

# Possible Worlds and the Objective World

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## 1 Varieties of haecceitism

It could be that, at the moment you finish reading this essay, the entire universe is wiped out in a great cosmic reset. After the reset, events exactly like those of the past 14 billion years are replayed. You and I and everyone we know have doppelgänger echoes in the very distant future. Call this scenario **First**.

Here's a different way things could be: this could have already happened. That is, it could be that our Big Bang *was* a cosmic reset, and before it there were 14 billion years of history just like those that have happened since the reset up to when you finish reading. In this case, you and I and everyone we know *are* doppelgänger echoes of people in the very distant past. Call this scenario **Second**.

In each of these scenarios, two copies of a long stretch of history take place, one after the other. In **First**, you and I live in the first of two copies; in **Second**, we live in the second. But this is a bit odd. **First** and **Second** tell precisely the same qualitative story: they only differ concerning the identities of particular individuals—which of the two people exactly like you is really *you*, and such questions. You might think it is implausible that there are really two different possible worlds that differ *merely* concerning which things are which. The pull of a thought like this creates a tension: **First** and **Second** both seem possible, but it doesn't seem like there should be such subtle differences between possible worlds.

David Lewis suggests a way of splitting the difference between these two seemings. His crucial claim—one that will occupy a good deal of attention in this essay—is that “*Possibilities are not always possible worlds*” (1986, 230). In the case at hand, there really

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are two ways things could be—two possibilities, First and Second—and yet there is just one possible world underlying both of them.

The way Lewis explains this distinction between possibilities and possible worlds uses his theory of counterparts (1968; 2001, 39ff; 1986, ch. 4). (This particular explanation isn't essential to the main thesis, but it will be helpful to have a concrete proposal to fix ideas, and I will be returning to it at various points.) The main idea of this theory involves a certain way of interpreting *modal* claims, about what might or must have been, in *possibilist* terms, quantifying over possible worlds and the individuals that inhabit them. I could have been a taxi driver; the counterpart theorist interprets this claim in possibilist terms as saying that I have a *counterpart* who is a taxi driver in some possible world. An individual *a* could have been *F* iff *a* has a counterpart which is *F* in some possible world. (This is only a start; I expose more of the workings in Russell 2013 and in Section 2.)

For present purposes, the important point about counterpart theory is that an individual *a* can have more than one counterpart in the same possible world. This means that a single world can provide *a* with more than one possibility—more than one way *a* might be—depending on the choice of counterpart. This is how Lewis deals with the case of recurring histories (1986, 232). There is one possible world **Reset**, a world with two successive copies of the last 14 billion years. In **Reset**, there are two people who live lives just like yours (up until the moment you finish reading this essay, that is), *reader*<sub>1</sub> who lives before the reset and *reader*<sub>2</sub> who lives long after it. Both of these people are your counterparts. There could be a cosmic reset in a little bit, because *reader*<sub>1</sub> is your counterpart—and thus First is possible. And there could have been a cosmic reset in the distant past, because *reader*<sub>2</sub> is your counterpart—and thus Second is possible. One possible world, two possibilities.

Let's put some labels on these views. I've been assuming that you have a handle on a distinction between two sorts of propositions: **qualitative** and **singular**. It is a qualitative proposition that some electron is near an eminent philosopher; it is not a qualitative proposition that some electron is near David Lewis (unless this proposition can be explicated some other way). The idea is that qualitative propositions make no essential reference to particular individuals. I haven't given, and I won't try to give, anything like an *analysis* of qualitateness, but I hope the distinction is clear enough to work with.

We say (following Lewis) that two possible worlds **differ haecceitistically** iff they represent all the same qualitative propositions as true, and yet represent different singular propositions as true (1986, 221). Lewis believes that there aren't any worlds that differ haecceistically: no two worlds tell precisely the same qualitative story, and yet tell different stories about which things are which. Lewis called this doctrine "anti-haecceitism".

But there's also a sense in which Lewis is a haecceitist: he believes that First is possible and Second is also possible. These are haecceitistically different *possibilities*—stories which each could have been true, according to which things would be qualitatively exactly alike, but which could not both be true together. He can consistently hold this because he thinks that possibilities are not always possible worlds.

To distinguish these ideas, I'll use **World Haecceitism** to label the doctrine that there are haecceitistically different *possible worlds*, and **Possibility Haecceitism** to label the doctrine that there are haecceitistically different *possibilities*. Lewis holds the combination of *Possibility Haecceitism* with *World anti-Haecceitism*—a combination he calls **cheap haecceitism**. Scenarios like First and Second are both possible, but they do not correspond to different possible worlds. Although there are no merely singular differences between qualitatively alike possible worlds, worlds are not all of the possibilities.

Cheap haecceitism is a clever idea, and following on Lewis's initial discussion it has been put to work for a variety of metaphysical purposes. But there is something deeply puzzling about the doctrine: it seems to lapse into either incoherence, or else irrelevance to the issues where it has been put to work. In the next section I'll discuss this puzzle, drawing on work by Brad Skow (2007) and Boris Kment (2012). I'll go on to explain an understanding of the theoretical role of possible worlds which is distinct from the role played by mere "possibilities", and which is central to a certain kind of metaphysical inquiry. I'll then explain how this understanding of what worlds are, and thus of what cheap haecceitism says, connects to questions about the metaphysical status of particular individuals.

I should make clear that the view I'll present is not Lewis's. In fact, Lewis says things that fit badly with my way of drawing the relevant distinctions (which I discuss in Section 8). It turns out his version is tied to his idiosyncratic view of the nature of possible worlds, as separate concrete universes. But cheap haecceitism has a life in philosophy beyond Lewis's system, and my alternative way of making sense of it should be welcome.

## 2 A puzzle

Cheap haecceitism requires that possible worlds come apart from possibilities. But saying this seems to lose touch with what possible worlds are *for*—that is, with the primary *theoretical role* of possible worlds. Robert Adams puts it mildly:

[T]he intuitive attractiveness of the notion of possible worlds ... would also be diminished if we were unable to apply to some cases of possibility the idea that what is possible is what is the case in some possible world (Adams 1974, 223; cf. Plantinga 1974, 44–5; Stalnaker 1976).

Possible worlds were supposed to help us talk about *what is possible*; if possible worlds stop doing that job, then we have lost our grip on them altogether.

Here's a way of spelling this thought out. We can put some constraints on a theory of possible worlds, constraints which jointly describe the **Possibility Role**.

- (P<sub>1</sub>)  $p$  is possible iff  $p$  is true at some world.
- (P<sub>2</sub>) If  $p_1, p_2, \dots$  entail  $q$  and  $p_1, p_2, \dots$  are true at a world  $w$ , then  $q$  is true at  $w$ .
- (P<sub>3</sub>) Either  $p$  is true at  $w$  or not- $p$  is true at  $w$ .

These constraints seem like precisely the sort of conditions that shape our theoretical conception of what sort of thing a possible world is supposed to be.<sup>1</sup>

But if possible worlds play the Possibility Role, then cheap haecceitism is inconsistent. (In fact, just (P<sub>1</sub>) and (P<sub>2</sub>) suffice to raise the problem.) Possibility Haecceitism says that there are propositions  $p$  and  $p'$ , each possible, according to which things are qualitatively just alike—that is, for each qualitative proposition  $q$ , either  $p$  and  $p'$  each entail  $q$  or they each entail not- $q$ —but which entail different singular propositions—that is, there is some  $r$  such that  $p$  entails  $r$  but  $p'$  does not. Then  $p$ -and- $r$  is possible, so by (P<sub>1</sub>) and (P<sub>2</sub>)  $p$  and  $r$  are both true at some world  $w$ . Also  $p'$ -and-not- $r$  is possible, so  $p'$  and not- $r$  are both true at some world  $w'$ . Since by (P<sub>1</sub>) and (P<sub>2</sub>)  $r$  and not- $r$  can't both be true at the same world (they jointly entail something impossible)  $r$  is not true at  $w'$ . So  $w$  and  $w'$  represent different singular propositions as true. Furthermore, if  $q$  is any qualitative proposition which is true at  $w$ , then  $p$  and  $p'$  must both entail  $q$ , so  $q$  is also true at  $w'$ . (Otherwise  $p$  entails not- $q$ , so  $q$  and not- $q$  would both be true at  $w$ .) The converse also holds, so the very same qualitative propositions are true at  $w$  and  $w'$ . Thus Possibility Haecceitism implies World Haecceitism. If possible worlds play the Possibility Role, then cheap haecceitism is incoherent.

But how could possible worlds *fail* to satisfy the Possibility Role? It might help to look at what the counterpart theorist says about this. According to the counterpart theorist, singular propositions are not straightforwardly true at possible worlds at all. Instead, a singular proposition can only be evaluated at a possible world considered together with a *choice of counterparts*.<sup>2</sup>

We can be more explicit about this if we spell out some more details of how counterpart theory should work.<sup>3</sup> Recall the counterpart theorist's formula:  $a$  could have been  $F$  iff  $a$  has a counterpart which is  $F$  at some world. This formula isn't very general. What are we to say about possibilities concerning more than one thing? In Lewis's original 1968 presentation, he told us to find a counterpart for each thing individually: so  $a$  could have  $R$ 'ed  $b$  iff  $a$  has a counterpart  $\hat{a}$  and  $b$  has a counterpart  $\hat{b}$  such that  $\hat{a}$   $R$ 's  $\hat{b}$  in some possible world. But this proposal overlooks the fact sometimes the fates of individuals are linked. Suppose an essentialist claim is true: Chelsea couldn't have had any mother but Hillary. Now consider the Reset world:

<sup>1</sup>We can sum up the Possibility Role a bit more elegantly and with somewhat greater logical generality using these two (dual) notions: propositions are **compossible** iff their conjunction is possible, and they are **exhaustive** iff their disjunction is necessary. Then these constraints will do:

$p_1, p_2, \dots$  are compossible iff for some world  $w$ , each  $p_i$  is true at  $w$ .

