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Indeterminacy, identity and counterparts: Evans reconsidered

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Abstract In this paper I argue that Gareth Evans' famous proof of the impossibility of de re indeterminate identity fails on a counterpart-theoretic interpretation of the determinacy operators. I attempt to motivate a counterpart-theoretic reading of the determinacy operators and then show that, understood counterpart-theoretically, Evans' argument is straightforwardly invalid.

Keywords Vague identity · Ontic vagueness · Indeterminacy · Counterpart theory

Gareth Evans' famous (1978) argument against the possibility of ontic vagueness is one of those philosophical problems that just will not die. Weatherson (2003) claims it's a lynchpin in the case against de re vagueness, whereas Noonan (2004) remarks that everyone knows that all the argument shows is that every vague object is determinately distinct from every precise one (and every other vague one). Obviously, it's the sort of thing that philosophers tend not to agree about. The Evans argument is thus still very much a 'live' issue in the ontic vagueness debate, one which anyone who wants to go in for ontic vagueness must have something to say about.

With that in mind, I'd like to propose a solution to the Evans argument for the would-be defender of ontic vagueness. I certainly do not intend this to be read as a knock-down objection to Evans' argument—far from it. But I put this solution forward because it's a simple and straightforward solution to Evans' puzzle that, as far as I know, has been largely unexplored. My contention will be that, should you be tempted by an ontology which commits you to vague or indeterminate identities, there is a reading of the determinacy operators available to you according to which the Evans argument fails for quite basic reasons.

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My proposal, which I'll outline below, is that the determinacy operators should be understood as quantifiers that range over precisifications in the same way that modal operators are quantifiers that range over possible worlds, and that claims of 'trans-precisificational identity' should be treated much like a counterpart theorist in the mould of Lewis (1971) treats claims of trans-world identity. On this understanding, I argue, the Evans argument fails, for quite straightforward reasons.

1 The Evans argument

Gareth Evans, in his seminal paper "Can There Be Vague Objects?" offers a purported proof against the existence of ontic vagueness. The proof hinges on the idea that whenever there are vague objects, there will be vague identity.[1] But vague identity (as in genuine vague identity between entities, rather than merely vague identity statements),[2] the argument attempts to show, is incoherent. Thus, Evans concludes, there cannot be vague objects.

The proof, as Evans presents it, runs as follows:

(1) $\nabla(a=b)$
(2) $\lambda[\nabla(x=a)]b$
(3) $\sim\nabla(a=a)$
(4) $\sim\lambda[\nabla(x=a)]a$
(5) $\sim(a=b)$ [from (2) and (4), by Leibniz's Law]

This is not a straightforward contradiction, but Evans then reasons that "if 'Indefinitely' and its dual 'Definitely' ('Δ') generate a modal logic as strong as S5, then (1)–(4) and presumably Leibniz's Law can each be strengthened with a 'Definitely' prefix, enabling us to derive

(5′) $\Delta\sim(a=b)$

which is straightforwardly inconsistent with (1)."

Thus, if Evans' reasoning is correct, we have a logical proof that there cannot be ontic vagueness.

2 The logic of determinacy

It seems clear, though, that to assess whether or not Evans' argument is valid, we must first provide an adequate analysis of 'determinately' and its converse 'indeterminately'. Evans' proof hinges on the use of these operators, and thus any judgment of its validity will depend on how we interpret them. In the subsequent sections I will attempt to motivate an interpretation of the determinately/indeterminately operators—one which I'll argue is very natural—on which the Evans argument does not go through.

[1] Many philosophers have disputed this claim (see, for example, Williamson 1994), but I will grant Evans his assumption for the sake of argument.

[2] See Lewis (1988).

2.1 Precisificaitons

It's a common assumption[3] in the literature that the determinacy operators have a semantics that mimics that of the modal operators. For example, the family of positions broadly known as supervaluationism maintain that the determinacy operators should be read as a type of pseudo-modal operator that ranges over *precisifications* rather than (as the modal operators do) worlds.[4]

According to this model, it's quite easy to provide for the analogy between modal semantics and determinacy semantics. Familiarly, on a possible worlds semantics 'necessary' simply means true in all (accessible) possible worlds ($\Box$P iff: P obtains at every accessible world). Its dual, 'possibly', just means not necessarily not; i.e., true in at least one possible world ($\Diamond$P iff: P obtains at some accessible world).

A similar understanding of the determinacy operators is then readily available if we read them as ranging over precisifications. Instead of (accessible) possible worlds, the operators will be concerned with admissible precisifications (inadmissible precisifications being analogous to impossible worlds). 'Determinate' will, on this model, simply mean true on every admissible precisification (ΔP iff: P obtains in every admissible precisification). The key disanalogy with the modal operators, however, will be that, while something can obviously be both necessary and possible, something cannot likewise be both determinate and indeterminate.[5] So it does not suffice to characterize 'indeterminate' as true in at least one admissible precisification (since this would leave open the possibility of truth in every precisification, which would amount to determinacy). Instead, 'indeterminate' needs to be characterized as true in at least one but not all admissible precisifications (∇P iff: P obtains at some admissible precisification and does not obtain at some other admissible precisification).

