9-2011

Identity and the Limits of Possibility

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IDENTITY AND THE LIMITS OF POSSIBILITY

A Dissertation Presented

by

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Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September, 2011

Philosophy

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For philosophical grandparents

ACKNOWLEDGMENTS

I have a big philosophical family. Since philosophy offers us few occasions to acknowledge our debts, I would like to make the most of this opportunity.

I owe an enormous amount to my advisor, Phil Bricker. It is a rare opportunity to study under a philosopher and person that one unfailingly respects. I have done my best to make good on this opportunity. For Phil, this has resulted in putting up with innumerable rough drafts and countless confused questions. For me, this has resulted in both challenging and instructive comments and patient and profitable discussion. This experience has been invaluable. As a person and philosopher, I offer him my sincerest thanks.

I owe much to the other members of my committee: Lynne Baker, Joe Levine, Jonathan Schaffer, and Angelika Kratzer. Lynne has been a steady stream of support and a counterpoint of good sense to my unconventional philosophical inclinations. Joe has been an insightful and welcome critic and teacher since my first days at UMass. Jonathan's work has been a model for much of this dissertation, and his willingness to help me along is enormously appreciated. Finally, my thanks to Angelika for her gracious service as an outside reader.

My thanks to other members of the UMass Philosophy Department. Fred Feldman has patiently steered me through the various stages of the Ph.D. program. In addition, Hilary Kornblith has served as a professional mentor. His guidance and advice have meant a great deal to me. My thanks also to Beth Grybko, the best of all possible administrative assistants.

My philosophical family extends beyond those here at UMass. I owe the opportunity to study here to my former professors at the University of Manitoba and the

University of Victoria. In particular, Ben Caplan's guidance during my time at the University of Manitoba has contributed greatly to this dissertation. Thanks to all those who put up with me throughout my formative years.

Along with my professors, I owe an intellectual and personal debt to my friends and fellow students. From my days at the University of Victoria, I would like to single out my dear friends, Chloe Armstrong and Anthony Kulic. From my time at UMass, I thank all those who have provided the philosophical comradery that has meant so much to me. Among others, my thanks to Kelly Trogdon, Michael Rubin, Ed Ferrier, Barak Krakauer, Chris Ragg, Heidi Buetow, Jim Binkoski, Jeremy Cushing, Jeff Dunn, Lowell Friessen, and Alex Sarch. My warmest gratitude also to Sarah Thompson for her welcome distractions and kind encouragement.

My family of non-philosophers are owed thanks of an entirely different order. They have been ceaselessly patient and supportive over the years. For everything, I thank Janet, Doug, Megan, and Steve.

Thanks, finally, to the Philosophy Department at the University of Massachusetts Amherst for financial support in the form of the Puryear Fellowship, the Dean of Humanities and Fine Arts for financial support in the form the Dean's Dissertation Fellowship, and the Social Sciences and Humanities Research Council of Canada for financial support in the form of a Doctoral Fellowship.

ABSTRACT

IDENTITY AND THE LIMITS OF POSSIBILITY

SEPTEMBER, 2011

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Possibilities divide into two kinds. Non-qualitative possibilities are distinguished by their connection to specific individuals. For example, the possibility that Napoleon is a novelist is non-qualitative, since it is a possibility for a specific individual, Napoleon. In contrast, the possibility that someone—anyone at all—is a novelist is a qualitative possibility, since it does not depend upon any specific individual.

Haecceitism is a thesis about the relation between qualitative and non-qualitative possibilities. In one guise, it holds that some maximal possibilities—total ways the world could be—differ non-qualitatively without differing qualitatively. It would, for example, be only a haecceitistic difference that distinguishes actuality from a maximal possibility where Napoleon and Nefertiti swap all of their qualitative properties and relations. According to this alternative possibility, things are the very same qualitatively, but which individuals occupy which qualitative roles differs: Nefertiti would be a stout conqueror, while Napoleon would be a beautiful consort.

This dissertation is an examination of the nature of haecceitism, the arguments in its favor, and the consequences that follow from it. In Chapter One, I distinguish various conceptions of haecceitism and related theses concerning maximal possibilities, possible worlds, the identity of indiscernibles, and non-qualitative properties. In Chapter Two, I develop and defend conceivability arguments for haecceitism in the face of various anti-haecceitist challenges. In Chapter Three, I consider the relation between haecceitism and the Humean approach to plenitude, which aims to characterize the space of possible worlds in terms of combinatorial principles. In Chapter Four, I examine the distinction between qualitative properties like *redness* and non-qualitative properties like *being Napoleon* and argue in favor of fundamental non-qualitative properties. In Chapter Five, I present a novel version of non-qualitative counterpart theory, which employs bare particulars to reconcile modal realism and haecceitism. In Chapter Six, I clarify and defend quiddistism, the property-theoretic analogue of haecceitism. I conclude in Chapter Seven by defending the modal view of essence.

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CHAPTER 1

HAECCEITISMS

1.1 Preliminaries and Possibilities

In 1973, Bruce Springsteen released his first album, *Greetings from Asbury Park, N.J.* That same year, Thomas Pynchon published his third novel, *Gravity's Rainbow.* While these events actually took place, they might not have. Springsteen could have released a jazz album; Pynchon could have written a children's book. In either case, the world and its inhabitants would have been a different way than they actually are. But, as things turned out, these alternative possibilities were left unactualized.

Since these alternative possibilities are possibilities *for* Springsteen and Pynchon, they are *non-qualitative possibilities.* Other possibilities, like the possibility that something red exists, are not possibilities *for* any specific individual. Instead, they are *qualitative possibilities.* They could obtain regardless of whether any specific individual existed, since they depend exclusively on how the world is qualitatively. For example, the possibility that something red exists would obtain whether the world contained only a single rusty pick-up truck or a lone crimson berry.

At the actual world, a vast number of possibilities, both qualitative and non-qualitative, obtain: human beings exist, trees sprout leaves, manned spaceflight occurs, and Thomas Pynchon writes novels. While each of these possibilities could have failed to obtain, they are all actualized. Among these many actualized possibilities is one unique *maximal possibility.* This maximal possibility *includes* each and every actualized possibility and obtains exclusively at the actual world.

An analysis of possibility, maximal and otherwise, is a central pursuit in the metaphysics of modality. But it is not the only pursuit. In addition, we aim at knowledge about what is and is not possible. In this chapter, I will take up an issue of particular relevance to this latter pursuit. For this reason, I will not presuppose a particular analysis of possibilities. So, while it is natural to identify possibilities with propositions or states of affairs, I will assume only that the notions of *possibility*, *maximal possibility*, and *inclusion* are sufficiently well understood.[1] And, with these notions available, we can inquire into the limits of possibility within a largely neutral framework. Note, also, that we are presently concerned with possibilities rather than possible worlds. As will become clear, there is some reason to think they are one and the same, but, for the moment, it will be helpful to leave this question open.

Unsurprisingly, philosophers disagree over the limits of individual possibility. *Essentialists* believe there are certain properties or relations that constrain non-qualitative possibilities.[2] For example, they hold that properties like *being human* or *being a mammal* are essential to Springsteen and Pynchon, so it is impossible for these individuals to exist without instantiating these properties. In contrast, *anti-essentialists* accept a broader range of non-qualitative possibilities. They believe it is possible for Springsteen or Pynchon to exist without instantiating these allegedly essential

[1]For discussion, see Adams (1981). If one identifies possibilities with propositions and maximal possibilities with conjunctions of possibilities, inclusion can be helpfully understood as entailment.

[2]Essentialism admits of many varieties. Among its advocates are Kripke (1980), Plantinga (1974), Salmon (1986), Ellis (2001) and Wiggins (2001).

properties.[3] So, according to anti-essentialists, there are no limits on the range of individual possibilities.[4]

Haecceitism, like essentialism and anti-essentialism, is a thesis about the limits of possibility. It holds that maximal possibilities can differ solely in terms of the individuals they are *possibilities for*. Unfortunately, many doctrines have been labelled as "haecceitism". And, while most of these doctrines hold that some possibilities or possible worlds differ solely in terms of the identity of the individuals they include, these doctrines differ in both subtle and substantive ways. So, prior to taking up haecceitism's relation to the limits of possibility, our first challenge is to get clear about what haecceitism is, and what it is not.

To this end, we must distinguish two theses that philosophers typically intend by "haecceitism".[5] One thesis concerns only possibilities; the other concerns both possible worlds *and* possibilities. I examine these varieties of haecceitism in Sections Two and Three. After clarifying their differences, I spend the remainder of this chapter getting straight on their finer points as well as their relation to doctrines often conflated with haecceitism. So, in subsequent sections, I clarify how haecceitism relates to the Principle of the Identity of Indiscernibles (Section Four), the existence of haecceities (Section Five), transworld identity (Section Six), and singular proposi-

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[3]Anti-essentialism is a minority opinion. Quine (1960) famously denounces essentialism, but retains a disdain for modality that precludes his categorization as an anti-essentialist. And, although he is not an anti-essentialist, Chisholm (1967) offers a notable argument for anti-essentialism considered at length in a later chapter. Lewis (1986) attributes a form of anti-essentialism to Pavel Tichy. For further discussion, see Nelson (2007).

[4]I assume here that anti-essentialists uphold the necessity of identity, but see Nelson (2007) for an argument that anti-essentialists ought to deny that even the identity and distinctness of individuals is necessary.

[5]My attempt to clarify the commitments of haecceitism builds upon earlier efforts in Lewis (1986) and Skow (2008). Another usage of the term 'haecceitism' is found in the work of Nathan Salmon, who views haecceitism as a thesis about whether we are able to stipulate which individuals are being referred to in various counterfactual scenarios. See Salmon (1996) for further discussion of what Salmon intends by 'haecceitism'. Yet another usage of 'haecceitism' is found in Gallois (1998), but I do not take up his account here.

tions (Section Seven). I conclude by summarizing the relevant conclusions about the varieties of haecceitism in Section Eight.

Before proceeding, let me note that my aim here is not to uncover "the one true meaning" of the word 'haecceitism' or to suggest that philosophers have heretofore been mistaken about what they have meant in employing the term. My aim is only to provide a taxonomy of the views that cluster around haecceitism-talk. Philosophers are well within their rights to define their terms as they see fit, but if their definitions lead to conflations and confusions, philosophical work must be done. My aim here is to do exactly this. And, in so doing, I will develop a taxonomy which makes perspicuous the distinctions between a number of theses too often run together. I do hold that this taxonomy, in addition to clarifying the distinctions and relations between theses, also squares with the usage and intentions of most philosophers who take up these issues. Accordingly, my project here is not to offer a revisionist account of the philosophical terrain. In subsequent chapters, my efforts will, however, extend beyond mapping this terrain and aim at finding the best place to settle within it.

1.2 Alethic Haecceitism

As I said above, there are two varieties of haecceitism. The first variety of haecceitism, *alethic haecceitism*, is a thesis about what sorts of modal claims are true and, therefore, what possibilities we should countenance. On this score, defenders of alethic haecceitism are fortunate: common modal intuition appears to side in their favour. Consider, for example, that you could have been one of two twins. You could have been the eldest twin or you could have been the youngest twin. And, regardless of which twin you were, events in the world could have unfolded in the very same way.

Since our ordinary modal reasoning finds nothing incoherent in these modal claims, there is strong *prima facie* reason to accept them as true. And, to this end, we must

distinguish among the possibilities these claims describe. It seems, then, that there is a maximal possibility according to which you are the eldest twin and another maximal possibility according to which you are the youngest twin. Furthermore, these possibilities differ *only* in terms of which of non-qualitative possibilities they include—in this case, the possibilities for you and your twin.[6]

Alethic haecceitism is the doctrine that some maximal possibilities differ in just this way. And, with this in mind, we can now define our first variety of haecceitism as follows:

> **Alethic Haecceitism**: Some maximal possibilities differ only with respect to the non-qualitative possibilities they include.

Maximal possibilities can differ, not only with respect to non-qualitative possibilities they include, but also with respect to the *qualitative possibilities* they include. Qualitative possibilities obtain only if certain qualitative properties or relations are instantiated. How exactly qualitative properties or relations are to be distinguished from non-qualitative ones is a contentious issue.[7] For present purposes, I will assume that properties or relations like *being spherical* or *being larger than any red object* are qualitative and, furthermore, that we have some intuitive grasp of the notion of a qualitative property or relation. Accordingly, the possibility that something spherical exists and the possibility that something blue is larger than something red are both qualitative possibilities. And, with this mind, we can note that if some maximal possibility includes the qualitative possibility that a golden mountain exists and another does not, these possibilities are separated by a *qualitative difference*. We can define qualitative difference as follows:

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[6]This examples owes to Lewis (1986: 231).

[7]I examine outstanding proposals for analyzing this distinction in Chapter Four and defend the view that qualitative properties supervene upon natural properties as conceived of and defended in Lewis (1983).

> **Qualitative Difference**: Possibilities differ qualitatively if and only if they differ with respect to the qualitative possibilities they include.

Qualitatively indiscernible possibilities include the very same qualitative possibilities. And, if alethic haecceitism is true, there are distinct but qualitatively indiscernible maximal possibilities. So, in cases like the twin example provided above, alethic haecceitism accommodates the truth of the relevant modal claims by distinguishing qualitatively indiscernible maximal possibilities solely in terms of the non-qualitative possibilities they include. Since alethic haecceitism entails that some possibilities differ without differing qualitatively, we can say that such possibilities are separated by a *haecceitistic difference* rather than a qualitative one. We can now define haecceitistic difference as follows:

> **Haecceitistic Difference**: Possibilities differ haecceitistically if and only if they differ only with respect to the non-qualitative possibilities they include.

According to *alethic anti-haecceitism*, there is a qualitative difference between any distinct maximal possibilities. So, faced with the twin case above, the anti-haecceitist must reject the possibilities we considered. Instead, he must claim that some qualitative difference holds between every maximal possibility according to which you are the eldest twin and every maximal possibility according to which you are youngest twin.

Having introduced alethic haecceitism, let us now consider another example often employed to motivate it. Suppose that there is a plane along which our universe is mirror-symmetric. According to this mirror-hypothesis, there are, on the other side of the universe, mirror-duplicates of you, me, Springsteen, Pynchon, and everyone

else on our familiar side.[8] Given suitable technology, we might even observe this mirror-reversed side of the universe, perhaps errantly believing it to be our reflection. Now, further suppose that, later this week, the mirror-reversed side of the universe opposite us will blink out of existence. Billions upon billions will perish instantly. Mirror-duplicates of you, me, Springsteen and Pynchon will vanish. Fortunately, life will continue here as we soldier on without our mirror-duplicates. Note, however, that this non-qualitative possibility, according to which we survive, is nowhere near as distressing as the non-qualitative possibility according to which our half of the universe, rather than that of our mirror-duplicates, ceases to exist. In this less appealing of outcomes, our mirror-duplicates continue on, but we are doomed by this time next week.[9]

There is a stark contrast between non-qualitative possibilities where you exist next week and those where you perish. In considering the mirror-hypothesis, this contrast must be understood in terms of a haecceitistic difference between possibilities. Quite clearly, the individual who instantiates all of your qualitative properties and relations—your *qualitative profile*—on *this* side of the universe is you, an individual you care very deeply about. The individual on the other side of the universe that shares your qualitative profile is not you. And, while you may feel no animosity towards him or her, you two are distinct, so, if one of you is to be annihilated, you should hope it is your mirror-duplicate.

In this case, the maximal possibility where you survive and the possibility where you do not are separated only by a haecceististic difference. And, insofar as this case and others like it involve genuinely distinct possibilities, a satisfactory conception

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[8]I assume here that mirror-duplicates are indiscernible and set aside worries about handedness or spatial orientation.

[9]This example follows those considered in Adams (1979), Lewis (1983b), and Lewis (1986).

of modality must acknowledge haecceitistic differences in order to limn the space of possibilities. Alethic haecceitism does exactly this.

An additional class of modal claims involving "swapping" or "replacements" also require the truth of alethic haecceitism. Consider the claim that you could be qualitatively just as I am and I could be just as you are. According to this claim, there is a possibility according to which you and I "swap" our respective qualitative profiles. Similarly, there is a possibility according to which Springsteen has all the qualitative properties that Pynchon does and Pynchon has all the qualitative properties that Springsteen does. In swapping cases of this kind, there is no qualitative difference between the possibilities under consideration. They differ only with respect to the non-qualitative possibilities involved.

Other modal claims involve "replacement". Consider the claim that the world could be just as it is qualitatively but that you nevertheless fail to exist. Instead, an individual distinct from all actual individuals but qualitatively indiscernible from you "replaces" you, occupying your actual qualitative role. Since this possibility involves an individual that does not actually exist, it is a case of *replacement* rather than *swapping*. But, as like swapping cases, replacement cases can be accommodated only if one accepts alethic haecceitism.