$p_1, p_2, \dots$  are exhaustive iff for each world  $w$ , some  $p_i$  is true at  $w$ .

<sup>2</sup>The counterpart theorist might say that a singular proposition  $p$  is true at a world  $w$  iff  $p$  is true at *some* choice of counterparts at  $w$ . In that case (P<sub>2</sub>) is violated, since  $p$  can be true at some choice, and not- $p$  true at some other. Second attempt:  $p$  is true at  $w$  iff  $p$  is true at *every* choice of counterparts at  $w$ . This version violates both (P<sub>1</sub>) and (P<sub>3</sub>): for example, First is possible, but neither First nor its negation is true at every choice of counterparts at a Reset world.

<sup>3</sup>See Hazen 1979; Lewis 1986, 233–4; cf. Dorr, MS. The following two paragraphs are adapted from Russell (2013).

it contains two duplicate mother-daughter pairs, each of which is very like Hillary and Chelsea. So each of the daughters,  $daughter_1$  and  $daughter_2$ , is a counterpart of Chelsea, and also each of the mothers,  $mother_1$  and  $mother_2$ , is a counterpart of Hillary. Then since  $daughter_1$  is Chelsea's counterpart, and her worldmate  $mother_2$  is Hillary's counterpart, Lewis's original instructions lead us to say that Chelsea might have been born to someone other than Hillary—contradicting the essentialist claim.

The solution: in cases of joint possibility, we also have joint counterparts. Don't look for a counterpart of Hillary and a counterpart of Chelsea independently; look for a *pair* which is a counterpart of the pair  $\langle \text{Hillary}, \text{Chelsea} \rangle$ . Here  $\langle \text{mother}_1, \text{daughter}_1 \rangle$  is such a counterpart pair, and so is  $\langle \text{mother}_2, \text{daughter}_2 \rangle$ . But the crossed pairs  $\langle \text{mother}_1, \text{daughter}_2 \rangle$  and  $\langle \text{mother}_2, \text{daughter}_1 \rangle$  are not—so we can respect the essentialist claim.

Generalizing: instead of just a counterpart relation between individuals, use a counterpart relation between *sequences* of individuals. There is no need for these sequences to be finite. As a further convenience, let the first element of the sequence be a possible world, the **evaluation world** of the sequence. This way possibilities *de dicto* as well as joint possibilities *de* however many *rebus* can all be interpreted uniformly. What is possible is what is true at some **counterpart sequence**:  $a_1, a_2, \dots$  could have been so-and-so iff the sequence (the actual world,  $a_1, a_2, \dots$ ) has some counterpart sequence  $\langle w, \hat{a}_1, \hat{a}_2, \dots \rangle$  such that  $\hat{a}_1, \hat{a}_2, \dots$  are so-and-so at  $w$ .

The important point about these details is that counterpart sequences *do* play the possibility role. They, and not possible worlds, are the things truth-at-which amounts to possibility, according to the counterpart theorist. So it is natural to follow Lewis in calling such sequences *possibilities*.

But this merely compounds the strangeness of the view. On what grounds do we withhold the label “possible world” from the things that play the Possibility Role, and bestow that label on other things that play a quite different role? Boris Kment puts it like this:

On this account, worlds do not play the theoretical role commonly associated with worlds ... That role is taken over by the world-descriptions [in this case, counterpart sequences]. But surely what the term “world” refers to is determined in large part by the theoretical role commonly associated with the word “world”. If the entities that best fit this theoretical role are the world-descriptions, then, other things being equal, these entities are better candidates for being the referents of “world” than what the world description theorist calls “worlds”. So, should we not conclude that the world description theorist is simply misdescribing her own account? If her view is correct, then the world-descriptions are really the possible worlds (Kment 2012, 24).

I should note that the “theoretical role” Kment is discussing here is not the “vanilla” Possibility Role. Instead, Kment argues for haecceitism based on considerations about

*probability* and of *counterfactuals*. It is the role of worlds in these theories that he is actually discussing in the quoted passage.<sup>4</sup>

In the case of probability, the thought is that a theory of chance will give a probability measure over the set of possible worlds: the chance of  $p$  is the probability assigned to the set of worlds where  $p$  is true. But, as there are intuitively compelling cases of haecceistically different *possibilities*, so too there are intuitively compelling cases of haecceistic *chances*. To capture these, the counterpart theorist would need to treat counterpart sequences not only as the witnesses of possibility claims, but also as the domain of the probability measure.

Similarly, the theory of counterfactuals standardly appeals to a **closeness** relation on possible worlds. But there are intuitively compelling cases of haecceistic counterfactuals. To capture these, counterpart sequences would also have to bear the closeness relation.

In each case, we see these sequences taking over more and more of the jobs standardly done by possible worlds. What could justify us in continuing to withhold the term “world” from these objects? What work is left for worlds to do that isn’t already done by mere possibilities?

Brad Skow puts his complaint against cheap haecceitism a bit differently. Use the term “possible world” however you like—you are the master. But once you deny that worlds play the Possibility Role, they have pulled loose from the kind of applications you wanted to use them for.

For instance, Leibniz and Clarke exchanged famous arguments about whether “space is a real absolute being” (2000, Leibniz’s Third Letter, §3); some of these arguments turned on where material objects might have been. Leibniz argued: if there were absolute space, then all material objects could have been uniformly shifted from their actual locations. But Leibniz thought it was absurd to think that there was a different possible world so much like our own—either for reasons arising from the Principle of Identity of Indiscernibles (“For two states indiscernible from each other are the same state, and consequently, it is a change without any change”, Fourth Letter, §13) or from the Principle of Sufficient Reason (“[I]t is impossible there should be a reason why God, preserving the same situations of bodies among themselves, should have placed them in space after one certain particular manner and not otherwise”, Third Letter, §5). So, he concluded, there is no absolute space.

More recently, certain philosophers have invoked Lewis’s cheap haecceitism to block Leibniz’s argument.<sup>5</sup> The believer in absolute space can admit that things *could have* been uniformly displaced from where they actually are, while denying that there is a different *possible world* like that. The possibility of displacement is witnessed by our own world, with different places considered as *counterparts* of the actual places.

Skow replies: this sort of anti-haecceitism is a mere dodge. Leibniz’s argument can be stated without appealing to possible worlds: according to Skow, Leibniz’s con-

<sup>4</sup>Delia Graff Fara (2009) applies a similar kind of pressure from a different direction: the cheap haecceitist’s possible worlds also don’t play the standard world-role for the modal *actuality* operator.

<sup>5</sup>Pooley 2006; cf. Butterfield 1989. I take this up further in unpublished work.

siderations of Sufficient Reason provide just as strong a challenge to the claim that things *could have been uniformly displaced* as they do to the claim that there is a *possible world* at which things are uniformly displaced. So say what you like about what possible worlds there are; even so, if things could have been displaced, that alternative *possibility* is troubling enough. Cheap haecceitism doesn't answer Leibniz's argument: it just makes possible worlds irrelevant to the debate.

More generally, Skow says, the debates over the two Haecceitisms,

take place at different levels. The Lewisian debate [over World Haecceitism] is a debate in the metaphysics of modality: assuming that one believes in possible worlds, and analyses modal operators as quantifiers over possible worlds, what is it that determines which non-qualitative sentences are true according to a given possible world? The [Possibility] haecceitism debate, by contrast, is more “first-order”. It is a debate not about the form of the correct theory of the truth-conditions of modal sentences, but about which modal sentences are true (Skow 2007, 107).

Questions about possible worlds, once separated from questions about *what is possible*, don't make contact with ground-level metaphysical issues, beyond the parochial issues peculiar to the metaphysics of *modality*. Possibility is what matters for metaphysics, not possible worlds.

We can sum up the puzzle as a dilemma for cheap haecceitism. If possible worlds play the Possibility Role, then cheap haecceitism is straightforwardly inconsistent. But if worlds *don't* play that role, then cheap haecceitism is metaphysically irrelevant. The doctrine is either confused, or else pointless.

### 3 Possibilist metaphysics

Before moving on, I should briefly address two kinds of response to this challenge that I want to set aside. The first is an appeal to the intrinsic nature of possible worlds—the kind of stuff worlds are made of. One might say that the things the cheap haecceitist calls “possible worlds” assume the title by metaphysical privilege: the possibilities, though they do play an important role in interpreting modal discourse, are a metaphysically second-rate kind of object. This second-rate status isn't *non-existence*—the counterpart theorist, at least, has a way to construct them from first-rate materials. But perhaps the possibilities are less metaphysically **natural** than the possible worlds.<sup>6</sup> The guiding thought here is that it isn't just the theoretical role of “possible world” that determines its referent. Certain properties are more natural than others, and this metaphysical privilege makes them more eligible to be referents for our terms—they are “reference magnets” (Lewis 1983, 1984).

