

HUMILITY AND METAPHYSICS*

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In *Ramseyan Humility* (Lewis 2009), David Lewis defends the claim (*Humility*) that we cannot identify the fundamental properties. Lewis derives Humility from the principle (call it *Variance*) that “the true and complete final theory” is realized by different properties in different possible worlds: “If there are multiple possible realizations, Humility follows” (Lewis 2009: 207). His reasoning comprises a metaphysical argument in support of Variance and an epistemological argument deriving from Variance the conclusion (Humility) that we can’t know the identity of the fundamental properties. This suggests two possible routes for challenging Lewis’s argument—an epistemological route that takes issue with the derivation of Humility from Variance and a metaphysical route that targets Lewis’s arguments for Variance. These two routes seem independent of one another—the success of each of them doesn’t seem to be contingent on the success of the other. The goal of this paper is to argue that, in one direction, this impression is mistaken. The metaphysical strategy can’t ultimately succeed in resisting Humility unless the epistemological strategy is also successful. Challenging Lewis’s metaphysical claims doesn’t provide an independent strategy for resisting Humility.

1 Humility

Let me start with a brief summary of the concepts that Lewis employs for formulating his argument. Assume, as Lewis does, that there is a true and complete final theory T. The

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vocabulary of T can be divided into theoretical terms that T implicitly defines (T-terms) and the rest (O-terms), which are interpreted independently of T. He assumes, without loss of generality, that all the T-terms are names, and that no two of them name the same thing (Lewis 2009: 206). He also assumes that the O-terms suffice to express all possible observations (Lewis 2009: 206). Each of the fundamental properties that play an active role in the actual workings of nature will be the referent of a T-term. Lewis assumes that T can be formulated as a one-sentence axiom, the *postulate* of T.¹ This can be written as $T(t_1, \dots, t_n)$, where t_1, \dots, t_n are the T-terms. Replacing T-terms by variables in the postulate of T we get the formula $T(x_1, \dots, x_n)$, in which only O-terms occur. Given the interpretation of the O-terms, an n-tuple may or may not satisfy this formula at a possible world. Call a tuple that satisfies this formula in actuality an *actual realization* of T and one that satisfies it in some possible world a *possible realization* of T. Since T is the true and complete theory and it implicitly defines the T-terms, it has a unique actual realization (Lewis 2009: 207). If we existentially quantify the free variables in $T(x_1, \dots, x_n)$, we obtain the *Ramsey sentence* of T: $\exists x_1, \dots, x_n T(x_1, \dots, x_n)$. As Lewis observes, the Ramsey sentence of T “logically implies exactly the O-language sentences that are theorems of T” (Lewis 2009: 207). Since we are assuming that the O-terms suffice to express all possible observations, it follows that:

any predictive success for T is equally a predictive success for the Ramsey sentence of T. Since the evidence for T consists in its record of predictive success, there is no way to gain evidence for T that is not equally evidence for the Ramsey sentence. (Lewis 2009: 207)

¹ As he explains, this is not a substantive assumption (Lewis 2009: 206).

Hence, if T has multiple possible realizations but only one of them is actual,
 no possible observation can tell us which one is actual, because whichever
 one is actual, the Ramsey sentence will be true. (Lewis 2009: 207)

Therefore, if Variance is true, Humility follows. How does Lewis argue for Variance?

As Lewis explains, “some T-terms might be names of other things [...] but for the most part the T-terms will name fundamental properties” (Lewis 2009: 206). Let’s simplify matters by assuming that all T-terms name fundamental properties, and that the postulate says that they do. Properties fall into several categories: “There are all-or-nothing monadic properties. There are all-or-nothing n-adic relations, at least for smallish n. There are properties that admit of degree, that is, magnitudes; more generally, there are scalar-valued, vector-valued, tensor-valued,... magnitudes. There are relational magnitudes” (Lewis 2009: 205). We should expect the postulate of T to say which of these categories the property named by each T-term belongs to. It follows that for each position in an n-tuple of fundamental properties, there is a property category that the component of the tuple in that position has to belong to in order for the tuple to be a possible realization of T. If an n-tuple of fundamental properties satisfies this categorial condition, we’ll say that it is *T-compliant*.

