, the worry here is not asking for a defense of why, given that we are warranted in focusing on indeterminacy, it would be theoretically valuable to provide an MC of that phenomenon. That I will indicate in the next section. The worry is rather: Why, given the

\textsuperscript{14} From here on, when I talk of the “concept” of indeterminacy, I will mean this generic or minimal concept. I will use ‘conception’ to refer to specific views on the nature and logic of indeterminacy. Concepts are controversial entities, and so my reference to them could seem illicit in the present context, given that the aim of an MC is to remain as neutral as possible on substantive and controversial issues. However, this worry misunderstands the scope of the relevant neutrality. An MC (of indeterminacy) is concerned with neutrality only with respect to substantive views about the nature and logic of indeterminacy. Some theorists will deny the existence of concepts, but I don’t know of any who do so on the basis of a substantive view about indeterminacy. In short, my appeal to concepts in theorizing about indeterminacy is no more and no less problematic than it is in the countless other places where concepts are appealed to across philosophy.
theoretical value of providing an MC, should we aim our MC at indeterminacy rather than indefiniteness?

The first thing to say in response is that I am in no way claiming that our pursuit of an MC of indeterminacy should supplant a similar pursuit with respect to indefiniteness. On the contrary, I think a proper MC of indefiniteness could prove quite valuable for theorizing about these related phenomena. But, though parallel in structure and similar in spirit, the project of providing an MC of indefiniteness is a separate project, subject to distinct considerations and pressures, from what I am concerned with here, namely an MC of indeterminacy.

Now to the heart of the worry. I agree that the objection might have some bite, if it were correct in the way that it characterizes our use of ‘indeterminacy’, namely as a more or less arbitrary carving up of a more natural phenomenon. But I don’t think this characterization is correct. On the contrary, our (generic) concept of indeterminacy seems to be highly intuitive and unified in a way that an arbitrary carving-up is not. In other words, the division between semantic and metaphysical indefiniteness (i.e. indeterminacy), on the one hand, and epistemic indefiniteness, on the other, is a highly natural one. Three points of evidence on this.

First, appeals to indeterminacy play an important role in philosophical theory. This is evidenced by the wide range of areas in philosophy where the concept of indeterminacy is used to express this or that thesis or draw such and such distinction. To appreciate this, one has only to think of the variety of places in which one hears a philosopher claim that there is no fact of the matter regarding a certain issue. Important-ly, such appeals are to indeterminacy specifically, not to indefiniteness more generally. Quine and Parfit, for instance, are both quite clear that their theses are not to be understood in epistemic terms. The same is true of many other cases. Insofar as the theoretical potency of a

phenomenon is an indication of its naturalness, indeterminacy would seem to be highly natural.

Second, we have a number of vivid ways of glossing the concept of indeterminacy: it’s the idea of there being no fact of the matter (or perhaps no determinate fact of the matter), of things being objectively unsettled, of there being no objective matter to be right or wrong about, of there being a question with no answer, etc. Each of these is evocative philosophical issues, consider Field (1973) (reference), Hare (2011) (counterfactuals), Montgomery (1996) (color), Funkhouser (2009) (belief), Bruckner (2009) (action) and Swanson (2017) (causation). None of these theses, it is clear, is to be understood in epistemic terms, but nor does any make any assumptions about the specific nature of the relevant indeterminacy. It is the generic concept doing the theoretical work.

The last two come from Quine (1960: 73) and Parfit (1984: 214), respectively. A few points on ‘no fact of the matter’. First, the earliest use of the phrase that I am aware of comes from Quine (1968), who uses it to formulate his indeterminacy thesis. (A quick Google Scholar search supports this as the provenance of the phrase, though of course this isn’t decisive.) Today the phrase is probably overused in philosophy, and there may be instances of it that diverge from anything having to do with indeterminacy. But the primary, dominant and (apparently) original sense of ‘there is no fact of the matter whether p’ is that it is indeterminate whether p. Second, ‘no fact of the matter’ does not simply and literally mean that there is no fact that p and no fact that not-p (at least not as it is typically used). For one might maintain, without contradicting herself, that there is no fact of the matter — or, better, that there is a fact of the matter — about some issue while nonetheless denying facts anyplace in her ontology. Alternatively, if we read ‘fact’ in a minimal, ontologically non-commital way, where ‘it is a fact that p’ is simply equivalent to ‘p, then the literal reading of ‘no fact of the matter’ would amount to flat-out contradiction, which is again not something that one need be committed to in order to coherently employ the phrase. Again, Quine is a case in point: he makes heavy use of the phrase, despite his adherence to classical logic and a fact-free ontology. See Taylor (2016) for details. Of course, it might turn out that the correct account of the underlying nature of the phenomenon of there being no fact of the matter — i.e. of the phenomenon of indeterminacy — requires either a substantive notion of fact or a revision to classical logic. But that is a matter of substantive metaphysics; it is not contained in the meaning of ‘no fact of the matter’ alone. Third, in addition to ‘no fact of the matter’, one also sees use of ‘no determinate fact of the matter’. Read literally, these phrases could seem to be in competition with each other: one says that there is no fact at all; the other just says that there is no determinate fact. But, again, I don’t think these phrases are meant literally most of the time, and typically I think the ‘determinate’ is just there for emphasis. A nice example of this is found in Field’s (2003) paper, actually entitled ‘No Fact of the Matter’, where he uses...
of a certain phenomenon—we know, at an intuitive level, the sort of thing that they are trying to get at. But each is only evocative—they gesture at a phenomenon, but they don’t, all by themselves, tell us in precise terms what that phenomenon is. The fact that we have so many vivid ways of expressing indeterminacy suggests that it is something on which we have a strong intuitive grasp, and thus which is highly natural; the fact that these modes of expression are inexact suggests that indeterminacy is in need of a more precise characterization (i.e., an MC).

Third, there are certain situations which, when properly described, seem to easily elicit a gut reaction of indeterminacy from many of those confronted with them—not a reaction of indefiniteness, or of a particular substantive conception of indeterminacy, but of indeterminacy full stop (i.e. in its generic sense). Cases of vagueness are a prime example. You’re teaching your intro philosophy class. You describe a line of 100 people, each a centimeter taller than the preceding one, and ask your students where the cutoff is dividing the tall and the not tall. Now, some may well think, “I don’t know; I can’t know,” thereby attributing what we would call indefiniteness, and leave it at that. But many others will have the distinct feeling that, in some sense or another, there just is no answer here one way or the other, thereby attributing indeterminacy.18 The point is not that this is ultimately the correct answer, or that every student will inevitably react in this way, or that you couldn’t easily get these students to see that indefiniteness also applies in such cases. The point is just that a common and natural gut response is one of indeterminacy.19 All of this suggests that there is an intuitive, relatively pre-theoretical idea of indeterminacy that these students are working with. This idea might be rather inchoate and hard to articulate further, but there is a natural phenomenon there that the students are grasping onto.

To conclude: Indefiniteness may well be a perfectly natural phenomenon worthy of its own MC. But, as the preceding points suggest, indeterminacy is just as natural, and so equally worthy of an MC of its own. Our use of ‘indeterminacy’ is not at all arbitrary, but rather tracks a highly intuitive phenomenon.20

18. Or perhaps some might say that there is no sharp cutoff, and thus that, for certain people in the middle, there is just no answer as to whether they are tall, again attributing indeterminacy.

19. Indeed, that’s one reason why epistemic accounts of vagueness are often met with such initial incredulity; many people’s gut response, justified or not, is that there is just no fact of the matter regarding borderline cases.

20. Here are a couple other worries in the same vein as the one above. For a final variation, see note 32.

Worry 1: The phenomenon of indefiniteness is potentially broader than that of indeterminacy, and in that sense is more neutral. Insofar as one of the goals of an MC is to remain as neutral as possible on such substantive issues, wouldn’t an MC of indefiniteness be more theoretically powerful than one of indeterminacy? Again, perhaps our focus should be on indefiniteness rather than indeterminacy.

Reply: The point of an MC is not neutrality for neutrality’s sake alone. If it were, then presumably there’d be no reason to stop at indefiniteness—why not give an MC of unknowability in general, where indefiniteness is a specific kind of unknowability? The point is rather to provide a characterization of a phenomenon of interest, where that characterization is neutral with respect to substantive accounts of that very phenomenon. My hope is that at this point, especially given the points raised in response to the original worry above, you agree that indeterminacy is indeed a phenomenon of interest.

Worry 2: Many putative cases of indeterminacy are controversial, and some theorists deny that the phenomenon ever occurs. The same does not seem to be true for indefiniteness. This suggests that our concept of indefiniteness is pre-theoretical, while that of indeterminacy is not. For that reason, our focus should be on indefiniteness rather than indeterminacy.

