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Modal Realism and the Problem of Missing Diversity

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ABSTRACT: According to modal realism, logical space consists of concrete possible worlds that are spatiotemporally and causally isolated from each other. The aim of the paper is to show that modal realism may not be able to accomplish some of its explanatory tasks because it cannot warrant that logical space is sufficiently diverse. In particular, it cannot exclude the possibility that merely possible worlds are indistinguishable from the actual world in certain important respects. If this is the case, modal realism cannot explain the truth of some modal statements that are obviously true or the contingency of some non-modal statements that are obviously contingent.

KEY WORDS: Counterpart relation, logical space, modal realism, principle of recombination, the possibility of missing diversity.

Loosely speaking, logical space comprises all the possible ways in which the world might be. Take the actual world and make any change, minute or substantial, preserving consistency and completeness; the result is another way the world might be, i.e. another possible world. Logical space is the collection of all possible worlds.[1]

According to modal realism (MR), logical space consists of concrete possible worlds. Merely possible worlds are as concrete as the actual world.[2] They

[1] "Possible worlds" designates both the actual world and non-actual worlds. Non-actual worlds are labelled "merely possible worlds". I sometimes use "world" instead of "possible world". Whenever I refer to merely possible worlds or the actual world in particular, I am fully explicit about it.

[2] By MR I understand David Lewis's theory, which involves counterpart relations, as developed in (Lewis 1986). The counterpart relation is a similarity relation that is neither symmetric nor transitive (see Lewis 1968). There are other versions of modal realism that do not invoke counterparts and are not targeted here (see, for example, McDaniel 2004). I also put aside the attempts to enhance MR with impossible worlds (see, for example, Vacek 2013 and 2016).

are not representations of the alternative ways things might have been; rather, they are those alternative ways themselves. Worlds are "maximal mereological [sums] of spatiotemporally interrelated things" (Lewis 1986: 73) and are both spatiotemporally and causally isolated from each other. An individual only exists in one world, but other worlds might contain its counterparts.

I am going to argue that MR's theory of logical space is unsatisfactory because logical space, as portrayed by MR, may not be rich enough to comprise all the possibilities we need for explanatory purposes. An argument that supports this claim can be cast in semantic terms; it is developed in Section 1. Section 2 involves a critical discussion of one possible response of an MR theorist; it is based on the so-called principle of recombination. Then I discuss some other possible responses that are partly based on the inconstancy of counterpart relations (Section 3). A brief summary concludes the paper (Section 4).

1. Missing Diversity

My main thesis suggests that if MR is taken seriously, some semantic attributes of statements must be left unspecified. This is because MR construes logical space as consisting of concrete worlds that are completely isolated from each other. It is thus metaphysically impossible to determine, from within the actual world, how merely possible worlds are in fact constructed. In particular, it is metaphysically impossible to determine, from within the actual world, whether merely possible worlds are as diverse as it is needed for explaining why certain statements possess the semantic attributes we intuitively take them to have. Here are two illustrations of this contention.

First, MR has to leave unspecified the truth values of modal statements. For example, it cannot guarantee that modal statements that are intuitively taken to be true are really true rather than false. Take (1) as an example:

(1) David Lewis might have been an ersatzist.

Intuitively, (1) is true (in the actual world). Despite being a diehard supporter of MR, it is perfectly imaginable that Lewis adopted an ersatzist position instead. MR's explanation of this fact may consist in that (1) is true in so far as there is at least one merely possible world in which Lewis has a counterpart and that counterpart adopts an ersatzist, rather than a modal realist, view on possible worlds. Now, it is clear that if a theory cannot warrant that there is such a merely possible world, it has no resources to explain the truth of (1). This is precisely what MR cannot warrant. According to MR, all merely possible worlds are completely inaccessible from the actual world. It thus has to remain undetermined whether Lewis has an ersatzist counterpart in some

possible worlds; both options – i.e. that there is such a merely possible world as well as that there is no such world – remain equally plausible. As a result, despite the fact that (1) strikes us as true, MR has to leave unspecified the truth value of (1). Generally speaking, MR is not in a position to explain why certain statements are true rather than false.