Lewis provides two arguments for Variance—the permutation argument and the replacement argument. The *permutation argument*, on which I’m going to focus, takes as its starting point the assumption that at least two properties in the actual realization of T fall in

the same category.² As Lewis points out, “[a]n inconclusive reason to assume this is the expectation that current physics is not entirely wrong in its inventory of fundamental properties” (Lewis 2009: 206).

This assumption entails, and is equivalent to, the claim that there are multiple T-compliant permutations of the components of the actual realization of T. From this, Lewis derives Variance with the help of two metaphysical principles: combinatorialism and quidditism. Combinatorialism “tells us that possibility is preserved under permutations” (Lewis 2009: 209). Quidditism tells us that if we permute same-category properties in the actual realization of T, “the permutation is indeed a different possibility” (Lewis 2009: 209).

If A is the unique actual realization of T, we can formulate Lewis’s permutation argument in the following terms:

- 1 There are multiple T-compliant permutations of the components of A. (Premise)
- 2 Every T-compliant permutation of the components of A is a possible realization of T. (combinatorialism)
- 3 If a T-compliant permutation B of the components of A is a possible realization of T, then A and B are different possible realizations of T. (From quidditism)
- 4 VARIANCE: T has multiple possible realizations. (from 1, 2 and 3)
- 5 For every possible realization X of T, if X is the actual realization, the Ramsey sentence of T is true. (Premise)
- 6 If two hypotheses make the Ramsey sentence of T true, then no possible observation favours one over the other. (Premise)

² The replacement argument avoids this assumption with a different argument for the existence of multiple T-compliant n-tuples of fundamental properties. The reasoning from this point is the same as in the permutation argument.

- 7 For every possible realization X of T , no possible observation favours A over X as the unique actual realization of T . (from 5 and 6)
- 8 For some possible realization $X (\neq A)$ of T , no possible observation favours A over X as the unique actual realization of T . (from 4 and 7)
- 9 If for some possible realization $X (\neq A)$ of T , my observations don't favour the A over X as the unique actual realization of T , then I don't know the identity of the unique actual realization of T . (Premise)³
- 10 HUMILITY: I can't know the identity of the unique actual realization of T . (from 8 and 9)

Lewis presents this argument as sound, and is happy to accept its conclusion: “we are irremediably ignorant about the identities of the fundamental properties that figure in the actual realization of the true final theory” (Lewis 2009: 214). He doesn't see anything particularly devastating about admitting this kind of ignorance. “Why is Humility ‘ominous’?”, he asks, “Whoever promised me that I was capable in principle of knowing everything?” (Lewis 2009: 211).

If, unlike Lewis, you want to avoid accepting Humility, you need to challenge the soundness of the argument. How could we do this? It seems to me that the validity of the argument is not open to serious question. Hence, resisting Humility would require rejecting one or more of its premises. Challenges to the argument can be usefully classified as

³ Notice that the possible realizations of T whose existence has been established are T -compliant permutations of the components of A , i.e. tuples of actual-world properties. The argument will still go through if we take the quantifiers in 5, 7, 8 and 9 to range over these tuples of actual-world properties.

targeting either the metaphysical reasoning in support of Variance or the epistemological reasoning deriving Humility from Variance. Let's consider these in turn.

2 Epistemological challenges

Suppose Variance is true. Lewis derives Humility from Variance using premises 5, 6 and 9. 5 and 6 are fairly straightforward consequences of Lewis's definitions. 9 is more substantial. It expresses a necessary condition for knowing the identity of the unique actual realization of T—my observations have to favour A over any other possible realization as the unique actual realization of T. Several strategies have been proposed for challenging this claim.

One option is to take issue with the epistemological approach that supports this kind of necessary condition for knowledge. 9 is an instance of the general principle that we don't know p unless we can discriminate p from every alternative possibility. This general principle is a key ingredient in traditional sceptical reasoning. The sceptic uses it to advance from the observation that you cannot discriminate between the possibility that you have hands and the possibility that you are an envatted brain being fed impressions as of hands to the conclusion that you don't know that you have hands.