Response: It’s hard to say just how theoretical a given concept of some phenomenon is. I’m also not sure that a concept’s being theoretical in this way should automatically undercut its claim to an MC. In any case, the worry’s reasoning seems flawed. Just because people disagree about where X applies does not mean that X is highly theoretical or unworthy of a precise characterization. Compare: many putative cases of knowledge (or justified belief) are controversial, and some philosophers (skeptics) deny that it occurs at all. But the concept of knowledge is highly intuitive and pre-theoretical and is a classic target of philosophical analysis.
3. The Theoretical Value of an MC

There are a number of ways in which I think providing an MC would have theoretical value for debates about the nature and logic of indeterminacy. I’ll mention five here. It is the last that is perhaps most important.

A. The Concept of Indeterminacy

Consider Parfit’s suggestion that it is indeterminate whether A is the same person as B or as C. What makes this claim comparable to van Inwagen’s about composition? What makes either of these claims comparable to ours about Biden? An MC provides an answer to these questions. It provides an account of the generic concept of indeterminacy and thus tells us the sense in which these claims have similar content.

An MC also helps us distinguish the concept of indeterminacy from others nearby. For example, what makes Quine’s indeterminacy thesis distinct from an error theory about translation? What distinguishes an indeterminate sentence from one that is simply ill-formed or meaningless? Again, an MC provides an answer.

Finally, consider a skeptic who thinks that there’s no unified and coherent concept of indeterminacy at all — there’s just a bunch of distinct and unrelated phenomena that we all throw under the umbrella of ‘indeterminacy’. How might we respond to such a skeptic? By providing an MC — a set of necessary and sufficient conditions under which all cases that we label with ‘indeterminacy’ fall, but which does not, in and of itself, decide what the nature or logic of that indeterminacy is.

B. Vagueness

One particular place that indeterminacy gets appealed to is in debates about the nature of vagueness. I take it as a given that vagueness is a type of indefiniteness, though presumably the latter is a broader phenomenon still. Just as with indeterminacy, one of the central debates regarding vagueness concerns its nature or source. It’s typical to view this debate as dividing into three camps: vagueness is ultimately a metaphysical phenomenon, an error theory, or a semantic phenomenon. From our perspective, however, this debate is better seen as consisting of two decision points, each involving an appeal to indeterminacy: First, does vagueness involve indeterminacy? If no, then it is ultimately some sort of epistemic phenomenon. If yes, then there is a further question regarding the nature of this indeterminacy: Is it semantic or metaphysical?

Consider the first of these decision points. The epistemicist says that vagueness never involves indeterminacy; her opponents deny this. Now, what is it, exactly, that these parties disagree over? What is it that the epistemicist says is not going on while the proponent of semantic or metaphysical indeterminacy says is going on? An MC provides an answer to this question.

For instance, standard brain-fission examples arguably involve cases of indefiniteness: it is indefinite whether person A survives as B or as C. But these do not seem to be cases of vagueness. Instead, vagueness presumably has some tight connection to sorites reasoning or to the concept of epistemic tolerance. More on vagueness below.


22. Consider an MC that is purely disjunctive: it is indeterminate whether \( p \) if A or B, where A and B are distinct phenomena between which there is no natural relation. Such an MC would not provide a response to the skeptic. For this reason, such MCs should be avoided. One way to do this would be by stipulation: A proper MC should not be purely disjunctive. A better way, I think, would be to show that a purely disjunctive MC is unsatisfactory because it runs afoul of some other desideratum on an MC. I’ll take up this latter route later on (§7). In addition, note that much of what we said in response to the worry at the end of §2 could help rebut the skeptic’s worry. But having an MC would provide additional help.

23. For instance, standard brain-fission examples arguably involve cases of indefiniteness: it is indefinite whether person A survives as B or as C. But these do not seem to be cases of vagueness. Instead, vagueness presumably has some tight connection to sorites reasoning or to the concept of epistemic tolerance. More on vagueness below.

24. There is a further choice point that crosses these other two: Is there (or could there be) higher-order vagueness (or indeterminacy)? But this question is not directly relevant to the point I am making here.

25. For epistemic theories of vagueness, see Williamson (1994) and Sorensen (2001). Both of these authors are in fact generally skeptical of the possibility of any indeterminacy. Is an MC of indeterminacy really needed to understand this skeptical position? It depends. If the skeptical claim is ‘I don’t have any idea what you could possibly even mean by ‘indeterminacy’; what you’re saying is just nonsense to me,’ then in this case an MC doesn’t help us understand the skeptic’s position so much as it allows us to rebut it — here’s exactly
C. The Nature of Indeterminacy
Go back to our disagreement over the nature of the indeterminacy in (S). You say (S) is semantic; I say (S) is metaphysical. An onlooker to our debate might be skeptical: who’s to say we aren’t just talking past each other? Yes, we’re both using the word ‘indeterminacy’ to describe and agree to (S). But perhaps we mean different things. Maybe you mean something essentially semantic, while I don’t. If so, then there is no single phenomenon that you and I both agree occurs in (S) and whose nature we disagree over.

I don’t actually think that this is the situation in most discussions of indeterminacy. I think there’s a single phenomenon that we’re all, more or less, talking about and concerned with understanding better. But it would be nice to have a direct response to the skeptic here, and an MC provides us with exactly that. Suppose we both agree to an MC of the form

It is indeterminate whether \( p \) iff \( \phi \)

Then, insofar as we both agree to (S), we’ll both agree that conditions \( \phi \) obtain in that case. And assuming that we’re not talking past each other in our understanding of \( \phi \) itself — a point I will come back to below (§4) — we can then be relatively sure that you and I are not talking past each other in this instance: we both agree that the phenomenon, whatever it is, that is coextensive with \( \phi \) obtains and needs explaining.

Here’s another way of thinking about the present point: What an MC provides us with is a neutral starting point for debates about the nature and logic of indeterminacy. If you and I begin our debate by both agreeing that there is indeterminacy in (S) precisely in the sense that the conditions of our MC apply in (S), then we can be confident, as our debate unfolds, that neither of us is begging any questions or what we mean by ‘indeterminacy’. Alternatively, if the skeptical claim is ‘I know what you mean by ‘indeterminacy’, but I just don’t think indeterminacy in that sense is possible’, then an MC is directly helpful to understanding the skeptical position — it gives us a precise characterization of the phenomenon that the skeptic thinks is impossible. In either case, there is theoretical value in providing an MC.

smuggling in any substantive view, insofar as the MC is neutral with respect to any such substantive view.26

D. Pluralism
An increasingly popular position in debates about the nature of indeterminacy is a sort of pluralism.27 According to the pluralist, (a) there are these two (or more) distinct phenomena out there — semantic (s) indeterminacy and metaphysical (m) indeterminacy — and (b) these two phenomena are both genuine types of indeterminacy. Point (b) is important, for it is what distinguishes the pluralist’s position from a crude “disjunctivist” view, according to which there’s this one phenomenon, m-indeterminacy, and this other unrelated phenomenon, s-indeterminacy, and we just use the label ‘indeterminacy’ to pick out the disjunction of these phenomena. To keep her position distinct from this disjunctivist view, then, it is incumbent on the pluralist to tell us more about point (b): what is it that m- and s-indeterminacy, despite being distinct phenomena, share in common that makes them both count as genuine types of indeterminacy? An MC provides an answer to this question: m- and s-indeterminacy are both types of indeterminacy exactly insofar as each is a different way of realizing the conditions \( \phi \) of that MC.

It is illustrative to compare the pluralist’s position here with pluralist theses in other areas of philosophy. For instance, consider the pluralism about truth articulated in Wright (1992). At the center of that theory is what Wright calls a “minimal” theory of truth. Anything that satisfies this minimal theory thereby counts as a genuine type of truth

26. We are of course committed to some substantive view, namely that there is indeterminacy here, not just indefiniteness. But this is hardly something being smuggled in; I’m imagining that you and I are each quite explicit on this point. The neutral starting point our MC affords us is neutral with respect to debates about indeterminacy, not indefiniteness more generally. Compare this point with notes 13 and 20.

27. Most proponents of metaphysical indeterminacy are happy to also countenance certain instances of semantic indeterminacy, and thus count as pluralists. See Barnes and Williams (2011).
for Wright, and he thinks that multiple distinct properties do in fact satisfy this minimal theory; hence there are multiple types of truth. Similarly, consider the logical pluralism defended in Beall and Restall (2006). They too begin with a minimal conception of what constitutes a logic; they then go on to show that many distinct systems satisfy this conception. The point here is not just that these pluralisms do contain a minimal theory as a part, but moreover that such minimal theories are foundational to these pluralisms. What I am suggesting is that an MC should play an analogous role in any formulation and defense of pluralism about indeterminacy.

E. A Guide to Debates about Indeterminacy

We now come to what I see as the most significant value of providing an MC, namely that an MC can serve as a guide to debates about the nature and logic of indeterminacy. Debates about indeterminacy have relatively few precise and explicit constraints on them. This is especially true with respect to debates about the nature of indeterminacy. There are small checks on our theorizing here and there — indeterminacy is interdefinable with determinacy in a particular way, it precludes knowledge, etc. — but by and large what seems to shape debates about the nature of indeterminacy is just our rough and ready concept of indeterminacy, of there being no fact of the matter. Insofar as an MC would provide an explication of this concept, it would help give a more exact and principled structure to our debates regarding indeterminacy.