Second, MR has to leave unspecified the modal properties of certain statements. For example, it cannot guarantee that statements that are intuitively taken to be contingent are really contingent rather than necessary. Take (2) as an example:

(2) David Lewis is not an ersatzist.

Intuitively, (2) is contingent. MR's explanation of this fact may consist in that (2) is contingently true because it is true in the actual world and there is at least one merely possible world in which it is false (in such a world, Lewis's counterpart adopts an ersatzist position concerning possible worlds). Now, it is clear that if a theory cannot warrant that there is such a merely possible world, it has no resources to explain the contingency of (2). This is precisely what MR cannot warrant. As we have just seen, it has to remain undetermined whether there is at least one merely possible world in which (2) is false. As a result, despite the fact that (2) strikes us as contingent, MR has to leave unspecified what kind of modality (2) instantiates. Generally speaking, MR is not in a position to explain why certain statements exemplify contingency rather than necessity.

Summing up, MR cannot be used to show (*i*) that some modal statements are true rather than false and (*ii*) that some non-modal statements are contingent rather than necessary. Concerning (1) and (2), the consequences hold because, appearances notwithstanding, MR cannot reliably determine that there is a merely possible world in which Lewis's counterpart instantiates the property of *being an ersatzist*. Thus, MR cannot reliably preclude it being the case that in all merely possible worlds Lewis's counterparts have either non-ersatzist standpoints concerning possible worlds or no views on possible worlds whatsoever.

If MR is correct about the nature of merely possible worlds, it faces what can be called *the possibility of missing diversity*. Assuming that all merely possible worlds are as concrete as the actual world and that they are completely isolated from the actual world, it cannot be determined, from within the actual world, whether merely possible worlds really instantiate all possibilities. Let us say that two possible worlds, W_1 and W_2, are *indistinguishable with respect to an individual I and a property P* (*IP-indistinguishable*, for short) provided it holds that if I inhabits W_1 and instantiates P in W_1, then there is I's counterpart that inhabits W_2 and instantiates P in W_2. It is perfectly rea-

sonable that there is a merely possible world that is IP-indistinguishable from the actual world in the case of a particular individual and a particular property; this is the case when both David Lewis and his counterpart instantiate the property of *not being an ersatzist*. The existence of merely possible worlds that are IP-indistinguishable from the actual world must be accepted by any plausible theory of possible worlds, including MR. What might appear problematic, however, is that MR cannot exclude the chance that *all* merely possible worlds are such that they are IP-indistinguishable from the actual world in the case of David Lewis and his instantiating the property of *not being an ersatzist*. If all merely possible worlds are IP-indistinguishable from the actual world in this way, possible worlds are not diverse enough to provide us with all the possibilities we need for satisfactory analyses of the natural language statements such as (1) and (2).

The problem of missing diversity does *not* consist in that, as a matter of fact, no merely possible world is such that it contains Lewis's ersatzist counterpart, *but* in that it cannot be determined, from within the actual world, whether Lewis does have an ersatzist counterpart in some merely possible world. That is why I talk about the *possibility* of missing diversity. We cannot escape this conclusion provided we take seriously the idea that all possible worlds are isolated from each other. If we take MR at face value in this respect, there is no way to eliminate the possibility of missing diversity.

It should be added that when I say that it cannot be determined – from within the actual world – that possible worlds are sufficiently diverse, I do not mean to point to our cognitive limitations; my argument is not epistemological in the first place.[3] The argument rather concerns the fact that it is a live metaphysical possibility that all merely possible worlds are such that they are IP-indistinguishable from the actual world in the case of David Lewis and his instantiating the property of *not being an ersatzist*. In other words, saying that all merely possible worlds are such that not all of them are IP-indistinguishable from the actual world in the case of David Lewis and his instantiating the property of *not being an ersatzist* is equally admissible as saying that they are IP-indistinguishable in this respect.