2.2 Modal vagueness

The view outlined above—that determinacy operators are in various way structurally analogous to modal operators—is familiar from the vagueness literature. But there's an alternative, stronger way of understanding the link between determinacy/indeterminacy semantics and modality that I find preferable, at least for the case of ontic indeterminacy (which is what concerns us here).[6]

[3] Which Evans seems to share, given that he thinks that the operators 'generate a modal logical at least as strong as S5.'

[4] See Fine (1975) for the classic treatment.

[5] The closest modal analogy for 'indeterminate' thus seems to be 'contingent'—something cannot be both contingent and necessary, contingency being a middle-ground, as it were, between necessarily and necessarily not. See Parsons and Woodruff (1992).

[6] What follows is a very brief exposition, but the full details of the view proposed can be found in Barnes (manuscript) 'Ontic vagueness: a guide for the perplexed' and Barnes and Williams (manuscript) 'A theory of metaphysical indeterminacy'; additionally, Williams (2008) outlines a very similar and equally useful view. The structure (though not the ontological commitments) is analogous to the so-called non-standard supervaluationism of, e.g., McGee and McLaughlin (1994).

Rather than claiming that precisifications are *like* worlds, we can claim precisifications *are* worlds. That is, we can understand precisifications as a special subset of the possible worlds. On this view, determinacy operators are more than just formally analogous to modal operators: determinacy is just a form of restricted modality (wherein the operators range only over the subset of possible worlds which count as admissible precisifications of the actual world).

This modal (as opposed to pseudo-modal) construal of the determinacy operators relies on the distinction, familiar from Ersatz theories of modality, between the actual world and the actual*ized* world.[7] If the world contains indeterminacy, then there is more than one world in the space of precisifications—because if the world contains indeterminacy then the world admits of precisification in various ways. If, for example, it's indeterminate whether p, then there will be at least two worlds in the space of precisifications—one which represents things as being p, and one which represents things as being not-p. Both possible worlds in the set of precisifications are fully precise, but if at the actual world it is indeterminate whether p, it will be indeterminate which of these two fully precise worlds is actualized.

This indeterminacy arises because, as in standard Ersatz theory, each world represents itself as being actualized. So if we then apply the basic definitions, given in the previous section, of determinacy (truth at all precisifications) and indeterminacy (truth and some precisifications and falsity at others), we get the result that it's indeterminate which world is the actualized world. Determinately, there is one and only one actualized world. But if there's indeterminacy in the actual world, then it's indeterminate *which* of the possible worlds it is.[8] This is just a modelling of the basic thought that if the world itself is indeterminate, then there's no unique, determinately correct representation of it.

There are formal as well as philosophical advantages to using such a picture of ontic indeterminacy. On the formal side of things, it upholds both bivalence and excluded middle.[9] On the more philosophical front, it gives us a way of understanding ontic indeterminacy that fully avoids assigning 'third-category' status to indeterminacy (where p's being indeterminate is just another way p can be, just like being true or being false, rather than being some kind of 'unsettledness' between the two poles of truth and falsity). It also gains points for simplicity—why have both precisifications and worlds, if you can instead account for the former solely in terms of the latter? As has often been pointed out, the determinacy operators do seem to behave strikingly like

[7] This terminology can be somewhat confusing—another option is Stalnaker's distinction between a world and its possible states, one of which is actual. See, e.g., Stalnaker (1976).

[8] Because if there's indeterminacy at the actual world there will be more than one world in the space of precisification, and we have defined indeterminacy with respect to p as disagreement between precisifications about the truth value of p—thus the precisifications will disagree over the truth value of 'world w is actualized' (since each world represents itself as being actualized), making it indeterminate which world is actualized.

[9] Everything's precise at the precisifications; indeterminacy arises simply if there's more than one precisification. So determinately, everything's precise—but if there's no determinately actualized world, that means it's indeterminate which precise way things are. For any p, it's determinate that either p or not-p obtains—those are the only two options; it's just that it can be indeterminate which obtains. Likewise, it's determinate that p is either true or false, because again those are the only two options; but sometimes it can be 'unsettled' *which* of those two exhaustive and exclusive options in fact obtain.

the modal operators. With that in mind, it would seem beneficial, if it were tenable, to simply incorporate treatment of the determinacy operators into a theory of modality. And, lastly, as mentioned, the modal picture gives full weight to the highly intuitive thought that, if the world is in fact indeterminate, there's simply no determinately correct way of representing it.[10]

It's very important to note that this type of modal representation of indeterminacy is in no way essential to the response to the Evans argument I'm about to give. You can easily accept a counterpart theoretic analysis of the determinacy operators while maintaining a standard (non-modal) account of precisification. But the modal framework does make my subsequent position both more plausible and more motivated, and also helps me to answer some potential objections. I'll thus incorporate it in several places to do some work, though I'll make sure to highlight when I'm doing so.