As I have explained it, alethic haecceitism is a thesis about what modal claims are true. And, since modal claims typically describe possibilities, alethic haecceitism is best understood as the claim that there are maximal possibilities that differ only in terms of the non-qualitative possibilities they include. Evidence for accepting these possibilities emerges from cases like those considered above or from our more common modal intuitions.[10] But, for reasons that will now be made clear, alethic haecceitism

[10]I consider the case for alethic haecceitism in Chapters Two and Six.

is a thesis importantly distinct from the ontic variety of haecceitism, which is a claim about the nature of possible worlds as well as possibilities.

1.3 Ontic Haecceitism

Our second variety of haecceitism, *ontic haecceitism*, is a thesis about the relation between possible worlds and possibilities.[11] According to ontic haecceitism, there are possible worlds that represent all the same qualitative possibilities but represent distinct non-qualitative possibilities.[12] For example, according to certain forms of ontic haecceitism there is a possible world, distinct from the actual one, that represents a maximal possibility according to which Springsteen is just as Pynchon actually is and *vice versa*.

While the general character of ontic haecceitism is clear enough, a precise formulation of ontic haecceitism is a trickier matter. Note, first, ontic haecceitism is not a thesis about the "metaphysical character" of possible worlds. It is neutral with respect to any number of views one might have about the ontological status of possible worlds. So, for example, it is a thesis that both modal realists and actualist ersatzers can endorse.

Second, it is not *merely* a thesis about the possibilities that worlds represent. In this respect, it differs from alethic haecceitism. And, while it does require that there be maximal possibilities that differ haecceitistically, ontic haecceitism is a stronger thesis. It concerns the things that represent these possibilities: possible worlds.

Third, it is not the thesis that there are qualitatively indiscernible possible worlds. While ontic haecceitism is most plausibly developed in terms of qualitatively indiscernible worlds, this commitment is negotiable. One could accept that there are

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[11] Again, I follow Skow (2008) in carving up haecceitistic theses along roughly these lines.

[12] Ontic haecceitists include Adams (1979), Plantinga (1974), and Salmon (1996).

indiscernible possible worlds and still deny ontic haecceitism. Indeed, I will consider just such a view—defended in Lewis (1986)—in the following section. Similarly, one can deny that there are indiscernible possible worlds and still accept ontic haecceitism. For example, if one identifies possible worlds with sets of sentences, these sentences might differ qualitatively—perhaps by the substitution of synonyms—yet represent maximal possibilities that differ only haecceitistically. In light of these considerations, we are best served to define ontic haecceitism as follows:

> **Ontic Haecceitism**: There are distinct possible worlds that represent maximal possibilities that differ only with respect to the non-qualitative possibilities they include.

In introducing alethic haecceitism, I avoided any talk of possible worlds, but the primary contrast between alethic and ontic haecceitism should now be clear. While alethic haecceitism is a thesis about maximal *possibilities*, ontic haecceitism is a thesis about how *possible worlds* represent possibilities. Specifically, it requires that there are distinct possible worlds that represent all the same qualitative possibilities yet differ in terms of the non-qualitative possibilities they represent. So, while alethic haecceitism requires haecceitistic differences between possibilities, ontic haecceitism requires that distinct possible worlds do the job of representing these possibilities.

The conflation of alethic and ontic haecceitism is understandable. Philosophers often eschew talk of possibilities in favour of talk about possible worlds. This is because most philosophers assume that our modal thought and talk is properly analyzed in terms of a plurality of possible worlds. It is natural, then, to take the arguments for alethic haecceitism as providing evidence for ontic haecceitism. As we will see, however, alethic haecceitists need not be ontic haecceitists. And, to see how exactly these theses come apart, it will be helpful to say a bit more about possible worlds and their relation to both ontic haecceitism and modality in general.

According to *possible worlds theory*, our modal discourse ought to be analyzed in terms of possible worlds.[13] Taken at face value, this commitment requires that there exist a plurality of possible worlds—one for every one of the myriad total ways the world might have been—and that claims about what Springsteen and Pynchon *could* or *must* do are to be analyzed as claims about what *would have been true* if a certain possible world were *actualized*.

This apparatus of possible worlds earns its keep by making sense of our modal thought and talk. In asserting that a proposition is *necessarily* true—that it must be the case—one claims that it is true at *all* possible worlds. In asserting that a proposition is *possibly* true—that it could be the case—one claims it is true at *some* possible worlds. In this way, the apparatus of possible worlds allows us to make sense of the varying modal status of propositions.

The apparatus of possible worlds also allows us to distinguish varieties of modality. For example, given the laws of physics that hold at the actual world, no massive body can travel faster than the speed of light. Despite this, it seems possible that, in a world with different laws of physics, something could travel faster than the speed of light. The apparatus of possible worlds gives us a natural way to reconcile these claims: the space of *nomologically* possible worlds—worlds where the actual laws of physics hold—is a subset of the space of all *metaphysically* possible worlds which includes worlds where the actual laws of physics do not hold. Assertions that nothing could travel faster than the speed of light can be interpreted as concerning only the space of nomologically possible worlds and, therefore, be rendered true. Other assertions that one could travel faster than the speed of light, can, as required, be interpreted as claims about the wider space of metaphysically possible worlds.[14]

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[13]Possible worlds theorists include Adams (1979), Lewis (1986), Plantinga (1974), and Salmon (1996).

[14]Unsurprisingly, many philosophers disagree about the taxonomy of modalities. Some essentialists (e.g., Ellis (2001) hold that metaphysical and nomological necessity coincide. Others distinguish

The apparatus of possible worlds also affords us another way to distinguish the category of non-qualitative possibilities. For example, *de dicto* modal claims like 'Necessarily, something exists' attach modal operators directly to propositions. They concern the modal properties of the actual world that are independent of any facts about how individuals are represented across possible worlds. For this reason, *de dicto* modal claims are equivalent to qualitative possibilities. In contrast, *de re* modal claims like 'Pynchon is necessarily human' are claims about non-qualitative possibility; they depend upon the way individuals are represented across the space of possible worlds.[15] Given possible worlds theory, we can take *non-qualitative* and *de re* possibility to be, for the most part, interchangeable. For this reason, we can also define alethic and ontic haecceitism in terms of *de re* possibility:

> **Alethic Haecceitism**: Some maximal possibilities differ only in terms of the *de re* possibilities they include.

> **Ontic Haecceitism**: There are distinct possible worlds that represent maximal possibilities that differ only in terms of the *de re* possibilities they include.

Equipped with a better understanding of the character and fertility of possible worlds theory, we can now clarify the broader commitments of ontic haecceitism.

Ontic haecceitism invites certain conclusions about the space of possible worlds. In particular, it seems to show that the space of possible worlds varies along two dimensions. Along one dimension—the qualitative dimension—possible worlds differ with respect to the qualitative possibilities they represent. Along the second dimension—the non-qualitative dimension—possible worlds differ with respect to which individ-

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nomological, metaphysical, and logical necessity. Insofar as possible, I will remain neutral on the relation between these purportedly distinct modalities.

[15]See Bricker (2007) for more on the distinction between *de re*/*de dicto* modalities.

uals they represent. And, while philosophers are quick to acknowledge variation along the qualitative axis, the ontic haecceitist holds that no adequate metaphysics of modality can be offered without attending to the non-qualitative dimension and differences in what is represented *de re*. In addition, the ontic haecceitist holds that variation along this non-qualitative axis is independent (perhaps partially, perhaps totally) of variation along the qualitative axis. So characterized, the ontic haecceitist is not committed to any specific view about how possible worlds represent possibilities that differ haecceitistically. It is worth noting, however, that since ontic haecceitism holds that certain possible worlds represent possibilities separated by haecceitistic difference, ontic haecceitism does require that such possibilities be accepted. For this reason, *ontic haecceitism entails the truth of alethic haecceitism*.

Given possible worlds theory and alethic haecceitism, ontic haecceitism is liable to be seem attractive. This is because it allows for a one-to-one correspondence between maximal possibilities and possible worlds. So, for every maximal possibility, there is a unique possible world that represents that very possibility. Such a view is therefore well-suited to accommodate the possibilities described in the twin and mirror-universe examples above. Despite this, the leap from alethic to ontic haecceitism is greater than it might initially seem. In large measure, this is because certain philosophers, most notably David Lewis, have ably defended modal ontologies that accept alethic haecceitism, while rejecting ontic haecceitism.[16]

Lewisian haecceitism—the particular package of alethic but non-ontic haecceitism defended in Lewis (1986) and elsewhere—requires a rich ontology of possible worlds and a subtle thesis about the nature of *de re* representation. This Lewisian picture carries with it a commitment to *possibilism*—the thesis that merely possible entities exist—and the denial of *actualism*—the thesis that the domain of actual entities is

[16]See, for example, Lewis (1983b) and (1986).

necessarily coextensive with the domain of existents.[17] In particular, Lewis accepts *modal realism*—a variety of possibilism that identifies possible worlds with a plurality of disconnected, maximal sums of spatiotemporally related individuals. Lewis also denies that individuals exist in more than one world, but, even so, he accepts that individuals are *represented* as existing at various worlds. This is because Lewis holds that *de re* representation is accomplished by way of *counterpart relations*—relations of similarity that obtain between distinct individuals. According to *counterpart theory*, individuals have their modal properties in virtue of the way that their counterparts are.[18] And, since there are many counterpart relations—each corresponding to some relation of qualitative resemblance—the modal properties of individuals are *inconstant*; they vary from context to context as the relevant counterpart relation changes.

According to Lewis, qualitatively indiscernible possible worlds cannot differ in terms of what *de re* possibilities they represent. And, since Lewis denies there are qualitatively indiscernible worlds that differ in terms of the *de re* possibilities they represent, he rejects ontic haecceitism. Interestingly, Lewis does remain agnostic on the question of whether qualitatively indiscernible possible worlds do indeed exist.[19] But, even if we suppose Lewis to accept that these worlds exist, his denial of ontic haecceitism is not in jeopardy. This is because a commitment to ontic haecceitism does not require merely the existence of qualitatively indiscernible worlds but, rather, that some possible worlds represent the very same qualitative possibilities but distinct *de re* possibilities. Since Lewis denies these indiscernible worlds differ with respect to the possibilities they represent, their existence is compatible with the falsity of ontic haecceitism.

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[17]For some influential defenses of actualism, see Adams (1981), Kripke (1980), and Plantinga (1974). Possibilism is defended in Lewis (1986), Bricker (2006), Williamson (1998) and elsewhere.

[18]For more on counterpart theory, see Lewis (1968), (1971), and (1986).

[19]See Lewis (1986: 224).

Because Lewis accepts that there are maximal possibilities that differ only haecceitistically, he accepts alethic haecceitism. But, unlike ontic haecceitists, he holds that one and same world—considered under different counterpart relations—represents a multitude of maximal possibilities that differ haecceitistically. So, for example, the actual world, considered under distinct counterpart relations, might represent both the possibility that Springsteen and Pynchon have the qualitative profiles they actually do as well as the possibility that Springsteen and Pynchon swap qualitative profiles. In this way, one possible world, given the relevant counterpart relations, represents a plethora of non-qualitative possibilities and, in so doing, allows the Lewisian haecceitist to deny that there is a one-to-one correspondence between maximal possibilities and possible worlds.

I will have much more to say regarding Lewisian haecceitism and the reconciliation of alethic haecceitism with ontic haecceitism and its denial in later chapters.[20] But, at present, my interest is a more modest one: I aim to clear the conceptual brush that surrounds the haecceitist theses just considered. This requires a close examination of the relation between alethic and ontic haecceitism and the metaphysical theses they are too often confused with. I will now begin by considering the relation between haecceitism and the Principle of the Identity of Indiscernibles.

1.4 The Identity of Indiscernibles

The Principle of the Identity of Indiscernibles (hereafter, *PII*) is a thesis about the relation between identity and properties. It holds that no individuals can share all their properties without being identical. Formulated in second-order logic, PII is the following claim about the relation between identity and properties:

(PII) $\forall F \forall x \forall y[(Fx \leftrightarrow Fy) \rightarrow x = y]$

[20] In Chapter Five, I consider objections to Lewisian haecceitism, and present an alternative modal realist treatment of haecceitism.

According to PII, if any individuals instantiate all the same properties, they are the very same individual. As is well-known, the above formulation of PII admits of many interpretations. On one interpretation, the second-order quantifier is unrestricted and quantifies over any properties whatsoever.[21] Let's call this *unrestricted* version of the PII, UPII.

If certain views about properties are correct, UPII is trivial.[22] This is because, according to these views, there are properties like *being Thomas Pynchon* and *being Bruce Springsteen*. And, if these properties fall within the scope of the second-order quantifier, UPII can offer us no further understanding of the relation between identity and properties. We know very well that anything with the property *being Thomas Pynchon* is identical to Thomas Pynchon. So, to permit quantification over these sorts of properties is to presuppose an understanding of the relation between identity and properties that PII was supposed to help us acquire in the first place. Faced with the threat of trivializing PII, the tenability of stronger versions of it is worth considering. We can do so by placing restrictions on the domain of the second-order quantifier that result in progressively stronger formulations.

The most natural restriction is one that excludes non-qualitative properties—sometimes called "haecceities" or "thisnesses"—like *being Thomas Pynchon*.[23] The resulting interpretation of PII allows second-order quantification over only qualitative properties. Among these latter properties are intrinsic properties like *being a material object* or *being spherical* and extrinsic properties like *being larger than every blue*

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[21] I take PII to quantify over properties and relational properties like *being to the south of an iceberg*.

[22] I have in mind here *abundant* views of properties that hold every set of individuals to correspond to a property. Such views are in opposition to *sparse* views of properties that hold properties to correspond to only universals or certain elite sets of individuals.

[23] I'll employ the term 'haecceities' here, but I take the the two terms are interchangeable.

thing.[24] In contrast, other non-qualitative properties like *being Thomas Pynchon's hat* or *being to the left of Bruce Springsteen* must also be excluded from the domain of properties in order to avoid trivializing the PII. In this way, PII is no longer trivialized by virtue of excluding properties like *being Thomas Pynchon*.

On its most plausible interpretation, PII holds that if any two individuals instantiate all the same qualitative properties—setting aside the above excluded non-qualitative properties—they are the very same individual.[25] For this reason, PII, in conjunction with the Indiscernibility of Identicals, purports to give necessary and sufficient conditions for the identity of individuals in terms of the identity of properties. With this understanding of PII, we can consider a now-familiar challenge posed in Black (1952):

> Isn't it logically possible that the universe should have contained nothing but two exactly similar spheres? We might suppose that each was made of chemically pure iron, had a diameter of one mile, that they had the same temperature, colour, and so on, and that nothing else existed. Then every quality and relational characteristic of the one would also be a property of the other. Now if what I am describing is logically possible, it is not impossible for two things to have all their properties in common. This seems to me to *refute* the Principle [i.e., PII].[26]

Black's description of a possibility involving two indiscernible spheres seems *prima facie* acceptable, so there is pressure to accept that there is a possible world with only two qualitatively indiscernible objects. But, if such a world is indeed possible, then

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[24]It is worth noting that by restricting the domain of the quantifier to only intrinsic properties, one commits themselves to the identity of any *duplicates*, since duplicates share all their intrinsic properties. In contrast, *indiscernibles* share, not only their intrinsic properties, but all their extrinsic and relational properties as well.

[25]See Hawley (2009) for further discussion of the various interpretations of PII.

[26]Black (1952: 156)

the relation between qualitative properties and identity is at odds with PII, since numerical distinctness is consistent with qualitative indiscernibility. Black's proposal is, therefore, a counter-example to PII.

A defender of PII might, when faced with Black's argument, hold that PII is a contingent rather than necessary truth and that, as a result, Black succeeds only in pointing out that *certain* worlds defy PII. While one should, if they accept Black's argument, concede that PII is at best contingently true, it seems that if PII is merely contingent, it is robbed of what makes it metaphysically and conceptually significant. It fails to capture a necessary truth about the coextension of qualitative indiscernibility with identity. But it is this very coextension that makes PII theoretically interesting.[27]

In light of Black's counterexample, we ought to deny that qualitative indiscernibility entails numerical identity, and reject PII. This is an important discovery about the nature of identity, but, given our present interests, the more interesting question is how PII relates to haecceitism and, in particular, whether its falsity entails some form of haecceitism. To this end, I will now argue that *the truth of PII is an issue orthogonal to the truth of alethic haecceitism.*

To see how these two issues come apart, recall that PII is a claim about whether or not qualitatively indiscernible yet distinct entities might coexist. In contrast, alethic haecceitism is a claim about whether certain maximal possibilities differ only in the non-qualitative possibilities they include. Consider that one could consistently accept that some maximal possibilities differ haecceitistically, but, at the same time, deny that there are any possibilities according to which two qualitatively indiscernible yet distinct entities coexist. For example, one might deny that there are any maximal possibilities according to which qualitatively indiscernible spheres exist, but accept

[27] Adams (1979: 17) discussion of almost indiscernible twins lends further support to the denial of PII.

that there are maximal possibilities that differ only in terms of which lone sphere they represent as existing. For this reason, one can accept alethic haecceitism while, at the same time, accepting PII.