There are three ways in particular that an MC would help guide and constrain such debates. First, an MC would provide a target for theorizing about indeterminacy. Suppose again that we settle on an MC with conditions φ. Then, if we are trying to come up with a theory of the nature or source of indeterminacy, we’d better aim for conditions φ. That is, the phenomenon our theory points to as constituting indeterminacy had better explain, realize or otherwise entail φ. In this way we can allow our MC to help guide our theorizing about indeterminacy.

Second, and relatedly, an MC provides us with a test for adequacy among theories of indeterminacy. Suppose I tell you that some phenomenon X is what ultimately constitutes indeterminacy (or perhaps one type of indeterminacy). If this proposal is to have any hope at all, it had better be that X entails φ. If X does not entail φ, then you have grounds to criticize my view as not fully capturing the phenomenon of indeterminacy. This method of adjudication is particularly relevant when considering the merits of certain semantic conceptions of indeterminacy. A common complaint against such conceptions is that they are simply insufficient for indeterminacy. Here’s an example: Consider a theory which says that the indeterminacy in (S) consists in the fact that its complement clause, ‘Suzan is rich’, expresses multiple propositions, some true and others false. Trenton Merricks has criticized this semantic conception on the grounds that this sort of “poly-expression”, as we may call it, while perhaps sufficient for something like truth-value gaps, is insufficient for bona fide indeterminacy. But what does Merricks base this insufficiency claim off of? Mainly just our intuitions about cases like (S) and how they diverge from what we know about poly-expression. And what I am suggesting is not that arguments like this are bad, but only that they would be greatly clarified and strengthened if, instead of relying on just our intuitions in these cases, we had a relatively precise MC on hand and were able to show that poly-expression does not suffice for the conditions of that MC.

Finally, an MC provides us with a test for intelligibility for theories of indeterminacy. Consider the view that says that indeterminacy (or one type thereof) is of some general sort S or has a certain feature F. And suppose now that we can show that we have no clear idea of what it would be for the conditions of our MC to fall under S or instantiate

28. In illustrating these points, I focus exclusively on debates about the nature of indeterminacy, but I suspect something analogous could be said for debates about its logic.


F. Then we ought to reject this conception of indeterminacy as simply unintelligible. In this way an MC provides us with a test of intelligibility. This test is particularly relevant when considering the viability of *metaphysical* conceptions of indeterminacy. A common complaint against such conceptions is that they are unintelligible—we have no clear understanding or conception of what it would be for indeterminacy to occur in the world independently of how we represent the world.\(^3\) As above, arguments like these are mainly driven by reflection on our rough and intuitive concept of indeterminacy (what could it be for the world *itself* to be indeterminate?). And while I do not deny the force of some of these arguments, again my point is that they’d be greatly strengthened and clarified if they were to appeal to the conditions of an MC in place of our unrefined concept of indeterminacy.\(^2\)

31. For complaints along these lines, see Dummett (1975), Lewis (1986: 212), Lewis (1993) and Sainsbury (1994). These complaints of unintelligibility should be distinguished from claims of outright incoherence of the sort argued for in Evans (1978).

32. To continue a variation on the worry raised at the end of §2, one might wonder whether the theoretical virtues described in this section could be equally, or perhaps even better, achieved with an MC of indefiniteness rather than one of indeterminacy. In short, I think not. The virtues discussed in sections A, B and D are all specific to indeterminacy, so they are not the sort of thing that could be achieved by an MC of indefiniteness. The virtues in sections C and E revolve around debates about the nature and logic of indeterminacy. Since every case of indeterminacy is a case of indefiniteness, an MC of the latter could perhaps be used, to a certain extent, to achieve some of these same virtues. But an MC of indeterminacy will *better* achieve these virtues, given that it will provide us with a more specific characterization of the phenomenon whose nature we are debating. If you and I are already in agreement that we have a genuine case of indeterminacy before us, not just a case of indefiniteness, then our debate about the nature of that indeterminacy will be better served, in all the ways indicated above, by an MC of indeterminacy specifically, rather than one of indefiniteness generally. Here’s an example to illustrate these points with respect to our ‘test for adequacy’ virtue above: Consider a theory of indeterminacy that retains classical logic and which takes the ‘determinately’ operator as an unexplained primitive notion. Such a view is offered by Field (1994). But in a later paper Field (2001) rejects this view, arguing that it isn’t specific enough to entail genuine indeterminacy—it is compatible with an epistemic reading of the ‘determinacy’ operator. Clearly a precise ‘test for adequacy’ for indeterminacy would be helpful here—it would tell us the exact conditions that Field thinks are not satisfied by the given theory—whereas one of indefiniteness more generally would in this case be pretty useless.

33. See Greenough (2003) for an excellent discussion of this project. Much of my thinking in the current paper has been inspired by that work.
4. Desiderata on an MC

I’d now like to lay down four desiderata on a satisfactory MC. These desiderata will then point in the direction of a general strategy for formulating an MC.

The first desideratum is an obvious one:

**(D1) Extensional Adequacy:** The conditions of an MC should be satisfied by all and only genuine cases of indeterminacy.

Of course, there is plenty of debate over the extension of ‘indeterminacy’ in the first place. Not everyone will agree with Quine about translation or van Inwagen about composition, for instance. But (D1) doesn’t require us to settle these issues in order to agree on an MC; it only requires that we agree that if (and only if) the conditions of our MC obtain, then we have a case of indeterminacy. The debate over particular cases then shifts to whether or not those conditions obtain.

The second desideratum corresponds to the idea that an MC should be theory neutral. The issues here are somewhat delicate. On the one hand, the whole purpose of an MC is to have a characterization that all parties can agree to, no matter their particular views on the nature and logic of indeterminacy. On the other hand, we don’t want our MC to be entirely toothless—we’d like it to have some bite in adjudicating debates about the nature and logic of indeterminacy. What to do? I think it’s difficult to say in any concrete and precise terms exactly how much neutrality we should demand. Ultimately formulation of a satisfactory MC will require something of a balancing act between these two competing interests, and it is only in actually getting our hands dirty, trying out some proposed MCs and seeing how they fare, that we will get a proper feel for how this should go. This I hope to demonstrate in the sections below when we look at some particular proposals. However, there are a few general points we can make right here.

Begin with the nature of indeterminacy. Here we should distinguish between the general question as to whether this nature is metaphysical or semantic and the particular question as to whether such-and-such proposed conception of that nature is correct. Achieving neutrality on the first question is of more importance than on the second. We should also distinguish between the situation in which an MC directly—that is, all by itself—rules out a particular theory of the nature of indeterminacy from that in which it indirectly—that is, only in conjunction with additional substantive premises—rules out that theory. Only the first type of non-neutrality is what our MC should be required to avoid.

Now consider the logic of indeterminacy. We should distinguish two issues here. The first concerns whether the conditions ϕ of our MC themselves either state or provide an instance of a controversial logical principle regarding indeterminate language. Any such controversial MC should be avoided. As an example, suppose our MC claims that it is indeterminate whether p iff p and not-p. Since there are plenty of theories of indeterminacy that retain the law of non-contradiction, such an MC would violate this demand of neutrality.

The second issue centers on the question of what sorts of rules of inference are sufficiently neutral to be allowed in our theorizing about indeterminacy from a minimal standpoint. In other words, what is the appropriate logic for a minimal theory of indeterminacy? This question is pressing, since, once we’ve established an MC, we’d like to be able to draw conclusions from that MC in order to adjudicate substantive debates about indeterminacy and generally explore the phenomenon’s contours from a minimal point of view. To do so we’ll need to know what rules of inference are minimally allowable, what logic should govern a minimal theory. But here we face a dilemma. On the one hand, if we stick with classical logic (say) for our minimal theory, then it looks like we are automatically ruling out any non-classical approach to indeterminacy, thus running afoul of neutrality. (Similarly if we choose any other controversial logic.) On the other hand, if we allow ourselves only completely uncontroversial rules of inference (if

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34. The two issues are not independent, of course.
such there be), then we’d seem to render our theory toothless, thus undermining our MCs theoretical potency.

Again, a resolution of this dilemma would seem to require a sort of balancing-act strategy. Such a strategy is nicely exemplified by Greenough’s (2003) treatment of an analogous problem for a minimal theory of vagueness.35 Greenough’s idea is that in developing such a theory we should help ourselves to classical inferences until the points at which these inferences become controversial as a matter of the logic of vagueness. I propose adopting the parallel strategy for indeterminacy.36 To illustrate, suppose we infer some conclusion from our MC-conditions using some classical rule of inference $R$. Now, maybe $R$ is entirely uncontroversial among theories of indeterminacy. For example, maybe $R$ is conjunction introduction. In that case, use of $R$ is perfectly allowable. But maybe $R$ is instead something like reductio ad absurdum, which is controversial in the context of indeterminacy. In this case, we need to check whether our particular use of $R$ is relevantly tied to an instance of indeterminacy — that is, whether the specific case we are here applying it to involves indeterminacy in a way that certain theories of indeterminacy would claim blocks the inference. If so, then $R$ is illicit here. But if not, then $R$ is still allowable in this instance. It might be the case that a theory of indeterminacy prohibits $R$ in cases of indeterminacy. But if our particular use of $R$ is not actually tied in this way to a case of indeterminacy, then there is no reason, from the perspective of remaining neutral regarding the logic of indeterminacy, to disallow such an inference. Now, there is no way to tell up front just how much inferential power this strategy will ultimately afford our minimal theory, and much of this will depend on the form our MC ultimately takes. But the hope is that it will allow our minimal theory to have some theoretical bite while nevertheless remaining neutral as regards the logic of indeterminacy.