It might be objected, however, that this problem does not arise because MR says a lot of other things about possible worlds. In particular, MR provides us with detailed principles that describe how possible worlds are built up. As a result, if MR is taken *as a whole*, it contains sufficient resources to ward off the possibility of missing diversity. In what follows, I am going to show that this is not the case.

[3] Of course, the argument has epistemological consequences, and some of my claims point to these consequences, but this is not to be understood as suggesting that the argument itself is epistemological (an epistemological version of the argument is briefly discussed in footnote 8).

2. Diversity by Recombination

MR accepts that "absolutely every way a world could possibly be is a way some world is" and that "absolutely every way that a part of a world could possibly be is a way that some part of some world is" (Lewis 1986: 86). As Lewis subsequently notes, however, these claims say "nothing at all about abundance or completeness" because they "would be true even if there were only seventeen worlds, or one, or none" (Lewis 1986: 86). Logical space is complete provided "[t]here are no gaps in logical space; no vacancies where a world might have been, but isn't" (Lewis 1986: 86). So, some mechanism securing the completeness of logical space is needed. This is supposed to be achieved by means of the *principle of recombination*, according to which "anything can coexist with anything else, at least provided they occupy distinct spatiotemporal positions" and "anything can fail to coexist with anything else" (Lewis 1986: 88).[4] Assuming that A, B, C, and D, are individuals, this is to be understood such that if one world contains A and another world contains B, there is a world that contains duplicates of both individuals; analogously, if one world contains both C and D, there is a world that contains a duplicate of C and does not contain a duplicate of D and there is a world that contains a duplicate of D and does not contain a duplicate of C.[5] The principle of recombination warrants that "patching together parts of different possible worlds yields another possible world" (Lewis 1986: 87–88). Thus, one might claim that this guarantees a sufficient number of worlds, making logical space diverse in the required sense.

Thus, my worry that all merely possible worlds are IP-indistinguishable from the actual world in the case of David Lewis and the property of *not being an ersatzist* is obviated by the diversity sustained by the principle of recombination. Returning to (1) and (2), the former can be described as true and the latter as contingent because the principle guarantees that there is at least one merely possible world in which Lewis's counterpart is an ersatzist.

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[4] As J. Divers claims, the principle of recombination "appears indispensable to [MR] since such a principle is required to generate enough worlds to underwrite the non-trivial extensional accuracy" of "[it] is possible that A iff there is a world according to which, A" (Divers 2002: 101). If my line of reasoning in this paper is correct, the principle is not sufficient to achieve this objective. I adopt the unrestricted version of the principle of recombination. Due to the influential argument developed in (Forrest and Armstrong 1984), a number of philosophers, including Lewis himself, considered some restrictions on the principle. (Nolan 2002: 131) and (Efird and Stoneham 2008) argue, however, that no restriction is needed.

[5] Given that intrinsic properties are those "which things have in virtue of the way they themselves are" (Lewis 1986: 61) independently of their relations to other things, and perfectly natural properties are a subtype of intrinsic properties, two individuals are duplicates if and only if "they have exactly the same perfectly natural properties" and "their parts can be put into correspondence in such a way that corresponding parts have exactly the same perfectly natural properties, and stand in the same perfectly natural relations" (Lewis 1986: 61).

This line of defense fails, though. It can be shown that even though the principle of recombination applies, (1) might turn out to be false rather than true and (2) might turn out to be necessary – or, better, weakly necessary[6] – rather than contingent. This means that even though the principle is applied, it is not guaranteed that there is a merely possible world in which Lewis's counterpart is an ersatzist.