Against this background, one way of motivating the thought that worlds do not play the Possibility Role is **Lewisian modal realism**. Lewis claims that possible

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<sup>6</sup>In this response and my reply I mainly follow Kment (2012, 24–6).

worlds are maximal spatio-temporally connected sums of concrete objects. Being such a sum is a fairly nice property to have; it can be concisely specified in terms of spatio-temporal relations and mereology, which are good candidates for being perfectly natural. It is, anyway, plausibly more metaphysically natural than being a counterpart sequence, since these are complicated constructions out of the sums and their inhabitants. This then could explain why the sums count as possible worlds despite imperfectly playing their theoretical role.

A separate, subtler way to motivate this idea is **actualism**.<sup>7</sup> Suppose you're trying to build possible worlds out of propositions—actually existing propositions, the only kind there are—and suppose you think that there aren't actually any singular propositions about individuals that don't actually exist. (You are an “existentialist” in Alvin Plantinga's sense.) Then you'll only get so far. Using Alan McMichael's example: John F. Kennedy could have had a second son who became a Senator, even though he might have chosen to become an astronaut instead. But is there a possible world that witnesses the (possible) possibility of the son becoming an astronaut? That world can't be built out of any singular propositions about the second son in question, since he doesn't actually exist. So unless there are some *general* propositions that suffice for it being *he* who is the astronaut of the possibility—unless this merely possible second son has a **qualitative essence**—there just won't be enough propositions around to build this possible world.<sup>8</sup>

What to do? One way to generate more possibilities is to construct analogues of counterpart sequences.<sup>9</sup> Each of the propositional worlds has some set of **qualitative roles**—maximal sets of qualitative properties whose joint instantiation is compatible with the world's propositions all being true. We can then let a possibility be a sequence of a world and its qualitative roles. (A role may occur more than once in the sequence, to help deal with qualitative duplicates.) One of these sequences  $v$  is possible relative to a sequence  $u$  iff it is possible for things that jointly play the  $u$ -roles to jointly play the corresponding  $v$ -roles. We have, in particular, a sequence which includes an astronaut role which is possible relative to a sequence including a corresponding Kennedy's-second-son role; this is the possibility McMichael required. Finally—depending some on your views on propositions—these sequences of qualitative roles may very well be less metaphysically natural than the qualitative propositional worlds from which they were constructed. So on this story the propositional worlds might count as possible worlds, despite their failure to play the Possibility Role.

Neither the Lewisian nor the actualist story strike me as the right sort of reason for separating possible worlds from possibilities. Neither of them emerge from the work we want possible worlds to do; rather, they arise from the deficiency of the materials available to that work. On each story, worlds don't play the theoretical role we wanted them for, because the only thing that does play that role is second-rate. This has two consequences. First, each of these two stories about what possible worlds are

<sup>7</sup>See Adams (1981); McMichael (1983); Lewis (1986, 157ff); Fine (1977); Plantinga (1983).

<sup>8</sup>What Adams calls an “ $\alpha$ -relational” essence—one involving qualitative relations to particular actually existing things—would also do the trick. I'll ignore this wrinkle.

<sup>9</sup>This sort of idea—using sentences rather than propositions—is pursued by Wang (MS).

turns out to be *revisionary* about possible worlds, and comes at a corresponding cost.<sup>10</sup> Second, insofar as possible worlds don't play their customary role, this kind of response does nothing to answer the worry that possible worlds turn out to be metaphysically irrelevant.

Besides these concerns, there's the issue of plausibility. Is the force of reference magnetism really strong enough to pull the theoretical term "possible world" free of the metaphysical second-rate things? I'm skeptical that the difference between the first- and second-rate stuff is so large in this case. (And if reference magnets can pull "possible world" loose from our theory, then why not "possibly" along with it?) My hunch is that, whatever logical space is made of, it is pliable stuff, and won't resist fitting the roles theory demands of it. On the security of this hunch, I will pay no heed at all to the metaphysics of possible worlds (though the metaphysics of *our* world remains paramount). The reason I defend for separating worlds from mere possibilities is "internal" to the inquiry that we use possible worlds to help us pursue, not some "external" constraint imposed by the brittleness of our metaphysical resources. It arises not from what worlds are *made of*, but from what they are *for*.

## 4 Multiple modalities

The second kind of response to the puzzle that I want to set aside is one that says cheap haecceitism turns on distinguishing two different senses of "possible".<sup>11</sup> Abstractly, this response would say: while scenarios like First and Second are possible<sub>1</sub>, they are not possible<sub>2</sub>. This abstract view could be filled out in many different ways: for example, somebody might say First and Second are *conceptually* possible but not *metaphysically* possible; or maybe the distinction is something less familiar. Whatever the two modalities amount to, the view would say that *possibilities* play the Possibility<sub>1</sub> Role—what is possible<sub>1</sub> is what is true at some possibility—and *possible worlds* play the Possibility<sub>2</sub> Role—what is possible<sub>2</sub> is what is true at some possible world.

The cheap haecceitist says that First and Second are not true at two different possible worlds. So, if possible worlds play the Possibility<sub>2</sub> Role, then it must be that First and Second are not both possible<sub>2</sub>: at least one of First or Second is impossible<sub>2</sub>, and perhaps both of them. More generally, if worlds play the Possibility<sub>2</sub> Role, then World anti-Haecceitism implies that each complete qualitative story necessitates<sub>2</sub> some complete story about particular things.

It's not clear that this is a bad thing to say: that depends on what possibility<sub>2</sub> is supposed to be.<sup>12</sup> But this view has a very different structure from the kind of cheap haecceitism that I've been discussing. The two-modality view says that there

<sup>10</sup>"This may be less than we wanted in the way of possible worlds, but actualist intuitions make extremely plausible the claim that it's all there is" (Adams 1981, 21). "Is there any cost at all? I think there is—simply the cost of making a break with established theory, on which all differences between possibilities are supposed to be differences between possible worlds" (Lewis 1986, 235).

<sup>11</sup>Thanks to an anonymous referee for pressing me to make this explicit.

<sup>12</sup>In other work I argue that it isn't a good thing to say about *nomio* possibility, and that it therefore doesn't fit one of the main applications of cheap haecceitism.

are possibilities which don't correspond to *any* possible world: at least one of First and Second is possible<sub>1</sub> even though no world represents it as true. But this isn't what Lewis or his followers generally say. They say that First corresponds to a possible world, and Second corresponds to a possible world, and it is the *same* world in each case. Since First and Second contradict each other, a single world can only represent both of them as true in accordance with the Possibility<sub>2</sub> Role if possibility<sub>2</sub> is deviant: by (P<sub>1</sub>) and (P<sub>2</sub>), either First and Second don't jointly entail<sub>2</sub> their conjunction, or else a contradiction is possible<sub>2</sub>. So this kind of cheap haecceitist's worlds don't fit the Possibility Role for *any* reasonable kind of possibility. They must be doing some other job.

The two-modality view says that certain special possibilities satisfy some more demanding condition, being possible<sub>2</sub>, and only these special possibilities correspond to possible worlds. That view is not the one I'm pursuing. The question my cheap haecceitist has to answer is not: what further condition does it take for a possibility correspond to a possible world? The question is rather: what does it take for two possibilities to correspond to the *same* possible world? It isn't a question of *restricting* possibilities, but of *individuating* them.

Accordingly, I'll set aside the fact that "possible" is said in many ways: I use "possible" and its cognates in just one sense—the sense of *metaphysical* possibility, since that's what people in this literature usually mean. (But most of what I say applies just as well to other modalities, like nomic possibility or narrowly logical possibility.) My response to the puzzle doesn't turn on distinguishing two different ways for a scenario to be possible. Rather, it turns on two different ways of *distinguishing possible scenarios*.

## 5 The objective world

The orthodox view says that a possible world is a completely specific way things could have been. But there is a different thing for a possible world to be: a completely specific way the *world itself* could have been. This kind of possible world is a *factual* possibility, as opposed to a merely "perspectival", "representational", or "conventional" possibility. This is the central idea I aim to explain and apply.<sup>13</sup>

<sup>13</sup>I don't think this idea is entirely new: similar distinctions appear in various places, but as far as I know have not been worked out in detail. For instance, some authors distinguish between "worlds" and mere "descriptions of worlds", as in this passage:

On the other hand, he thinks that those same possible states of affairs could just as truly (not more truly, but just as truly) be described as containing only one thing in place of each of the sets of indiscernibles. The two descriptions are very different, but there is no difference at all in the possible reality that they represent (Adams 1979, 14–15; describing a view of Hacking 1975).

Similarly Derek Parfit writes, concerning whether I could be either of two resulting people from a split-brain operation,

These are not two different possibilities, one of which must be true. These are merely two different descriptions of the very same course of events (1986, 354).

What this turns on is the notion of **objective matters of fact**. I'm trusting that you already have some grip on it. I'll just give a few examples to help you latch onto what I'm talking about.<sup>14</sup>

An example from physics. A standard interpretation of the special theory of relativity teaches us that ordinary quantities of time and space are not objective, but rather depend on a frame of reference. There are no objective facts about temporal duration or about spatial length or shape. This is not to say that all claims made in ordinary language or in prerelativistic theory that say that some redwoods are more than a hundred meters tall, or that Stonehenge is circular, or that muons in cosmic rays decay more slowly than muons in a laboratory—that these are all *false* or *meaningless* (though impassioned physicists do occasionally say such things). There is an interesting philosophical problem about the status of these claims. Hartry Field gives them the convenient label of “factually defective”. They don't describe absolute reality, or state purely factual matters. (These glosses aren't intended as explanations, just extra hints that might help you latch onto the right idea.)