Finally, with respect to both the nature and the logic of indeterminacy, I see no reason why our MC should be neutral with respect to completely off-the-wall and unmotivated theories of indeterminacy, ones that no reasonable theorist would ever take seriously. Only ‘reasonable’ theories need be accommodated. Of course, ‘reasonable’ here is vague and open to interpretation. But I’m not sure that we can or should hope to completely eliminate such vagueness, and I think that our discussion below will demonstrate that its presence does not prevent us from trying to formulate an MC in a fair and principled manner.

Putting all of the above points together, then, we can state our second desideratum as follows:

(D2) Neutrality: An MC should not directly decide the general question as to whether indeterminacy (or a given case thereof) is semantic or rather metaphysical in its nature. Nor should it directly rule out any reasonable particular conception of the nature or logic of indeterminacy. Finally, any minimal theorizing about indeterminacy may make classical inferences, so long as those particular inferences remain uncontroversial as a matter of the logic of indeterminacy.

Now on to the third desideratum, which pertains to the general transparency of an MC:

(D3) Transparency: An MC should provide an explication of indeterminacy in terms that are both (i) relatively precise and transparent and (ii) understood in a uniform way by all participants to debates over the nature and logic of indeterminacy.
Both conditions (i) and (ii) are motivated by the theoretical virtues, outlined in the previous section, that we should expect out of an MC. Consider (i) first. Recall the ways in which an MC should help guide debates about indeterminacy. Implicit in this idea is that those conditions should provide a better guide than the bare concept of indeterminacy all by itself.\textsuperscript{37} An MC is thus supposed to provide conditions that are more precise and transparent than that bare concept. The more precise and transparent the better, but they should certainly be more so than the bare concept alone. This is what I mean by ‘relatively precise and transparent’ in condition (i). Now consider condition (ii). Recall how an MC is supposed to allay skeptical worries that those who debate the nature of indeterminacy are simply talking past each other. Implicit in this idea is that these parties are not talking past each other in their understanding of the conditions of the MC itself. Hence condition (ii).

The final desideratum is an obvious condition of non-circularity:

\textit{(D4) Non-Circularity:} An MC should provide an explication of indeterminacy in terms that do not themselves involve the concept of indeterminacy, either explicitly or implicitly.

(D4) could be seen as following from (D3) — any conditions that appeal to the concept of indeterminacy cannot themselves be more precise and transparent than that concept — but it is helpful to have it as a separate desideratum.

Three final points about these desiderata: First, nowhere do we require that an MC provide an analysis of the concept of indeterminacy; we do not demand definition, synonymy or cognitive equivalence. All we require is extensional adequacy (D1), together with satisfaction of (D2)–(D4). Second, satisfaction of these desiderata is a matter of degree. This is particularly true with respect to (D3), given its use of ‘relatively’, and (D2), given its use of ‘reasonable’. The more an MC satisfies these desiderata, the better. Finally, these desiderata are demanding, and there is no guarantee up front that they can all be completely satisfied. This is particularly true for (D4), given the difficulties in providing reductive characterizations generally. Having acknowledged this concern, however, I don’t think we should let it deter us from trying, at least at first, to find an MC that can meet these demands. The best strategy is to set our aims high. If after due searching we come up short, then we can lower our standards at that point. But to begin we should treat these desiderata as if they can be satisfied and thus as constraining our search for an MC.

5. A General Strategy

Now that we have these desiderata on the table, we can use them to help design a general strategy for formulating an MC. Begin with the idea that, in formulating an MC of the form

\[
\text{It is indeterminate whether } p \text{ iff } \phi, \]

we’d presumably like to reference, in some way or another, and either directly or indirectly, the subject matter of ‘p’ in the conditions \( \phi \). It’s being indeterminate whether \( p \), after all, must have something to do with matters \( p \). I see three general ways of going about this. The first two ways run afoul of our desiderata, as I’ll demonstrate, leaving us with the third way as our general strategy going forward.

The first strategy, which we may call the \textit{propositional strategy}, indirectly references the subject matter of ‘p’ by making explicit reference to the proposition expressed by ‘p’:

\[
\text{It is indeterminate whether } p \text{ iff } \ldots <p>\ldots
\]

The problem with this strategy is that it violates our neutrality desideratum (D2). For it assumes that the sentence ‘p’ expresses a unique proposition, namely <p>, an assumption that a large family of semantic

\textsuperscript{37} By the “bare” concept, I just mean our rough and ready (generic) concept of indeterminacy unaccompanied by any precise characterization or explication of that concept (i.e., unaccompanied by an MC).
A Minimal Characterization of Indeterminacy

This leaves us with what we may call the metalinguistic strategy. This strategy indirectly references the subject matter of ‘p’ by making explicit reference to the sentence ‘p’ and (presumably) some truth-theoretic feature of ‘p’:

It is indeterminate whether \( p \iff \cdots \)'...

Unlike the previous two strategies, the metalinguistic strategy does not seem to be in any general tension with our desiderata. To regards to (D3): Talk of sentences is relatively precise and transparent, and we can expect all parties to agree on what the relevant sentence is and hopefully on at least some of that sentence’s properties. With regards to (D2): Whatever the underlying nature of indeterminacy — whether it has to do, say, with the semantics of ‘p’ or with the facts to which it corresponds — we can expect that this nature will manifest itself in some feature of the sentence (e.g. a lack of truth-value). If so, then the sentence will be able to provide a vehicle for certain superficial markers of indeterminacy, which all parties can agree to but have the option of explaining in different ways. These virtues of the metalinguistic approach will become clearer when we actually put it to use. So let us do that now:

if the proposition \( \langle p \rangle \) — presumably distinct from either \( \langle p_1 \rangle \) or \( \langle p_2 \rangle \) — is true will ‘p’ be true. There might be other, less theoretical or more deflationary ways of describing the truth-conditions of ‘p’ that both of us could agree to. But there is at least one major way, namely that just given, in which we will disagree about what makes ‘p’ true, and that is enough to show that the material mode strategy fails to satisfy (D3).

1. Which is not to say that certain particular instances of this strategy won’t fail to respect one desideratum or the other. We will come across some below.

42. One might worry that the metalinguistic strategy allows us to characterize only cases of its being indeterminate whether \( p \) for which we have a corresponding sentence ‘p’. But the metalinguistic strategy is actually no worse off on this point than any other strategy for providing an MC, since any such strategy will inevitably use ‘p’ as a schematic sentence letter. Moreover, such a limitation does nothing to detract from the theoretical virtues of an MC, since, for any specific case of indeterminacy we might be interested in, we’ll always have a sentence for describing its subject matter. Thus, if we’d like, we can think about an MC as primarily a characterization of indeterminate sentences rather than cases of indeterminacy per se, though I will continue to talk

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Theories of indeterminacy will explicitly deny. To adopt the propositional strategy would thus be to immediately rule out these semantic theories (perhaps all semantic theories), and this is clearly to violate (D2).

The second strategy, which we may call the material mode strategy, directly references the subject matter of \( p \):

It is indeterminate whether \( p \iff \cdots p \cdots \).

The problem with this strategy is that it violates our transparency desideratum (D3). To see this, suppose I accept a semantic theory of indeterminacy according to which it consists, at least in part, in the fact that there exist multiple “legitimate precisifications” of ‘p’, \( \langle p_1 \rangle \) and \( \langle p_2 \rangle \), and in turn adopt some supervaluationist semantics for interpreting sentences containing ‘p’. And suppose you accept some sort of metaphysical theory of indeterminacy and thus think that ‘p’ expresses the unique proposition \( \langle p \rangle \). Then you and I will understand the content of the right-hand side of the above biconditional in very different ways, given that that side uses ‘p’, about whose interpretation we disagree. Even though both of us might agree that ‘…p…’ expresses a condition that is true of all and only cases of indeterminacy, we will disagree about what, exactly, that condition is. Insofar as we understand the right-hand side of the above biconditional differently, the present strategy violates condition (ii) of our transparency desideratum.

38. For instance, any explanation of indeterminacy in terms of semantic indecision. See Lewis (1986: 212) and Braun and Sider (2007).

39. What if we were to try and achieve neutrality by interpreting talk of propositions here in a relatively minimal way, replacing \( \langle p \rangle \) with simply the proposition that ‘p’? Then we’d be using the sentence ‘p’ on the right-hand side of our MC, which is an instance of the next strategy we are about to consider.