As Jonathan Schaffer has explained (Schaffer 2005), several extant anti-sceptical strategies seek to block the sceptical conclusion by rejecting the principle under discussion, arguing, to the contrary, that indiscriminable counter-possibilities are not always incompatible with knowledge. Dogmatist, anti-closure and contextualist answers to scepticism offer different versions of this general strategy. Advocates of any of these positions will reject premise 9, claiming that from the fact that my observations don't favour

A over some other possible realization as the actual realization of T it doesn't follow that I don't know the identity of the actual realization.⁴

A different strategy for resisting premise 9 focuses, not on conditions for knowledge, but on the notion of identification. According to Ann Whittle (Whittle 2006), identifying the actual realization of T does not require singling it out from other possible realizations. Hence the fact that we can't obtain the evidence that would enable us to do this doesn't force us to accept Humility.

A third approach to resisting premise 9 would exploit the fact that, as Lewis explains, my ignorance of the identity of the fundamental properties is ineffable ignorance. The ineffability of my ignorance arises from the limitations in the procedures at my disposal for referring to fundamental properties. As a result of these limitations, I can't produce a sentence that identifies the referent of a theoretical term in a way that doesn't make its truth value entirely obvious. Here's Lewis's illustration of the point:

Which property occupies the seventeenth role? Is it the actual occupant of the first role? Is it the actual occupant of the second role?... Is it the actual occupant of the seventeenth role?... Is it the actual occupant of the n th role?

No sooner do we ask our question this way than we seem to know the answer: it is the actual occupant of the seventeenth role. (Lewis 2009: 216)

⁴ For some criticisms of this approach, see (Locke 2009). As Locke points out, one might try to use in this context Lewis's own response to traditional scepticism, although Locke thinks that the strategy doesn't work.

The conclusion Lewis draws from this circumstance is that our ignorance of the identity of the fundamental properties is ineffable. For every possible realization X of T, there is a contingent proposition true in all and only the worlds where X is the actual realization of T. What we don't have, according to Lewis, is sentences that express these propositions "and do so in such a way that we can know which sentence expresses which proposition" (Lewis 2009: 216).

It's unclear what role, if any, these considerations are supposed to play in Lewis's argument for Humility. On my construal of Lewis's reasoning, they don't play any obvious role,⁵ but other authors have found in Lewis's discussion a line of reasoning in which expressive limitations play a central role. Thus, according to Stephan Leuenberger (Leuenberger 2010), Lewis's argument for Humility rests on the thought that propositions identifying the referents of the T-terms cannot be expressed in the O-language, but expressibility in the O-language is a necessary condition for knowledge.⁶ And Alexander Kelly (Kelly 2013) finds in Lewis an argument that derives the conclusion that we can't know the proposition that A is the actual realization of T from the principle that we are not capable of grasping propositions of this kind.

I'm not going to discuss these proposals or the general issue of the role that ineffability might play in an argument for Humility. What I want to highlight here is the possibility of using the ineffability of ignorance in a strategy for *rejecting* Humility. On this line of reasoning, ineffable ignorance is no real ignorance. Since there is no sentence

⁵ But see footnote 14, below.

⁶ David Yates refers to arguments for Humility based on these considerations as *semantic* (Yates 2018).

identifying the fundamental properties whose truth value we are ignorant of, it follows that we are not ignorant of the identity of the fundamental properties.⁷

This line of reasoning would provide another route to the rejection of premise 9. Our observations may not favour A over the other possible realizations of T, but this is no obstacle for knowing the identity of the actual realization of T. The tuple that does the job is identified by the sentence “T is realized by the tuple that actually realizes it”, and I know that this sentence is true.

3 Metaphysical challenges

The second strategy for challenging Lewis’s argument targets his derivation of Variance. In order to assess our options here, we need to understand the structure of the argument. In particular, we need to clarify the role that quidditism plays in it. Quidditism is the view that one and the same property can be present at different worlds (Black 2000: 92). Lewis invokes quidditism in support of premise 3—the claim that if a T-compliant permutation B of the components of A is a possible realization of T, then A and B are different possible realizations of T. Quidditism unquestionably entails this claim. From the assumption that no two T-terms denote the same thing, it follows that A and B are different tuples: at least two positions are occupied by different properties in A and B. According to quidditism, a possible world w in which B realizes T is a world in which T is realized by a tuple B with the very same components as A, but in a different order. Hence at least two properties will play in w

⁷ Shamik Dasgupta (Dasgupta 2015) has developed and rejected this line of reasoning, using an analogy between knowledge of the identity of the fundamental properties and knowledge of the positions of objects in Newtonian space.

different roles from those that they play in the actual world. Hence w is different from the actual world, as premise 3 dictates.