The principle of recombination suggests that any individual coexists with any other in some possible world or other. As a result, all possible combinations of individuals obtain. This provides us with all worlds in which Lewis has counterparts, as well as all worlds in which he has not. So far, so good. What is crucial, however, is that the principle of recombination does not warrant that it is not the case that all of his counterparts instantiate the property of *not being an ersatzist*. The principle is completely silent about which properties are instantiated by the inhabitants of worlds. It might be the case that there is at least one world in which Lewis's counterpart is an ersatzist; it is equally probable, however, that no such world exists in logical space. If the latter obtains, the unwanted consequences concerning (1) and (2) rear their heads again.

Notice that the principle of recombination would warrant that there is a possible world in which Lewis has an ersatzist counterpart provided an ersatz theory of possible worlds is assumed to be an individual. In such a case, the principle would determine that there are possible worlds in which Lewis's counterparts are combined with the theory (or, rather, its duplicates). In such a case, at least some of Lewis's counterparts might be related to the ersatz theory in an appropriate way and, thus, might instantiate the property of *being an ersatzist*; at the same time, some other of his counterparts would not be related to the theory in question, meaning that they would instantiate the property of *not being an ersatzist*. This suggestion would provide us with sufficient resources to eliminate the possibility of missing diversity with respect to Lewis and the above properties. Unfortunately, this explanation is not feasible because theories (understood as sets of propositions) are not individuals. As a result, the principle of recombination cannot be used to combine people with theories in the required sense.

Let us look at the problem more closely. According to the principle of recombination, there are worlds in which Lewis has duplicates and worlds in

[6] A statement is necessarily true (false) in the strong sense provided it is true (false) relative to every world. A statement is necessarily true (false) in the weak sense provided there is no world in which it is false (true) (see Kripke 2011: 3); it might be true in some worlds and truth-valueless in others. It holds that (2) is weakly necessarily true if Lewis instantiates the property of *not being an ersatzist* in the actual world and, in all merely possible worlds *in which he has counterparts*, the property is instantiated by those counterparts (in other merely possible worlds, (2) is neither true nor false). In what follows, I accept that the set of contingent statements is disjunctive with the set of weakly necessary statements.

which he does not. Assuming that *not being an ersatzist* is an intrinsic property, none of his duplicates are ersatzists.[7] Now some of Lewis's duplicates are his counterparts in those merely possible worlds in which they exist. Those counterparts are not ersatzists, and those merely possible worlds cannot be used to show that (1) is true (rather than false) in the actual world and (2) is contingent (rather than weakly necessary). At the same time, there are merely possible worlds in which Lewis has no counterparts (irrespective of whether he has duplicates there or not). These worlds cannot justify the actual truth of (1) and the contingency of (2) either. Finally, in the remaining worlds, Lewis has counterparts that are not his duplicates. If (1) is to be true and (2) contingent, these are the worlds we should consider.

The problem is that we cannot do so. We have seen that as there is a chance that there is at least one of Lewis's counterparts that is an ersatzist so it is equally probable that none of his counterparts are ersatzists. We are not in a position to ascertain what obtains in particular merely possible worlds. We might find out that there is a possible world in which Lewis's counterpart is an ersatzist only if we were somehow able to leave the actual world for another possible world. Given that we are confined to the actual world, we cannot directly inspect merely possible worlds, which means that all pieces of information concerning merely possible worlds have to be derived from suitable assumptions. The principle of recombination is supposed to be such an assumption. However, the principle does not determine which individuals are Lewis's counterparts in merely possible worlds. As a result, the principle simply does not show that worlds are diverse enough to comprise both ersatzism espousing and ersatzism not espousing counterparts of Lewis. It provides us with many merely possible worlds in which Lewis has *duplicates* (as well as many merely possible worlds in which he does not), but it cannot positively guarantee that there is at least one merely possible world in which he has a *counterpart* that is an ersatzist. More precisely, even if there were merely possible worlds in which Lewis's counterparts were ersatzists, they would not be anticipated by the principle of recombination. The principle cannot be appropriately used to generate information about there being such merely possible worlds.[8]

[7] I treat the properties of *being an ersatzist* and *not being an ersatzist* as intrinsic because I assume that theories are not things or individuals. Thus, people may instantiate these properties independently of their relations to some other thing. If someone doubts that they really are intrinsic, she or he is invited to choose another example that would better fit her or his intuitions in this respect.