In addition, one can reject alethic haecceitism, while, at the same time, denying PII. For example, one could hold that there is a *unique* maximal possibility wherein, say, two qualitatively indiscernible iron spheres exist, but that there are no maximal possibilities that differ solely in terms of the identity of the spheres in question. According to a such a view, there are maximal possibilities that include possibilities for qualitatively indiscernible entities, but none of these maximal possibilities differ haecceitistically. Although such a view is unattractive, its consistency does suffice to show that there is an important conceptual distinction between PII and alethic haecceitism.

While PII and alethic haecceitism are orthogonal theses, difficult questions arise when we consider the relation between PII and ontic haecceitism. The first complication concerns differing views about the metaphysical status of possible worlds. For example, some views, like modal realism, hold that possible worlds are individuals, while other views about possible worlds deny this. And, if possible worlds are not individuals, they will fall outside the scope of PII. For this reason, if possible worlds are not individuals, PII has no implications for the truth or falsity of ontic haecceitism.

Alternatively, if possible worlds are individuals, the truth or falsity of PII might have implications for ontic haecceitism. For example, if PII is true, then there are no qualitative indiscernible possible worlds. And, without these worlds, it is unclear how a modal realist might ensure that possible worlds represent maximal possibilities that differ haecceitistically. If, however, one endorses a form of linguistic ersatzism that identifies possible worlds with more mundane individuals like sentences or sets of sentences, these individuals might be discernible even while they succeed in representing maximal possibilities that differ haecceitistically. It seems, then, that the truth of

PII is compatible with both ontic haecceitism and the identification of possible worlds with individuals. Alternatively, if PII is false, ontic haecceitism need not follow. Recall that Lewis might accept qualitatively indiscernible possible worlds, but, since he denies that such worlds differ in what they represent *de re*, he does not thereby endorse ontic haecceitism. For these reasons, we can see that ontic haecceitism and PII are, for the most part, unrelated theses.

Having clarified the relation (or lack thereof) between PII and alethic and ontic haecceitism, we can now turn to a related issue often thought to be relevant to haecceitism. This issue revolves around the existence of haecceities and their relation to the truth or falsity of haecceitism.

1.5 Haecceities

The nature of haecceities (or what I have been calling "non-qualitative properties") like *being Thomas Pynchon* turns largely on the truth or falsity of PII. For example, if PII is true, then identity is to be analyzed in terms of qualitative indiscernibility. And, if so, it is natural to view properties like *being Thomas Pynchon* as qualitative properties. Alternatively, if PII is false, then identity does not reduce to qualitative indiscernibility. And, one might therefore naturally view haecceities as non-qualitative properties that can differ between indiscernible entities. To differentiate between these two very different views about the nature of the haecceities, we can hold the former sort of view to be committed to *qualitative haecceities* and the latter sort of view to be committed to *primitive haecceities*, where only primitive haecceities are understood to be non-qualitative.[28]

[28]There are complications that I gloss over here regarding the inference from the falsity of PII to the non-qualitative nature of haecceities. While I take up these questions in Chapter Four, our interests here are well-served by resting content with the distinction between these two kinds of haecceities.

Characterizing haecceities as qualitative or non-qualitative raises the difficult question of how the qualitative/non-qualitative distinction should itself be understood. And, while most philosophers accept that there is such a distinction, there is much disagreement about how it is properly drawn.[29] Later, I will take up the question of how this distinction is best understood, but, for the moment, I will again attempt to remain neutral on this issue. Setting these concerns aside, we can still profitably take up the question of how the existence of primitive haecceities relates to haecceitism.

Getting clear on this issue will prove helpful because the assumption that the existence of primitive haecceities entails haecceitism is both common and mistaken.[30] In order to see why commitment to haecceities and haecceitism come apart, we need to consider two views. The first view accepts primitive haecceities but neither alethic nor ontic haecceitism; the second view accepts alethic or ontic haecceitism, but not primitive haecceities. By considering these views, we can draw out the important divide between a commitment to primitive haecceities—a thesis about the metaphysics of properties—and alethic and ontic haecceitism, which are orthogonal theses regarding the space of possibilities and possible worlds.

The first case in which primitive haecceities and haecceitism come apart is in the metaphysics of the benighted necessitarian who denies that there are any non-actual possibilities. She believes that the world could have been no other way than it actually is. Nevertheless, she defends the view that there are primitive haecceities (perhaps because she believes the mirror-hypothesis to be true). And, even while she accepts primitive haecceities, she rejects both alethic and ontic haecceitism; she denies there are any non-actual possibilities or non-actual possible worlds that differ haecceitistically. For her, there is no space of possibilities or possible worlds, only the

[29]See Lewis (1983) and Bricker (2007) for supervenience-based account. See Adams (1979) for discussion of a linguistic account.

[30]Swinburne (1995) seems to be guilty of this. See Cover and O'Leary-Hawthorne (1997) for discussion.

single point in logical space that is the actual world. In her preferred metaphysics, we can see that commitment to alethic or ontic haecceitism is not entailed by a commitment to primitive haecceities.

The second case in which haecceitism and primitive haecceities come apart is in the metaphysics of the austere nominalist who rejects properties altogether.[31] Even while she denies there are properties, she accepts that individuals are distinct from one another. Moreover, she accepts certain modal claims about individuals. She agrees that you could have been the eldest of two twins or the youngest. She further agrees that, in either case, the course of events would have been unaltered. In accepting these claims, she takes on a commitment to alethic haecceitism, but, in virtue of her nominalism, she does without primitive haecceities. Moreover, she might accept an ontology of concrete possible worlds and hold that, while these worlds represent possibilities that differ haecceistically, they do so in a way that requires no commitment to properties. With this in mind, we can see that primitive haecceities do not incur a commitment to either variety of haecceitism or *vice versa*.

Primitive haecceities and haecceitism should not be conflated. And, while we must note their independence, the best version of ontic haecceitism might be one that traffics in primitive haecceities. Indeed, the view of ontic haecceitism I will defend in later chapters is of this kind. But, having explained that these claims are independent of one another, we can now turn to another issue that cuts across the debate over haecceitism: transworld identity.

1.6 Transworld Identity

Kaplan (1975) marks the introduction of "haecceitism" into the parlance of contemporary metaphysics. There, Kaplan characterizes haecceitism as follows:

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[31]This point owes to Lewis (1986: 225).

> The doctrine that holds that it does make sense to ask—without reference to common attributes and behavior—whether *this* is the same individual in another possible world, that individuals can be extended in logical space (i.e., through possible worlds) in much the way we commonly regard them as being extended in physical space and time, and that a common "thisness" may underlie extreme dissimilarity or distinct thisnesses may underlie great resemblance, I call *Haecceitism*.... The opposite view, *Anti-Haecceitism*, holds that for entities of distinct possible worlds there is no notion of trans-world being.[32]

Kaplan's characterization runs together a number of theses that, while closely related to both alethic and ontic haecceitism, are worth keeping separate. Indeed, given Kaplan's characterization of "anti-haecceitism", one might think that haecceitism is just the commitment to "trans-world being" or, as most philosophers now say, "transworld identity". For this reason, it is important to note why a commitment to transworld identity does not entail ontic or alethic haecceitism. Before doing so, we should, however, clarify as best we can what exactly is meant by "transworld identity".

Talk of transworld identity arises in the context of possible worlds theory. And, in one sense, it is an uncontroversial thesis. This *benign* sense of "transworld identity" requires only that individuals are *represented* as existing at distinct possible worlds. So, for example, some possible world represents the *de re* possibility that Pynchon is a pirate, while another represents the possibility that he is a viking. Regardless of one's views on possible worlds, one ought to accept this kind of *de re* representation. This is because denying *benign transworld identity* is tantamount to denying that *de*

[32]Kaplan (1975: 723)

re modality can be accommodated within the framework of possible worlds and such a denial should sit poorly with any possible worlds theorist.

Since benign transworld identity is presupposed by any possible world theorist, the ontic haecceitist, by virtue of accepting possible worlds theory, is committed to its truth. That said, philosophers who eschew talk of possible worlds might attempt to accommodate alethic haecceitism within some other metaphysical approach to modality.[33] For this reason, alethic haecceitism does not entail benign transworld identity.

In the opposite direction, it should be clear that benign transworld identity does not entail alethic or ontic haecceitism. This is because benign transworld identity is compatible with any number of views regarding the limits of possibility, many of which deny that maximal possibilities are ever separated by haecceitistic differences. For this reason, we can see that transworld identity, in its benign sense, is largely orthogonal to the issue of haecceitism.

In addition to *benign transworld identity*, there is a more controversial sense of "transworld identity". Unfortunately, the way to explicate this second, more controversial sense is itself controversial. In order to get a grip on this notion, let us first consider Lewis's version of counterpart theory, which is often cited for rejecting "transworld identity" in the controversial sense.

According to Lewis's version of counterpart theory, *de re* representation works in terms of qualitative resemblance: individuals bear counterpart relations to one another in virtue of their qualitative properties. And, while no individual is a part of more than one world, individuals have their *de re* modal properties in virtue of the counterpart relations they stand in. So, for example, while Thomas Pynchon exists only at the actual world, he has the *de re* modal property of *being possibly a pirate*

[33]See, for example, modalist views developed in Prior and Fine (1977) and discussed in Melia (1992).

in virtue of bearing a resemblance relation to a distinct individual that is a pirate at another possible world. So, according to a Lewis's view, the domains of individuals that exist at distinct possible world never overlap. Rather, they are connected by the counterpart relation, a relation that does not obey the logic of identity.[34]

A distinctive feature of Lewis's version of counterpart theory is that it is developed against the backdrop of modal realism, which holds possible worlds to be concrete maximal sums of spatiotemporally related individuals. Because distinct worlds stand in no spatiotemporal or causal relations to one another, it is natural to assume that they do not overlap or share any of their parts. Even so, some have defended a version of modal realism that holds that the domains of worlds do overlap.[35] According to *modal realism with overlap*, Thomas Pynchon is a part of the actual world as well as a part of other possible worlds. Moreover, he has the *de re* modal property of *being possibly a pirate* in virtue of being a part of a world wherein he is a pirate. According to modal realism with overlap, the domain of individuals that exist a distinct possible worlds do, in fact, overlap. And, as a result, the overlapping of domains is understood in terms of the logic of identity rather than, say, counterpart theory.

With this distinction in mind, we might be tempted to understand "transworld identity" as the thesis that the domains of distinct possible worlds admit of overlap.[36] But understanding "transworld identity" in this way proves unhelpful in making sense of much debate in the metaphysics of modality. This is because Lewis's counterpart theory is most often contrasted with actualist views of modality that reject an ontology of concrete possible worlds, but are touted to sustain a commitment to genuine "transworld identity". These actualists typically endorse some variety of *ersaztism*

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[34]Most notably, the counterpart relation is intransitive whereas identity is transitive.

[35]For discussion of modal realism with overlap, see Lewis (1986). For a defense, see McDaniel (2004).

[36]See Bricker (2007) for a related but perhaps distinct discussion of transworld identity.

about possible worlds, according to which possible worlds are identified with actually existing entities that accomplish the task of representing the space of possibilities. These ersatz worlds do not literally have individuals like Thomas Pynchon as their parts. For this reason, it is unclear how the domains of ersatz worlds could be understood to overlap with the domain of the actual world except in something like the benign sense of transworld identity considered above.

An alternative proposal for understanding the controversial sense of "transworld identity" might look to how different theories accommodate *de re* representation. On one hand, *primitivists* hold that *de re* representation is unanalyzable and cannot be explained in terms of any other notion. On the other hand, *reductivists* hold that *de re* representation is analyzable in terms of some other notions. For example, according to Lewis's modal realism, *de re* representation is explained in terms of qualitative resemblance between counterparts. And, according to modal realism with overlap, *de re* representation is also explained in terms of identity. In contrast, primitivists hold that *de re* representation cannot be analyzed. And, while many primitivists do attempt to explain what entities accomplish this representation (e.g., uninstantiated universals or sets of sentences), *de re* representation is nevertheless taken to be, at bottom, unanalyzable.[37]

The divide between reductivism and primitivism is an important one. For this reason, one might consider whether the debate over "transworld identity" is properly understood as the debate between reductivists and primitivists. As it turns out, this interpretation of the debate over "transworld identity" is unsatisfactory. Not only does it stray too far from concerns about identity *simpliciter*. It also classifies certain views in a way at odds with most philosopher's usage of "transworld identity".

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[37]Strictly speaking, this incorrect. For the linguistic ersatzer, *de re* representation is analyzed in terms of naming. Even so, they too must accept some form of primitive *modality*, if not primitive *de re* modality. See Lewis (1986: 142-164.) for discussion.

Consider, for example, a version of modal realism that accepts counterpart theory, but denies that resemblance is what determines counterpart relations. Instead, this *non-qualitative counterpart theory* holds that counterpart relations hold in virtue of primitive non-qualitative properties or relations rather than qualitative ones.[38] According to such a view, *de re* modality proves unanalyzable, even while individuals never belong to the domain of more than one world. Such a view seems properly identified as rejecting "transworld identity" but it does require the truth of primitivism. For this reason, the distinction between primitivism and reductivism is not plausibly identified as the issue underlying the debate over "transworld identity".

It seems, then, that there are two important yet orthogonal distinctions: one holds between those who disagree about whether the domains of worlds overlap and another holds between those who disagree about whether *de re* representation is primitive. While these views crosscut one another, neither corresponds with what philosophers seem to intend by the elusive and controversial sense of "transworld identity". For this reason, we are better served to consider whether these independent issues have implications for the truth of haecceitism.

Let's first distinguish *splitters*—those who deny the domain of individuals at distinct worlds ever overlap—from *lumpers*, who accept that overlap sometimes occurs. Let's also distinguish *primitivists*—those who accept that representation *de re* is primitive—from *reductivists* who hold that representation *de re* is to be analyzed away. Now, rather than surveying the varying combinations of alethic and ontic haecceitism with splitting, lumping, primitivism, and reductivism, let me note the following important points regarding the relation between these views.

First and foremost, alethic haecceitism neither entails nor is entailed by any of these surveyed views. So, while certain views have an easier time accommodating its

[38]Not all versions of non-qualitative counterpart theory need to be primitivist ones. I defend a reductive version of non-qualitative counterpart theory in Chapter Four.

truth, alethic haecceitism is a thesis wholly separate from the reductivist/primitivist and splitting/lumping disputes. But, as usual, ontic haecceitism proves to have more interesting conceptual connections.

If representation *de re* is to be analyzed in qualitative terms, then ontic haecceitism must be rejected. This is because ontic haecceitism requires that possible worlds represent distinct *de re* possibilities in terms of something other than qualitative properties. For this reason, the most familiar version of reductivism—the viewed advanced by Lewis—rules out ontic haecceitism. That said, modal realism with overlap, which is also a reductivist view, is compatible with ontic haecceitism, since it analyzes *de re* representation in terms of parthood and identity. For this reason, the primitivist/reductivist distinction does not uniquely characterize ontic or alethic haecceitism. In addition, the splitter/lumper distinction does not help in characterizing ontic haecceitism. This is because splitters, who seem well-postitioned to reject ontic haecceitism, can endorse both alethic and ontic haecceitism. If, for example, one accepts non-qualitative counterpart theory and becomes a splitter, they would nevertheless be properly classified as an ontic haecceitist. With these complications in mind, ontic haecceitism can be seen to be a thesis largely orthogonal to either interpretation of "transworld identity". And, having clarified the relation between the various senses of "transworld identity" and haecceitism, we can now turn to another thesis that one might plausibly confuse with haecceitism: the existence of singular propositions.

1.7 Singular Propositions

Up to this point, I have helped myself to talk about, and quantification over, possibilities without commitment to any specific account of their nature. Neutrality in this regard is helpful, since the points I've made are general ones, independent of any strong background assumptions. Here, I want to outline the account of possibilities

I prefer. It is important to note that this account is not entailed by alethic or ontic haecceitism; it could be abandoned even while either form of haecceitism is retained. Even so, I believe it to be the most plausible way to understand both our ordinary and philosophical talk about possibilities.[39]

According to the account I favour, possibilities are identified with possible propositions.[40] *Maximal possibilities* are, in turn, identified with maximal conjunctions of propositions. They *include* non-maximal possibilities by way of entailment. And, for every proposition, a maximal possibility entails that proposition or its negation. In addition, if we accept possible worlds into our ontology, they can be seen to bear a unique relation to propositions. When a possibility obtains at a world, that proposition is *true at* that world. And, since a maximal possibility obtains only at one world, a maximal conjunction of propositions is true at a unique world.[41]

The appeal of identifying possibilities with propositions emerges, in part, from the fact that propositions play a central role in other philosophical domains. Most notably, propositions are crucial in making sense of the content of our thought and talk. They are mind and language-independent entities. They are expressed by sentences and, in contexts, the truth-value of propositions determines the truth-value of sentences. In addition, they are the objects of our attitudes like believing and doubting. For example, to believe that Thomas is verbose is to bear the belief relation to the proposition that Thomas is verbose. So, by accepting propositions into our ontology, a wide array of intentional phenomena like belief can be made tractable.