40. None of this is to say that you and I will in fact mean different things by our respective utterances of ‘p’. If ‘p’ is an unambiguous sentence of English, then my use of ‘p’ will mean the same as yours. All I am saying is that we will disagree about the correct semantic story behind ‘p’. And because we disagree about this, there is an important sense in which we will disagree about what the content of ‘p’ is. This difference can be brought out, among other ways, by asking each of us what would make ‘p’ true. I will answer that only if the propositions \( \langle p_1 \rangle \) and \( \langle p_2 \rangle \) are both true will ‘p’ be true; you will respond that only

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40. None of this is to say that you and I will in fact mean different things by our respective utterances of ‘p’. If ‘p’ is an unambiguous sentence of English, then my use of ‘p’ will mean the same as yours. All I am saying is that we will disagree about the correct semantic story behind ‘p’. And because we disagree about this, there is an important sense in which we will disagree about what the content of ‘p’ is. This difference can be brought out, among other ways, by asking each of us what would make ‘p’ true. I will answer that only if the propositions \( \langle p_1 \rangle \) and \( \langle p_2 \rangle \) are both true will ‘p’ be true; you will respond that only
6. Some MCs Ruled Out

It’s time to consider some specific MC proposals. We’ll first look at a couple of nonstarters, just to get them out of the way. We’ll then turn our attention to a family of proposals that appear much more promising. The members of this family take truth-value gaps, in one way or another, as the key to characterizing indeterminacy. Despite the intuitive plausibility of these proposals, I’ll argue that none is able to jointly satisfy our desiderata.

A. Nonstarters

We begin with what may seem the most straightforward way of characterizing indeterminacy:

\textit{No Fact:} It is indeterminate whether \(p\) iff it is not a fact that \(p\) and it is not a fact that \(\neg p\).

Note that this proposal is not formulated in accordance with our metalinguistic strategy. Rather it is an application of the material mode strategy. And so it inherits the problems of that strategy: different parties to the debate about the nature of indeterminacy will interpret ‘\(p\)’, and hence ‘the fact that \(p\)’, in very different ways, thus running afoul of our transparency desideratum (D3). No Fact is a nonstarter.\(^{43}\)

Another straightforward approach would be to characterize indeterminacy disjunctively:

\textit{Disjunctive:} It is indeterminate whether \(p\) iff either it is \(s\)-indeterminate whether \(p\) or it is \(m\)-indeterminate whether \(p\).\(^ {44}\)

The problem with this strategy is that it violates (D4), our non-circularity constraint.\(^ {45}\) This is because the concept of indeterminacy is prior to the concepts of \(m\)- and \(s\)-indeterminacy. The latter concepts are partially defined in terms of the former. Hence this proposal is (implicitly) circular.

But why insist that the concept of indeterminacy is prior? Why not think of it as a purely disjunctive concept? In effect we already answered this question in our response to the worry about indefiniteness at the end of §2. There I provided a number of reasons for thinking that our use of ‘indeterminacy’ was not at all an arbitrary carving out of two distinct phenomena, \(m\)- and \(s\)-indeterminacy, but was rather tracking a highly intuitive and natural phenomenon. But if so, then clearly ‘indeterminacy’ is not just defined as a disjunction of two distinct and unrelated phenomena, \(m\)- and \(s\)-indeterminacy.

B. No (Determinate) Truth-Value

Here’s a natural thought: What it is, in a minimal sense, for it to be indeterminate whether \(p\) is just for the sentence ‘\(p\)’ to lack a truth-value in some way or another. This thought seems to be the default view of many who use the concept of indeterminacy as well as some who theorize about the phenomenon of indeterminacy.\(^ {46}\) There are a few different ways we might articulate this idea. We’ll take each in turn.

\(^{43}\) Perhaps we could translate the idea behind No Fact into metalinguistic terms? For instance: It is indeterminate whether \(p\) iff there is no fact that \(p\) corresponds to nor any fact that \(\neg p\) corresponds to. There’s something to this suggestion, but unfortunately it relies on the rather vague idea of correspondence, and any reasonable way of making this idea more exact will, I think, ultimately lead us to the official MC that I offer and endorse in §§7–8.

\(^{44}\) Of course, more would have to be said about what \(m\)- and \(s\)-indeterminacy amount to here, but we can ignore this issue.

\(^{45}\) It also, again, violates our metalinguistic strategy. But in this special case it’s not so clear that this is problematic. Anyway, we have independent reasons for rejecting the proposal.

\(^{46}\) For examples of the former, see Parfit (1984: 213–4) and Soames (1999). For examples of the latter, see Horwich (2000: 87) and Barnett (2009: 7). Field (1994; 2000) also acknowledges the force of this intuition, though in those papers he tries to resist it.
The most straightforward way is to say that indeterminacy is just a matter of a simple truth-value gap:

TVG-1: It is indeterminate whether \( p \) iff \( 'p' \) is neither true nor false.

As tempting as this characterization of indeterminacy may be, it cannot provide an adequate MC, for it is easy to see that it is extensionally inadequate, and thus fails to satisfy (D1). There are many philosophical and semantic reasons for positing sentential truth-value gaps that do not have anything to do with indeterminacy. For instance, consider a non-cognitivist in metaethics who is not a quasi-realist. She will maintain that ‘Stealing is wrong’ is neither true nor false, but she won’t thereby conclude that it is indeterminate whether stealing is wrong. The phenomenon of indeterminacy is quite distinct from and unrelated to any sort of non-cognitivist phenomena, even if both ultimately result in truth-value gaps.

It is clear, however, what the relevant difference is between these phenomena. A sentence like ‘Stealing is wrong’, according to the non-cognitivist, does not purport to represent a fact in the first place; that’s not its semantic function, and that’s why it’s neither true nor false. A sentence like ‘Susan is rich’, on the other hand, does purport to represent a fact. It just fails to do so when it is indeterminate whether Susan is rich, in which case (let’s assume) it is neither true nor false. In a word, non-cognitivist sentences are not “descriptive”; whereas, presumably, indeterminate sentences are.

This observation thus points in the direction of a second proposal:

TVG-2: It is indeterminate whether \( p \) iff \( 'p' \) is a descriptive sentence and \( 'p' \) is neither true nor false.

What should we think of TVG-2? There are a couple problems here. First, TVG-2 is still extensionally inadequate. Consider a simple failure of reference. I utter ‘This dog is asleep’, but my use of ‘this dog’, given the circumstances, does not refer to anything at all. The sentence is descriptive yet is neither true nor false (arguably). But it would be odd, if not downright nonsensical, to say that it is indeterminate whether this dog is asleep. Talking about nothing is not a way of speaking about something indeterminate. Indeterminacy may well result in a gap in truth-value, but so do potentially many other phenomena, and so this can’t be all there is to indeterminacy.

Second, TVG-2 does not respect our neutrality desideratum (D2). As natural as it may be to suppose that indeterminacy entails truth-value gaps, there are a number of serious philosophical accounts of indeterminacy that deny this idea in one way or another. Quine, for instance, is famous for his insistence that there is no fact of the matter regarding certain claims about translation. But Quine also maintains bivalence as a general rule, and does not see this semantic commitment as in tension with indeterminacy. In a somewhat different spirit, Barnes and Williams (2011) have recently developed an account of metaphysical indeterminacy that also respects bivalence. Their strategy, in broad outline, is to take m-indeterminacy as a (metaphysical) primitive, and then apply a type of supervaluationist semantics to the resulting indeterminate language. The specifics of this proposal allow them to achieve two results: (a) for all sentences \( 'p' \), it is determinate that \( 'p' \) is either true or false; and (b) if it is indeterminate whether \( p \), then it is indeterminate whether \( 'p' \) is true and it is indeterminate whether \( 'p' \) is false. (a) gives us the determinacy of bivalence, and thus precludes the idea that indeterminacy gives rise to truth-value gaps, contrary to both of the following problems are also problems for TVG-1.

47. Both of the following problems are also problems for TVG-1.

48. Keep in mind that this is not a case in which it is indeterminate what I refer to, but rather one in which I (determinately) refer to nothing at all.

49. See Quine (1981). Quine’s exact conception of indeterminacy is a delicate matter, one which I have investigated in detail elsewhere. See Taylor (2016). Very roughly, Quine’s idea is that it is indeterminate whether \( p \) just in case both its being the case that \( p \) and its being the case that \( not-p \) are compatible with all the same ways the world could possibly be at the level of elementary physics. The details of this proposal aside, all we need to note here is that such a conception of indeterminacy can be made relatively good sense of and does not require the existence of truth-value gaps.

50. See Barnes and Williams (2011: 126).
TVG-2. (b) gives us a way of avoiding having to say that indeterminate sentences could somehow have determinate truth-values.

Barnes and Williams’s proposal fits into a general strategy, found in other places as well, of substituting the intuition reflected in TVG-1 and -2 — if it is indeterminate whether \( p \), then ‘\( p' \)’ is neither true nor false — with the weaker idea of (b) — if it is indeterminate whether \( p \), then it is indeterminate whether ‘\( p' \)’ is true and it is indeterminate whether ‘\( p' \)’ is false.\(^{53}\) Indeterminacy, the idea goes, does not give us an absence of truth-value, just an indeterminacy in truth-value. Any such view will be incompatible with TVG-2. But this thought does motivate one final proposal:

TVG-3: It is indeterminate whether \( p \) iff it is indeterminate whether ‘\( p' \)’ is true and it is indeterminate whether ‘\( p' \)’ is false.\(^{52}\)

TVG-3, though, is of course no good as an MC. It is obviously circular, employing the concept of indeterminacy over again on its right-hand side, and thus fails to satisfy our desideratum (D4).