I want to argue, however, that premise 3 can also be derived without invoking quidditism, from other premises to which Lewis is committed. The alternative derivation proceeds as follows:

- i. The components of A are different from each other. (Lewis's assumption)
- ii. B is different from A . (from i)
- iii. T is uniquely realized in actuality. (Lewis's assumption)
- iv. B doesn't realize T in actuality. (from ii and iii)
- v. Any possible world in which B realizes T is not identical with the actual world. (from iv)

And v is equivalent to premise 3. This argument doesn't rest in any way on quidditism. It doesn't assume that the components of B in one world have to be numerically identical with the components of B in another world, rather than their numerically distinct images under the counterpart relation.

The availability of this alternative argument means that rejecting quidditism would not deprive Lewis of premise 3. Nevertheless, rejecting quidditism might still undermine the argument for Variance in a different way. It could be argued that if quidditism is rejected, combinatorialism loses all plausibility. If quidditism is false, talk of trans-world identity of properties will have to be understood as concerning, not numerical identity, but a counterpart relation between numerically different properties inhabiting different worlds. It follows that a world in which B realizes T is a world in which T is realized by the tuple formed by the counterparts of the components of B . Now, whether a world satisfies this description depends on what properties in that world are paired with the components of B by the counterpart relation. I'm going to argue that it's hard to see how the pairings could result in a tuple that realizes T .

To see this, suppose that *m* is the property that plays the mass role in *A* and *c* is the property that plays the charge role in *A*. Suppose also that *B* is identical to *A* except that *m* and *c* have swapped positions. Now, a world in which *B* realizes *T* is a world in which the counterpart of *m* plays the charge role and the counterpart of *c* plays the mass role. But on no plausible account of the counterpart relation would it produce these pairings. We should expect instead that for any world *w* in which *T* is uniquely realized, the counterpart of *m* in *w* will be the property that plays the mass role in *w*, and the counterpart of *c* will be the property that plays the charge role in *w*. This would certainly be the outcome on the property counterpart relation that Lewis expects the anti-quidditist to adopt: “two world-bound properties in two worlds are counterparts if the role of one in one world approximately matches the role of the other in the other” (Lewis 2009: 211). On this plausible assumption about the counterpart relation, it follows that there is no possible world in which *T* is realized by *B* or, in general, by any permutation of the components of *A*. Hence, on this assumption, if quidditism is rejected, combinatorialism (premise 2) will also have to go.⁸ I conclude that the rejection of quidditism would block the argument for Variance by undermining, not premise 3, but premise 2.⁹

⁸ I don't think my argument for this claim relies on a particularly stringent account of the counterpart relation for properties. On a permissive account of the relation (or in an undemanding context, on a contextualist account of the relation), there might be a world in which the counterpart of *m* plays the charge role—*provided that there isn't a better candidate at that world*. What's hard to see is how on any account of the counterpart relation, however lax, in a world that contains a property playing the mass role, *m* could have as its counterpart the property playing the charge role. See (Heller 1998) for an excellent discussion of a non-quidditist conception of properties.

⁹ In any case, for the purposes of my assessment of Lewis's argument, what matters is not that rejecting quidditism would undermine premise 2, but that this is the *only* way in which the move could block the argument.

It might help to bring into focus my claim about the role of quidditism if we go back to how Lewis proposes to use it. According to Lewis, quidditism tells us that if we permute same-category properties in the actual realization of T “the permutation is indeed a different possibility” (Lewis 2009: 209). I’ve argued that we can show, without invoking quidditism, that if the permutation is a possibility at all it is a different possibility. But if quidditism is false, the permutation won’t be a possibility, and combinatorialism will fail.

I’ve argued that rejecting quidditism would undermine the argument for Variance by forcing us to reject combinatorialism. But anti-quidditism is not the only route to the rejection of combinatorialism. According to quidditism, the components of A themselves, not just their counterparts, might be present at non-actual possible worlds. This makes room for the possibility that at one of these worlds T will be realized by a given permutation of the components of A. But quidditism in no way entails that this will be the situation for any permutation of the components of A, let alone for every such permutation, as combinatorialism dictates. Quidditists might want to join anti-quidditists in rejecting combinatorialism. Hence a challenge to Lewis’s argument that targets combinatorialism directly will be of wider appeal than one that targets quidditism in the first instance.¹⁰