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[39]The main rival to this account, which identifies possibilities with states of affairs, will be ignored. I follow Lewis (1992) in rejecting states of affairs on Humean grounds.

[40]Since one might accept contradictory or impossible propositions, this identification must be qualified as no possibility is identified such a proposition.

[41]A further notable connection between propositions and possible worlds is found in the attempt to reduce the former to the latter. I remain neutral on whether propositions should be viewed as *sui generis* entities or as reducible to properties or sets of possible worlds. See Lewis (1986) and Stalnaker (1984).

The nature of propositions, here identified with possibilities, affords us a unique way to express the commitments of haecceitism. To see why this is so, it will be helpful to contrast two rival views about propositions. *Fregean views* hold that propositions are complex and have *modes of presentation* (hereafter, *MoP*)—typically understood to be descriptive abstract representations—and properties or relations as their constituents. *Millian views* also hold that propositions are complex, but deny that they have modes of presentations as constituents. Instead, they have individuals—in many cases, concrete entities—and properties or relations as their constituents.[42] Fregeans, therefore, hold that a sentence like

(1) Bruce is American.

expresses a proposition represented as <MoP$_{Bruce}$, *being American*>, where 'MoP$_{Bruce}$' represents the mode of presentation that picks out Bruce.

In contrast, Millians believe that (1) expresses a *singular proposition*: an abstract object that, in some way, contains both the object, Bruce, and the property, *being American*. This proposition is representable as <Bruce, *being American*>. According to Millianism, the contribution of a name to the semantic content of a sentence in which it occurs is just the individual it refers to. And, since the semantic content of a sentence is a proposition, Millianism entails that sentences like (1) express singular propositions.

Singular propositions contain the individuals they are about. So, even if two individuals are qualitatively indiscernible, a singular proposition about one of the individuals will not contain the other. For example, even if there is a duplicate of our galaxy located in the distant reaches of the universe that contains an exact duplicate of Bruce, the semantic content of (1) would be our nearby Bruce, rather than his qualitative duplicate. In contrast, *general propositions* do not contain the individual

[42]See Caplan (2007) for discussion of the distinction between Millian and Fregean views.

they are about. They can be satisfied by distinct objects. For example, a sentence like

(2) The largest biped is right-handed.

could be about an individual, Bruce, at one time and a distinct individual, Thomas, at another time. Singular propositions like <Bruce, *being right-handed*>would be entailed, at a certain time, by the general proposition in question and the fact that Bruce is the largest biped. But, for reasons just noted, this singular proposition differs in semantic content from the general ones that might entail it.

The distinction between general and singular propositions parallels the distinction between qualitative and non-qualitative possibilities. So, while the truth of general propositions depends upon whether certain qualitative possibilities obtain, the truth of singular propositions depends upon whether certain non-qualitative possibilities obtain. It is natural, then, to identify singular propositions with non-qualitative possibilities and general propositions with qualitative possibilities. These identifications also afford us another way to formulate the thesis of alethic haecceitism:

> **Alethic Haecceitism**: Some maximal consistent sets of propositions differ only in terms of the singular propositions they have as members.

If one rejects the identification of possibilities with propositions, this thesis has no modal implications. It is merely a claim about the existence of conjunctions of propositions. But, if propositions are possibilities, and maximal possibilities are maximal conjunctions of propositions, this definition entails that some possibilities differ haecceitistically. With this account of possibilities available, one might, following Kaplan (1975), hold that the existence of singular propositions entails the truth of alethic haecceitism.[43] This would be a mistake.

[43]See Kaplan (1975: 724).

On the view I have outlined, the acceptance of singular propositions *does* entail the acceptance of non-qualitative possibilities; however, a distinct and stronger claim about the space of non-qualitative possibilities is needed to establish alethic haecceitism. This claim would need to establish that there are maximal conjunctions of propositions that differ haecceitistically and are also compossible. Clearly, the truth or falsity of this claim about the compossibility of certain conjunctions of propositions does not follow from the existence of singular propositions alone. So, while I hold that alethic haecceitism is properly understood against the backdrop of propositions and singular propositions, the acceptance of singular propositions does not entail alethic haecceitism.[44]

1.8 Conclusion

In this chapter, I have attempted to clarify an array of theses that cluster around the word 'haecceitism'. According to the taxonomy I've outlined, haecceitism divides into two principal varieties: alethic and ontic. The first variety is a thesis about the truth of modal claims; the second variety is a thesis about possible worlds and *de re* representation. Alethic haecceitism holds that some maximal possibilities differ only in terms of the non-qualitative possibilities they include. Ontic haecceitism holds that some possible worlds differ in terms of the non-qualitative possibilities they represent without differing in what qualitative possibilities they represent. After distinguishing these two theses, I considered their relation to four theses: the denial of PII, the existence of primitive haecceities, the acceptance of "transworld identity", and the commitment to singular propositions. I then argued that both alethic and ontic

[44]The related thesis of "Kripkean Specification" is also distinct from alethic haecceitism. According to it, we are capable of stipulating which particular individual we are speaking of, when we speak of counterfactual possibilities. But, since this thesis says nothing regarding the limits of *de re* possibility, it is consistent with the denial that maximal possibilities differ haecceitistically. For this reason, it neither entails nor is entailed by alethic haecceitism. See Kripke (1980: 44), Lewis (1986: 222), and Salmon (1996: 205) for further discussion.

haecceitism are orthogonal to these theses. They neither entail nor are entailed by them.

CHAPTER 2

CONCEIVABILITY ARGUMENTS FOR HAECCEITISM

2.1 Introduction

Possibilities can be distinguished in many ways. To begin, let us distinguish *non-qualitative possibilities* like the possibility that Napoleon is bipedal or that Pynchon writes novels from *qualitative possibilities* like the possibility that something—anything at all—is red or that seven spheres exist. While the the former possibilities depend in some way upon the existence of specific individuals, the latter are not tied to any specific individuals.

We can also distinguish maximal possibilities from non-maximal ones. *Maximal possibilities* are total ways the world could be. They include or entail non-maximal possibilities. Some of these are qualitative; others are non-qualitative. For example, the actual maximal possibility includes the qualitative possibility that someone smokes as well as the non-qualitative possibility that Obama smokes. The actual maximal possibility therefore differs from various non-actual maximal possibilities where no one smokes, Obama does not smoke, or where Obama fails to exist altogether.

Once we distinguish possibilities in preceding fashion, we can formulate the following thesis:

> **Alethic Haecceitism**: Some maximal possibilities differ only in terms of the non-qualitative possibilities they include.

If alethic haecceitism is true, there are ways the world could be that include all the same qualitative possibilities but differ with respect to the non-qualitative possibilities

they include. This kind of difference between maximal possibilities is a *haecceitistic difference*. So, while alethic haecceitists accept that there are some maximal possibilities that differ this way, alethic anti-haecceitists do not.[1]

To get a firmer grasp on alethic haecceitism, consider a maximal possibility according to which you and Obama swap all of your actual qualitative properties and relations. If this is a genuine maximal possibility, it differs from actuality only in terms of the non-qualitative possibilities it includes. And, since all qualitative matters are the very same, the existence of maximal possibilities that differ in this way entails alethic haecceitism.

In addition to alethic haecceitism, there is a second thesis that is properly labelled as a kind of haecceitism. This additional thesis outstrips alethic haecceitism since it makes reference not only to maximal possibilities, but also to possible worlds—the entities typically held to represent maximal possibilities:

> **Ontic Haecceitism**: There are distinct possible worlds that represent maximal possibilities that differ haecceitistically.

Ontic haecceitism is a thesis about the relation between maximal possibilities and possible worlds. According to its most natural implementation, maximal possibilities—some of which differ haecceitistically—uniquely correspond with or are identical to possible worlds.

Although ontic haecceitism entails alethic haecceitism, the converse does not hold. Some, most notably Lewis (1986), have accepted alethic haecceitism, but rejected ontic haecceitism. And, while these theses can come apart, it is important to note that alethic haecceitism is the more general thesis. It can be accepted or rejected

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[1] Alethic anti-haecceitists include Forbes, (1985), Sider (2002), Nolan (2001), Robinson (1989), and Dasgupta (2009).

by both defenders and opponents of possible worlds. For this reason, it is properly viewed as the broader, more general conception of haecceitism.

In this chapter, I consider alethic haecceitism and the arguments in defense of it. For this reason, I set aside, as best I can, the issues raised by the metaphysics of possible worlds and ontic haecceitism and focus instead on maximal possibilities. In particular, I will set my sights on determining whether the following sort of claim, which depends upon maximal possibilities but need not depend upon possible worlds, is true: "Things could have been just as they actually are in all qualitative respects, but the facts about the identity of individuals might be different." Since my interest is in alethic rather than ontic haecceitism, several issues about the metaphysics of worlds will be set aside in the following discussion. Even so, I will mark the relevance of certain views about worlds when appropriate. In addition, I examine issues raised about the scope of haecceitistic differences and ontic haecceitism in later chapters.

How should one make the case for alethic haecceitism? Although there is a broad range of arguments that lend support to alethic haecceitism, the most powerful arguments are conceivability arguments.[2] Here, these conceivability arguments for alethic haecceitism will be my primary focus. For those us friendly to alethic haecceitism, many of these arguments will seem convincing. Nothing interesting there. What is interesting is how the alethic anti-haecceitist might respond to them. Through careful consideration of these responses, we can get a better sense of how one might defend alethic anti-haecceitism and of the costs that alethic anti-haecceitism incurs. To this end, I consider a battery of conceivability arguments for alethic haecceitism and de-

[2]Another direct argument for haecceitism is "Chisholm's Paradox", which is offered—but not accepted—in Chisholm (1967) and endorsed in Mackie (2006). See Chapter Six for discussion. Less direct arguments, which rely on substantive auxiliary assumptions, can be drawn from Kripke (1980) where it is seems that our best theory of probability requires some form of haecceitism, Stalnaker (2008) where it is suggested that our best theory of content requires some form of haecceitism, and Melia (1999) where some form of haecceitism is needed to avoid settling intuitively open questions about the deterministic/indeterministic status of quantum mechanics.

velop what I believe to be the best available alethic anti-haecceitist responses. Once the dust has settled, I hope to have shown that alethic anti-haecceitism is untenable and that we ought to accept alethic haecceitism. After examining the dialectic between the alethic haecceitist and the anti-haecceitist in Sections Two through Six, I conclude by offering a taxonomy of conceivability arguments for alethic haecceitism that isolates their most significant features.

Before getting underway, it will be helpful to briefly mark some working assumptions. These are mostly simplifying assumptions that are intended to provide a rough and neutral framework for discussion. So, while there is assuredly more to be said on each of these topics, my aim here is only to offer a general backdrop for understanding the debate between alethic haecceitists and alethic anti-haecceitists.

Let me begin by clarifying the relevant sense of "conceivability". In what follows, I aim at neutrality with respect to issues about whether conceivability, imagination, or some other notion is at the center of modal epistemology.[3] To this end, I use 'conceivability' and 'imaginability' synonymously and help myself to what I take to be the common ground between parties to this debate. Specifically, I take the relevant notion of conceivability or imaginability to be *positive*, since it involves forming a representation of a world, situation, or maximal possibility rather than *negative*, where negative conceivability requires only that a possibility is not ruled out by some body of knowledge (e.g., what one knows).[4] I also take conceivability or imaginability to involve more than *prima facie* conceivability, but less than the *ideal* conceivability available only to ideal rational agents. So understood, the operative notion of conceivability requires that one detect no contradiction, upon sustained reflection, within a positive representation one forms. And, although I will employ 'conceivability' and

[3]This is not to say that conceivability is the whole story. I defend a modal epistemology that turns on principles of plenitude in Chapter Three.

[4]These distinctions—presented roughly here—owe to Chalmers (2002).

'imagination' interchangeably throughout, I draw distinctions between kinds of conceivability or imagination as we proceed. Note, also, that I use "maximal possibility" as a stand-in for the more familiar, but also more contentious talk of "possible worlds" in most of what follows. Again, this is to side-step worries about possible worlds in favor of more neutral terminology. For convenience's sake, I will also focus primarily on the conceivability of maximal rather than non-maximal possibilities.

Let me now clarify how I will understand the inference from conceivability to possibility. Here, I assume that an *apparently conceivable maximal possibility* provides *prima facie* evidence of a genuine maximal possibility.[5] I further assume that this *prima facie* evidence is defeasible in the face of an alternative explanation of an apparently conceivable maximal possibility. Alternative explanations of apparently conceivable maximal possibilities—explanations that deny that an apparently conceivable maximal possibility is a genuine maximal possibility—take two forms.

First, the existence of an apparently conceivable maximal possibility, m, might be explained, not by the fact that m is a *genuine* rather than only apparently conceivable maximal possibility, but, instead, by the fact that an agent mistakes some maximal possibility, m^*, for m and, for this reason, is mistaken in concluding that m is a maximal possibility. Explanations of apparent conceivability that take this form holds agents to form errant modal beliefs by virtue of conflating or mistakenly identifying maximal possibilities. For example, Kripke (1980) offers an explanation of why some agents believe that Hesperus and Phosophorus could be distinct even while they are necessarily identical: agents mistake the genuine possibility that there are two planets that resemble Venus for an apparently conceivable maximal possibility in which Hesperus and Phosphorus are distinct.

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[5]This terminology might seem odd since an apparently conceivable maximal possibility might not be a possibility at all. Notice, however, that an apparently round square need be neither round nor square.

The second alternative explanation of an apparently conceivable maximal possibility is not that agents are mistaken about which maximal possibilities are which, but rather about which apparently conceivable maximal possibilities are genuinely possible. According to this form of explanation, the existence of an apparently conceivable maximal possibility, m, is to be explained, not by holding m to be genuinely possible, but, instead, by holding an agent conceiving of m to be conceiving of what is in fact a maximal *impossibility*. Explanations of this sort do not impute any kind of modal illusion to agents, but, instead, hold that, in at least some cases, apparently conceivable maximal possibilities that might initially seem possible prove to be impossible. As I will argue shortly, there is reason to believe that the former kind of explanation, which appeals to a kind of modal illusion, provides a more attractive modal epistemology. For the moment, however, it will helpful to bear in mind that both kinds of explanations might be deployed to explain away apparently conceivable maximal possibilities without commitment to their genuine possibility.

2.2 The Electron Argument

Let us begin by considering the Electron Argument. Let 'Lois' name your favourite actual electron. Let 'Lana' name your least favourite actual electron. Assume, as seems quite plausible, that Lois and Lana are distinct—indeed, necessarily distinct—but are also intrinsic duplicates of one another. Granted these assumptions, we can present the following argument for alethic haecceitism:

The Electron Argument

P1. It is conceivable that only Lois exists.

P2. It is conceivable that only Lana exists.

P3. If P1, there is a maximal possibility that includes only Lois.[6]

P4. If P2, there is a maximal possibility includes only Lana.

P5. If there is a maximal possibility that includes only Lois and there is a maximal possibility includes only Lana, alethic haecceitism is true.

C1. Therefore, alethic haecceitism is true.

Before evaluating the Electron Argument as an argument for alethic haecceitism, it will be useful to discuss why a modified version—in particular, one that replaces "maximal possibility" with "possible world"—fails as an argument for ontic haecceitism.

Recall that ontic haecceitism holds that there are unique possible worlds that correspond to maximal possibilities (some of which differ haecceitistically). On this view, the distinct maximal possibilities involving Lois and Lana are identified with distinct possible worlds. For those who accept alethic haecceitism but reject ontic haecceitism, the distinctness of these worlds is denied. Instead, there is only a single world that does the job of representing both the maximal possibility where only Lois exists and the maximal possibility where only Lana exists.

The Electron Argument will provide no support for ontic rather than alethic haecceitism, since the non-ontic haecceitist can accommodate the distinct maximal possibilities yet deny there are distinct possible worlds.[7] Fortunately, our present interest is not in possible worlds, but in whether we ought to accept maximal possibilities that differ haecceitistically. With this in mind, let me now turn to the task of discovering

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[6]For simplicity's sake, I assume that maximal possibilities can "include" individuals by way of including the possibility that they exist (e.g., the relevant maximal possibility includes the possibility that Lois exists).