[8] Given the fact that we possess neither directly obtained nor derived information about Lewis's counterparts and their being or not being ersatzists in merely possible worlds, the challenge outlined in Section 1 also can be formulated in epistemic terms. It can be argued that, independently of its being true (in the actual world), we cannot *know* that (1) *is* true

Obviously, some properties are such that an individual instantiates them provided it consists of certain other individuals. For example, David Lewis instantiated the property of *being bipedal*, because both his legs were properly attached to the rest of his body. There are worlds in which his legs exist separately, or does not exist at all, and in at least some of those worlds he fails to instantiate the property of *being bipedal*. The principle of recombination provides us with possible worlds that are variegated enough to guarantee that Lewis's counterparts possess various numbers of legs. This does not hold for the property of *not being an ersatzist* – being composed of certain parts does not suffice for someone's not being an ersatzist. Recently, B. Armour-Garb has argued that "[j]ust patching together wings and pigs does not imply the existence of a world in which there are flying pigs" (Armour-Garb 2015: 1210). It means that the principle of recombination, though warranting that there are possible worlds in which some individuals are pigs with wings, cannot be taken to guarantee that there are possible worlds in which some individuals instantiate the property of *being a flying pig*.[9] Virtually the same thing holds for the property of *not being an ersatzist*.

So, when Lewis claimed that the principle of recombination makes it true that "[t]here are no gaps in logical space", he was merely partly correct. Viewed from one perspective, he was right because the principle mixes all individuals in all conceivable ways. Viewed from another perspective, however, he was wrong because the principle does not establish the distribution of all properties in all conceivable ways over individuals. In sum, the principle of recombination does not demonstrate that all conceivable assignments of properties to individuals are concrete possibilities, as understood in MR.[10]

(in the actual world) and, independently of its being contingent, we cannot *know* that (2) *is* contingent. The epistemic challenge would be in force even if it were the case that (1) is true and (2) is contingent, because it does not depend solely on what is the case in merely possible worlds. This is because we are not in a position to *justify* our beliefs that (1) is true and that (2) is contingent. (Of course, the epistemic challenge might be fend off by adopting a notion of knowledge that does not require justification.)

[9] Armour-Garb develops his argument by way of criticizing G. Rosen's modal fictionalism (see Rosen 1990). Nevertheless, this argument challenges the very heart of MR; in fact, it can be taken to undermine modal fictionalism *because* of challenging MR itself. See also (deRosset 2009: 1002–1003), where still another example along similar lines is presented. Furthermore, Armour-Garb (as well as deRosset) discusses the possibility that recombination takes place at the microscopic level and dismisses it as insufficient (see Armour-Garb 2015: 1210–1211). This is important because it undermines the attempts to rescue the prospects of the recombination principle by suggesting that a person is an ersatzist based on her or his genetic predispositions or structural organization at the atomic or molecular level.

[10] Notice that MR is a theory that belongs to the actual world. Given this fact, what is the status of the principle of recombination? Should it be viewed as a description of what is the case in logical space? Or should it be taken as a prescription that guides building up logical space? Neither option is appealing. If the principle describes what logical space looks like,

3. Some Other Ways to Diversity

One option the MR theorist might take is to claim that it is simply *assumed* that all conceivable assignments of properties obtain. She might add that this assumption has nothing to do with the principle of recombination.[11] So, there simply is a world in which Lewis's counterpart is an ersatzist because it is logically possible that Lewis is an ersatzist. Given this possibility, logical space contains worlds in which at least some of Lewis's counterparts are ersatzists. As a result, this assumption guarantees that (1) is true and (2) is contingent.