An example from metaethics. Some philosophers hold that moral claims are not straightforwardly factual. There are various theories about the status they do attain—“expressivism” or “relativism” or something else—but these theories join forces against the view that moral claims state objective factual propositions.

An example from metaphysics. Philosophers debate whether the present is metaphysically special, whether there is an objective present time. We can understand this as a debate over whether claims like “The extinction of the dinosaurs is in the past” state objective facts.<sup>15</sup>

For present purposes, I think it is best to take the notion of factuality as primitive, rather than attempting to analyze it in other terms. Let me point out and discourage two particularly tempting reductions.<sup>16</sup> It is unhelpful to explain factuality either in terms of what is *true* or in terms of what *facts* there are. The trouble is that both the notions of truth and of fact admit “thin” deflationary uses. For instance, I take it that, even if the moral anti-realists are right that moral discourse is “factually defective”, I am not amiss in saying that torture is wrong. If it is proper to say that torture is wrong, then in a perfectly good deflationary sense it is proper to say that it is *true* that torture is wrong, and that it is a *fact* that torture is wrong. It is only right to deny that this is true, or that it is a fact, if the denial is said in the right philosophical tone of voice: even

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A similar distinction is sometimes drawn in the philosophy of physics between possible worlds and models of a physical theory; for instance, John Earman speaks of different models as “two different modes of presentation of the same state of affairs” (1989, 171, see also §9.6).

<sup>14</sup>This discussion draws on Field (1994); Fine (2001, 2009); Dreier (2004); Sider (2012, §11.7).

<sup>15</sup>But this way of putting it is slippery: even if the present *isn't* metaphysically special (so the “B-theorist” has it right) any particular utterance of this sentence might state an objective fact, namely that the extinction of the dinosaurs is in the past *of the time of utterance*. According to the B-theorist, no temporarily-true propositions are factual. But whether ordinary-language tensed sentences express temporarily-true propositions at all is a further question of semantics.

<sup>16</sup>I continue to follow Field, Fine, and Sider. But note that Field does not think factuality should be taken as primitive (p. 433), and Fine and Sider each explain it in terms of their own preferred primitive notions: see Section 6.

though it's a fact that torture is wrong, it is not a **FACT**. But the distinction between the “thin” and writ-large notions of fact is the very distinction in question. In what follows, I do use “fact” in its “writ-large” sense or tone, but I don't take this to explain anything.

Another kind of tempting explanation is in terms of propositions. You might be tempted to say that “Torture is wrong” doesn't express a proposition. I don't think this is especially helpful either: as there is a deflationary use of “true” and “fact”, there is also a deflationary use of “proposition”—a conception of propositions as mere “shadows of sentences”—according to which it perfectly fine to say that “Torture is wrong” expresses the proposition that torture is wrong. (The sentence surely isn't *unintelligible*.) Distinguishing these mere shadowy propositions from full-fledged **PROPOSITIONS** is another manifestation of the distinction in question.

In the same vein, you might be tempted to say—at least for some of these cases, such as “Stonehenge is circular”—that *which* proposition the sentence expresses varies from context to context. An utterance of “Stonehenge is circular” on Earth expresses a different proposition (say, that Stonehenge is circular in the Earth's frame of reference) from that expressed by another utterance of the same sentence on a passing spaceship. This is a sensible thing to say, as far as it goes. But again there also seems to be a sense in which these two utterances have the same cognitive significance—and thus in which we might well say they express the same proposition. The judgment that the two utterances say different things turns on metaphysical considerations—that there aren't facts about absolute spatial shape that could figure as the subject matter of both utterances. And once again, the status of such metaphysical considerations is what is at issue.

To be clear, I do think it a worthy goal to say something more illuminating about what factuality is; but it is also a difficult and contentious one, and we can do quite a bit with the notion while ascending from such disputes. So I won't be giving an account of it in any more basic terms. I will, though, sketch a formal framework for this notion and some cognates.

To begin, I'll assume we understand a sentence operator “It is factual whether  $p$ ”. (Distinguish this from an alternative way you might understand factuality: the *factive* operator “It is a fact that  $p$ ”. The two are interdefinable: it is a fact that  $p$  iff both  $p$  and it is factual whether  $p$ ; it is factual whether  $p$  iff either it is a fact that  $p$  or it is a fact that not- $p$ . But the non-factive version is more convenient.) I take sentences to express propositions—using the word “proposition” in a lightweight, deflationary sense, so sentences about simultaneity or wrongness express propositions even if they are factually defective—I'll call these **thin propositions**. Then whenever it is factual whether  $p$ , we also say the proposition that  $p$  is **factual**. The factual propositions are a subset of the thin propositions. In a slight abuse of terminology, I sometimes just call them **facts**. (This is abusive because some factual propositions are *false*.)

In this essay I'm not going to worry about any “hyperintensional” distinctions: I regard necessarily equivalent propositions as the same. It follows that thin propositions

correspond one-to-one with certain sets—sets of what I’ll call **(thin) possibilities**.<sup>17</sup> (These can be explicitly constructed as maximal consistent sets of propositions, but those details don’t concern us.) We say a proposition is **true at** each possibility in its corresponding set, and we say two possibilities **agree on** a proposition that is true at both or neither. Understood this way, thin possibilities play the Possibility Role of Section 2. They also obey a further *individuation* condition:

(PP) No two possibilities agree on every proposition.

This point is important enough to deserve being called the **Proposition-Possibility Link**. This link falls out of the most natural construction of possibilities from propositions; but more importantly, it is the most natural way of thinking about what distinctness of possibilities *is*. Possibilities are specific ways things could be; so a distinction between possibilities is a difference in how things would be according to them—a disagreement on some proposition or other.

Parallel considerations apply to factual propositions. I take it that factual propositions are closed under Boolean connectives: conjunctions, disjunctions, and negations of factual propositions are themselves factual. It follows that we can also put factual propositions in one-to-one correspondence with certain sets—sets of **factual possibilities**. Factual propositions stand to these factual possibilities just as thin propositions stand to thin possibilities: they completely and consistently specify the factual propositions. Using the same terminology of *truth-at* and *agreeing* for these, factual possibilities obey a parallel individuation condition:

(FW) No two factual possibilities agree on every factual proposition.

I call this the **Fact-World Link**. Factual possibilities are ways that the facts could be; so a distinction between factual possibilities is a difference with respect to some fact. Furthermore, while factual possibilities don’t play the Possibility Role, they *do* obey each of its three conditions when their propositional variables are restricted to *factual* propositions. The two different conceptions of propositions—thin and *factual*—directly give rise to two different conceptions of how to distinguish possibilities.

There is a natural relationship between the two kinds of possibilities—a function: we say that each thin possibility **represents** some factual possibility.<sup>18</sup> Two thin possibilities represent the *same* factual possibility iff they agree on every factual proposition. So, if you like, you can identify each factual possibility with an equivalence

<sup>17</sup>In fact, the result only requires the weaker assumption that *Boolean*-equivalent propositions are the same for instance, a proposition is identified with its double-negation and so propositions form a Boolean algebra. The mathematical result that guarantees the correspondence is called Stone’s Theorem. It is part of a general family of useful results known collectively as **Stone duality**, which underlies the following discussion. For a brief and friendly introduction, see Halmos and Givant 1998; for more extensive mathematical detail see Sikorski 1964; Birkhoff 1967; Koppelberg 1989, §2 and §7.

<sup>18</sup>Stone duality tells us not just that Boolean algebras correspond to sets (more precisely, topological spaces), but also that relationships *between* Boolean algebras correspond to dual relationships between their corresponding sets. In this case, we are using the fact that *subalgebras correspond to quotients*: the embedding of the algebra of facts in the algebra of thin propositions corresponds to a quotient map from the algebra of propositions to the algebra of facts.

class of thin possibilities under the equivalence relation of agreeing on the facts. If you look at the thin possibilities through glasses that obscure non-factual distinctions, the factual possibilities are what you see.

We can also move the other direction, from factual possibilities to thin possibilities. Each thin possibility can be thought of as a pair of a factual possibility—a genuine possible world—together with an arbitrary “frame of reference”, which specifies which non-factual propositions are true.<sup>19</sup> The general picture here is that a single world can be equally well represented in many different, incompatible ways, depending on certain choices of “perspective”. Some possibilities may turn out to differ just in the “perspective” one takes on the facts, and not in the facts themselves.

The sentence operator “It is factual whether ...” is not really the most natural or general device for our purposes. A more flexible version extends to subject matters which are not propositions, and which are not expressed by sentences.

It is a factual matter what rest mass an electron has

It is not a factual matter when the present moment is

It is a factual matter how the 2015 World Series will turn out

Here the factuality operator governs not declarative sentences but embedded questions, the relative clauses beginning with “what”, “when”, and “how”. These do not correspond to any particular propositions, but rather to **subject matters** (or *issues* or *questions*). The sentential locution—“It is factual whether  $p$ ”—also involves an embedded question, “whether  $p$ ”.