3 Counterpart theory

Much of what I have said so far is review, and none of it is going to help us out of the Evans argument. In direct relevance to Evans, here is my main proposal: given the above interpretation of the determinacy operators (i.e., as either modal or pseudo-modal operators ranging over precisifications), we should read them counterpart-theoretically. And if we construe the determinacy operators according to the counterpart theory model, the Evans argument will fail.[11]

Before I continue, let me make some clarificatory remarks on the project. The term 'counterpart theory' is somewhat ambiguous. It could be used to mean the Lewis (1968) formal system, together with his translation manual for taking sentences of quantified modal logic and turning them into sentences of the language of counterpart theory. But the term is also used simply to refer to the idea that the truth conditions of modal predications such as '*a* could have been F' are to be analysed not in terms of strict and literal trans-world identity (*a* is F at some world) but in terms of a relation of similarity (*a* has a counterpart—an object sufficiently similar to it—at some world that is F), together with the idea that *which* similarity relation is the counterpart relation is inconstant. These two projects are largely independent. One can obviously hold that the truth-conditions of modal predications concern distinct but similar individuals, and hold that the standards of similarity vary depending on what counterpart relation is invoked, without holding that sentences of QML should be translated into the 1968 formal system as Lewis suggests. Likewise, one can accept the Lewis (1968) formal system and hold that the truth of a modal predication is not inconstant. These two doctrines—both of which go by the name 'counterpart theory'—are simply tangential. When I use the term I do not mean the 1968 formal system. I am a counterpart theorist only in the sense that I think the truth conditions of '*a* could have been F' are not that *a* is F at some world but that there is something appropriately similar

[10] Unless we assign a third-category, separate-but-equal status to indeterminacy, which is of course to be avoided.

[11] The application of counterpart theory to vagueness (though not specifically to Evans' argument) has been explored before—see Forbes (1983)—though in that context its application is embedded within the framework of the degree theory of vagueness.

to *a* at some world that is F, and that what counts as 'appropriately similar' depends on what the salient standards of similarity are, and this can varies with a variation in how we refer to things. In particular, then, I am not going along with Lewis (1968) treatment of names as definite descriptions or anything like that. If you think that means my proposed solution does not deserve to be called a 'counterpart theoretic' solution, that's fine—simply sub in an alternative term. The terminology is unimportant; what matters is that the assumptions I am making render the Evans argument invalid.

3.1 Motivations

First things first, why on earth would you be tempted to go counterpart-theoretic[12] at this stage (and the answer better not be 'because it solves the Evans argument!')? In what follows I'll lay out the motivations, which I actually think are very strong, whether or not you're remotely tempted by counterpart theory for the modal case.[13]

Most importantly, counterpart theory lends itself particularly well to the semantic framework in question because of its unique treatment of transworld identity. According to counterpart theory, individuals are world-bound, but at other worlds they do have *counterparts*. These counterparts are world-bound objects in other possible worlds which are similar in relevant respects to the object in question. Modal claims are true of an object in the actual world in virtue of what is true of their counterparts. So it's true that I might have had red hair (rather than brown) if and only if I have a counterpart who has red hair. But my red-haired counterpart and I are not, strictly speaking, identical to one another.

Thus, in counterpart theoretic terms we do not have identity across precisifications (so *you*, strictly speaking, do not exist at any precisification of your current situation, but you do have a counterpart that does). For any x, x is F at a given precisification if and only if x's counterpart at that precisification is F. To extend to the case of determinacy operators, ΔFx iff: all of x's counterparts (at every precisification) are F; ∇Fx iff: some of x's counterpart's (at some precisification) are F and some are not.

To use a paradigm case of vagueness as an example, if it is indeterminate that Simon is bald, then Simon will have some bald counterparts and some non-bald counterparts (with 'counterparts' understood as ways Simon might be presented under various precisifications; but each 'counterpart', as in traditional counterpart theory, is distinct from

[12] In the sense outlined above. From now on I'll drop this qualification.

[13] It's helpful to note that endorsing the modal semantics for ontic indeterminacy outlined in Sect. 2.2 would also allow for the incorporation of standard motivations for counterpart theory, particularly the inconstancy of modality de re. Such arguments need not be accepted, however, if a modal semantics is used, because (as I will discuss later) those sceptical about contingent identity can always claim that contingent identity obtains only when indeterminate identity obtains (so that $\Delta a=b$ entails $\Box a=b$). But for those who are tempted by contingent identity in the first instance, the standard motivations for it can also be brought to bear for the case of indeterminate identity.

Simon himself).[14] Conversely, if it is determinate that Garfunkel is bald, then—for all admissible precisifications—all Garfunkel's counterparts will be bald.

Intuitively, this denial of transworld (or trans-precisification) identity fits neatly with the semantics for determinacy in question. If we take vagueness as a real (and perhaps even necessary/ineliminable) feature of the world, then it's natural to suppose that, for any vague term or object, the precisified versions of it will be similar in relevant respects, but they will not quite be *that term* (or object). This copes well with the common objection to the supervalutionist—that she has merely 'changed the subject' by precisifying. Well, in a sense she has; strictly speaking, she's talking about a different word/object when dealing with a precisification. *But that does not prevent her from gaining information about the actual word/object*.