[7]This is precisely the strategy of Lewis (1986).

whether the alethic anti-haecceitist—let's call her 'Anti' for short—-can resist the Electron Argument.

The first strategy available to Anti is to deny one or both of P3 and P4. There are two problems with this strategy. The first is a minor one: if Anti rejects only one of P3 and P4, some reason for her choice is required. But, since it is unclear what would make one premise less plausible than the other, her choice will be arbitrary and therefore objectionable. Better, then, for Anti to reject both P3 and P4 instead of only one.

While Anti can avoid this worry about arbitrariness, she faces a larger problem. If she rejects P3 and P4, she accepts that the best explanation of the apparent conceivability of the Lois-maximal possibility and the Lana-maximal possibility is that we conceive of maximal *impossibilities*. But, in accepting this as the best explanation, Anti severs the evidential connection between conceivability and possibility that P3 and P4 capture.

For those who hope to determine what is possible by appeal to what is conceivable, a preferable strategy is to maintain that, when we seem to conceive of what the alethic anti-haecceitist holds to be impossible—namely, maximal possibilities that differ haecceitistically—this is not because we conceive of the impossible. Instead, Anti ought to hold that we conceive of maximal possibilities that are genuinely possible, but are mistaken about the content of our conceiving. In particular, we mistake one maximal possibility for another and, in attempting to conceive of the Lois-maximal possibility and the Lana-maximal possibility, we conceive of a single maximal possibility twice over. (Perhaps it is one including Lana or perhaps Lois or perhaps an entirely different electron.) In this way, the evidential link between conceivability and possibility is retained, but Anti can still offer an explanation for why the defender of the argument is mistaken in drawing the incorrect alethic haecceitist conclusion.

To be sure, some will be content to bite the bullet, deny one or both of P3 and P4, and accept that conceivability does not provide a guide to possibility. But, if one is content to explain apparent conceivability by holding individuals to conceive of the impossible, one will have a blanket response to any conceivability argument for a thesis one finds objectionable. Such blanket responses are not of particular interest here. What is of interest is whether Anti can sustain the evidential connection between conceivability and possibility in addition to her alethic anti-haecceitist scruples. For this reason, I will focus here and throughout on the anti-haecceitist who opts for the second kind of strategy: denying the relevant conceivability premises and attempting to explain away the conceivability in question by appealing to something like modal illusion (i.e., errors involving the misidentification or conflation of maximal possibilities).

How should Anti explain the alethic haecceitist's mistaken belief that he conceives of the distinct Lois and Lana-maximal possibilities? The best explanation proceeds by ascribing to the alethic haecceitist what I will call "modal delusion".[8]

Modal delusion occurs when individuals form mistaken beliefs about the content of their imaginings. In the present case, the mistake is as follows: the alethic haecceitist believes that he conceives of a Lois-maximal possibility and then of a Lana-maximal possibility. In fact, he conceives of one and the same maximal possibility twice over. (It is an open question whether it is the Lois-maximal possibility, the Lana-maximal

[8]Modal delusion is intended to be reminiscent of "modal illusion" associated with Kripke (1980: 103-104, 141-150). It is an interesting and difficult question how precisely these are related. For Kripke, modal illusion occurs, roughly, when an individual imagines a "qualitatively identical epistemic situation" to his or her actual one, where the meanings of terms fixed by description pick out different individuals or properties than they actually do. The precise features of modal illusion are a matter of some controversy, but, as with modal delusion, it shows a kind of epistemic insensitivity to singular content and the primary role that qualitative (or, as I discuss later, experiential content) plays in forming our modal beliefs. For discussion of "textbook Kripkeanism", see Yablo (2005). For a dissenting interpretation, see Byrne (2006). For further discussion, see Soames (2006) on Kripke and Gendler and Hawthorne (2002) and Bealer (1994) on the finer details of modal illusion.

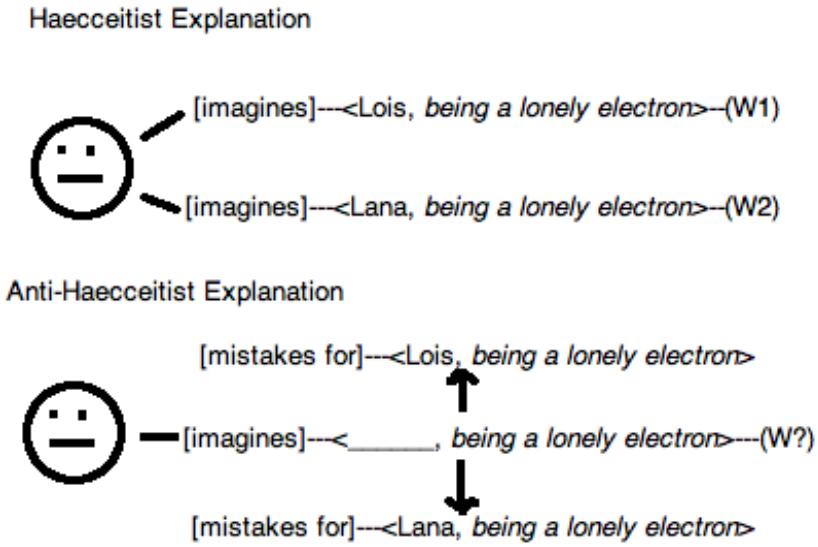
possibility, or some other maximal possibility including some other individual, say, Diana.)

To see why this mistake occurs, notice that imaginings typically include two kinds of content: *singular content*, where this content is determined by the identity of the individuals an imagining is about, and *general content*, where this content is determined by the distribution of qualitative properties and is therefore independent from singular content.

According to the alethic haecceitism, the content of his conceivings are ⟨Lois, *being a lonely electron*⟩ and ⟨Lana, *being a lonely electron*⟩. These propositions, differ with respect to singular content, but still share the same general content ⟨x, *being a lonely electron*⟩.

In contrast, Anti holds that the alethic haecceitist is mistaken in believing his imaginings to differ with respect to their singular content. Anti holds that these imaginings share the very same singular and general content. While it will seem to the alethic haecceitist *as if* he imagines distinct maximal possibilities, the content of his imaginings are one and the same. Furthermore, given their shared general content, the alethic haecceitist will be unable to determine that he is modally deluded and will mistakenly believe that the content of the conceivings associated with P1 and P2 are different. Armed with an explanation of the apparent conceivability of a Lois-maximal possibility and distinct Lana-maximal possibility, Anti can now deny one or both of P1 and P2 and grant merely the *apparent* conceivability of P1 or P2.

Intuitively, the alethic haecceitist argument and Anti's response deliver competing explanations of the conceivings relevant to the Electron Argument:



The alethic haecceitist might complain that Anti's explanation delivers a highly counterintuitive view of modality. After all, it seems plausible that, for any actual individual, there is a maximal possibility that contains only that individual. And, since Lois and Lana are actual electrons, it seems that we should be able to "subtract" the rest of the actual maximal possibility and be left with different maximal possibilities. Against this response, Anti can note that this notion of "subtraction" is a good guide to qualitative possibility and accept that, for any actual individual, there is a maximal possibility that contains only a qualitative duplicate of that individual. Anti will deny, however, that we can draw any conclusions about non-qualitative possibility using this "subtraction"-based reasoning, since it is useful only as a guide to qualitative possibility.

Anti's appeal to modal delusion provides an alternative explanation of the apparent conceivability of the Lois-maximal possibility and Lana-maximal possibility; however, whether it is indeed the best explanation will turn on whether we ought to accept alethic haecceitism. For example, if there is some argument for alethic haecceitism that Anti cannot provide a suitable response to, I submit that we ought to accept alethic haecceitism and, in turn, accept P1 and P2. But, if Anti can success-

fully rebut all of the arguments for alethic haecceitism, we can follow her in rejecting P1 and P2 and accept Anti's alternative explanation. For this reason, we ought to turn to alternative arguments for alethic haecceitism. And, since the just-considered strategy will allow Anti to block arguments that are sufficiently similar to the Electron Argument, let us turn to an argument that involves a rather different kind of imagination.[9]

2.3 The Staring Contest Argument

Imagination comes in different kinds. Consider, for example, the difference between imagining running a marathon and imagining that you are running a marathon. The first kind of imagination, *inside imagination*, issues from a particular perspective. It likely involves you imagining the feeling of exhaustion, the burning sensation in your legs, and the appearance of the finish line in your field of vision. Intuitively, it requires us to place ourselves within an imaginary situation and occupy a particular perspective within that situation.

The second kind of imagination, *outside imagination*, does not issue from a particular perspective. And, while you might visualize yourself "from above" wearing a racing number, leading the pack, and collapsing at the end, outside imagination need not involve any sort of sensuous imagination. You might simply hold the proposition that you are running a marathon fixed in your reasoning and draw conclusions from it.[10] Outside imagination is therefore are general kind of imagination that in-

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[9]For example, Anti can treat an argument in Jubien (1993: 41-42) along the same lines: "Suppose the world consisted only of two globes—globes that were qualitatively indistinguishable. The globes would be at a certain distance from each other. They would be made of the same kind of material. They would be of the same size, color, density, and so on. We can certainly imagine that even at the microscopic and subatomic levels, there was no qualitative difference between them. Yet, the argument continues, it seems clear that the positions of the globes might have been reversed."

[10]A natural way to sharpen this distinction is to appeal to a distinction between content modeled in terms of sets of possible worlds and sets of centered possible worlds consisting of a world and an individual (and perhaps a time) within that world. While this is a helpful heuristic, it is unavailable

volves representing a situation but abstracts away any particular perspective that the situation is to be imagined from.

Since we have been treating conceivability and imagination interchangeably, we might wonder whether conceivability arguments for haecceitism can be offered from both "the outside" and "the inside". We have already considered the Electron Argument which is imaginable only from the outside. And, since the Electron Argument—an *outside argument*—met with a *prima facie* satisfactory response from Anti, perhaps a move to inside imagination will allow us to overcome Anti's challenge.

Let us now consider whether appeal to inside imagination makes for an argument that cannot be undermined by Anti's appeal to modal delusion. To begin, imagine a situation in which you and a qualitatively indiscernible doppelganger are the lone occupants of a world in which you stand upon two mountains, Apex and Peak. Further assume that, given your highly competitive temperament, you and your doppelganger have become locked in a staring contest that will continue indefinitely. You stand on Apex; your doppelganger stands on Peak. Furthermore, the purely qualitative description of this world, *STARING*, is satisfied. Granted these assumptions, we can offer an *inside argument* for haecceitism, the *Staring Contest Argument*:

The Staring Contest Argument

P1. It is conceivable that *STARING* is satisfied and you stand upon Apex.

P2. It is conceivable that *STARING* is satisfied and you stand upon Peak.

P3. If P1, it is possible that *STARING* is satisfied and you stand upon Apex.

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at the moment, since the question of haecceitism is closely connected with whether we need to model particular contents as sets of worlds and centered worlds or sets of worlds only. See Ninan (2008) for helpful discussion of these issues.

P4. If P2, it is possible that *STARING* is satisfied and you stand upon Peak.

P5. If it is possible that *STARING* is satisfied and you stand upon Apex and it is possible that *STARING* is satisfied and you stand upon Peak, haecceitism is true.

C1. Therefore, alethic haecceitism is true.[11]

Having earlier set aside those strategies that involve denying premises like P3 and P4 that link conceivability with possibility, Anti must deny one or both of P1 and P2. In doing so, she faces the challenge of explaining away their apparent plausibility.

In order to meet this challenge, the notion of modal delusion, previously applied to outside imagination, must be adapted to inside imagination.[12] Intuitively, this is not a difficult notion to grasp. It requires only that the *experiential content* of inside imagination—the content that determines how things *seem* from an imaginative perspective—is compatible with distinct singular content—the content determined by the identity of the individuals imagined. So, for example, if I imagine seeing one of two twins, Ben or Carl, the experiential content of my inside imagination might be the same, but the singular content—determined by which particular twin I imagine—might differ depending on whether I imagine Ben or Carl.

Anti's explanation of inside modal delusion—let us suppose it is your very own modal delusion—will now run as follows: While you believe you have inside imagined

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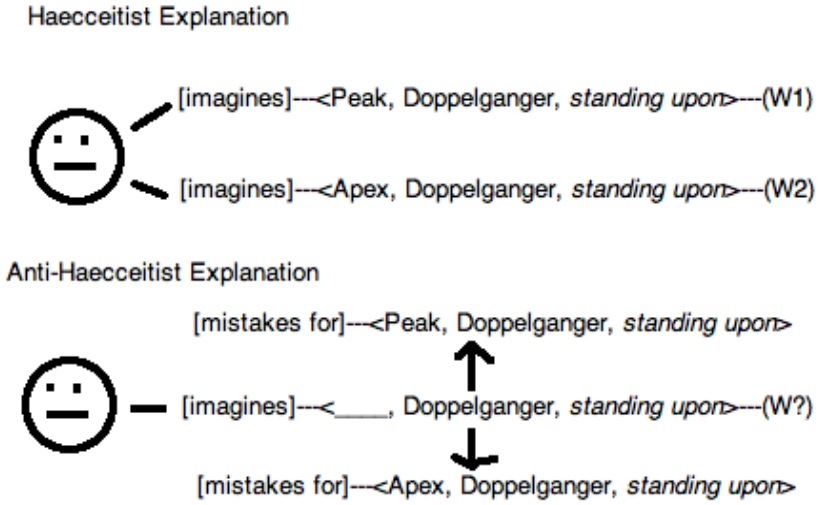
[11]The Staring Contest Argument has a close parallel in the case involving Lewis's Two Gods. See Lewis (1979). A related argument, discussed in Lewis (1986) and Graff Fara (2009), involves worlds of eternal recurrence. According to these arguments, we are to imagine occupying different epochs (albeit the same qualitative role) in different possible worlds. As with the Staring Contest argument, our imaginings will have identical experiential content and will therefore be subject to the same anti-haecceitist response.

[12]Any argument that invokes inside imagination has a corresponding version that invokes outside imagination, but not conversely. Perhaps, however, one might accept the possibility of worlds of "pure subjectivity" that have no imaginable general content and can therefore be imagined exclusively from the inside. But, then again, perhaps not.

two distinct maximal possibilities that differ with respect to where you are located, there is only a single maximal possibility. You form your mistaken belief that there are two qualitatively indiscernible maximal possibilities because you believe that your inside imaginings, while sharing the same experiential content, differ in terms of their singular content. In one case, you believe you inside imagine standing on Apex and looking at your doppelganger on Peak. In the other case, you believe you inside imagine standing on Peak and looking at your doppelganger on Apex. But you are mistaken, and your mistake is a natural one. There is only one possibility for you—perhaps it is standing on Apex, perhaps it is standing on Peak, or perhaps it is standing on some entirely different mountain. And, since you cannot distinguish your inside imaginings in terms of their experiential content, Anti can maintain that you form the mistaken belief that the singular content of your inside imaginings differ and that you therefore suffer from modal delusion.

We can represent Anti's and the alethic haecceitist's competing explanations as follows:



Anti's response to the Staring Contest Argument runs in close parallel to her response to the Electron Argument. To be sure, it raises a number of puzzles about

inside imagination that the previous argument did not, but, at the very least, Anti has offered a *prima facie* plausible explanation of why we might incline to accept P1 and P2 even while one or both are false. It seems, then, that moving from outside imagination to inside imagination will not sway Anti towards alethic haecceitism. Something further is required. In the next section, I consider an inside argument that attempts to improve on these initial efforts and make a convincing case for alethic haecceitism.

2.4 The Replacement Argument

The Electron and Staring Contest Arguments share a strange feature that many conceivability arguments do not. They require a kind of pair-wise conceivability-possibility inference. We are required to conceive of two non-actual maximal possibilities, and, given their genuine possibility, we are to conclude that they are separated by a haecceitistic difference. Perhaps this pair-wise structure and the fact that the argument does not involve the actual maximal possibility explains Anti's success in meeting the arguments already considered. To see whether this is so, let us consider an argument that aims to show that there is a maximal possibility that differs haecceitistically from the actual one. Bricker (2007) presents this *Replacement Argument* as follows:

> Indeed, it is perfectly legitimate to say: consider a possibility qualitatively indiscernible from actuality but in which I do not exist. In the possibility envisaged, I have a doppelganger, a person exactly like me in every qualitative respect, intrinsic and extrinsic; but that person isn't me. I find this intuition compelling, and think that any account of modality *de re* must find a way to accommodate it.

If we take ACTUAL to be the purely qualitative description of the world, we can formalize the Replacement Argument as follows:

The Replacement Argument

P1. It is conceivable that ACTUAL be satisfied but that you fail to exist.

P2. If P1, it is possible that ACTUAL be satisfied but that you fail to exist.

P3. If it is possible that ACTUAL be satisfied but that you fail to exist, then alethic haecceitism is true.