If a proposition is a way things could be, then a subject matter is a *kind* of way things could be—a respect in which things might be one way or another. The matter of *what color snow is* indicates a certain range of propositions: that snow is white, that snow is green, that snow is either white or green, and so on. These are answers (of varying completeness) to the question of the color of snow. Accordingly, I take a subject matter to be any set of propositions which is closed under the Boolean connectives.<sup>20</sup> The elements of a matter  $P$  are the answers to the question  $P$  raises, the more or less specific ways for  $P$  to be. We say that a matter  $P$  **settles** a matter  $Q$  iff every  $Q$ -proposition is also a  $P$ -proposition. Intuitively this means that  $P$  is at least

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<sup>19</sup>As we can think of thin possibilities as two-dimensional objects, we can also reason about them using resources of two-dimensional modal logic (See for example Davies and Humberstone 1980). One dimension of possibility—which shifts the world but not the frame of reference—is purely **counterfactual**, while the other—which shifts the frame of reference while leaving the world fixed—is purely **counterconventional**. Iris Einheuser develops and defends a framework like this (2006, 2003).

(One potential problem is that it might not always be possible to identify frames of reference between different possible worlds: what conventions are available might depend on what the world is really like. In this case, in general we couldn’t make sense of *purely* counterfactual possibility—or its dual, a kind of purely conventional necessity, similar to apriority. The “mixed” modality of possibility *tout court* is unaffected by these concerns.)

This is formally similar to the intensional supervaluationist framework of McGee and McLaughlin (2000), with “factually” standing in for “definitely”.

<sup>20</sup>That is, a subject matter is a complete Boolean subalgebra of (thin) propositions.

as specific, as fine-grained a matter as  $Q$ .<sup>21</sup> Any propositions  $p_1, p_2, \dots$  generate a subject matter: the matter of **how**  $p_1, p_2, \dots$  **stand**. This is the least specific matter which includes each of them.

In particular, the set of factual propositions is a subject matter: *how the world is in itself*. I'll call it  $W$ , for short. And more generally, a **factual matter** is any matter which is settled by  $W$ . Just as the factual propositions track the sentence-operator "It is factual whether ...", the factual matters track the question-operator "It is factual ...".

Like propositions, subject matters have a "dual" representation in terms of possibilities. Each subject matter  $P$  corresponds to an equivalence relation on the set of possibilities: the relation of **agreement on**  $P$ .<sup>22</sup> In particular, agreement on  $W$  is agreement on the facts. This principle links subject matters and their equivalence relations:

(Agree)  $P$  settles  $Q$  iff any possibilities which agree on  $P$  agree on  $Q$ .

Similarly, factual matters correspond to equivalence relations on the set of factual possibilities, and an analogous principle holds:

(Agree<sub>W</sub>) If  $P$  and  $Q$  are factual matters,  $P$  settles  $Q$  iff any factual possibilities which agree on  $P$  agree on  $Q$ .

(You might recognize a standard definition of supervenience.)

One further perspective can also be helpful (or at least suggestive). We can think of propositions as a special case of a more general sort of entity, sometimes called **concepts**. Propositions are the concepts that correspond to sentences, but more generally we can think of predicates, names, connectives, and quantifiers as corresponding to concepts as well. In the case of predicates, these are properties; for names, they are individual concepts (in Carnap's sense). In the other cases, we don't have especially good labels. Concepts of this sort can be composed to produce other concepts: for instance, as a predicate and a name combine to form a sentence, a property and an individual concept combine to form a proposition.

According to this picture, we have a certain "thin" conceptual scheme—some set of concepts—and it makes sense to ask which of these concepts genuinely correspond to reality. We might introduce a more general operator for this purpose—"c is objective"—one that can combine with expressions of any syntactic category. (So it is like Ted Sider's "structure" operator—see Section 6.) This is grammatically awkward, but I'm not sure that's a serious obstacle to using such a device. In any case, we can ask

<sup>21</sup>Subject matters form a *complete lattice* under the settling order (see Birkhoff 1967, 15).

<sup>22</sup>This correspondence links my definition to the treatment of questions and subject matters of Hamblin 1958; Lewis 1998.

the corresponding questions about concepts: some of the concepts that figure in our conceptual scheme are special, the **objective concepts**.<sup>23</sup>

Here is the main point of all of this. Insofar as we can distinguish between factual and non-factual claims, we have two conceptions of how the world is: as Fine puts it, “the real world ‘out there’—and the world of common mundane fact” (Fine 2001, 4). This is the distinction between metaphysical **FACTS** and mere “thin” facts. Exactly parallel to this distinction, we have two conceptions of possible worlds, as ways the world *could* be: the deflationary conception of a thin possibility, and the “thick” metaphysical conception of a factual possibility—a possible **WORLD**. (These are “metaphysically possible worlds” in a double sense: both the traditional sense of being compatible with metaphysical principles, but also the sense of representing distinctively metaphysical matters.) Thin possibilities are what play the Possibility Role.<sup>24</sup> But factual possibilities play another important role. In particular, they, and not the thin possibilities, obey the Fact-World Link (**FW**): any difference between factual possibilities is a *real* difference, a difference in the facts. Possible worlds have both of these different theoretical roles to play. And sometimes—especially in matters of metaphysics—the two roles come apart.

## 6 The aims of metaphysics

The framework I’ve just sketched goes together with a certain metaphysical project. This is the project of understanding how the world is in itself. In the framework of Section 5, this amounts to figuring out which propositions and concepts genuinely correspond to reality—which of them are genuinely factual or objective. This conception of metaphysics as inquiry in the world’s objective structure is very much in the same spirit as certain other accounts in the recent spate of “meta-metaphysical” literature. But it differs in some details which are worth calling attention to.

Besides the conception of “reality as factual”, there is a conception of “reality as fundamental”:<sup>25</sup> a division of the world of fact into a *basis* and a superstructure in some sense reducible to that basis. Thus Fine, in addition to a notion of factuality that largely coincides with my use, has an additional metaphysical notion of **reality**—the *fundamentally* factual. He argues that there is a general presumption that a proposition which has a *ground* is not real in that sense (27–28). Lewis’s **naturalness**, though it divides properties rather than propositions, is also understood this way:

The guiding idea, roughly, is that the world’s universals [natural properties] should comprise a minimal basis for characterising the world com-

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<sup>23</sup>I think the proper technical context for working with concepts, in this sense, is category theory (taking a cue from the categorical semantics for the typed  $\lambda$ -calculus): concepts are arrows in a category of types. The algebraic notions of subalgebras and quotients (subject matters and the settling order) have natural categorical analogues. I pursue some applications in unpublished work.

<sup>24</sup>At least, this is so if ordinary propositional quantification ranges over thin propositions.

<sup>25</sup>These are Fine’s terms.

pletely. Universals that do not contribute at all to this end are unwelcome, and so are universals that contribute only redundantly. A satisfactory inventory of universals is a non-linguistic counterpart of a primitive vocabulary for a language capable of describing the world exhaustively (Lewis 1983, 346).

Lewis’s natural properties, like Fine’s real facts, are found at the “bottom” of the world. Sider’s extended notion of naturalness—or **structure**—also has this feature (Sider 2009, 2012). Sider’s notion is like my objectivity in that it applies to arbitrary concepts, rather than just propositions or just properties; but it is like Fine’s reality and Lewis’s naturalness in that it applies only to the world’s *basic* structure.

My use of “factual” or “objective” does not mark this kind of distinction. This is clear from the point that the factual is closed under logical connectives: anything “logically constructed” from the factual will be just as factual as what we began with. If it is factual whether emeralds are green at particular times, and likewise whether they are blue, then it is equally a factual matter whether emeralds are *grue*. There is no privileged basis of primitive objective concepts that generate the whole conceptual scheme—or at least, the framework I have presented does not single out such a basis.

It is no surprise then that factuality cannot do all the work that the finer-grained notions are sometimes put to. Clearly it won’t separate the projectible predicates from the gruesome; no more will it distinguish the intrinsic properties of objects from the relational; I don’t see it as particularly useful for a criterion of objective similarity, or of syntactic simplicity useful for a “Best System” account of laws of nature;<sup>26</sup> and I don’t see how it could exert any helpful force of reference magnetism. This is certainly not to say that factuality has no important role to play in epistemology, metaphysics, philosophy of science, or philosophy of language. There are very plausible coordinating constraints between them. For instance, laws of nature plausibly must be factual propositions, expressible using only objective concepts.<sup>27</sup> Similarly, I think that reference, understood in a non-deflationary sense as a relation between signs and the **WORLD**, should point to objective referents. These are suitably coarse-grained constraints.

Attention has recently been turned toward another metaphysical notion, that of **ground** (Fine 2001, MS; Schaffer 2009; Rosen 2010). Some think that the facts (or concepts or objects) are not only divided into a foundation and superstructure, but also there are further divisions into levels of being, and a lattice of supporting beams built between them. There is a distinctive way in which the basis elements are related to the derived, something like a privileged class of *derivations* of the generated from the generators.

<sup>26</sup>Indeed, under natural assumptions there is an objective property that necessarily is had by everything iff all the facts are as they actually are—and so a Best System account that adverted to the *objective* properties would be trivialized (cf. Lewis 1983, 367). (By (FW), for each factual possibility *w* besides the actual one,  $\alpha$ , there is a proposition that distinguishes  $\alpha$  from *w*. By the assumption *an arbitrary conjunction of factual propositions is factual*, the conjunction *p* of all of these propositions is factual. The assumption *if it is factual whether p, then being-such-that-p is objective* completes the argument.)