'Bald' taken to mean 'has less than 537 hairs on the scalp' rather than our loose, common-usage term has certainly lost something in translation. Or, to give a potential ontic example, vague Tibbles the cat is a fuzzy creature quite distinct from any of the determinate collections of molecules that might stand in for him at his various precisifications. Better than adopting strict identity then—identity across precisifications, which would entail that our loose, vague word and the precisified word are identical, or that our blurry-bounded cat and some collection of molecules x(1)–x(n) are identical—seems to be claiming that the extension of 'less than 537 hairs on the scalp' is not *identical* to the extension of our word 'bald', but rather is a precisified *counterpart* of 'bald' (and likewise for Tibbles and the molecules). In a certain precisification, that is, 'less than 537 hairs on the scalp' has the relevant similarity and does the semantic work that 'bald' does in the actual world, and so claims of determinacy such as, e.g. 'x is determinately bald', are made true, in part, by the truth (simpliciter) of 'counterpart-x has less than 537 hairs on the scalp'.[15] Similarly, in a certain precisification there is group of molecules that plays the role that Tibbles plays in the actual world, such that 'molecule x(3) is determinately part of Tibbles' is made true at least in part by the truth simpliciter of 'counterpart-molecule x(3) is part of the counterparts of x(1)–x(n)'.

The general picture here is similar to notions of *verisimilitude* in the sciences—the idea that our theories make an approximation at truth, a best representation of the situation, but that they do not quite paint the picture as things really are.[16] Analogously, precisifications give us a helpful model for distinguishing determinacy and indeterminacy, but they are not the way things really are—in reality, things (words, objects,

[14] What is in fact being precisified in these cases will depend on what you think the source of vagueness is: if you think vagueness is semantic, then our term 'bald' will be precisified; if you think it is ontic, then something like facts about what is a member of the object playing the Simon role or what properties that object instantiates, etc., will be precisified; if you think vagueness is a mixture of both, then precisifications will likewise be a mixture of both. Counterpart theory is particularly useful in the third case, because its context-sensitivity helps to pick out what sorts of precisifications are in order at what times. Precisifications, however, should be understood as complete precisifications of the actual world—nothing is precisified in isolation.

[15] The truth of 'determinately' statements will, of course, depend on the true application of all admissible precisifications—that is, that all the counterparts of a vague term can truly be applied to the subject in question.

[16] The analogy is only partial, however, as verisimilitude's picture is one of getting closer and closer to the truth, which everyone who is not a degree theorist probably will not be happy with.

properties, etc.—depends on your theory of vagueness) are vague.[17] With this in mind, then, it's best not to speak of strict identity across precisifications. Rather, we have actual (vague) things and then we have their precisified counterparts. We can thus latch on to truth claims about actual things based on the way things are in precisifications, while at the same time maintaining that nothing here in the vague world is identical with anything in the precisifications.

As a further point in its favour, counterpart theory allows that the truth of modal claims can be context sensitive. Sentences uttered in different contexts may invoke different counterpart relations, and thus who your counterparts are will depend in part on the context of utterance. This feature is particularly appealing when its determinacy analogue is applied to vagueness, an area which has a great deal of context-sensitivity.[18]

On precisificational accounts of determinacy, if 'x is determinately F' changes truth value depending on the context, this means that some precisifications of F count as admissible in some contexts but not in others. The precisification-style modelling of determinacy thus needs to account for *why* certain precisifications can be sometimes admissible, sometimes not. Counterpart theory gives us an excellent way of modelling and explaining the reasons for this shift in precisificational admissibility. 'x is determinately F' is true in a context just in case the counterpart relation invoked in that context only picks out as counterparts of x things that are F. And the same utterance which is true in one context can be false in another context, simply because a different counterpart relation is invoked, one which picks out some x-counterparts which are not F. The counterpart-theoretic notion of the salience of a particular counterpart relation tells us *why* there is a shift in what precisifications are admissible.

So, for example, for a man who is 6′2, 'He is determinately tall' is true when uttered at the APA, but false when uttered at an NBA convention.[19] There is a shift in which precisifications we count as admissible. Counterpart theory, with its well-developed apparatus for modelling context-sensitivity, provides a particularly useful framework for explaining how this shift in admissibility works.[20]

It's important to point out here, however, exactly how counterpart theory realizes the context-dependence of modal properties, and thus to demonstrate how the analogous treatment of determinacy might work. There's a common temptation to think that

[17] Standard counterpart theory, however, applies only to objects, not to properties (see especially Lewis (1971)). So the person who wants to adopt counterpart theory to account for vagueness in *properties* will have to either give an account of vagueness in properties *via* objects or, alternatively, adopt the version of counterpart theory that incorporates counterparts of properties, as developed in Heller (1998).