C1. Therefore, alethic haecceitism is true.[13]

The Replacement Argument is an *actuality-involving* inside argument.[14] Does it succeed where the Staring Contest Argument failed? Not really. Faced with the Replacement Argument, Anti has a plausible response.

Once again, Anti can deny the relevant conceivability premise, P1. But, unlike with previous arguments, she need not invoke modal delusion to explain her denial of P1. Instead, she can claim that you are unable to inside imagine that you do not exist. While you can certainly imagine, say, a vast expanse of blackness, this is not to imagine non-existence; it is merely to imagine that you exist in a vast expanse of blackness. Anti can therefore comfortably deny P1.

Anti might also go further and attempt to explain the intuitive appeal of P1 by holding that, upon failing to inside imagine non-existence, some will lapse into imagining the actual maximal possibility from the outside and then mistakenly believe that they succeed in outside imagining their non-existence within a qualitatively indiscernible maximal possibility. Here, however, Anti can appeal to modal delusion that occurs in outside imagination and claim that, even if you have the persisting

[13]Bricker (2007: 130).

[14]Skow (2007) also discusses the distinction between Swapping and Replacement Arguments.

intuition that P1 is true, it is likely a product of the same kind of modal delusion that underwrites the Electron Argument.

In light of the failure of the Replacement Argument, something more than actuality-involvement is needed to overcome Anti's resistance. To see what this might be, let us consider yet another argument.

2.5 The Swapping Argument

The problem with the Replacement Argument was that it required us to imagine the unimaginable. Fortunately for the alethic haecceitist, there is another actuality-involving inside argument that avoids this particular problem. This argument involves actual individuals swapping their *qualitative roles*—the totality of their respective qualitative properties—and is offered in Lewis (1986):

> Consider the thought that I might have been someone else. Here am I, there goes poor Fred; there but for the grace of God go I; how luck I am to be me, not him. Where there is luck there must be contingency. I am contemplating the possibility of my being poor Fred, and rejoicing that is unrealised. I am not contemplating a possibility that involves any qualitative difference in the world... Rather, I am contemplating the possibility of being poor Fred in a world just like this one.[15]

Formalized, the argument runs as follows:

> **The Swapping Argument**
>
> P1. It is conceivable that ACTUAL is satisfied and that you occupy a qualitative role that you do not actually occupy.

[15]Lewis (1986: 231).

P2. If P1, it is possible that ACTUAL is satisfied and that you occupy a qualitative role that you do not actually occupy.

P3. If it is possible that ACTUAL is satisfied and that you occupy a qualitative role that you do not actually occupy, then alethic haecceitism is true.

C1. Therefore, alethic haecceitism is true.

The Swapping Argument is an actuality-involving inside argument. Unlike the Replacement Argument, the imaginative task it requires us to perform is not an impossible one. Furthermore, Anti's earlier strategy of invoking modal delusion does not seem to succeed here.

Suppose, for example, that the qualitative role that you inside imagine occupying is the one actually occupied by LeBron James. So, when you inside imagine occupying this qualitative role, you inside imagine sailing through the air for a reverse dunk and being blinded by the camera flashes at a press conference.

The experiential content of your inside imagining is very different from the experiential content of your actual life. But, in order for Anti's modal delusion strategy to be applicable here, the *general or experiential content* of your imagining must be the same as the content of your actual experience. But, since these contents differ, Anti's modal delusion strategy will not succeed. It seems, then, that there is no way to undermine the Swapping Argument by holding us to be modally deluded when we imagine swapping roles with LeBron James. Arguments of this sort, which involve imaginings that differ in terms of their general or experiential content, are therefore *differentiable arguments* and arguments that do not, like those previously considered, are *non-differentiable arguments*.

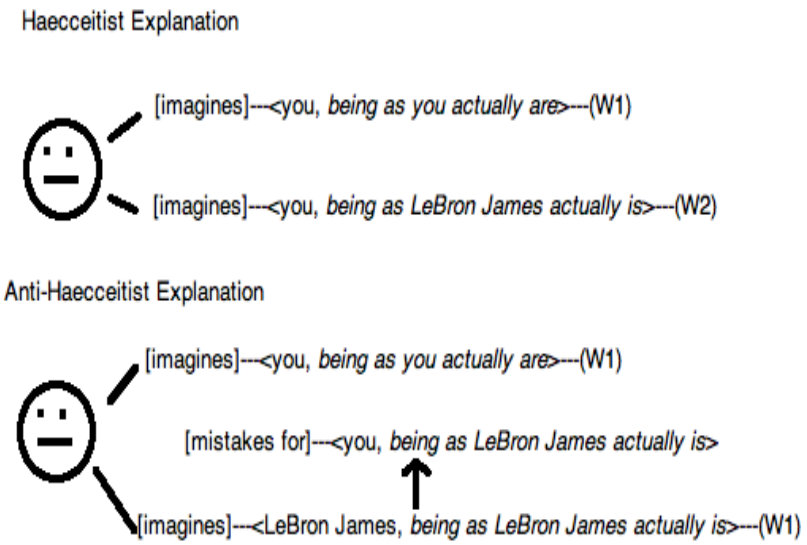
How might Anti block inside differentiable arguments like the Swapping Argument? I believe Anti's best option begins by conceding that your LeBron-imagining

and your actual life experience are indeed differentiable. Despite this, she can now argue that the fact that these two contents are differentiable does not guarantee that what you believe to be the content of your LeBron-imagining is its genuine content. In particular, Anti can hold that a different kind of modal delusion sinks the Swapping Argument. This kind of modal delusion is not a confusion between the LeBron-imagining and your actual experience. It is a confusion between what you believe to be the content of the LeBron-imagining and the genuine content of the LeBron-imagining. Specifically, Anti can hold that, in the act of imagining relevant to P1, you do not imagine *yourself* to be otherwise—i.e., occupying LeBron James' qualitative role. On the contrary, Anti holds that you imagine *being* LeBron James. Intuitively, this distinction is between imagining *yourself being otherwise* and imagining *being someone else altogether*. Represented formally, Anti holds that inside imaginings have three constituents: the individual undertaking the imaginative act, the individual that one imagines being, and the experiential content. So understood, Anti holds that, since you cannot distinguish the general content of ⟨you, LeBron James, the experience of LeBron James' actual life⟩ and ⟨you, you, the experience of LeBron James' actual life⟩, you cannot know that you have succeeded in inside imagining a possibility for you rather than a possibility for LeBron James.

According to Anti's new strategy, the modal delusion that afflicts you is not a confusion regarding the imaginings that are intended to represent two distinct maximal possibilities. It is confusion between two non-differentiable imaginings: the imagining that purports to represent a non-actual world—one where you are LeBron James-like—and the imagining that represents how the actual world is for another individual, LeBron James. As with the previous kind of modal delusion, the content of the confused imaginings is non-differentiable, but, in this case, the modal delusion occurs at a different point in the dialectic. This putative delusion allows Anti to hold that, despite having imagined a content differentiable from your actual experience,

you have only conceived of a single maximal possibility—the actual one—but have done so *as* a different individual. In one case, you have your own actual experience. In the other case, you imagine being LeBron James in the very same actualized maximal possibility. Your mistake is therefore a natural one. And, if Anti's earlier appeal to modal delusion sufficed to block previous arguments, her appeal to it here should be sufficient to block the Swapping Argument.

Represented along the same lines as the previous responses, Anti's new strategy runs as follows:



Anti's response to the Swapping Argument is not a modest one. Notice that, if it is successful, the inside imagining of being LeBron James and that of occupying his qualitative role are non-differentiable and therefore share the same experiential character. But, if these imaginings share the same experiential character and we cannot discern them, a skeptical problem arises: how are we to determine, for any inside imagining, whether we imagine *ourselves* occupying a certain qualitative role rather than imagining how things are for *someone else* altogether? If Anti is to deploy this response to the Swapping Argument, it seems to guarantee inside imagination can never be a guide to possibility, since we cannot know whether our imaginings have

anything do with what is possible for *us*. As a consequence, we cannot take inside imaginability to provide evidence of what is possible for ourselves. In contrast, if one rejects Anti's view of inside imagination and holds that, when one imagines from the inside, one imagines one's self being otherwise, the skepticism about the content of inside imagination can be set aside and the link between inside imagination and possibility can be sustained.

Perhaps Anti can sustain the conceivability-possibility link by endorsing a kind of cautionary principle that specifies how conceivability-evidence, when properly handled, supplies us with evidence of what is possible. I take the best principle available to Anti to be motivated by noting, first, that a possibility in which you occupy LeBron James' qualitative role is a possibility according to which you instantiate quite different qualitative properties and relations than you actually have. Next, Anti assumes that certain essentialist theses are *prima facie* plausible. In particular, she assumes the *prima facie* plausibility of *origin essentialism*, according to which individuals have their biological origins essentially. Given this assumption, Anti formulates the following principle intended to avoid skepticism about the connection between inside imagination and possibility:

> **Precaution**: The genuine possibility of an apparently conceivable maximal possibility is the *prima facie* best explanation of conceivability except in cases where (i) what is conceived of violates *prima facie* plausible essentialist theses and (ii) there is some alternative explanation of the conceivability.

Intuitively, then, Anti's strategy is to hold that inside imagination is a good guide to possibility insofar as it does not flout *prima facie* plausible essentialist theses and admit of alternative explanation.[16]

There is something intuitive about Precaution. In part, this is because many are liable to resist the Swapping Argument precisely because it seems to run counter to their essentialist leanings. Perhaps, then, Precaution is a plausible principle about inside imagination and its role as a guide to possibility. As I will now argue, however, it does not help Anti in responding to a final kind of conceivability argument for alethic haecceitism.

2.6 The Global Destruction Argument

Granted Precaution, Anti's response to the Swapping Argument turns on the violation of *prima facie* plausible essentialist theses and subsequent anti-haecceitist explanation in terms of modal delusion. What is needed, then, is an argument for alethic haecceitism that Anti's response cannot be marshaled against. As I will now show, arguments of this sort are readily available.

Following Adams (1979), let us begin by imagining two globes that are qualitative duplicates of one another. We occupy one of the globes, Castor. Our qualitative duplicates occupy the other, Pollux. We can imagine a world where Castor and Pollux exist forever, remaining qualitatively indiscernible throughout. Alternatively, we can imagine a world where at a certain time Pollux smolders and explodes, while we remain safe on Castor. But, if we can imagine this, we can equally well imagine Castor and ourselves smoldering and exploding, while Pollux is spared. There is no reason, however, to think that the latter two possibilities differ in any qualitative

[16]One might wonder whether the Replacement Argument also flouts essentialist commits. I suspect that it does not do so directly, but it does make problems for so-called "Sufficiency Principles" often employed in arguments for origin essentialism. For discussion, see McKay (1986).

respect. Let us say, then, that these worlds both satisfy the qualitative description, GLOBES. We can now offer the following argument:

The Global Destruction Argument

P1. It is conceivable that you occupy a world satisfies GLOBES and that you smolder and explode.

P2. It is conceivable that you occupy a world that satisfies GLOBES and that you do not smolder and explode.

P3. If P1, it is possible that you occupy a world satisfies GLOBES and that you smolder and explode.

P4. If P2, it is possible that you occupy a world that satisfies GLOBES and that you do not smolder and explode.

P5. If it is possible that you occupy a world satisfies GLOBES and that you smolder and explode and it is possible that you occupy a world that satisfies GLOBES and that you do not smolder and explode, then alethic haecceitism is true.

C1. Therefore, alethic haecceitism is true.[17]

The Global Destruction Argument is a differentiable inside argument. For this reason, the strategy used to block the Staring Contest Argument cannot be deployed as a response. The best bet for Anti is to respond to it as she did to the Swapping

[17]See Adams (1979: 22). Melia (1999: 650) offers an analogue: "We could imagine a collection of bald philosophers, sitting in a circle. It is a law that one of them will grow a single hair. But, by the symmetry of the situation, any of the philosophers could be the lucky one. Again, our intuition is that there are many qualitatively isomorphic but distinct possibilities, each representing a different way in which the situation could evolve... What does it matter that he is part of a complex situation, and that the various ways the situation will develop are all qualitatively the same? What difference will this make to him?"

Argument—i.e., by holding there to be a modal delusion between your imagining that you *yourself* are smoldering and burning and you imagining *being someone else* who is smoldering and burning. Recall, however, that Anti accepts Precaution in order to ensure that her anti-haecceitist explanations are well-motivated and to avoid skepticism about inside imagination as a guide to possibility. But, given Precaution, Anti's strategy cannot be deployed against the Global Destruction Argument. This is because it does not violate any *prima facie* plausible essentialist theses and there is therefore no principled reason to attempt to offer an anti-haecceitist explanation of the apparent conceivability in question. For this reason, Anti seems to have only two choices: accept full-blown skepticism about the link between inside imagination and possibility or accept alethic haecceitism.

Before considering these final options, it is worth noting an alternative strategy Anti might appeal to. She could claim that the situations involved in the Global Destruction Argument are too exotic and therefore too "distant" from actuality for our modal judgments—inside or outside—to be reliable guides. For this reason, the "exotic character" of the relevant imaginings rather than their violation of *prima facie* plausible essentialist theses is what allows us to hold the defender of the argument to suffer from modal delusion and offer a principled anti-haecceitist explanation.

While I am skeptical of the claim that the relevant situations are particularly exotic, it is important to note that this strategy is by no means general enough to defuse another conceivability argument for haecceitism. This final argument is *imperfectly actuality-involving*: it is actuality involving only for those who are actually one of a pair of twins. Lewis (1986) presents it as follows:

> To illustrate, consider these two possibilities for me. I might have been one of a pair of twins. I might have been the first-born one, or the second-born one. These two possibilities involve no qualitative difference in the way the world is. Imagine them specified more fully: there is the possibility of

> being the first-born twin in a world of such-and-such maximally specific qualitative character. And there is the possibility of being the second-born twin in exactly such a world.[18]

The argument, offered to either of a pair of "identical" twins, can be formalized as follows:

> **The Twins Argument**
>
> P1. It is conceivable that ACTUAL is satisfied and that you occupy the qualitative role of your twin.
>
> P2. If P1, it is possible that ACTUAL is satisfied and that you occupy the qualitative role of your twin.
>
> P3. If the actual world exists and it is possible that ACTUAL is satisfied and that you occupy the qualitative role of your twin, then alethic haecceitism is true.
>
> C1. Therefore, alethic haecceitism is true.

The Twins Argument is a differentiable inside argument. It is not plausibly deemed "exotic" in the way that the Global Destruction Argument might be. Since there are actually twins, the argument is, for some individuals, actuality-involving. Finally, since it does not violate origin essentialism or any other *prima facie* plausible essentialist theses, Anti has no principled reason to hold the defender of the argument to suffer from modal delusion, given her commitment Precaution.

For this reason, Anti's last alternative to alethic haecceitism is to embrace skepticism about inside imagination as a guide to possibility. If she pursues this option, she

[18]Lewis (1986: 231).

will not be alone. For instance, Nagel (2003) says: "one should be wary of intuitions based on the first-person perspective, since they can easily create illusions of possibility."[19] In a similar vein, Nichols (2008) accepts skepticism about inside imagination as a guide to metaphysical possibility.

Anti's denial that inside imagination is a guide to possibility has interesting consequences. The first is that it places the anti-haecceitist in the uncomfortable position of having been pushed to a thesis in modal epistemology by what might now seem to be a rather dogmatic commitment to alethic anti-haecceitism. It would be better, I believe, to simply admit that anti-haecceitist intuitions are negotiable and that we are better served to accept alethic haecceitism than to let our anti-haecceitism settle open issues in modal epistemology.[20]

The second interesting consequence is that, if Anti denies inside imagination is a guide to possibility because we can imagine haecceitistic differences from the inside, her position runs parallel to one regarding essentialism and anti-essentialism. For example, Nichols (2008) argues that inside imagination is no guide to possibility because we can imagine what are alleged to be counter-essential situations (e.g., where you flout your essence by occupying Napoleon's qualitative profile and having different biological origins). It is unclear, however, what evidence is being offered for the impossibility of the allegedly counter-essential situations. Absent compelling independent argument, the anti-essentialist ought to be unconvinced by Nichols' argument. Indeed, she can hold the fact that we can imagine the situation in question to provide evidence of its possibility.

A similar moral applies here for the alethic haecceitist: if the anti-haecceitist concludes that inside imagination is not a guide to possibility because of her com-

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[19]Nagel (2003: 216).