7. Indeterminacy as Determination Failure

I now want to offer the beginnings of an MC that I think has potential to meet all our desiderata. We won’t have the space to fill in every last detail here, but I think we can put enough meat on the bones to recognize the power of this MC.

The MC I have in mind is motivated and guided by reflection on the sort of reasoning that is typical of indeterminacy arguments (i.e. arguments for the conclusion that it is indeterminate whether \( p \)). I call this reasoning the standard reasoning. In schematic form:

\[
\text{Standard Reasoning: If anything determines whether } p \text{, it is facts of type B ("B" for "base" facts). But the B-facts don’t determine whether } p \text{ — they don’t determine that } p \text{ and they don’t determine that not-} p \text{. Hence it is indeterminate whether } p .\]

Observe how the standard reasoning applies in a handful of examples:

Red: If anything determines whether her shirt is red (as opposed to orange), it is facts about (say) the particular reflective properties of the shirt.\(^{55}\) But they don’t. So it’s indeterminate.

Rich: If anything determines whether Suzan is rich, it is facts about the exact amount of money in her bank account. But they don’t. So it’s indeterminate.

Translation: According to Quine, if anything determines whether ‘gavagai’ translates as ‘rabbit’, it is facts about linguistic behavior. But they don’t. So it’s indeterminate.

Personal Identity: According to Parfit, if anything determines whether A is the same person as B, it is facts about

\[^{51}\text{For other instances of this strategy, see Greenough (2008) and McGee and McLaughlin (1994).}\]

\[^{52}\text{We could also add the requirement that ‘\( p' \)’ be descriptive if we’d like.}\]

\[^{53}\text{Here and throughout, I use ‘determine’ to mean “metaphysically determine”, as opposed to in any epistemic or causal sense of ‘determine’. There are a variety of competing theories of metaphysical determination. I don’t intend to weigh in on that debate here, and so I’ll continue to just use the neutral ‘determine’. But see §9 below for more discussion.}\]

\[^{54}\text{I’ve stated the standard reasoning in the material mode. This is its most natural formulation, but it would seem to be inconsistent with our metalinguistic strategy. We’ll remedy this issue presently, but for the moment let us continue to speak in the material mode.}\]

\[^{55}\text{Not all would agree to this (think of response-dependent accounts of color). But that doesn’t undermine the force of the example. As I will explain below, what the “base facts” are in any given case is often a controversial matter.}\]

\[^{56}\text{See note 11.}\]
psychological and physical continuity. But they don’t (in brain fission cases). So it’s indeterminate.\textsuperscript{57}

And so on. This reasoning applies to virtually all cases of indeterminacy.\textsuperscript{58} That’s not to say that one \textit{must} argue in this way in any given case, but just that one \textit{could} (and typically does) argue in this way — the reasoning applies.

The most important thing to notice about the standard reasoning, besides its wide applicability, is that it applies \textit{independently of what one thinks about the underlying nature and logic of indeterminacy}. Take the simple case of Suzan’s being rich. No matter whether you think the relevant indeterminacy is owing to the semantics of ‘rich’ or to something about the property of richness or to its just being metaphysically unsettled whether Suzan is rich, you will no doubt acknowledge that (a) if anything is going to determine whether Suzan is rich, it is facts about the amount of money in her bank account, and (b) such facts do not determine one way or the other whether Suzan is rich. Were you to deny this — were you to maintain that these facts \textit{did} decide the matter one way rather than the other — you couldn’t reasonably maintain that it was nonetheless indeterminate whether Suzan is rich.

I think the standard reasoning, and the fact that it is standard, indicates something central about the concept of indeterminacy itself. This thought may be put, roughly, as follows: Virtually all cases of indeterminacy, in some way or another, involve a \textit{determination failure} by a more basic set of facts. If it is determinate that \( p \), then something \textit{makes it the case} that \( p \); if it is indeterminate whether \( p \), then there are certain facts whose “job” it is to decide whether \( p \), but which nevertheless don’t make it the case that \( p \) and don’t make it the case that not-\( p \). Indeterminacy is a failure of determination by a more basic set of facts.\textsuperscript{59}

\textsuperscript{57} See note 4.
\textsuperscript{58} I say “virtually” because I will discuss a case below that seems resistant to this reasoning. See note 67.
\textsuperscript{59} Similar ideas are found in Greenough (2008) and van Cleve (1992), though

Let’s now try and use these guiding ideas to formulate a proper MC. Let’s say that a type of fact \textit{B} is a \textit{determination base for whether \( p \) iff}, intuitively, if anything determines whether \( p \), it is facts of type \textit{B}; and let us call the facts of type \textit{B} that actually obtain (if any) the \textit{B-facts}. Then we can formulate a preliminary MC as follows:

\textit{Preliminary MC}: It is indeterminate whether \( p \) iff there exists a type of fact \textit{B} such that (i) \textit{B} is a determination base for whether \( p \) and (ii) the \textit{B-facts} fail to determine whether \( p \) — i.e. they don’t determine that \( p \) and they don’t determine that not-\( p \).

In short, the Preliminary MC says that something is a case of indeterminacy iff the Standard Reasoning applies to it.

Notice that the Preliminary MC is formulated in the material mode — the \textit{B-facts} fail to determine \textit{whether \( p \) }; \textit{B} is a determination base for \textit{whether \( p \) }. And this conflicts with our commitment to a metalinguistic strategy. To rectify this issue, what we’ll need is a way of translating the Preliminary MC into a more refined MC that is formulated in exclusively metalinguistic terms. This is the sense in which the Preliminary MC is only preliminary.

We’ll come to that task in the next section. But before getting there I want to make a few clarificatory comments regarding the central concept of our Preliminary MC, that of a determination base.

First, it may or may not be a controversial matter what the determination base \textit{B} is in any given case. For example, many will disagree with Quine that facts about behavior constitute the determination base for matters of translation. In other cases, such as Suzan’s being rich, it may be entirely plain what the determination base is (especially if we stipulate that this is how we are using the world ‘rich’). In cases where it is controversial what \textit{B} is, it may be controversial whether the standard reasoning applies, and thus controversial whether there is indeterminacy.

\textsuperscript{59} neither of these authors is offering an MC.
Second, B is a type of fact. I won’t offer any theory of facts or types thereof here, other than to say that types are intensional objects whose existence should be understood quite liberally. For concreteness, we may if we’d like identify a type of fact with a function from worlds to sets of facts obtaining at those worlds. Importantly, speaking of a given type of fact makes no assumption about what facts of that type actually obtain. For instance, we can speak of the type of facts about blueness — what is blue and what is not — without making any assumptions about what, if anything, is actually blue. The idea behind the Standard Reasoning and the Preliminary MC is to first identify a type of fact B which is such that, if anything determines whether \( p \), it will be facts of this type, and then consider the actual facts of that type, the B-facts, to see whether they in fact determine whether \( p \).

Third, though I sometimes speak of the determination base type B for a given \( p \), this is not, strictly speaking, correct; the determination base type for \( p \) need not be unique. There may be many types of fact such that, if anything determines whether \( p \), facts of this type will determine whether \( p \).

Finally, what is it, exactly, for B to be a determination base for \( p \)? As indicated above, at an intuitive level we can think of B as being a determination base type for \( p \) just in case, if anything determines whether \( p \), it is facts of type B. Alternatively, we can think of B as being a type of fact whose “job” it is to determine whether \( p \). Ultimately neither of these characterizations will do as an official definition, but I do not have the space here to say with any more precision what exactly the idea of a determination base type amounts to.

60. I’m focusing on facts for the sake of concreteness. But everything we say here would hold just as well if we allowed entities of other ontological categories to enter into the determination relation. See Schaffer (2009) for an example of such a view.

61. For example, if facts about the amount of money in Suzan’s bank account count as a determination base for whether Suzan is rich, then arguably so will facts about the amount of money in each person’s bank account.

62. The second characterization is obviously unsatisfactory until we’ve said more about what it is for it to be the “job” of certain facts to determine whether \( p \).

tive characterization will suffice for our present purposes, however. In any given case, e.g. in matters of richness, or translation, or personal identity, we have a relatively firm grasp on what it is for something to be a determination base (which, again, is not to say that we necessarily agree on what that type is). Moreover, and importantly, we can understand what it is for B to be a determination base type for \( p \) even if in fact nothing determines whether \( p \). Even though nothing determines whether Suzan is rich, we know full well what type of fact “should”, as it were, do this job.

8. A Minimal Characterization

So much for determination bases. Let’s now return to the task of translating our Preliminary MC into suitable metalinguistic terms. Specifically, what we need to do is determine metalinguistic surrogates of the two main concepts in the Preliminary MC: that of a determination base for whether \( p \), and that of a set of facts determining (or failing to determine) whether \( p \). In each case we’d like our surrogate to be as close in extension as possible to the concept it is a surrogate of.