<sup>27</sup>Cf. Earman (1989, 171–3), for example.

Ground, like fundamentality, has no essential role in the framework I have just sketched. The factual *can* be understood in terms of fundamental reality and ground. For instance, Fine (2001, 29) explains it this way:

[A] proposition is factual iff it is real or it is grounded in what is real.

Similarly, the objective properties might be thought of as those which supervene on the distribution of natural properties (or which are logically constructible from them in some other sense). So if you like some of these fine-grained notions, you can understand the coarse-grained distinction as emerging from them. But there is no need to understand factuality this way. Indeed, I confess some skepticism toward the finer distinctions of ground, fundamentality, and naturalness. They seem, at least in some cases, to demand too much discrimination of the world. Probably I am not alone in this skepticism. So I think it is worth noting that the coarse-grained notion of objective fact is separable from the fine-grained notions of fundamental reality or ground; the project of limning the world's objective structure can, at least in some interesting cases, be undertaken without pursuing these other, more difficult quests.<sup>28</sup>

There is another project I like better, though. It is in some ways similar to the quest for grounds, but it arises instead from the idea that there are distinguished objective concepts other than propositions: this is the project of characterizing the facts *intrinsically*.<sup>29</sup> Our description of the facts shouldn't be parasitic on any non-factual ideology. Rather, the factual propositions should be "built up" compositionally from an inventory of objective concepts.

## 7 The qualitative world

Back to haecceitism. "Cheap haecceitism", recall, turns on a distinction between possibilities and possible worlds, and this distinction was charged with either confusion or else pointlessness. The first disjunct of the charge has now been met: explaining possible worlds as factual possibilities gives coherent content to the view. The cheap haecceitist accepts Possibility Haecceitism, because she accepts that stories like First (where you have an echo in the future) and Second (where you *are* an echo of the past) are *possible*. But she denies World Haecceitism by holding that there is no *factual difference* between the two stories.

Now I'll consider the metaphysical relevance of World Haecceitism. In what follows I'll reserve the term "possible world" for the factual possibilities and use "possibility" for the thin sort. Possible worlds, understood this way, are for metaphysics:

<sup>28</sup>Fine briefly considers a position like this under the heading of "semi-quietism" (2001, 29).

<sup>29</sup>In more or less the sense of Field (1980, 43–6). Cf. Fine (2001, 20):

The underlying metaphysical thought here is the inessentiality of the nonfactual in describing the factual. Even if the nonfactual were altogether expunged from the ordinary world, we could still provide a complete account of factual reality in terms of what remained.

their role is in the investigation of the world’s structure. Thus the chief importance of World Haecceitism is in this sort of metaphysical inquiry. The central issue is Adams’ question:

Is the world—and are all possible worlds—constituted by purely qualitative facts, or does thisness hold a place beside suchness as a fundamental feature of reality? (Adams 1979, 5)

The question is whether reality is purely qualitative. In keeping with the picture of metaphysics sketched in Section 5, and with my present policy of ignoring hyperintensional distinctions, I take Adams’ question to amount to whether there are genuine **FACTS** which are irreducibly non-qualitative, in the sense that they don’t supervene on how the world is qualitatively.<sup>30</sup> Let  $Q$  be the matter of how all qualitative propositions stand, and call a proposition **haecceitistic** iff  $Q$  does not settle whether  $p$ . Then the metaphysical thesis in question is **Qualitativism**:

(Q) There are no haecceitistic factual propositions.

More tersely,  $Q$  settles  $W$ : how the **WORLD** supervenes on how things are qualitatively. This is a metaphysical doctrine of the same form as **physicalism**—the doctrine that all facts are settled by the *physical* facts.<sup>31</sup>

The doctrine (Q) is equivalent to World anti-Haecceitism. Recall: World Haecceitism is the thesis that there are haecceitistically different possible worlds: worlds which agree on the truth of every qualitative proposition but disagree on the truth of some singular proposition. Worlds which agree on all qualitative propositions *and* all singular propositions agree on every proposition; and worlds which agree on every proposition are the same world. (A comment on “indiscernible worlds” in Section 8.) So we can restate World *anti*-Haecceitism as the doctrine that

(¬WH) No two worlds agree on every qualitative fact.

<sup>30</sup>In principle there are views that I will thus classify differently from how someone might who reads “fundamental features of reality” more strictly in terms of *ground*. Somebody might hold that there are facts which aren’t grounded in qualitative facts even though they supervene on them. Or somebody might hold (even more exotically) that all facts *are* grounded in qualitative facts even though they *don’t* supervene on them. (I don’t know of anyone who holds the first view, though analogous views about the grounds of, say, mathematical facts are commonly held. David Chalmers suggested the second view in a presentation at Princeton—but it strikes me as desperate.) Certainly views like these weren’t what Adams had in mind, nor do they play a major role in the related literature.

<sup>31</sup>Also like this physicalist doctrine, it has a modally weaker variant. Lewis holds physicalism to be compatible with there being non-physical **alien** natural properties, which are not instantiated in the actual world (See 1983, 364). Likewise, a weaker form of Qualitativism would hold merely that all actually instantiated objective properties are qualitative, allowing the possibility of alien haecceities. I don’t know whether anyone would find this thesis more attractive than the modally stronger version. (In fact, this is the opposite of Adams’ position in Actualism and Thisness.)

(I say qualitative *fact* because a world doesn't unequivocally say anything one way or the other about non-factual propositions.<sup>32</sup>) It is straightforward to show that (Q) and ( $\neg$ WH) are equivalent. (Proof:  $Q$  settles  $W$  iff the qualitative *facts* settle  $W$ . By (Agree<sub>W</sub>) this holds iff any worlds that agree on the qualitative facts agree on every fact. And by (FW) worlds agree on every fact iff they are identical.) In short: anti-haecceitism about possible worlds is equivalent to the metaphysical thesis that reality is qualitative. There are genuine haecceitistic differences between *worlds* just in case there are genuine haecceitistic *facts*. This is the source of the metaphysical importance of the doctrine about worlds.

Now consider an argument against (Q), essentially due to Adams. Recall the two scenarios First and Second.

- (1) First is possible and Second is possible.
- (2) So there are distinct possible worlds which agree on every qualitative fact.
- (FW) Distinct possible worlds disagree on some fact.
- ( $\neg$ Q) So there are haecceitistic facts.

A possible First-world and a possible Second-world would differ in no qualitative respect—but they are different in *some* respect, so worlds must have non-qualitative structure.

One response the qualitativist has to the argument is to deny the first premise (1). But this is an uphill road—and there is another way. If “fact” is understood in its “thick” metaphysical sense, then the argument turns on an equivocation between two different conceptions of a possible world. What makes the step from (1) to (2) plausible is the conception of an *thin* possibility; what makes the premise (FW) plausible is the conception of a *factual* possibility. So the qualitativist can consistently hold that First and Second are possible by being a *cheap haecceitist*. The possibilities are genuine, but they correspond to just one **WORLD**. The possibilities of you being first and you being second aren't different with respect to any objective fact, but only with respect to how the facts are represented.

Adams is, in fact, sensitive to a distinction like this one, which he calls a distinction between worlds and *descriptions* of worlds. He also thinks there is a good reason to take differences like that between First and Second to be genuine differences between *worlds*. His case is a bit different: instead of two epochs, there are two qualitatively indiscernible planets, Castor and Pollux, just one of which is at some point spectacularly destroyed. He writes:

That the difference between  $w_2$  and  $w_3$  is real, and could be important, becomes vividly clear if we consider that, from the point of view of a

<sup>32</sup>Incidentally, this is a minor glitch in Lewis's way of stating anti-haecceitism: on Lewis's view, a world doesn't unequivocally represent singular propositions as true at all; this is a job for counterparts, not worlds. Presumably when he says a world represents some *de re* matter as true, he really means it represents it as true with respect to some choice of counterparts. This means the same world can represent both a proposition and its negation as true—which is a bit odd. (Compare Skow 2007, 105)

person living on Castor ... and having (of course) an indiscernible twin on Pollux, it can be seen as the difference between being annihilated and somebody else being annihilated instead (Adams 1979, 22).

We can make the same point about my stories: in First, you are about to be destroyed in a cosmic reset, but in Second it is your past twin who suffered that fate. Surely this is a real difference in fact?

There are some subtle issues here relating to whether we have some kind of special first-person evidence concerning the metaphysics of ourselves.<sup>33</sup> There are also questions about the proper attitude to take toward the non-factual. For instance, one might think that if it is not an objective fact whether  $p$ , then it makes no sense to *care* whether  $p$ ; but surely it makes sense to care whether it is you who is annihilated.<sup>34</sup> I am not sure what the right thing to say is about arguments like these. Maybe it can make sense to care about non-factual matters. Maybe there is some alternative way of redescribing what it makes sense to care about in cases like these in purely qualitative terms. Or maybe an argument like this is sound, and we should be full-fledged haecceitists—and not mere cheapskates. At this point I don't intend to settle this first-order debate. What I want to make clear is what kind of consideration the debate turns on. It is not the first stage of Adams' argument: the *possibility* of scenarios like First and Second may be cheap. Rather the action is in the second stage: whether there is a *real difference* between such scenarios in some matter of objective fact.