[18] Most vague words can, of course, be context sensitive independent of apparent embeddings in determinacy operators. But the standard supervaluationist-style theories of vagueness equate truth with 'super-truth' (determinate truth). So for any simple utterance of, e.g., 'he is tall', we need to look at precisifications to evaluate its truth.

[19] It's tempting to say that the context-sensitivity of a word like 'tall' is explained much more simply: 'tall' just picks out different properties in different contexts. But the vagueness of tall means that we cannot determine what property 'tall' picks out without precisifying (at least not on a Lewisian-style picture of properties). And thus we still need to explain the shift in precisificational admissibility.

[20] Think of the analogy with the statue and the clay puzzle. In the context of referring to the (single) object qua statue, we say truly that it could not survive being smashed, but when we switch contexts to refer to the object qua clay, we say truly that it could. Thus the same object can have different modal properties (by having different counterparts) depending on what context we refer to it in.

a counterpart-theoretic analysis makes it the case that which modal properties a thing has is in some sense mind-dependent (after all, modal properties vary from context to context and we're the ones picking out the contexts). Anyone who thought this was the type of solution to be offered for indeterminacy of identity would be forgiven for not giving it the time of day; but in fact I think it's a misreading of counterpart theory. Yes, counterpart theory does say that when we refer to, e.g., the single clay/statue entity as the clay, it has the property of being squashable, yet when we refer to the same entity qua statue it does not have the property of being squashable. So prima facie it does seem that by the very act of referring to a single object in different way we're changing what modal properties that object has.

In fact, counterpart theory claims only that a change in how we refer to objects can change how we single out properties. For the case of the statue/clay, when we refer to it qua clay we say truly that it could be squashed, whereas when we refer to it qua statue we say truly that it could not. But all that has happened, when we refer to it as 'the statue', is that we have made it the case that the very same property from when we called it 'the clay' no longer deserves the name 'squashability'.[21]

Likewise for determinacy. If it's determinate that you're tall at the APA but determinate that you're not tall at the NBA, it's not that *you have* changed any of your properties. It's just that the different contexts single out different precisifications for the word 'tall', because different standards of tallness are salient.

3.2 Counterpart theory and Evans' argument

3.2.1 The basics

And now, at long last, we come to it: the proposed solution to Evans' famous argument. Let me be clear about what follows: I'm in no way asserting that indeterminate identity follows from counterpart theory. What I want to argue is that, within a counterpart-theoretic semantics, indeterminate identity is perfectly *coherent*. You do not *need* to embrace indeterminate identity if you interpret the determinacy operators counterpart theoretically—and it will not give you independent motivation for doing so—but if you already have reason to think indeterminate identity should be tenable, counterpart theory can let you have it.

Assuming that we're reading the determinacy operators counterpart theoretically, Evans' argument straightforwardly fails because, on a counterpart-theoretic interpretation, the two property abstraction steps equivocate. Because of this equivocation, the argument is invalid (though the premises are true). Thus a major advantage of a counterpart theoretic treatment of the argument is that it allows us to say everything

[21] In the clay context, the property would have been the set of all individuals with squashed counterparts; the property is still the very same set (it has the same members), but by changing the context we have made it the case that not all it's members have squashed counterparts (because referring to the statue/clay qua statue invokes a counterpart relation according to which the object has no squashed counterparts); so the *very same* property no longer deserves to be called the property 'squashability'. See Cameron (2008) for detailed discussion of these issues.

that Evans thinks we should say in cases of ontically indeterminate identity ($\nabla a = b$, $\sim \nabla a = a$, etc), make all the predications de re, and yet reject Evans' conclusion.

Familiarly, in counterpart theory it can be the case that:

$(a = b)$

but:

$\Diamond(a \neq b)$

yet:

$\sim \Diamond(a \neq a)$ (that is, $\Box(a = a)$).

Thus, from the fact that $\Diamond(a \neq b)$ but $\sim \Diamond(a \neq a)$, you cannot infer that a and b have different properties. In the actual world, they are identical ($@a = b$), and thus they share all their properties (via the indiscernibility of identicals). Yet the different names can invoke different counterpart relations, so in some worlds they are not identical.[22] But we cannot conclude from this that a and b are actually distinct; they are actually identical, but could have been distinct. a and b can in fact satisfy different modal predicates (since a has some counterpart which is qualitatively unlike any of b's counterparts) in the actual world, but *never in the same context*. When we refer to a qua identical to b, then necessarily all its counterparts are counterparts of b. When we refer to the one thing a/b as 'a', the counterpart relation invoked is such that it has different counterparts from the counterparts it would have were we to refer to it as 'b'. But from this we cannot, of course, conclude that a and b are distinct; they are one and the same thing, simply with different counterpart relations singled out depending on which terms of reference we choose.

If we are to understand the determinacy operators in a modal/pseudo-modal semantics, then we can straightforwardly apply a similar treatment in the indeterminacy of identity case.

We have:

$\nabla(a = b)$

But, of course,

$\sim \nabla a = a$.