Consider first the concept of a determination base. As a metalinguistic surrogate for that concept, I propose the following:

\textbf{Sentential Determination Base:} A type of fact B is a sentential determination base for the sentence ‘\( p \)’ (given the meaning of ‘\( p \)’) iff, intuitively, if anything determines whether ‘\( p \)’ is true, it is facts about the meaning of ‘\( p \)’ (the M-facts) together with the B-facts. Alternatively: iff, intuitively, it is

As for the first characterization, if we took it as an official definition, then any type of fact B would vacuously count as a determination base for \( p \) whenever nothing determined whether \( p \). An obvious move would be to go modal: necessarily, if anything determines whether \( p \), it is facts of type B. Vacuity creeps back in, however, if we think there could be cases in which intuitively there is a particular type of fact whose “job” it is to determine whether \( p \) and yet necessarily such facts fail to determine whether \( p \). If this is conceivable, then it might turn out that the notion of a determination base is actually hyper-intensional. This, however, is perhaps not surprising given that various conceptions of metaphysical determination (e.g. grounding) are themselves hyper-intensional.
facts of type B whose “job” it is, together with the M-facts, to determine whether ‘p’ is true.\textsuperscript{63}

As indicated, this is only an intuitive characterization, just as with our original characterization of a determination base (and for the same reasons). The concept of a sentential determination base is very close in extension to that of a determination base: anything that is a determination base for whether \( p \) will also be a sentential determination base for ‘p’; and \textit{almost} anything that is a sentential determination base for ‘p’ will be a determination base for whether \( p \). (I’ll come back and address the ‘almost’ later on.\textsuperscript{64})

Now consider the concept of a set of facts determining whether \( p \).

As a surrogate for ‘facts X determine whether \( p \)’, I propose ‘facts X, together with the facts about the meaning of “\( p \)” (the M-facts), determine whether “\( p \)” is true or false — i.e. determine that “\( p \)” is true or determine that “\( p \)” is false.’ Correspondingly, as a surrogate for ‘facts X fail to determine whether “\( p \)”’, we have ‘facts X, together with facts about the meaning of “\( p \)”, fail to determine whether “\( p \)” is true or false — i.e. don’t determine that “\( p \)” is true, and don’t determine that “\( p \)” is false’. Again, these surrogates are very close in extension to the originals: any time a set of facts X determines whether \( p \), the same set X, together with facts about the meaning of ‘\( p \)’, will determine whether ‘\( p \)” is true or false; and \textit{almost} any time X, together with the meaning of ‘\( p \)’, determines whether ‘\( p \)” is true or false, it will also be the case that X determines whether \( p \).

Given these metalinguistic surrogates of the central concepts in our Preliminary MC, we can now translate that MC into our final MC:

\textit{Minimal Characterization of Indeterminacy (MC):} It is indeterminate whether \( p \) iff there exists a type of fact B such that (i) B is a sentential determination base for ‘\( p \)” (given the meaning of ‘\( p \)”); and (ii) the B-facts and the facts about the meaning of ‘\( p \)” (the M-facts) don’t determine that ‘\( p \)” is true, and the B-facts and the M-facts don’t determine that ‘\( p \)” is false.

To illustrate the mechanics of MCI as well as some of its features, let’s try working through a simple example. If anything determines whether the sentence ‘Suzan is rich’ is true/false, it is clearly facts about the meaning of that sentence together with facts about how much money is in Suzan’s bank account. The latter type of fact thus counts as a sentential determination base for ‘Suzan is rich’; these are facts whose “job” it is, together with the meaning of ‘Suzan is rich’, to determine whether ‘Suzan is rich’ is true/false. Now suppose we look at all the facts of this type that actually obtain — all the (actual) facts about the amount of money in Suzan’s bank account — and consider them together with the facts about the meaning of ‘Suzan is rich’. And suppose we conclude that this combination of facts fails to determine a truth-value for ‘Suzan is rich’. Then there’s nothing left to conclude but that it is indeterminate whether Suzan is rich. What we’re saying, after all, is that there are certain facts that are, as it were, “in charge of” determining a truth-value for ‘Suzan is rich’, but which nonetheless in this case fail to do exactly that. Given this, how could we maintain that it is nonetheless perfectly determinate one way or the other whether Suzan is rich? Conversely, suppose now that this combination of facts does determine that ‘Suzan is rich’ is (say) true. Then we couldn’t reasonably maintain that it was nonetheless indeterminate whether Suzan is rich. After all, there is \textit{something} that completely determines ‘Suzan is rich’ to be true. Putting it all together: it is indeterminate whether Suzan is rich iff there is a type of fact B that, on the one hand, counts as a sentential determination base for ‘Suzan is rich’ and yet, on the other hand, when combined with the meaning of ‘Suzan is rich’, fails to determine a truth-value for that sentence. Hence the proposed MC.

Let’s take this example bit further. Suppose that Martha and Samantha disagree about the nature of the indeterminacy in Suzan’s case.
They both agree that the right-hand side of MCI is satisfied, and hence both agree that it is indeterminate whether Suzan is rich, but Martha thinks the nature of this indeterminacy is metaphysical whereas Samantha thinks it is semantic. Now consider where this disagreement of theirs might manifest itself with respect to MCI. I propose that it manifests itself in the different explanations that Martha and Samantha give for why the right-hand side of MCI is satisfied; in particular, different explanations for the relevant determination failure in condition (ii) of MCI: how it is that the relevant B-facts together with the M-facts fail to determine a truth-value for ‘Suzan is rich’.

For instance, Martha might maintain that the sentence ‘Suzan is rich’ is perfectly precise in its meaning, and in particular that the predicate ‘rich’ expresses a unique property being rich, but that the facts about the amount of money in Suzan’s bank account simply fail to determine whether or not Suzan has this property. This account thus locates the source of the determination failure in (ii) in a prior determination failure between facts about money in bank accounts (the B-facts) and facts about the instantiation of the property of being rich. And this latter determination failure is one that holds independently of how or if we represent the relevant issues, thus keeping with Martha’s metaphysical stance on the relevant indeterminacy. In short, Martha blames the determination failure in (ii), and hence the relevant indeterminacy, on the B-facts and their relation to a single property of being rich.

Now turn to Samantha. She might maintain that the sentence ‘Suzan is rich’ does not express any single or precise proposition, but rather is semantically associated with a set of propositions of mixed truth-value, perhaps owing to some sort of semantic indecision. For simplicity, suppose there are just two such propositions:

\[ p: <\text{Suzan has at least } 100,000 \text{ in her bank account}> \]

and

\[ q: <\text{Suzan has at least } 100,001 \text{ in her bank account}>. \]

Thus the M-facts in this case are that ‘Suzan is rich’ is semantically associated with both \( p \) and \( q \) (perhaps owing to semantic indecision). The B-facts, meanwhile, fully determine the truth-values of these propositions, and that one is true and the other false. Thus the B-facts and the M-facts together fail to determine a truth-value for ‘Suzan is rich’, as expected. But notice that, unlike in Martha’s account of metaphysical indeterminacy, here there is no sense in which the B-facts themselves are to blame for the relevant determination failure in (ii); rather the determination failure in (ii) is owing to a prior determination failure in the M-facts, a determination failure as to which unique proposition is expressed by ‘Suzan is rich’. In this sense the determination failure in (ii), and hence the indeterminacy as to whether Suzan is rich, does depend on how we represent the relevant matters, and in particular on the meaning of ‘Suzan is rich’, thus keeping with Samantha’s semantic stance on the relevant indeterminacy. In short, Samantha blames the determination failure in (ii), and hence the relevant indeterminacy, on the M-facts themselves.

The point here is not that Martha’s and Samantha’s particular accounts are the only viable accounts of metaphysical and semantic indeterminacy possible. Far from it — there may be many different ways of explaining the determination failure in (ii). The point is rather that (a) disagreement regarding the nature of indeterminacy can be usefully construed as disagreement over how to explain the right-hand side of MCI, and in particular how to explain the determination failure in condition (ii); and (b) the difference between whether a given case of indeterminacy counts as metaphysical or as semantic can be seen as a difference in whether, in that case, the explanation for the determination failure in (ii) is located in certain special features of the B-facts (perhaps in relation to others) or rather in certain special features of the M-facts, respectively.\(^{65}\)

\(^{65}\) Samantha and Martha disagree about what the M-facts are in the case of ‘Suzan is rich’. Does this mean that they understand the right-hand side of MCI differently, in violation of desideratum (D3)? No. They (presumably) understand the general concept of meaning (and thus M-facts) in the same way;
Altogether, our discussion of the preceding example illustrates, or at least strongly suggests, the following three virtues of MCI: First, it is extensionally adequate. Second, it is compatible with, and hence neutral between, both metaphysical and semantic accounts of the nature of indeterminacy. And third, it can serve as a useful guide in debates over the nature of indeterminacy by providing a clear and precise target phenomenon — namely the determination failure in (ii) — that any theory of indeterminacy must adequately explain.