Most people tempted by Qualitativism will also like a more general version. I'll assume you understand the contrast between the qualitative and singular not only for *propositions* but also as it applies to *properties* (and relations—let these be understood as included). (Probably this is a safe assumption, at least if you understood the propositional contrast. The property version is the one Adams discusses—and it's quite likely that you implicitly thought of qualitative propositions as those which are “built” appropriately from qualitative properties.) A **haecceitistic property** is one that doesn't (locally) supervene on qualitative properties—that is, one that isn't necessarily equivalent to some disjunction of conjunctions of qualitative properties.<sup>35</sup> Then the more general thesis is

(Q<sup>+</sup>) There are no haecceitistic objective properties.

(Why “more general”? One reason would be if propositions are a special kind of property or relation. Propositions might be zero-place relations. Or they might be properties of the entire cosmos (See Lewis 1986, 53–54). Even if we don't *identify* propositions

<sup>33</sup>Cf. van Cleve (1985, 105); van Inwagen (1991, §12).

<sup>34</sup>Cf. Williams (1970, 176ff); Parfit (1986, 265).

<sup>35</sup>Some ways of defining supervenience will have the unfortunate consequence that thinsness properties like *being Armand* trivially supervene, by the non-contingency of identity. (Thanks to Kit Fine for discussion on this point.) But this way doesn't: the  $B$ -properties locally supervene on the  $A$ -properties iff any possible things which share all their  $A$ -properties share all their  $B$ -properties. (This extends the definition of “settles” for subject matters to algebras of *properties*.) This is equivalent to the formulation in the main text.

with cosmos-properties, there are fairly plausible bridge principles between them. For a proposition  $p$ , a  $p$ -**cosmos** is a cosmos such that  $p$ . Here are some bridge principles:

Necessarily, there is exactly one cosmos.

If being  $F$  is a qualitative property, then it is a qualitative proposition that some cosmos is  $F$ .

If  $p$  is a factual proposition, then being a  $p$ -cosmos is an objective property.

These principles together with  $(Q^+)$  imply  $(Q)$ . The argument: if  $p$  is factual, then being a  $p$ -cosmos is an objective property, and  $(Q^+)$  implies that being a  $p$ -cosmos supervenes on some qualitative properties  $Q_i$ . It follows that  $p$  supervenes on the qualitative propositions that-some-cosmos-is- $Q_i$ .

Say Quella is a property qualitativist: she believes  $(Q^+)$ . Adams argues that Quella's view implies the Principle of Identity of Indiscernibles (Adams 1979, 11; McMichael 1983, 57; cf. Skow 2007, 100):

(PII) Necessarily, any individuals which share all their qualitative properties are identical.

If Adams was right about this, it would be bad for Quella, since (PII) is not a very plausible thesis: it rules out all kinds of symmetric worlds which are eminently possible. Fortunately for Quella, Adams is not right about this. Let's look at an argument from  $(Q^+)$  to (PII) to see where it breaks down.

Each individual  $a$  has a **thisness**, the property of being  $a$ . By  $(Q^+)$ , thisnesses must supervene on qualitative properties. But then if Armand and Belinda have all qualitative properties in common then they either both have or both lack the property of being Armand. Clearly Armand has this property, so Belinda has it as well, which is to say that Belinda is Armand, Q.E.D.

The misstep in this argument is that  $(Q^+)$  does *not* in fact imply that  $a$ 's thisness supervenes on qualitative properties. What it says is that *objective* properties are qualitatively settled. So what Quella should deny is that Armand's thisness is an objective property: in general, she should hold that there are no objective non-qualitative thisnesses. If she holds this, then she is free to go on denying (PII).<sup>36</sup>

So Quella should hold that *being Belinda* is not an objective property. Presumably the problem is not with *being*; so Quella should think that Belinda herself is not part

<sup>36</sup>I think that Pooley is getting at something similar here:

I think that Adams' conclusion is irresistible. Thisness (as he has defined it) cannot always be purely qualitative. But the anti-haecceitist need not be troubled by this conclusion. Although thisnesses can be primitive *in the sense that they are nonqualitative* they need not be thought of as *metaphysically* primitive, substantial properties. They need not be the type of things that can provide a promising explanatory bedrock on which to erect a haecceitistic metaphysics (MS, 93).

of reality: the individual concept *Belinda* is not objective. This isn't the same as saying that *Belinda* doesn't exist—that she isn't anything. Demoting a concept from the office of objectivity doesn't prevent it from performing lay functions. *Belinda* is a perfectly serviceable “thin” concept, figuring in “thin” truths; and these can include the truth that something is *Belinda*. But she isn't “out there”, over and above the qualitative role that she plays. Singular, non-qualitative claims about *Belinda* don't state objective facts about the world.

The general picture *Quella* is pressed toward is that individuals are not part of metaphysical reality: she should disavow **individualism** in (pretty much) Shamik Dasgupta's (2009) sense, or **metaphysical haecceitism** in Fine's (2005). And, if she aims to give an *intrinsic* theory of the general facts (and if she is concerned about the individual *variables* that appear in the most natural way of stating them—but there are subtleties here) then she should turn to something roughly like the “bundle theory”: there isn't something further to an individual than her various qualitative properties and relations. Probably *Quella* had best not settle on an old-fashioned bundle theory that directly constructs individuals out of qualitative properties. (This sort of view runs into troubles with (PII) and with relations more generally.) But there are fancier versions around—like Dasgupta's algebraic generalism—which share the common idea that the book of the world is about qualitative properties and relations and their patterns of instantiation, and not about particular individuals.<sup>37</sup>

## 8 Some Lewisiana

In the preceding section I argued that World anti-Haecceitism is equivalent to the metaphysical thesis that reality is qualitative; in particular, an anti-haecceitist about possible worlds shouldn't believe in objective non-qualitative properties of *thisness*. But Lewis writes:

Despite its name, [world] haecceitism is not the acceptance of *haecceities*: non-qualitative properties of “thisness” which distinguish particular individuals. ... [Y]ou don't have to be a haecceitist to believe in haecceities. I am no haecceitist; but I hold that ... there is a property for any set whatever of possible individuals. This property I identify with the set itself. So we get properties that are in no way qualitatively delineated, and some of these are haecceities of this- and other-worldly individuals. A unit set of an individual is one especially strict sort of haecceity. Also, for any individual and any counterpart relation, there is the set of that individual together with all its counterparts, and this is a less strict sort of haecceity (Lewis 1986, 225).

But I say that neither of the two sorts of properties Lewis considers here really meets the job requirements for being a non-qualitative thisness.

<sup>37</sup>See van Cleve (1985); Hawthorne and Sider (2002); Dasgupta (2009), and for technical background Quine (1960); Halmos (2006).

Lewis identifies a property with the set of all its possible instances. The restriction of that set to the parts of a particular world tells you about how that property could have been distributed.

Consider the property of being a talking donkey, which I say is the set of all talking donkeys throughout the worlds. The full membership of this set does not vary from world to world. What does vary from world to world is the subset we get by restricting ourselves to the world in question. This is how the number of instances is contingent; for instance, it is contingently true that the property has no instances (Lewis 1986, 51).

Now consider this particular chicken, Belinda. Belinda's thisness is the property of *being Belinda*. According to Lewis, Belinda is a possible individual, and her unit set is a property—call it Unit. Is Unit the property of being Belinda? No. The restriction of Unit to any world other than the actual one is empty. This means, by parallel considerations to the passage just quoted, it is *extremely* contingent that Unit has any instances. Consider any world just like ours except that the lighting is a bit dimmer. The restriction of Unit to any such world is empty; so, necessarily, if the lighting were a bit dimmer, Unit would have no instances. But Belinda is not as fragile as that: something could be Belinda even in dimmer light. So Belinda's thisness could be instantiated even if the light were dimmer. So Unit is not, in fact, Belinda's thisness.

Lewis also considers the set containing just Belinda and her counterparts—call it Counter. Counter isn't qualified to be Belinda's thisness, either. Consider a world where Belinda has *two* counterparts (the Reset world, for example). The restriction of Counter to such a world has two members. So, again by parallel considerations to the quoted passage, it is possible for Counter to have two instances. But it isn't possible for Belinda's thisness to have two instances: if it did, then both instances would be Belinda, and so they would be one thing, not two.

The right thing for Lewis to say is that *no* objective property is Belinda's thisness. That's fine: he doesn't need one. There is no set of possible individuals whose restriction to a possible world is the set of things which are Belinda according to that world. For there just isn't any unequivocal fact of the matter concerning which things are Belinda according to a world: that's not a job for worlds, but for mere *possibilities*—for counterpart sequences.<sup>38</sup> Instead of an objective property, the counterpart theorist has a “frame-relative” property of being Belinda. It can't be specified as a set of possible individuals, or (equivalently, in this context) as a function from worlds to sets of individuals. Instead, the property of being Belinda can be identified with a function from each counterpart sequence to a set. Non-qualitative thisnesses—singular properties concerning particular individuals—are not among the objective properties that Lewis believes in, after all.

Now, Lewis is right that he believes in some *non-qualitative* properties. But they aren't ordinary thisnesses. They are something stranger.

<sup>38</sup>Compare the discussion of “actually dull” in (Russell 2013, 24).