From there, Evans infers that a has a property (being determinately identical to a), *which b lacks* (since ex hypothesi b is *not* determinately identical to a). Yet, if we interpret the indeterminacy operator using counterpart theory, this inference does not go through. As in the modal case, a and b might have all and only the same properties, but there be no context in which it is appropriate to both refer to the object as 'b' and refer to one of its properties as 'being determinately identical to a'. But were this the

[22] Again, think of the counterpart-theoretic treatment of the statue and the clay. They are identical, the very same thing. But they *could have* been different—the statue could have been made out of bronze. Referring to the (single) object qua statue invokes a different counterpart relation than referring to it qua clay, so the same object can satisfy different modal predicates, but—crucially—*never in the same context*. There's no violation of Leibniz's Law here—there's one object and one set of properties, but the correct descriptions of those properties varies from context to context.

case, the Evans argument would not in fact demonstrate that a and b have different properties (and thus must be distinct)—it would only demonstrate that some of a/b's properties have different descriptions appropriate to them, depending on whether we are in an 'a' context or a 'b' context.

Saying that it's indeterminate that a = b is (at least structurally) equivalent to saying that it's possible that a ≠ b—a is identical to b at some precisifications, but not at others. But, as aforementioned, in counterpart theory you cannot infer from this that a and b have different properties. It may simply be that the names 'a' and 'b' invoke different counterpart relations.

Thus, in a counterpart-theoretic framework, the Evans argument will fail to go through. The property abstraction reasoning will be equivocal, and thus invalid. Both (2) and (4) in the argument are each true in some context, but there is no *single* context in which both of them are true. The argument can only go through by shifting contexts, and thus equivocating.

If it is indeterminate that a = b, that means that some of a's counterparts are counterparts of b and some are not. This is perfectly compatible with it being determinate that a = a. The determinacy of a = a simply means that all of a's counterparts are counterparts of a, which is trivially true.[23] Yet we cannot infer from this that a has some property that b lacks, because the counterpart relation invoked in the a = b case is different; we have simply changed the context. The indeterminacy of identity between a and b simply tells us that not all a's counterparts are b's counterparts; that is, at some precisifications a and b are distinct. But this tells us nothing about how things are with a and b in the actual, non-precisified, world. Notably, it does not license the conclusion that a and b have different properties, and thus are non-identical, which is the move Evans attempts to make. Evans' argument thus fails, when interpreted counterpart-theoretically.

3.2.2 Why the argument is equivocal

It's worth spelling out the details of this, just to be clear about how, exactly, the proposed solution is meant to work. Object *a* has the property of being determinately identical to *a*—counterpart-theoretically, this property amounts to a saying 'all my *a* counterparts are *a* counterparts'. But of course, *b* has the same property; *b* can also say 'all my *a* counterparts are *a* counterparts'. It's just that, when we have shifted the counterpart relation by using the term '*b*', that property no longer deserves to be called 'being determinately identical to *a*' On this relation the property that deserves to be called 'being determinately identical to *a*' is the property of having all one's *b* counterparts be *a* counterparts. *b* does not have this property (and neither does *a*, of

[23] Of course, in the analogous modal case □a = a is false, so one might likewise think that △a = a should be false. Were this the case, then so much the worse for the Evans argument, as counterpart theory renders it unsound as well as invalid. But what we count as precisifications is a very restricted modality, and it's far from obvious that anything resembling Lewis (1971) 'twin cases', which falsify □a = a, would be present in admissible precisifications. Indeed, one might just count as a condition on the admissibility of a precisification that it satisfies a = a. I do not want to take a stand of this either way. What I'm interested in doing here is showing that each of the premises of the Evans argument can be true, and yet on a counterpart-theoretic interpretation the argument still does not work.

course), and so it is false to say that *b* is determinately identical to *a*. Evans' argument cannot go through, on a counterpart-theoretic interpretation, without equivocating.

To see precisely why this is the case, it's helpful to look at an example. Suppose the only instance of indeterminacy in the world is a case of indeterminate identity between *a* and *b*, such that $\nabla(a=b)$. There would be two admissible precisifications of such a situation—one in which *a* and *b* are identical, and one in which they are distinct. Thus, in counterpart theory, there would be two precisifcations, one in which there is a single object, *c*, which is a counterpart of both *a* and *b*, and one in which there are two objects, *d* and *e*, where *d* is a counterpart of *a* and *e* is a counterpart of *b*. So the situation is as follows:

(i) *c* is a counterpart of *a* and a counterpart of *b*
(ii) *d* is a counterpart of *a* and not a counterpart of *b*
(iii) *e* is a counterpart of *b* and not a counterpart of *a*

The Evans worry is then, in counterpart theoretic terms, that *a* has some property that *b* lacks, in virtue of having a counterpart that *b* does not have. But from that we can conclude that *a* and *b* are in fact distinct, rather than indeterminately identical. The indeterminate identity of *a* and *b* needs to be compatible with both their identity and their non-identity, but it looks like it's straightforwardly inconsistent with their identity, forcing us to conclude that they're non-identical. The idea is just the very basic:

(iv) Suppose $a = b$
(v) *d* is a counterpart of *b* (from (ii) and (iv))
(vi) contradiction (from (v) and (ii))

Yet on closer examination of the counterpart-theoretic interpretation, we can see that claims (i)–(iii) do not in fact license the reasoning made in (iv)–(vi). This is because, though each of (i)–(v) are true, they are not all true according to any single counterpart relation, and thus the contradiction (vi) does not follow. The only way to generate a contradiction would be by equivocating—by changing counterpart relations mid-argument—and thus the argument is invalid.