[20]Notice, that if Peacocke (1985) is correct and all imagination is inside imagination, this thesis proves even more striking, since the evidential connection between imagination and possibility is entirely severed.

mitment to anti-haecceitism, this claim will not be compelling unless independent evidence against alethic haecceitism is offered. Moreover, for the haecceitist, the relevant imaginability constitutes good evidence in favour of alethic haecceitism and for the reliability of inside imagination as a guide to possibility. The alethic haecceitist therefore requires no independent evidence. He can simply accept the working assumption of our modal epistemology that conceivability provides evidence of possibility.[21]

As I suggested earlier, if there is a single successful argument for alethic haecceitism, it would seem that the best explanation of apparently conceivable maximal possibilities that differ haecceitistically is just their genuine possibility. For this reason, Anti's apparent failure to undermine the Twins Argument suggests that the instances of conceivability relevant to all of the preceding arguments, from the Electron Argument to the Global Destruction Argument, are best explained, not by appeal to modal delusion, but by taking each argument to provide evidence for alethic haecceitism. So understood, Anti's defense falls like a house of cards once a single argument for alethic haecceitism like the Twins Argument cannot be successfully undermined.[22] Alethic haecceitism can therefore be supported by appeal to conceivability arguments.

Prior to concluding let me note an interesting feature of the preceding discussion: it delivers a taxonomy of conceivability arguments for alethic haecceitism. Within this taxonomy, the least powerful arguments were the outside arguments that Anti defused

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[21]If one finds the anti-haecceitist's or the essentialist's case against inside imagination compelling, a natural package of anti-haecceitist essentialism emerges as a competitor to haecceitist anti-essentialism. For the alethic haecceitism, the more stable package deal is the latter.

[22]Dasgupta (2009) has recently argued against a metaphysics of individuals and in favour of a generalist metaphysics that dispenses with individuals and replaces them with a conception of reality as constructed out of general facts—i.e., facts that make no reference to individuals or non-qualitative properties. For those wedded to anti-haecceitism, a generalist metaphysics might seem attractive by virtue of ruling out haecceitistic differences. Here, I note the availability of the view only to point out that, if generalism is required to sustain alethic anti-haecceitism, such a view should seem that much more extreme.

with modal delusion and the most powerful were those that seemed least plausibly defused by accusing their defender of modal delusion. As we have seen, however, these are inside arguments that do not violate essentialist intuitions.[23] Among these arguments, some are actuality or imperfectly-actuality involving, but the evidential significance of this particular feature is somewhat unclear. Finally, the Replacement Argument was seen to have the unique feature of being effectively unimaginable from the inside. Drawing upon these features, we get the following taxonomy:

<table>
<tr><td colspan="5">Inside Arguments</td><td>Outside Arguments</td></tr>
<tr><td colspan="4">Differentiable Arguments</td><td colspan="2">Non-differentiable Arguments</td></tr>
<tr><td colspan="2">Actuality-Involving</td><td colspan="4">Non-Actuality Involving</td></tr>
<tr><td>Counter-Essential</td><td colspan="5">No Prima Facie Plausible Essentialist Thesis Violations</td></tr>
<tr><td>Swapping</td><td>Replacement</td><td>Twins</td><td>Global Destruction</td><td>Staring Contest</td><td>Electron</td></tr>
</table>

2.7 Conclusion

I have examined a number of conceivability arguments for alethic haecceitism. After surveying the alethic anti-haecceitist's response, I have argued that, while modal delusion-based explanations of apparently conceivable maximal possibilities that differ haecceitistically meet with some success, the best available explanation—one that avoids skepticism about inside imagination as a guide to possibility—is to accept alethic haecceitism. There is therefore a strong case to be made for alethic haecceitism

[23]Note that, if inside arguments are the most persuasive for haecceitism, then there is a natural explanation for why some find haecceitism more plausible than the property-theoretic analogue, quidditism, since the latter does not admit of conceivability arguments from the inside.

on the basis of conceivability arguments. And, with this in mind, I will now turn to questions about the scope of haecceitistic differences and the prospects for ontic haecceitism.

CHAPTER 3

PLENITUDE DE RE

3.1 Introduction

There are countless actualized possibilities, but there is only one actualized *maximal* possibility. This maximal possibility *includes* possibilities like the possibility that Herman Melville wrote novels, the possibility that trees sprout leaves, and the possibility that something spherical exists.[1]

The possibilities included within maximal possibilities divide into two categories. There are non-qualitative possibilities that are possibilities *for* individuals. The possibility that Barack Obama is President or that Herman Melville is the tallest human are both of this kind. There are also *qualitative* possibilities like the possibility that something red exists or that something is to the left of a round object. These possibilities do not depend upon any specific individual for their actualization. They require only that some individual—any individual at all—instantiates certain qualitative properties.[2]

By distinguishing these kinds of possibilities, we raise the following question: Are there maximal possibilities that include the very same qualitative possibilities yet differ with respect to the non-qualitative or, alternatively, *de re* possibilities they

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[1]Here, I understand possibilities to include other possibilities by entailing them. Accordingly, for any possibility, a maximal possibility will include that possibility or its negation.

[2]Intuitively, non-qualitative properties like *being Henry VIII* or *being the wife of Henry VIII* are distinguished by their tie to specific individuals. For more on the distinction between the qualitative and the non-qualitative, see Chapter Four.

include? To take one example: Is there a maximal possibility wherein Napoleon has all the qualitative properties that Nefertiti actually has and *vice versa*?[3]

If maximal possibilities can differ in this way, then alethic haecceitism is true.[4] Alethic haecceitism holds that some maximal possibilities differ in terms of the non-qualitative possibilities they include *without* differing in terms of the *qualitative* possibilities they include. We can call the difference that separates maximal possibilities of this kind a *haecceitistic difference*.

Alethic haecceitism presents a puzzle for our best theory of plenitude: the Humean approach developed in Lewis (1986).[5] Like all accounts of plenitude, the Humean approach aims to characterize the space of possibilities and thereby determine what is and what is not possible. According to this approach, the space of possibilities can be characterized in terms of one or more *principles of plenitude*. Intuitively, these principles provide a recipe for "generating"—metaphorically, mind you—the entire space of maximal possibilities.

A puzzle arises, however, because the Humean approach is silent about the truth or falsity of alethic haecceitism. Although Lewis's development of the Humean approach characterizes the space of *qualitative* possibilities, it says nothing regarding non-qualitative possibilities. For this reason, the Humean approach—at least as previously developed—provides only an *incomplete* characterization of the space of possibilities.

My project here is to extend the Humean approach and, in doing so, provide a *complete* characterization of the space of qualitative and non-qualitative possibilities.

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[3]Setting aside this example, essentialism and haecceitism are perfectly compatible views.

[4]Recall that alethic haecceitism not be confused with the more controversial thesis of ontic haecceitism, according to which maximal possibilities—some of which differ haecceitistically—correspond to unique possible worlds.

[5]For discussion of the Humean approach, see Bricker (1991), Nolan (1996), Hawthorne *et al* (2003), and Efird and Stoneham (2009).

After briefly rehearsing the case for alethic haecceitism by presenting several arguments in its favour, I aim to clarify the central commitments of the Humean approach in Section Three. I then indicate why the Humean Approach is silent on the question of haecceitism and motivate the extension of the Humean Approach to matters *de re*. I then take up the challenge of formulating a principle of *de re* plenitude—a principle of plenitude for non-qualitative possibilities. After examining various principles of this kind, I conclude by briefly discussing the potential implications of principles of *de re* plenitude for the metaphysics of possible worlds.

3.2 The Case for Haecceitism

The notion of *logical space* will be important in what follows. On the view I assume here, possible worlds are identified with maximal possibilities and logical space is therefore built out of possible worlds.[6] Note, however, that my assumed identification of possible worlds and maximal possibilities is a harmless convenience. To be sure, one might accept maximal possibilities but deny the existence of possible worlds. But, if my assumption is mistaken, the following discussion will be unaffected except insofar as my talk of possible worlds will need to be recast in the more cumbersome terminology of maximal possibilities. For this reason, the discussion in this chapter is neutral—except where noted—between any number of views about the metaphysics of possible worlds.[7]

In the language of possible worlds, haecceitism is the thesis that some possible worlds represent the same qualitative possibilities but different *de re* possibilities. In-

[6]On one understanding, logical space is the mereological sum of all possible worlds. On another, it is the set of all possible worlds. Depending on one's favored view, non-maximal possibilities are either identified with sets or sums of possible worlds.The differences between these views are not relevant to our immediate purposes.

[7]Here, I do my best to set aside the difficulties arise by virtue of Lewis's particular treatment of haecceitism. See Chapter Five for discussion.

tuitively, these worlds are qualitatively indiscernible yet differ in some non-qualitative respect—i.e., with respect to facts about the identity of the individuals.[8] As I argued in the previous chapter, conceivability arguments provided strong support for haecceitism. These arguments proceed by having us imagine or conceive of worlds that differ haecceitistically, noting that the conceivability or imaginability of these worlds is evidence of their possibility, and concluding that some possible worlds differ haecceitistically.[9] Let me now briefly present three conceivability arguments for haecceitism:

> **The Cylinder Case:** Imagine a possible world consisting of only an infinite homogenous plane and a single homogeneous cylinder. Suppose that, at a certain time, the cylinder falls over. Intuitively, there are many ways for the cylinder to fall, but, for any way it might fall, that outcome will be qualitatively indiscernible from any other possible outcome. So, if there are distinct ways the cylinder could fall, there are possible worlds that differ only with respect to the *de re* possibilities that obtain.[10]

> **The Global Destruction Case:** Imagine a world consisting of only two globes that are qualitative duplicates of one another. We occupy one of the globes, Castor. Our qualitative duplicates occupy the other, Pollux. We can imagine a world where Castor and Pollux exist forever, remaining qualitatively indiscernible throughout. Alternatively, we can imagine a

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[8]See Chapter One for discussion.

[9]Note that the Humean approach does not deny imagination a role in modal epistemology. Lewis (1986: 90) says: "We sometimes persuade ourselves that things are possible by experiments in imagination. We imagine a horse, imagine a horn on it, and thereby we are persuaded that a unicorn is possible. But imaginability is a poor criterion of possibility... We get enough of a link between imagination and possibility, but not too much, if we regard imaginative experiments as a way of reasoning informally from the principle of recombination." The moral to draw here is that our commitment to the Humean approach is no obstacle to holding imagination to inform our best treatment of plenitude.

[10]This case is presented in Melia (2003: 162).

world where, at a certain time, Pollux smolders and explodes, while we remain safe on Castor. But, if we can imagine this, we can equally well imagine Castor and ourselves smoldering and exploding, while Pollux is spared. There is no reason, however, to think that the latter worlds differ in any qualitative respect.[11]

The Twins Case: Suppose that you are the firstborn of two monozygotic twins. Imagine, however, a world where events unfold in all the same qualitative respects as the actual world, but where you are the secondborn of the twins. Since matters are qualitatively the same, these worlds differ only with respect to the *de re* possibilities that obtain at them.[12]

Having examined these and other arguments in the preceding chapter, I will assume here that they supply us with sufficient evidence for the truth of haecceitism. And, as I will now argue, this presents a significant puzzle for the defender of the Humean Approach.

3.3 Principles of Plenitude

Let us now turn to principles of plenitude. The role of these principles is to show that logical space extends beyond the actual world. More specifically, their role is to furnish us with a *complete* logical space—one that includes all the possibilities we ought to countenance. These principles aim to ensure that logical space is without omissions, so that it includes every genuine possibility. And, while it is controversial what possibilities must be included, examples of incomplete logical spaces are clear enough. For example, no satisfactory principle of plenitude would hold that there are possibilities according to which six and eight giraffes exist, but none according to

[11]This case is presented in Adams (1979: 22).

[12]This case is presented in Lewis (1986: 231).

which seven giraffes exist. The task of our principles of plenitude is therefore to "fill" logical space and rule out omissions of this objectionable sort.

For Lewis, the development of principles of plenitude takes its cue from Hume's denial of necessary connections between distinct existences. Lewis summarizes his commitment to a principle of recombination as follows:

> Roughly speaking, the principle is that anything can coexist with anything else, at least provided they occupy distinct spatiotemporal positions. Likewise, anything can fail to coexist with anything else. Thus, if there could be a dragon, and there could be a unicorn, but there couldn't be a dragon and a unicorn side by side, that would be an unacceptable gap in logical space, a failure of plenitude.[13]

This passage expresses the basic insight underlying the Humean approach to plenitude: logical space can be characterized in terms of the various recombinations of possible individuals, which are parts of various possible worlds.

Although this guiding insight is simple enough, challenges arise in developing it in detail. In the remainder of this section, I single out the primary features of the Humean approach. This is needed in order to show, first, why the Humean approach as developed by Lewis is incomplete and, second, to give some idea of how it might be naturally extended to provide a plenitude of *de re* possibilities.

Before considering the first main feature—combinatorial units—let me briefly address an epistemic worry regarding the Humean's appeal to non-actual combinatorial units like the dragons and unicorns just mentioned. One might worry that the Humean approach, in allowing *mere possibilia* as combinatorial units, presupposes the kind of modal knowledge that principles of plenitude are thought to provide a foundation for. We ought to note, however, that this is where the Humean's epistemic

[13]Lewis (1986: 87).

conservatism regarding modal judgements comes into play. The Humean aims to systematize and extend our modal knowledge, not provide an infallible foundation from which it flows. In this way, the Humean helps herself to pedestrian modal knowledge of the kind that we typically assume ourselves to have. And, granted this knowledge, the Humean aims to subsume it and the rest of our modal knowledge within a broader theoretical framework.

Combinatorial Units: Since the Humean aims to characterize logical space in terms of the recombination of entities, they must specify which kinds of entities are subject to recombination. Here, we can call the entities to be recombined *combinatorial units*.

According to Lewis, combinatorial units are spatiotemporal parts of possible worlds. But, in opposition to Lewis, one might take events, objects, properties, states of affairs, or some combination thereof to be the combinatorial units.[14] Here, I remain neutral with respect to what entities are best identified as the combinatorial units and, in what follows, use 'combinatorial units' as a terminological placeholder for whatever entities are subject to recombination. It is important to note, however, that the Humean's combinatorial units are drawn from more than one possible world. So, for example, if there is a unicorn at some possible world and a dragon at another, these entities are nevertheless ripe for recombination.

Modal Independence: The second feature of the Humean approach concerns modal independence. For the Humean, combinatorial units are *modally independent*; they stand in no relations of necessary connection or exclusion. Lewis (1986) characterizes modal independence as follows: "Anything can coexist with anything else, at

[14]Some of Lewis's remarks suggest that he was tempted by a more general view about combinatorial units. See Lewis (1986: 181). Armstrong (1989) takes states of affairs to be the appropriate combinatorial units. See Lewis (1986b) for the case against Armstrong's account on the grounds that it violates the Humean demand of modal independence. See also Sider (2005) for discussion of Armstrong's combinatorialism.

least provided they occupy distinct spatiotemporal regions. Likewise, anything can fail to coexist with anything else."[15] We are better served, however, to generalize Lewis's claim and note that it divides into two distinct theses. The first of these rules out relations of *necessary exclusion*:

> *No Exclusions*: For any combinatorial unit, x, and any distinct combinatorial unit, y, there is a possible world where x and y coexist.

No Exclusions guarantees that, for any distinct combinatorial units, there is some possible world where they coexist. So, for example, if there is a golden mountain at some world, w, and a bronze statue at another world, w^*, there is at least one world wherein both a golden mountain and a bronze statue coexist.

The second part of the modal independence thesis rules out relations of *necessary connection*. Unlike No Exclusions this claim concerns combinatorial units that are worldmates (i.e., inhabitants of the same possible world). It can be formulated as follows:

> *No Connections*: For any combinatorial unit, x, and any distinct combinatorial unit, y, such that x and y are worldmates, there is a possible world where x exists but is not a worldmate of y.

No Connections guarantees that, for two worldmates, Cain and Abel, there is a possible world where Cain exists without Abel and *vice versa*. Together, No Exclusions and No Connections capture the thesis of modal independence central to the Humean approach.[16]

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[15]Lewis (1986: 88).

[16]Here, we should be careful to distinguish the intended sense of distinctness *qua* disjointness from mere numerical distinctness. For example, the region occupied by my body and the sub-region occupied by my torso, while numerically distinct, are not disjoint and therefore not distinct in the sense relevant here. For this reason, their connection is unproblematic: to recombine the region that contains me is just to recombine a duplicate of the sum of all my sub-regions.

Arrangements: We can now turn to the third piece of the puzzle: arrangements. The modal independence of combinatorial units guarantees that, for any two units, there is some world where those units coexist. It does not, however, guarantee that, for every way for combinatorial units to coexist, there is some world where they coexist in that way. Notice that a unicorn and dragon could coexist by being five feet apart or by being five light-years apart. For this reason, the Humean must ensure that, for any way for combinatorial units to be arranged (e.g., being five feet as opposed to five light-years apart), there is some possible world where they are so arranged.