The rejection of Variance is generally associated with structuralist views, according to which the causal-nomological profile of fundamental properties is essential to their

¹⁰ Quidditism follows naturally from the Kripkean conception of possible worlds, according to which “[p]ossible worlds’ are *stipulated*, not *discovered* by powerful telescopes”. On this conception, as Kripke points out, “[t]here is no reason why we cannot stipulate that, in talking about what would have happened to Nixon in a certain counterfactual situation, we are talking about what would have happened to *him*” (Kripke 1980: 44). The quidditist would add, in the same spirit, that there is no reason why we cannot stipulate that, in talking about how mass would behave in a certain counterfactual situation, we are talking about how *it* would behave.

identity.¹¹ These views are some times seen as challenging quidditism, but they can also be articulated as challenging combinatorialism, as required for the strategy for resisting Lewis's argument that I recommend. Since the fundamental properties are components of the actual realization of T, the view can be formulated as concerning this tuple, as the view that realizing T is necessary and sufficient for its identity.

We can easily provide a more precise formulation of the view. Start with sufficiency. The claim that realizing T is sufficient for the unique actual realization of T is the claim that the actual realization of T is its only possible realization. In other words, if A is the unique actual realization of T:

S For every possible world w and every n -tuple X , if X realizes T at w , then $X = A$.

Notice that S rules out the possibility that T is multiply realized in any possible world, but this seems to be a consequence of the claim that the nomological profile of a properties is sufficient for their identity.

The claim that realizing T is necessary for A is the claim that A couldn't fail to realize T. One reading of this is as the converse of S:

For every possible world w and every n -tuple X , if X doesn't realize T at w ,
then $X \neq A$,

which is equivalent to

For every possible world w , A realizes T at w .

¹¹ Structuralist views originally focused on the causal profile of properties (Shoemaker 1980, 1998; Hawthorne 2001). However, as Nora Berenstain has argued (Berenstain 2016), the focus on causal relations detracts from the appeal of the view, and a much more promising position results if we take the essence of properties to be constituted by all their nomological links, non-causal as well as causal.

On this construal of the necessity claim, it has the obvious consequence that T is a necessary truth, but this consequence can be avoided by restricting the claim to worlds in which the components of A are instantiated:

N For every possible world *w*, such that the components of A are instantiated in *w*, A realizes T at *w*.

I'm going to refer to the conjunction of S and N as *Ramseyan structuralism*.

Ramseyan structuralism poses a direct challenge to combinatorialism. According to combinatorialism, every T-compliant permutation of the components of A is a possible realization of T. According to S, no permutation of the components of A (other than A itself) is a possible realization of T. This blocks the transition from premise 1 to Variance. There may be multiple T-compliant n-tuples of fundamental properties, but according to S exactly one of them is a possible realization of T—namely A itself, and Variance doesn't hold.¹²

4 Metaphysics or epistemology?

In the previous two sections I have outlined two strategies for resisting Lewis's permutation argument for Humility—one epistemological and one metaphysical. The epistemological strategy takes issue with a necessary condition for knowledge (premise 9) that the argument invokes for deriving Humility from Variance. The metaphysical strategy challenges the combinatorialist principle (premise 2) that the argument invokes to establish Variance. The two strategies seem to be independent of one another—the success of one doesn't

¹² Clearly, N is not involved in the argument against Variance. Hence the argument can be endorsed by positions according to which realizing T is sufficient but not necessary for the identity of A, and the components of A are instantiated in worlds in which A doesn't realize T.

seem to depend on the success of the other. On the one hand, it seems that the epistemological strategy would work even if the metaphysical strategy didn't, since rejecting 9 would enable us to resist Humility even if combinatorialism were true. On the other hand, it seems that the metaphysical strategy could work even if the epistemological strategy didn't—that rejecting combinatorialism would enable us to resist Humility even if 9 were true. My main goal in the remainder will be to argue that the second claim is mistaken.

I will argue, to the contrary, that rejecting combinatorialism will not ultimately enable us to avoid Humility unless the epistemological strategy also works. As we have seen, rejecting combinatorialism will block Lewis's argument even if premise 9 is true. However, a minor modification of Lewis's reasoning will produce an argument for Humility in which combinatorialism doesn't figure as a premise. If the new argument is sound, then abandoning combinatorialism doesn't enable us to avoid Humility. I'm going to argue that the new argument can only be coherently challenged by someone who rejects 9. It follows that the rejection of combinatorialism doesn't result in an independent strategy for resisting Humility: it works only if the epistemological strategy against the permutation argument also works.