(i) says that according to the counterpart relation invoked by '*a*' (call it C_a) *c* is a counterpart of *a*, and according to the counterpart relation invoked by '*b*' (call it C_b) *c* is a counterpart of *b*. (ii) says that according to C_a *d* is a counterpart of *a* and according to C_b *d* is not a counterpart of *b*. (iii) says that according to C_a *e* is not a counterpart of *a* and according to C_b *e* is a counterpart of *b*.

What would be needed for a contradiction, then, is that according to C_a *e* is a counterpart of *b*. But that's not the case. The counterpart relation which tells us that *e* is a counterpart of *b* is C_b, and that's the appropriate relation to invoke in the context. According to counterpart relation C_a, though, *e* is not a counterpart of *b*. Whenever we start speaking of *b* as '*b*', we switch the context to the use of C_b, and so we correctly say that *e* is a counterpart of *b*. But we cannot then generate a worry from the claim that *e* is not a counterpart of *a*, because in doing so we automatically switch the context back to C_a, and thus any argument we set up would rest on an equivocation.

Again, it's helpful to think of the analogy to the statue/clay case. According to counterpart theory, we can truly say that the clay has some counterparts—some squashed

lumps, maybe—which the statue does not have. But we can only do this by changing the context from the $\text{counterpart}_{\text{statue}}$ relation to the $\text{counterpart}_{\text{clay}}$ relation.

3.2.3 Contingent and indeterminate identity

This should come as no surprise to the philosopher who endorses the modal framework for ontic indeterminacy sketched out in Sect. 2.2. Determinacy is being treated as a restricted necessity: what's determinately true is what's true not at *all* worlds unrestrictedly, but what's true at all those worlds which count as precisifications of the actual world. Indeterminate identity simply is contingent identity, where 'contingency' here is the contingency defined on the restricted necessity that is determinacy. Thus, any vindication of the coherence of (absolutely) contingent identity will automatically yield a vindication of the coherence of indeterminate identity. The coherence of both stands or falls together. Since counterpart theory allows the contingent identity theorist to resist the Barcan/Kripke proof of the necessity of identity, we should likewise expect it to allow the indeterminate identity theorist to resist the structurally similar proof Evans gives for the determinateness of identity.[24]

It should be noted, however, that accepting this solution to the Evans argument would still leave room for a position that accommodates many of the intuitions of those resistant to contingent identity. It could be maintained that identity can only be contingent when it is indeterminate—so that if $\Delta a = b$ then $\Box a = b$. So while objects which are indeterminately identical are contingently identical, objects which are determinately identical may in every case be necessarily identical.[25]

Moreover, any form of contingent identity is vindicated by the response to Evans offered here only if the genuinely modal interpretation of precisification is taken on board. But, as emphasized earlier, acceptance of that broader picture of indeterminacy is in no way necessary for endorsing a counterpart-theoretic treatment of Evans. One might easily maintain that modality and indeterminacy are only limitedly analogous, and thus adopt counterpart theory for the determinacy operators while retaining a standard treatment of the modal operators. This point is particularly clear when one considers that there are considerations in favour of a counterpart-theoretic interpretation that seem wholly specific to the case of indeterminacy and/or vagueness, and features of counterpart theory which might prove much more salient in the case of indeterminacy than they do in the case of modality. If, as many do, we consider vagueness to be ineliminable, then we should *expect* the denial of trans-precisificational identity yielded by counterpart theory. The words (or objects) we find in precisifications are useful tools for doing semantics, but they are in no way identical to the essentially vague representations (or objects) that we actually have. Counterpart theory thus lets us say something akin to the notion of verisimilitude for our modelling of vagueness—it's a useful and helpful representation, but do not mistake it for the real thing. This kind of picture is particularly attractive for the supervaluationist, who

[24] The analogy between these two proofs has been highlighted by E. J. Lowe in his (2005).

[25] My only point here is that such a position would be perfectly consistent, given everything I have said so far, and thus might be amenable to those who would welcome a solution to Evans' puzzle but find contingent identity largely unacceptable.

is often accused of changing the subject when she precisifies. Counterpart theory can allow her to embrace this—she *does* change the subject, but that is exactly what she should do. These considerations[26] are pressing in the case of vagueness, though they might have no weight (or, indeed, be explicitly contradicted) in the modal case.

What is most significant for the purposes here, though, is that counterpart theory gives us a way of understanding indeterminate identity which is both fully coherent and compatible with *both* identity and non-identity. This compatibility is crucial to avoid lapsing into a third-category analysis of indeterminacy. If two things are indeterminately identical, it's not that they have some special status, on equal footing with being identical or being non-identical. Rather, there are only two options—either they are identical or they are distinct. But what counterpart theory (and added help from modal semantics) allows is the idea that sometimes things can be 'unsettled' between these two poles.