Lewis would not accept World anti-Haecceitism quite the way I stated it in [Section 7](#). My statement, recall, said that no two worlds agree on all of the qualitative facts. But Lewis writes:

[A]nti-haecceitism is neutral about whether there are qualitatively indiscernible worlds: there can be any number of indiscernible worlds, so long as they are alike not only qualitatively but also in representation *de re*. ... For all I know, there are many indiscernible worlds, so that the worlds are even more abundant than we would otherwise think. I see no theoretical benefits to be gained by supposing that there are or that there are not, so on this question I advise that we remain agnostic (Lewis 1986, 224).

But I say that, if you are an anti-haecceitist, then you really do have a good theoretical reason to deny that there are “indiscernible” worlds that agree on the qualitative facts. The reason arises from the Fact-World Link, the distinctive constraint on possible worlds as *factual* possibilities: any two worlds disagree on some fact. If possible worlds don’t obey this constraint, then they aren’t doing the distinctive job of possible WORLDS, the job that makes sense of their distinction from mere possibilities.

Suppose there are “indiscernible” worlds  $w$  and  $w'$  which agree “not only qualitatively but also in representation *de re*”. There must be some factual proposition which is true at  $w$  but not  $w'$ , and by hypothesis this proposition is *neither* qualitative, *nor de re*. Then it is of a third, stranger kind—neither suchness nor thisness. Lewis identifies propositions with sets of worlds; so an example of these strange propositions would be the unit set of  $w$ —call it Wunit.

Propositions like this one pose a terminological problem. I used the term “haecceitistic” for whatever doesn’t supervene on quality. But this isn’t really an appropriate label for propositions like Wunit, which is not a singular, *thisness* sort of proposition. (You might wonder: isn’t it a singular proposition about *a world*? Not by Lewisian lights, it isn’t. Presumably  $w'$ , a qualitative duplicate of  $w$ , is a counterpart of  $w$  by any qualitative counterpart relation. So if  $w$  says anything *de re* about  $w$ , then  $w'$  says it, too. Wunit discriminates between  $w$  and  $w'$ , so it isn’t one of those *de re* propositions.) Just as Lewis’s “haecceities” Unit and Counter aren’t really thisnesses, Wunit isn’t really a singular proposition. For lack of a better word, we might call such propositions and properties “quasi-haecceitistic”. If there are any of these, we shouldn’t use the word “haecceitistic” in the way I proposed, and we’ll need a new way of drawing the relevant distinctions.

But look—I see no good reason to believe in any facts of this strange sort. If things were no different in any qualitative way *and* no different in any way concerning particular things, why on earth would we think that was a *different* way for the world to be? Since we shouldn’t believe in such oddball facts, we also shouldn’t believe in such differences between worlds.

Indiscernible worlds are not such a big deal for Lewis. “No application of modal realism seems to require indiscernible worlds, and none would be hindered by them. It is

an eminently negotiable question” (Lewis 1986, 157). So he can give them up without much loss. But similar issues arise for the possibility of indiscernible *individuals*—and these are potentially more serious.

Consider again the property Unit, the unit set of a particular possible individual, Belinda. This, I argued, is not a thisness. But neither is it a *qualitative* property—at least, not if Belinda could exist in a symmetric world, and let’s suppose she could. But why should we believe in such strange objective properties, which are neither qualitative nor singular? I say we shouldn’t.

The set Unit has a bit more wiggle room than Wunit. The Fact-World Link provides a strong reason to believe that, if there are qualitatively indiscernible worlds, then there is a non-qualitative fact. But the analogous principle for possible individuals is not so cut-and-dry: it isn’t totally clear that any distinction between possible individuals requires a difference of objective properties. I’m not sure that there couldn’t be possible individuals that are alike in every objective respect. In particular, then, Unit might not really be an objective property.

But if there aren’t any objective properties like Unit, then I think counterpart theory gives us at best a misleading picture of what the possible worlds are like. The point of an account of possible worlds, understood as ways objective reality could be, is to make clear what the objective features of the world are, and how they could be. According to the counterpart theorist, each possible world has a particular inventory of possible individuals. But do these possible individuals really reflect *objective* features of the world? If they did, we would expect the property of being any particular one of them—“quasi-haecceities” like Unit—to be objective properties. But since it isn’t plausible that there are objective properties like Unit, likewise we shouldn’t think that these particular possible individuals are really objective features of the worlds. If our hearts are with qualitativism, we should think that the objective features of the world are distributions of qualitative properties, not these possible individuals. And if our hearts are with metaphysical *haecceitism*, we should think that the objective features of the world include individuals—real individuals with real thisnesses, not these “quasi-haecceitistic” substitutes.

Lewis’s own reasons for rejecting World Haecceitism may seem quite different from the metaphysical motivations I have offered. But qualitativist commitments of a sort—an aversion to “mysterious non-qualitative aspects of worlds” (230)—do play an important role. If there are possible worlds that are qualitatively alike, but just one of which represents Belinda as being tiny, then what determines which of them it is? By hypothesis, it isn’t some qualitative feature that distinguishes it. So Lewis challenges: “I ask what the non-qualitative determinants of representation *de re* are, and how they do their work” (228).

Of course, we have just seen that Lewis does countenance some non-qualitative structure: the numerical identity of possible objects. Could one world represent Belinda as tiny because of its distinctive inventory of particular possible individuals? This can’t help much, because Lewis is convinced that there is no overlap between the inventories of distinct worlds (with the possible exception of some immanent univer-

sals—but never mind those).<sup>39</sup> So the possible inhabitants of the world where Belinda is tiny, and the inhabitants of the alternative world where some other chicken takes care of that, both stand in the same identity relations to the inhabitants of our world, and in particular to Belinda herself: none at all. Possibilist identities don't help to distinguish the two worlds.

But between qualitative features and possibilist identities, we have exhausted all the structure Lewis believes in. It is not that there are no relations between Belinda and other possible objects—there are plenty, a relation for every set of possible objects.

Then [the haecceitist] must tell me which of all the relations and properties and sums I believe in are the special ones. He cannot say that the special ones are the ones that carve along the qualitative joints; that I can understand, but that does not meet his need to single out some of all the ones that *don't* carve along the joints. He cannot avoid circularity. I do not think he can answer me. If he cannot, he leaves it entirely mysterious what it could mean to say that things were non-qualitative counterparts.

There are two ways to take this. One is stipulative: perhaps Lewis takes the “the qualitative joints” to be synonymous with “the joints of nature”.<sup>40</sup> But if this is how Lewis understands “qualitative”, then he has subtly changed the subject. For the rest of us, the qualitative was intended to contrast with the *irreducibly singular*, and in particular with thisnesses like the property of being Belinda. And the question before us is whether or not these properties are part of the structure of the world; in Lewisian terms, whether they carve nature at the joints. To call a non-qualitative but natural thisness property (for Lewis this would amount to a non-qualitative counterpart relation) a “contradiction in terms” (Lewis 1986, 229) is just to force us to find new terms: metaphysical privilege need not end at the *qualitative* joints of nature. That is what is in question.

The other, more interesting way to take the argument is as an appeal to parsimony. According to this version, the charge isn't that a natural but non-qualitative thisness is *contradictory*; only that it is *mysterious*—an additional and unneeded metaphysical distinction, not to be trusted. If objective thisnesses aren't qualitatively determined, and they aren't determined by the non-qualitative structure of possibilist identity, then it is thriftiest to give them up altogether. (It's not clear to me which of the two charges Lewis most seriously intends to make.)

<sup>39</sup>Lewis is convinced of this because of **the problem of accidental intrinsics**. Belinda could have been a bit smaller than she is. If some world represents that Belinda is smaller by including the very same possible object that the actual world does, then this same possible object represents having one size relative to the actual world and represents having a different size relative to another world. On Lewis's view, though, a possible object represents having a certain size simply by *having that size*. And he finds it incredible that having a certain size is a world-relative matter (Lewis 1986, §4.2).

<sup>40</sup>“Worlds might differ in their qualitative character ... That is to say, they might exhibit or represent different patterns of instantiation of the natural intrinsic properties and external relations ...” (221).

But maybe Lewis is playing a different game from mine altogether. To the extent that I could, I've been suppressing the oddest feature of Lewis's views about possible worlds. For Lewis, our world is something less than all of reality. Our Lewis-world is the maximal spatio-temporally connected object of which we are a part (Lewis 1986, §1.6). By Lewis's lights, there is much to say that goes beyond what is intrinsic to this large object—for there are vast and various places spatio-temporally disconnected from us as well. Now, Lewis doesn't use these explicit terms, but one certainly gets the impression that the claims he makes about these realms are intended as fully objective factual propositions. If that is so, then our Lewis-world is *not* our **WORLD** in the sense I have been discussing. It does not specify all matters of objective fact—just a few facts of special local interest.

This means that Lewis-worlds play *neither* of the two roles I've been discussing. They are not possibilities, the objects that witness claims about what is possible. (That is what counterpart sequences are for.) Neither are they possible **WORLDS**, ways that reality itself might have been. (None of them is big enough to be the way reality *is*!) So why call these spatio-temporal chunks “possible worlds” at all? I have tried to defend the cogency of the Lewisian thesis that worlds need not be possibilities. But my defense gives no comfort to the thesis that worlds are what *Lewis* says they are. (These universes might count as “worlds” in the sense in which distant planets or galaxies are other worlds, but I don't *think* that was what we were talking about.)

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