This line of defense is hardly appealing, however. First, it seems to undermine the role assigned to the principle of recombination in MR. If it is assumed that concrete worlds cover all conceivable assignments of properties to individuals, it is a simple consequence of this that concrete worlds also cover all combinations of individuals. No principle is needed to get this result. If this is the case, it becomes unclear why Lewis formulated the principle of recombination in the first place. We should accept that these combinations are not assumed but rather result from some postulates of MR. To the extent that this is so, however, it cannot be the case that all conceivable assignments of properties to individuals are assumed either. It should be somehow shown that with all of the possible combinations of individuals warranted by the principle of recombination come all worlds in which all properties are exemplified in all conceivable ways.

Second, the above defense reverses the course of explanation. It was assumed that the possibility that Lewis is an ersatzist – and, consequently, that (1) is true and (2) is contingent – is explained by there being at least one world in which Lewis's counterpart is an ersatzist. Now the defense requires that the existence of worlds in which Lewis is an ersatzist is to be explained by the fact that it is possible that Lewis is an ersatzist (and thus by the fact that (1) is true and (2) is contingent). This is putting the cart before the horse. Consequently, this kind of defense amounts to admitting that MR does not fulfil the explanatory role it has been designed to play.

Another option might consist in pointing out that there are certain facts concerning the actual world that, in conjunction with the principle of recombination, do warrant that Lewis has ersatzist counterparts in some merely possible worlds. In such a case, the principle would play an indispensable role

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it can be neither verified nor falsified, for obvious reasons. So, why should we rely on such a speculative claim? If, on the other hand, it prescribes how logical space should be built up, it conflicts with MR because possible worlds are self-contained concrete units that are not brought into existence by any principle or activity. To the extent that this is so, the principle is impotent when it comes to achieving what it is supposed to.

[11] This option is rather favorably discussed in (Menzel 2016: Subsection 2.1.4).

in generating merely possible worlds that guarantee the truth of (1) and the contingency of (2).

As claimed, the principle of recombination mixes all individuals in all conceivable ways. Taking for granted that there are ersatzists in the actual world and assuming that *being an ersatzist* is an internal property that all duplicates of every actual ersatzist instantiate, there surely are ersatzists in at least some merely possible worlds. Now it might be claimed that some of those duplicates may act as Lewis's counterparts in the merely possible worlds in question – more precisely, we cannot exclude the chance that some of the duplicates act as Lewis's counterparts. Thus, the principle of recombination provides us with merely possible worlds that contain ersatzists, and we simply assign to some of these individuals the role of being Lewis's counterpart. If this is the case, then it is possible that Lewis is an ersatzist and it is not the case that his counterparts instantiate the property of *not being an ersatzist* in all possible worlds in which they exist. The proponent of this response might add that we simply know that some of those duplicates are Lewis's counterparts because we simply take Lewis's being an ersatzist as a possibility.

This line of defense is unsatisfactory, though. It can be admitted that there are ersatzists in many non-actual worlds, as the principle of recombination together with some facts concerning the actual world suggest. It cannot be taken for granted, however, that some of those duplicates are Lewis's counterparts. It should be somehow *demonstrated* that they are. To say that some of the duplicates in question are Lewis's counterparts because Lewis's being an ersatzist is an obvious possibility is not a proper kind of demonstration. It cannot be argued that the logical space contains at least one possible world in which Lewis's counterpart is an ersatzist because Lewis's being an ersatzist is a possibility. It should be rather argued that Lewis's being an ersatzist is a possibility *because* the logical space contains a possible world in which Lewis's counterpart is an ersatzist. Thus, it seems that this strategy is just another instance of the putting the cart before the horse approach.