4 Objections

One worry about going counterpart-theoretic in a treatment of the Evans argument, however, is that the entrenched context-dependence of counterpart theory might point toward a strictly semantic, rather than ontic, interpretation of vagueness. Thus using counterpart theory to undermine Evans' proof of the impossibility of ontic vagueness turns out to be self-defeating, because it shows that the vagueness in question is a semantic matter after all.

However, though context sensitivity is a key feature of counterpart theory (indeed, *the* key feature in the analysis of Evans), I do not think this pushes in the direction of a 'semantic only' view of the indeterminacy in question. Indeed, I think the counterpart-theoretic interpretation is entirely neutral as to the *source* of indeterminacy; that question will have to be settled by theoretical considerations elsewhere. But counterpart theory, while in no way motivating ontically indeterminate identity, does vindicate its *consistency*, despite its inherent reliance on context-sensitivity. The defender of ontic indeterminacy could easily maintain that context determines what an object's counterparts are while still maintaining that the indeterminacy in question is ontic. The position would be that what we take as an acceptable precisification of an object will be a fact about us—our context, our language, our minds—but the bare fact that the object itself *admits* of precisification is a fact about the world, independent of what we think about it.[27] So, in short, *how* we precifisy is a fact about us, but that precisification is applicable in the first place need not be.

[26] In addition to the usefulness of counterpart theory in explaining shifts in precificational admissibility, as the context-dependence of vagueness is far more widely accepted and less controversial than that of modality.

[27] Such a position would need to maintain that there is no referential vagueness in the terms on either side of the identity claim—but I take it that this is Evans' original intention; they are Kripke-style names. Counterpart theory does not, of course, interfere with this construal of the names in question ('a' and 'b') as rigid designators, because in a counterpart-theoretic framework such names always refer back to their actual world referent (so 'a' always refers to a, rather than to any of a's counterparts).

This line of thought is particularly suited to the modal representation of indeterminacy mentioned previously. The counterpart theory semantics is, of course, like any semantics, just conceptual machinery—a way of setting out truth conditions, of representing the way things are. But *what*, exactly, that formal structure represents is a further question. On the modal approach to indeterminacy, how we single out counterpart relations is a fact about us, but the fact that there is more than one world in the space of precisifications could at least conceivably be determined by how things are in and of themselves.[28] If indeterminacy is representational, then what is being represented by the formal structure are facts about our representations (what we know, how we speak, what we mean, etc.). But if, ex hypothesi, indeterminacy were ontic, then what would be represented by the structure are facts about mind-independent reality, about how the world is in and of itself.[29] That is, if the world itself (rather than just our representations of it) were to admit of precisification, *that* would be a fully ontological, mind-independent fact.

Nothing like commitment to ontological indeterminacy falls out of (or is motivated by) the counterpart-theoretic treatment of determinacy operators or, more broadly, any kind of modal approach to indeterminacy like that outlined above. It would be incumbent upon the defender of ontic indeterminacy to give reasons (ostensibly reasons quite separate from her semantics for the determinacy operators) why she thinks a particular case of indeterminacy, and more specifically indeterminate identity, is a genuine fact about the world itself, rather than a fact about how we describe it or what we know about it. What sorts or reasons she might give, or whether any such are available, is outside the remit of this paper. The purpose of the arguments given here is simply to show that the basic idea of ontically indeterminate identity is *coherent*, whether or not it is in fact motivated.

5 Conclusion

In summary, then, I have attempted to motivate the idea that given a construal of the determinacy operators as either modal or pseudo-modal operators ranging over precisifications, we ought to interpret them counterpart-theoretically. On the counterpart theory model, however, the Evans argument against ontic vagueness is straightforwardly invalid. This obviously is not meant as a knock down objection to the Evans argument, as there is clearly much of the above that can be resisted. But for those who like the idea of ontic vagueness independently or are tempted by the type of ontological commitments that tend to lead to it (three-dimensionalism, restricted composi-

[28] See Barnes (manuscript) 'Ontic vagueness: a guide for the perplexed' and Barnes and Williams (manuscript) 'A theory of metaphysical indeterminacy'.

[29] A helpful analogy here is the debate between the conventionalist and realist about modality. Both modalizers can have the same formal semantics for modal operators, but they disagree about what is being represented by that formal structure. The conventionalist thinks the truth conditions for $\Box$P tell us something interesting about our beliefs, our conceptual apparatus, how we use 'P', etc., whereas the realist thinks they tell us some deep metaphysical fact about how the world is. The question is what the formal structure is representing (facts about our minds, or facts about the world). But nothing about the formal structure itself will decide this either way.

tion, etc.) it's something to keep in mind. Evans' argument is formidable enough that anyone who goes in for ontic vagueness has to have something to say about it; I hope to add counterpart theory to the list of options.

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