5 The new argument

The new argument for Humility bypasses Variance and the metaphysical principles that Lewis invokes to establish it. It runs Lewis's epistemological reasoning not from Variance, but directly from the claim (premise 1) that there are multiple T-compliant permutations of the components of A. This results in an argument with the following structure:

- 1 There are multiple T-compliant permutations of the components of A. (Premise)

- 5* For every T-compliant permutation X of the components of A, if X is the actual realization, the Ramsey sentence of T is true. (Premise)¹³
- 6 If two hypotheses make the Ramsey sentence of T true, then no possible observation favours one over the other. (Premise)
- 7* For every T-compliant permutation X of the components of A, no possible observation favours A over X as the unique actual realization of T. (from 5* and 6)
- 8* For some T-compliant permutation X of the components of A ($X \neq A$), no possible observation favours A over X as the unique actual realization of T. (from 1 and 7*)
- 9* If for some T-compliant permutation X of A ($X \neq A$), my observations don't favour A over X as the unique actual realization of T, then I don't know the identity of the unique actual realization of T. (Premise)
- 10 HUMILITY: I can't know the identity of the unique actual realization of T. (from 8* and 9*)

The new argument is valid. If its premises are true, Humility follows.¹⁴ Resisting its conclusion requires rejecting at least one of its premises. Our options here are more

¹³ The quantifiers in 5*, 7*, 8* and 9* range over tuples of actual-world properties, whether or not there is a possible world at which they realize T.

¹⁴ The availability of this alternative argument for Humility raises the question of why Lewis might have felt the need to take the detour through Variance. The first point that needs to be made in this connection is that the additional metaphysical premises that Lewis's argument invokes (combinatorialism and quidditism, but see my discussion in section 3, above, of the role of quidditism) are principles that he accepts and is prepared to defend. Hence, for Lewis, rejecting these premises is not a feasible strategy for resisting his argument. In his discussion of ineffability he appears to attach some importance to the existence of multiple *contingent* answer-propositions to questions concerning the identity of role occupants, even if we don't have answer-sentences to express these answer-propositions in the right way (see section 2, above). Did Lewis think that if all answer-propositions but one were metaphysically impossible Humility wouldn't hold, as there would be nothing to be ignorant of? Whether or not Lewis held this view, there are good

restricted than in Lewis's permutation argument. We are still assuming that 1 is true, and 5* (like 5) and 6 follow from Lewis's definitions. The only candidate for rejection is 9*.

We've already explored some lines of reasoning that would lead to the rejection of 9*. 9 is a logical consequence of 9*.¹⁵ Hence any of the positions outlined in section 2 leading to the rejection of 9 will also lead to the rejection of 9*. However, challenges to 9* that follow from challenges to 9 are of no interest to us. Our question is whether the rejection of combinatorialism sustains a viable strategy for resisting Humility that's independent of the epistemological strategy based on the rejection of 9. The fact that the new argument would be unsound if the epistemological strategy worked lends no support to an affirmative answer to our question. What would be needed for an affirmative answer is a challenge to 9* that's compatible with the acceptance of 9. Only then would we be able to maintain that the metaphysical strategy for avoiding Humility is genuinely independent of the epistemological strategy.

There's room in principle for this approach, as the necessary condition for knowledge set by 9* is stronger than the one set by 9. 9 requires that my observations favour A over every other possible realization of T. 9* requires, in addition, that my observations favour A over those T-compliant permutations of the components of A that are not possible realizations of T. So long as you are prepared to accept that some T-compliant permutations of the components of A are not possible realizations of T, rejecting 9* is logically compatible with accepting 9. I'm going to argue, however, that this isn't a coherent position.

reasons for rejecting it, as it would entail that we are never ignorant of the truth value of metaphysical necessities (see my discussion of substance essentialism in section 6, below).

¹⁵ On the assumption that all the fundamental properties are components of A. The permutation argument could be easily reformulated in such a way that the entailment doesn't depend on this assumption.