It might be replied, however, that this conclusion is too hasty. This is because it seems to ignore an important feature of the counterpart relation, namely its inconstancy. According to MR, counterpart relations are "inconstant, somewhat indeterminate, and subject to instant change in response to contextual pressures" (Lewis 1986: 8; for a detailed explanation, see Subsection 4.5). Thus, "[t]wo things can be counterparts in one context, but not in another; or it may be indeterminate whether two things are counterparts" (Lewis 1986: 254). Divers specifies that context can be determined by "the interests and intentions of speaker and audience, background information, spatiotemporal location of utterance and the choice of words used to refer to a relevant individual" (Divers 2002: 123). As a result, we are free to come up with a context relative to which an ersatzist that exists in a merely possible

world is taken to be sufficiently similar to Lewis in order to be his counterpart in that possible world. The requirement that one should somehow demonstrate that Lewis has an ersatzist counterpart is mistaken; what is important is just that one needs to come up with a suitable similarity relation which brings about that Lewis does have an ersatzist counterpart.

This solution is perfectly in line with the content and spirit of MR. Nevertheless, it elicits certain worries. Given the context-dependence of counterpart relations, it is rather easy to specify conditions relative to which a certain ersatzist that inhabits a merely possible world is Lewis's counterpart in that world. At the same time, it is easy to specify other conditions relative to which the very same individual would not be taken as Lewis's counterpart in that world. This fact indicates that there is a wide spectrum of counterpart relations available that has two extremes. On one hand, if a very permissive construal of similarity is adopted, it may turn out that all ersatzists that inhabit merely possible worlds are Lewis's counterparts. On the other hand, if a very stringent construal of similarity is chosen, it may turn out that no ersatzists from merely possible worlds are Lewis's counterparts. This might be worrisome.

Observe that the truth of (1) and the contingency of (2) become somewhat arbitrary and shifting properties of the statements. If a similarity relation were construed in a rather permissive way, (1) would be true and (2) contingent, as required. However, if a similarity relation were construed in a very stringent way, (1) would be false and (2) necessary. This is unintuitive. More precisely, it is unintuitive to admit that there is a context relative to which (1) turns to be false and (2) necessary. It is also unintuitive to suggest that the actual truth of (1) and the contingency of (2) are dependent on one's will, so to speak. This situation may incite one to take advantage of constructing a counterpart relation in whatever way one finds suitable for reaching her or his objectives. As a result, if one wants that (1) be true and (2) contingent, it just suffices to go for one kind of counterpart relation; if one wants otherwise, one is free to choose another kind of counterpart relation. This fact amounts to saying that (1) is true and (2) is contingent because someone simply decided them to be such. It is deeply unsatisfactory to suggest that truth-values of modal statements and modal properties of statements in general are dependent on one's will to such a large extent.

4. Conclusion

Summing up, MR fails to provide a satisfactory explanation of why certain modal statements that are naturally treated as true are true (rather than false) and why certain non-modal statements that are naturally treated as contingent are contingent (rather than necessary). This failure is due to MR's in-

ability to guarantee that logical space contains sufficiently diverse possible worlds. For example, MR is perfectly consistent with it being the case that all merely possible worlds are such that all David Lewis's counterparts are non-ersatzists as well as with it being the case that there is at least one merely possible world in which Lewis has an ersatzist counterpart. Since the actual world which we inhabit is completely detached from all merely possible worlds, it is impossible to determine how things really are with Lewis's counterparts. As a result, we cannot rebut the above charge against MR. Nevertheless, MR seems to offer a way out based on its principle of recombination. Though the principle is powerful enough to warrant that all individuals are combined in all conceivable ways in all possible worlds, it is not sufficiently powerful to guarantee that all conceivable assignments of properties to individuals obtain. For example, the principle can be used to show that there is a possible world in which Lewis has a counterpart with less than two legs, but it cannot be used to show that there is a possible world in which he has a counterpart that is an ersatzist. The modal realist may respond that the principle of recombination should be supplemented with the fact that counterpart relations are inconstant and thus that an object that is someone's counterpart relative to one context need not be her or his counterpart relative to another context. This fact makes it possible that ersatzists that inhabit merely possible worlds can be taken as Lewis's ersatzist counterparts. This suggestion amounts to saying that certain attributes – like modal properties or truth-values – of statements may shift at one's will. This is hardly appealing.[12]

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