9. Objections and Replies
I’d now like to briefly respond to four objections one might naturally raise against the MC just proposed.

Objection 1: If the B-facts and the M-facts (for ‘p’) fail to determine whether ‘p’ is true or false, then presumably no facts determine whether ‘p’ is true or false. This suggests opting for a much simpler MC along the lines of:

\[ \text{MCI}^*: \text{It is indeterminate whether } p \text{ iff no facts determine whether ‘p’ is true or false.} \]

\[ \text{MCI}^* \]

seems basically equivalent to MCI but avoids complicating matters with the concept of a sentential determination base.

Reply: I agree with the entailment indicated in the objection: the conditions of MCI entail the conditions of \( \text{MCI}^* \). But I don’t agree with the converse, and thus don’t agree that the two MCs are equivalent. Return to my utterance of ‘This dog is asleep’, where ‘this dog’ fails to refer to anything at all. Surely my utterance satisfies the conditions of \( \text{MCI}^* \): no facts determine whether ‘This dog is asleep’ is true or false. But it does not satisfy the conditions of MCI, because it has no sentential determination base: intuitively, there is no particular type of fact whose “job” it is, together with the meaning of ‘This dog is asleep’, to determine a truth-value for my utterance. So MCI and \( \text{MCI}^* \) are not equivalent, and moreover MCI gives the right result, given that a case of reference failure is not a case of indeterminacy. Again, the intuitive idea that is distinctive of indeterminacy, and which MCI is designed to capture, is that for any indeterminate sentence ‘p’ there are some facts whose “job” it is to determine a truth-value for ‘p’ and yet which nonetheless fail to do that very job — fail to determine a truth-value for ‘p’.

Objection 2: MCI uses the concept of determination (or failure thereof) on its right-hand side. But this concept is more or less the same as that of determinacy (or indeterminacy). So MCI is circular, violating desideratum (D4).

Reply: The concept of a set of facts determining a certain matter is just not the same concept as that of determinacy. The words ‘determinacy’ and ‘determination’ are obviously cognates in English, and of course I do think there is a close and significant connection between the corresponding concepts — otherwise I would never have proposed using the concept of determination to characterize indeterminacy at all. But they are not the same concept. One quick way to see this is to note that the concept of determination is overtly relational, whereas that of determinacy is not. Another, more significant way to see this is to reflect on what it is, exactly, for a set of facts X to determine whether p in the first place. Up until this point I have not said much about this relation of determination, assuming that the reader has some sufficiently intuitive sense of what this amounts to (though see note 53). This was intentional; for there are many theories of so-called “metaphysical” determination that one may choose from — grounding, truth-making, metaphysical necessitation, the “in virtue of” relation, etc. — and at this initial stage of formulating MCI I’d like to remain as neutral as possible between these choices. But suppose for the moment that we were to pick one; suppose we were to pick, say, grounding as the relation meant to play the role of “determination” in MCI. Then we’d have a
minimal characterization of indeterminacy in terms of the concept of
grounding. And this, I think it is clear, is in no way circular. The concept
of determinacy is just not the same concept as that of grounding. Indeed an MC that relates determinacy to grounding reveals some-
thing informative and relatively surprising about both concepts. Simi-
larly for other ways of understanding metaphysical determination. If
we think of “determination” as a placeholder for whatever our pre-
ferred notion of metaphysical determination is, and if we agree that no particular notion of metaphysical determination is at all the same concept as that of determinacy, then we should conclude that there is no circularity in MCI of the sort the objection suggests.

Objection 3: Suppose facts of some type F constitute a fundamental
layer of reality, in the sense that there is no more basic type of facts
on which the F-facts depend; F-facts are simply brute. Now let ’f’ be a
sentence we use to describe this fundamental layer. Given our intu-
tive characterization of a determination base, it would seem that f has
no determination base — there is no type of fact whose “job” it is to
determine whether f, since the fact that f (if it is a fact) is simply brute.66
But then there is no determination base B such that facts of that type
could ever fail to determine whether f. Hence, according to MCI, it
must necessarily not be indeterminate whether f. Thus MCI seems to
rule out the possibility of indeterminacy at the fundamental level, and
this is far too strong of a consequence for any characterization of inde-
terminacy that purports to be minimal.67

Reply: MCI does not rule out fundamental indeterminacy in the way
suggested. It is true, for the reasons given, that there is no determination

66. This reflects the fact that metaphysical determination, and with it the concept
of a determination base, is anti-reflexive: the fact that p cannot determine that
p.

67. This objection is particularly forceful if we suppose that certain quantum phe-
nomena (e.g. superpositions) constitute examples of indeterminacy at the
fundamental level, as seems quite plausible. For a nice discussion of indeter-
minality at the fundamental level, see Barnes (2014).

base for whether f. And for this reason it is true, according to the Prelimi-
inary MC, which is formulated in terms of such determination bases,
that it is not (and could not be) indeterminate whether f. However,
Preliminary MC is not our official MC; rather MCI is. And MCI is for-
mulated not in terms of determination bases (simpliciter) but rather in
terms of sentential determination bases. Moreover the sentence ’f’, even
though it describes a fundamental state of affairs, does have a senten-
tial determination base: a type of fact B which is such that, intuitively,
if anything determines whether ’f’ is true, it is the B-facts together with
the facts about the meaning of ’f’. These facts will just be the F-facts
(or some sub-type thereof). Only if the truth-value of the sentence ’f’
were itself a matter of brute or fundamental fact could we have the
result that ’f’ did not have a sentential determination base. But it is
hard to see how sentential truth would ever be a matter of brute fact
in this way; whether a sentence is true or false is entirely dependent
on the meaning of that sentence together with certain facts about the
world. It is the latter, the facts about the world, that we are picking out
as the sentential determination base for ’f’; and such types of fact will
(typically) exist for fundamental and non-fundamental matters alike.68
In the fundamental case, these (sentential) base facts are just the F-
facts — the facts we would describe using the sentence ’f’ itself as the
fact that f; whereas for non-fundamental matters p, there will be (sen-
tential) base facts that are more basic than facts as to whether p.69

More generally, what this demonstrates is that the concept of a sen-
tential determination base for ’p’ is slightly broader than that of a deter-
mination base for whether p: certain sentences, in virtue of describing
fundamental states of affairs, will not have determination bases; but
such sentences will nonetheless have sentential determination bases.70

68. I say “typically” because of cases like ‘This dog is asleep’. But that has nothing
to do with fundamentality.

69. Even in the non-fundamental case, facts as to ‘whether p’ — i.e. facts which
in some intuitive sense “directly correspond” to ’p’ — might constitute a deter-
mination base for ’p’ in addition to the more fundamental B-facts. Recall that
determination bases need not be unique.

70. Or at least they won’t lack sentential bases in virtue of being fundamental.
This is the sense, mentioned in §7, in which the two notions are *almost*
but not exactly extensionally equivalent. Since I agree with the objection
that fundamental indeterminacy should not be precluded out of
hand, this shows yet another virtue of shifting from the Preliminary
MC to MCI.

**Objection 4:** According to MCI, if it is indeterminate whether \( p \), then
the relevant B-facts and M-facts don’t determine that \( p' \) is true and
don’t determine that \( p' \) is false, in which case it seems as if \( p' \) is simply
not true and also not false, i.e. there is a truth-value gap. But then MCI
fails to be neutral in the same way as TVG-1 did.

*Reply:* Indeterminacy will result in a truth-value gap *only if* we take
falsity to be distinct from lack of truth, as the objection is clearly thinking
of it. However, if we instead *equate* falsity and lack of truth, then
it turns out that indeterminacy will result in *indeterminacy* of truth-value.\(^\text{71}\) So MCI itself is compatible with both outcomes; which we go
in for will depend on how we think about the further issue of falsity’s
relation to truth.

**10. Conclusion**

There’s surely more work to be done on the MC I’ve proposed, and
I don’t pretend to have addressed all potential concerns. Certain

\(^\text{71}\) Here’s why: Notice that the B-facts and the M-facts (for \( p' \)) are themselves a
determination base (simpliciter) for whether \( p' \) is true. They are facts whose
‘job’ it is to determine whether \( p' \) is true. Hence they are also a sentential deter-
mination base for the sentence ‘\( p' \) is true’ (given its meaning). Now
suppose that falsity is the same thing as lack of truth, and suppose the B-facts and
M-facts (for \( p' \)) don’t determine that \( p' \) is true and don’t determine that \( p' \) is
false. Then the B-facts and M-facts simply fail to determine whether \( p' \) is true
(or not). But this means that the B-facts and the M-facts—which are a sen-
tential determination base for ‘\( p' \) is true’—together with the facts about the
meaning of ‘\( p' \) is true’, fail to determine a truth value for ‘\( p' \) is true’. And that,
according to MCI, is equivalent to saying that it is indeterminate whether \( p' \)
is true. This, however, does not make MCI circular. Indeterminacy in truth-
value is not a condition on the right-hand side of MCI but rather a byproduct
of those conditions obtaining.

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A Minimal Characterization of Indeterminacy