6 Metaphysics without epistemology?

I'm going to make this case by highlighting the parallels between Ramseyan structuralism and claims to the effect that certain properties of an object are essential to it. Consider, for example, the claim that the substance of which a material object was made is essential to it (Kripke 1980: 114-15). According to this position (call it *substance essentialism*), my desk couldn't have been made of any substance other than the substance it was made of. Since it was made of wood, it couldn't have been made of steel, plastic, etc. It was made of wood in every possible world in which it exists.

I want to highlight two aspects of the contrast between substance essentialism and the opposite view (call it *substance accidentalism*), according to which my desk could have been made of other substances. Notice, first, that there's a range of propositions that for the substance accidentalist represent metaphysical possibilities which according to the substance essentialist represent metaphysical impossibilities. Thus, the proposition that my desk was made of steel represents a possible state of affairs for the substance accidentalist, but for the substance essentialist there is no possible world in which the proposition is true. In general, propositions representing my desk as made of a substance other than wood represent possible states of affairs for the substance accidentalist, but for the substance essentialist they represent metaphysical impossibilities. However, and this is the first point I want to highlight, the substance essentialist still has to recognise these as genuine, distinct propositions. They are needed, among other things, to provide the contents of propositional attitudes, since even if my desk could only have been made of one substance, it is perfectly possible for someone to believe of my desk that it was made of some other substance.

The second point I want to highlight in this connection is that the substance essentialist can claim no epistemological advantage over her opponent. The claim that the substance an object was made of is essential to it doesn't make it in any way easier to know what substance an object was made of. The conditions that a subject needs to satisfy in order to know that my desk was made of wood if substance essentialism is true are exactly the same as the conditions she would need to satisfy if substance essentialism were false. If knowing that it was made of wood required evidence to rule out the hypothesis that it was made of steel if this hypothesis represented a possible state of affairs, it would still need this evidence if the hypothesis represented an impossible state of affairs. If knowledge that my desk is made of wood required evidence to rule out the hypothesis that I'm a deskless envatted brain if this hypothesis represented a possible state of affairs, it would still need this evidence if the hypothesis represented an impossible state of affairs. Even knowledge that substance essentialism is true would be no help to the subject. The fact that my desk was made of the same substance in every possible world does not tell me which substance this is.¹⁶

There are important parallels between substance essentialism and Ramseyan structuralism. Both theses claim that the way things are in actuality in a certain respect is the way things are in every possible world. While the substance essentialist claims that my desk was made of the same substance in every possible world in which it exists, the Ramseyan structuralist claims that T is realized by the same tuple in every possible world in

¹⁶ The point can also be expressed in terms of the contrast between metaphysical and epistemic possibility. In these terms, the point is that the conditions that a subject needs to satisfy in order for a hypothesis to be epistemically impossible for her are the same for metaphysically possible and metaphysically impossible hypotheses.

which it is realized. I want to argue that the two points I've highlighted concerning substance essentialism have equally plausible correlates concerning Ramseyan structuralism.

According to combinatorialism, propositions representing T as realized by tuples other than the one that realizes T in actuality represent possible states of affairs—there are possible worlds in which they are true. According to the Ramseyan structuralist, these propositions represent metaphysical impossibilities—there are no possible worlds in which any of them is true. However, as with substance essentialism, this is no reason for denying the existence or distinctness of these propositions. If we accept the view presented in section 2, concerning the inexpressibility of these propositions, we might question their suitability as the contents of propositional attitudes or the meanings of sentences. But this point applies independently of the metaphysical status of the states of affairs represented by these propositions. Treating them as metaphysical impossibilities doesn't undermine the claim that they are genuine, distinct propositions.

The second point is equally plausible. The Ramseyan structuralist can claim no epistemological advantage over her opponent. If she has views on the conditions that a subject would need to satisfy in order to know the identity of the actual realization of T if combinatorialism were true, her rejection of combinatorialism won't abrogate these conditions. The same conditions need to be satisfied for knowing the identity of the actual realization of T whether or not there are possible worlds in which T is realized by other tuples.¹⁷

¹⁷ I'm using the analogy between the identity of the actual realization of T and the substance my desk is made of for a very specific purpose—to argue that rejecting Variance doesn't generate a metaphysical strategy for resisting Humility that's independent of the

We now have what we need in order to establish my main point—that the metaphysical strategy for resisting Humility works only if the epistemological strategy also works. I’m going to argue that it follows from our discussion of the relationship between knowledge and possibility that, if the epistemological strategy doesn’t work, the metaphysical strategy doesn’t work either.

Assume, then, that the epistemological strategy doesn’t work. This is the claim that premise 9 of Lewis’s argument is true: knowing the identity of the unique actual realization of T requires evidence that favours A over every other possible realization of T as the unique actual realization. Now, combinatorialism says that every T-compliant permutation of the components of A is a possible realization of T. Hence 9 entails that if combinatorialism were true, knowing the identity of the unique actual realization of T would require evidence that favours A over every T-compliant permutation of its components as the unique actual realization of T. Hence the claim that the epistemological strategy doesn’t work entails:

- E. If every T-compliant permutation of the components of A were a possible realization of T, then knowing the identity of the unique actual realization of T

epistemological strategy. There are other ways in which one might try to use the analogy that I don’t support. In particular, I don’t think the analogy can be legitimately used to argue that, contrary to what Lewis maintains, Ramseyan Humility is “ominous”. The argument I have in mind would start from the observation that the analogue of Ramseyan Humility is the claim that I can’t know which substance my desk is made of. The latter ignorance would be ominous indeed, so, if we follow the analogy—the argument goes—Ramseyan Humility is equally ominous. But this argument is not cogent, as the analogy doesn’t hold in this respect, certainly on Lewis’s conception of fundamental properties. For him, fundamental properties lack the kind of rich natures that would make not being able to know which of them plays which role as ominous as not being able to know which substance my desk is made of. I see no merit in this argument and, in general, I haven’t tried to argue here that Ramseyan Humility is ominous. I’m indebted to an anonymous referee on this point.

would require evidence that favours A over every T-compliant permutation of its components as the unique actual realization of T.

Now we can bring to bear the point we made above: the same conditions need to be satisfied for knowing the identity of the actual realization of T whether or not there are possible worlds in which T is realized by other tuples. If knowledge of the identity of the actual realization of T required evidence that favours A over a T-compliant permutation B of the components of A *if* there were a possible world in which B realizes T, then knowledge of the identity of the actual realization of T would still require evidence that favours A over B if there were no possible worlds in which B realizes T. It follows from this point that E entails:

Knowing the identity of the unique actual realization of T requires evidence that favours A over every T-compliant permutation of its components as the unique actual realization of T.

But this is, of course, premise 9* of the new argument. In sum, the claim that the epistemological strategy doesn't work entails premise 9* of the new argument.

Consider now the claim that the metaphysical strategy can successfully resist Humility. This requires blocking, not only Lewis's original argument, but also the new argument. But the new argument can be blocked only by rejecting premise 9*. Hence, the claim that the metaphysical strategy works entails that premise 9* is false.

We can now establish our intended conclusion. The claim that the epistemological strategy doesn't work entails that premise 9* of the new argument is true, but if premise 9*

is true, then the metaphysical strategy doesn't work either. Therefore, the metaphysical strategy works only if the epistemological strategy also works.¹⁸

We have focused our discussion on strategies for resisting Humility, but I'd like to close by quickly reviewing its bearing on strategies for establishing Humility. From this point of view, the main outcome of our discussion is that defeating the epistemological strategy would offer a practically clear route to Humility. If premise 9 of Lewis's argument could be upheld, premise 9* of the new argument would follow, and Humility would be irresistible. Humility is a fairly direct consequence of the claim that knowledge of the identity of the unique actual realization of T requires evidence that favours A over every other possible realization of T.

7 Conclusion

I have argued that the rejection of the metaphysical premises of Lewis's permutation argument doesn't sustain a viable strategy for resisting Humility that's independent of the strategy based on the rejection of Lewis's epistemological premises. I've presented a modified version of Lewis's reasoning that bypasses his metaphysical commitments and could only be resisted by someone who rejects the epistemological principle on which the permutation argument is based. Where we stand on Lewis's metaphysics makes no difference to our ability to resist Humility.

¹⁸ The conclusion applies, in the first instance, to versions of the metaphysical strategy based on the adoption of Ramseyan structuralism, as formulated in section 3. I think we would obtain the same conclusion for versions of the metaphysical strategy based on other alternatives to Lewis's account of properties, including Alexander Bird's conception of properties as potencies (Bird 2007), but defending this point lies beyond the scope of the present paper.

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