A satisfactory approach to plenitude must therefore appeal to entities that will ensure a plenitude of arrangements for combinatorial units.[17] And, while appeal to arrangements is unavoidable, it raises questions about the generality of the Humean approach. After all, if our best account of plenitude must appeal to them, then we also need a guarantee that there is a plenitude of arrangements. Since addressing this issue would take us too far afield, I will simplify matters here by following Lewis and others in straightforwardly assuming the possibility of quantification over a plenitude of arrangements.[18]

Interpreting Recombination: We are now in a position to consider the final piece of the Humean puzzle: the interpretation of recombination claims. Here, it is crucial to note that, as Lewis develops the Humean approach, claims about the recombination of combinatorial units are not *de re* claims: they do not require that one and the same combinatorial unit exist at various possible worlds. Instead, the

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[17]While Lewis downplays the significance of arrangements, he does say the following: "Anything alien can coexist, or fail to coexist, with anything else alien, or anything else not alien in any arrangement permitted by shape and size." Lewis (1986: 92). In a similar vein, Hawthorne *et al.* (2003) plug this gap by quantifying over "ways of being adjacent".

[18]In adopting quantification over possible arrangements in a principle of plenitude, I assume that among the possible arrangements are arrangements within alternative spatiotemporal structures or "world-structures". For discussion, see Bricker (1991) for discussion of how a principle of plenitude for world-structures is best formulated.

principle of recombination is to be understood, not in terms of individuals themselves, but rather in terms of duplicates of individuals.[19] Lewis says:

> It is right to formulate our principle of recombination in terms of similarity. It should say, for instance, that there is a world where something like the dragon coexists with something like the unicorn. But extrinsic similarity is irrelevant here, so I should not speak of coexisting *counterparts*. Instead, I should say that a *duplicate* of the dragon and a *duplicate* of the unicorn coexist at some world, and that the attached talking head has at some world a separated duplicate.[20]

An illustration: A complete logical space will include a possible world where the Eiffel Tower is the only material object. It will also include a possible world that includes only two Eiffel Towers. For this reason, the principle of recombination must entail that, just as any distinct combinatorial units can coexist, any number of duplicates of a given combinatorial unit can coexist. Such a principle must, therefore, permit "self-duplication" and ensure that there are possible worlds according to which there are millions upon millions of Eiffel Towers.[21]

Intuitively, one might now wonder, if there is a possible world with millions of Eiffel Towers, which among them is *our actual* Eiffel Tower? But, on Lewis's treatment of recombination, this question is ill-formed. This is because the principle characterizes logical space in exclusively qualitative terms. It therefore remains silent about non-qualitative possibility (i.e., what is possible *for* the Eiffel Tower) and whether *our*

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[19]See Lewis (1986: 89) for discussion.

[20]Lewis (1986: 89).

[21]Notice that, on the present proposal, quantification over a plenitude of possible arrangements ensures a plenitude of arrangements that involve self-duplication. So, for example, there is a plurality of possible arrangements for the Eiffel Tower, since the Eiffel Tower might have only one duplicate or instead a vast number of duplicates. In this way, quantification over numbers of duplicates of combinatorial units is replaced by quantification over arrangements.

Eiffel Tower exists at any world other than the actual one. Because Lewis holds that recombination is understood in terms of duplication, the space of possibilities can be characterized only in qualitative terms.

We are now able to formulate and interpret the *Humean Principle of Recombination*:

> **The Humean Principle of Recombination (HPR)**: For any possible arrangement, A, of any possible combinatorial units, x_1, x_2, ... , x_n, there is a possible world where, x_1, x_2, ... , x_n, are arranged A-wise.[22]

This principle and its interpretation are neutral on a number of issues relevant to the Humean Approach. It is, for instance, an open question whether HPR is reducible to some more natural principle or principles. For illustration's sake, one natural way to develop HPR—in fact, Lewis's preferred approach—holds that, for any possible non-overlapping arrangement of any possible spatiotemporal regions, there is a possible world where those regions are so arranged. Unsurprisingly, the constraints and qualifications on HPR will vary with one's preferred choice of combinatorial units, but, as I will argue shortly, something more must be added to HPR in order to achieve the aims of the Humean Approach.

3.4 Problems with Plenitude

The Humean approach presented above cannot be the whole story about logical space. Since HPR does not recombine combinatorial units themselves but only qualitative duplicates of those units, it characterizes the space of possible worlds only up to qualitative indiscernibility. It is therefore silent about what non-qualitative

[22]Here, I assume that quantification over arrangements ensures that there are possibilities according to which any combinatorial unit might exist alone and, in this way, incorporate No Connections without doing so explicitly.

possibilities there are. So, as a consequence, it neither affirms nor denies the truth of haecceitism—a thesis regarding both qualitative and non-qualitative possibilities.

In one sense, the silence of HPR regarding haecceitism is unsurprising. Lewis, the chief proponent of the Humean approach, accepts an ontology of possible worlds that rules out the genuine transworld identity of individuals.[23] So, in order to account for our *de re* modal thought and talk, Lewis develops counterpart theory, which analyzes *de re* modal claims—those involving non-qualitative possibilities—in terms of qualitative resemblance (e.g., a is possibly F if and only if a bears some qualitative resemblance to an individual that is F.) So, for Lewis, questions about the space of qualitative possibilities are of deep metaphysical interest and need to be settled by principles of plenitude. But, in contrast, *de re* modality, which is most intimately tied to haecceitism, proves to be largely a matter of convention, reducible to more fundamental facts about relations of qualitative resemblance that hold between parts of possible worlds. On this interpretation, HPR—in concert with a suitable treatment of arrangements—answers all the difficult modal questions—i.e., those concerning qualitative possibility—and, in concert with our modal conventions, also manages to settle any remaining questions about *de re* modality.

In another sense, the silence of HPR regarding haecceitism signals a considerable failure of the Humean approach. Notice that Lewis's commitment to counterpart theory is motivated primarily by his particular views about the nature of possible worlds. And, in turn, it is counterpart theory and convention that end up settling what non-qualitative possibilities there are. It is unclear, however, that the Humean's treatment of *de re* modality ought to be determined by any particular view of possible

[23]For Lewis, genuine transworld identity is untenable because of the problem of accidental intrinsics. Roughly, if a single individual exists at distinct possible worlds, but has distinct intrinsic properties at those worlds, then that individual will have incompatible intrinsic properties. So, upon pain of holding all contingent intrinsic properties to be mere relations to worlds, Lewis denies that a single individual can exist at distinct possible worlds. See Lewis (1986: 198-209). For discussion, see Chapter Five.

worlds—much less Lewis's controversial one—or that this broadly conventionalist treatment of *de re* modality is true to the core Humean motivations. Furthermore, since the initial allure of the Humean approach was to provide a uniform way to characterize the entirety of logical space, a more natural and theory-netural approach is to treat non-qualitative possibility in lockstep with qualitative possibility by using principles of *de re* plenitude.

Once we notice the bifurcation in Lewis's treatment of qualitative and non-qualitative possibilities, the prospect of a more unified version of the Humean approach begins to seem attractive. Indeed, a number of considerations suggest that we ought to prefer a unified approach of this kind. It enjoys general theoretical virtues of unity, elegance, and simplicity, since it would be better if qualitative and non-qualitative possibilities were to be treated in a unified fashion. Moreover, it remains unclear why the Humean ought to tackle questions about plenitude in exclusively qualitative terms and let Lewis's views about possible worlds and counterpart theory settle questions about what non-qualitative possibilities there are.

There is an additional motivation for pursuing a plenitude-driven treatment of *de re* modality: sustaining the connection between plenitude and fundamentality. This motivation emerges because many defenders of the Humean Approach take the combinatorial units to be, not just any class of entities, but all and only the fundamental ones.[24] Furthermore, the truth of haecceitism is evidence that there are fundamental entities other than those involved in Lewis's qualitative conception of plenitude. Notice, for example, that a central platitude about fundamentality is that the fundamental properties or facts suffice to fix all the properties or facts. But, if haecceitism is true, then qualitative properties or facts do not exhaust the range

[24]Sider (2007: 53) expresses precisely this insight: "Concerning possibility, I have in mind a combinatorial principle requiring, roughly, that any pattern of instantiation of a fundamental relation be possible." See also Armstrong (1989) for the role of fundamental atomic facts in recombination.

of fundamental properties or facts, since worlds can differ without differing qualitatively. For this reason, if plenitude traffics in all and only fundamental entities, then the non-qualitative features of the world—the features tied to *de re* modality—are fundamental and therefore due to be accounted for via principles of plenitude.

On the Humean approach that I will now develop, the first order of business is to determine what qualitative and non-qualitative possibilities there are. Only after doing so, should we turn to the task of providing a metaphysics of *de re* representation like counterpart theory. In this way, my preferred version of the Humean approach reverses the direction of theorizing that Lewis assumes in letting counterpart theory and convention settle matters *de re*. It therefore treats qualitative and non-qualitative possibility in lockstep, and allows for a unified modal epistemology that affords principles of plenitude a central position. And, unless one is inclined to think that our qualitative and non-qualitative modal knowledge have radically different sources, a disunified account like Lewis's should seem less attractive in comparison. As a consequence, Humeans who reject Lewis's particular metaphysical views are likely to find the view I develop a more natural way to answer questions about the plenitude of non-qualitative possibilities.

3.5 Providing a Plenitude

I will now turn to the project of formulating and defending a principle of *de re* plenitude. I suspect that there are several ways one might develop a principle of this sort. For instance, if one takes fundamental properties to be combinatorial units, one might allow for the recombination of both fundamental qualitative properties and fundamental non-qualitative properties like *being Napoleon*. Perhaps such a view would prove attractive, but, following Lewis, I will opt for an approach that avoids

appeal to the recombination of properties.[25] In doing so, I will begin by assuming that HPR succeeds in providing us with the complete space of qualitative possibilities. Granted this assumption, we can help ourselves to two helpful notions.

The first notion is that of a *maximal qualitative possibility*, which includes, for every qualitative possibility, either that possibility or its negation. Intuitively, maximal qualitative possibilities are just total ways for things to be qualitatively, but are indeterminate with respect to non-qualitative matters. As such, they can naturally be thought of as Ramseyfied descriptions of possible worlds.[26]

A second useful notion is that of a *qualitative profile*, where an individual qualitative profile is the set of each and every qualitative property, intrinsic, extrinsic, and relational, that an individual instantiates according to a maximal qualitative possibility. Qualitative profiles can, for our purposes, be thought of as Ramseyfied qualitative descriptions of individuals that encode only qualitative information about individuals and the world. Intuitively, they specify the qualitative properties something instantiates without specifying the identity of the particular individual that instantiates them.

Granted these two notions, the most natural way to extend the Humean approach is to develop a principle of *de re* plenitude that "generates" possibilities by mapping individuals into the qualitative profiles that make up maximal qualitative possibilities. In developing a principle of this sort, a number of issues arise. Let us begin, however, by considering the following principle as a first attempt:

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[25]See Lewis (1986: 92).

[26]We generate a Ramseyfied description by replacing all the individual constants that occur in a given description with variables and introduce corresponding existential quantifiers to bind them. For more on Ramsey sentences, see Lewis (1970).

> **Simple Plenitude**: For every individual and every qualitative profile, there is some maximal possibility according to which that individual instantiates that qualitative profile.

Simple Plenitude raises question about the five following issues: actualism and possibilism, joint possibilities, essence, distinct indiscernibles, and contingent identity. I will now consider these issues, and, by examining them in turn, move towards the best available principle of *de re* plenitude.

3.6 Actualism & Possibilism

The first issue Simple Plenitude raises is whether it should be understood along actualist or possibilist lines. Notice that Simple Plenitude employs quantification over "every individual". How should we interpret the domain of this quantifier?

According to an actualist interpretation, the quantifier ranges over only actual individuals, since only actual individuals exist. According to a possibilist interpretation, the quantifier ranges over both actual and merely possible individuals, since both actual and merely possible individual exist. Although an exhaustive discussion of actualism and possibilism is beyond the scope of the present discussion, it will be helpful to sketch a few of the crucial points in the debate between actualists and possibilists in trying to settle the question at hand.[27]

The most familiar worries about possibilism revolve around conceptual incoherence and ontological profligacy. According to analytic actualists, actuality is a precondition for existence, so the concept of a merely possible albeit existent individual is flatly incoherent.[28] Other opponents of possibilism find the charge of conceptual incoherence too strong, but still maintain that there is something unattractive about

[27]For discussion of complications in defining and interpreting actualism, see Bennett (2005).

[28]See, for example, Loux (1979: 47).

the possibilist's commitment to mere possibilia or the disregard for parsimony that possibilism seems to require.[29]

For actualists, possible worlds are constructions out of actually existing entities that represent maximal possibilities. But, if only actually-existing resources are available for the construction of possible worlds, it is unclear whether actualists can discriminate between intuitively distinct maximal possibilities. The crux of the problem arises when we consider *aliens*—individuals that might exist, but do not actually exist.[30] If we accept the possibility of aliens, we ought to also accept that there could have been two more individuals than there actually are. Let us suppose, for example, that there could have been, in addition to all actual individuals, two additional bronze cubes that are intrinsic duplicates of one another. Given such a possibility, there is reason to believe that either cube could have been the lone individual that exists. There are therefore two maximal possibilities: one according to which one of the bronze cubes exists, another according to which the other bronze cubes exists. But, how is the actualist to distinguish these maximal possibilities?

Since neither bronze cube actually exists, she cannot discriminate them by naming them. And, since the two worlds with only bronze cubes are qualitatively indiscernible, she cannot do so in qualitative terms. Here, the possibilist fares better than the actualist. She can distinguish the two cubes by name, since, unlike the actualist, she admits these bronze cubes exist even while they do not actually do so. In this respect, she avoids the actualist's problems regarding aliens.

Just as possibilism allows for a relatively easy way to discriminate between various maximal possibilities, it also allows an easy way to interpret our principles of *de re* plenitude. If we suppose the relevant quantifiers to range over all possible individuals, we can guarantee the full range of non-qualitative possibilities for both actual and

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[29]For a possibilist response to these charges, see Lewis (1986: 135-165).

[30]For discussion, see Lewis (1986: 136-192).

alien individuals. But, if we opt for actualism, we cannot straightforwardly accommodate non-qualitative possibilities involving aliens. In light of this consideration, I will help myself to a commitment to possibilism with three caveats.

First, notice that our primary competitor, Lewis, also endorses possibilism, so the present proposal is no better or worse off for taking on a commitment to possibilism. Second, if actualists find they cannot set aside their worries about commitment to merely possible entities, they are welcome to employ a principle of *de re* plenitude that quantifies over only actual individuals. Such a principle will secure a plenitude of qualitative possibilities as well as a plenitude of non-qualitative possibilities for actual individuals, but leave open precisely what non-qualitative possibilities, if any, there are for aliens. This is noteworthy, in part, because it allows for the defender of the present approach to *de re* plenitude to handily represent views like Adams (1981), which deny there are haecceitistic differences regarding alien individuals. Third, even while we can follow Lewis in accepting possibilism, we need not commit to his particular version of possibilism (i.e., one that accepts a plurality of concrete possible worlds). We might, for example, view possible individuals as abstracta or as a *sui generis* ontological category. In this respect, the nature of the merely possible can be left open even while we help ourselves to possibilist quantification.

3.7 Joint Possibilities

A second issue, which presents serious problems for Simple Plenitude, concerns joint possibilities—possibilities for more than one individual—like the possibility that you and I are made of gold. Although Simple Plenitude ensures that there is some world in which I am sitting and that there is some world in which you are standing, it does not guarantee that there is some world in which you are sitting and I am standing. To remedy this worry, we need to strengthen our formulation by appealing to mappings

of sets of individuals into sets of qualitative profiles rather than mere mappings of individuals into qualitative profiles. The following principle results:

> **Full Plenitude**: For every set of qualitative profiles included in a maximal qualitative possibility, P, and for every set of possible individuals, S, and for every one-to-one mapping from S into P, there is a maximal possibility where members of S instantiate the qualitative profile in P that they are mapped into.

Full Plenitude accommodates joint possibilities. In doing so, it guarantees a plenitude of haecceitistic possibilities. It requires, for instance, that not only is there a possible world where you and I have the actual qualitative profiles of Bush and Obama respectively, there is also a world where you and I have the qualitative profiles of Obama and Bush respectively. This is because the mappings from S into P are ordered in such that any way to distribute S throughout P is an admissible mapping. By guaranteeing a plenitude of both individual and joint possibilities, Full Plenitude secures a broad range of haecceitistic differences that, as I will argue later, a suitable principle of *de re* plenitude should accommodate.

3.8 Essence

Simple and Set Plenitude raise questions about essence. Since they forego any restrictions on the qualitative possibilities for individuals, they preclude any individual from having (non-trivial) essential qualitative properties.[31] Furthermore, the Humean's commitment to modal independence rules out the *de re* necessary connections between individuals defended by essentialists (e.g., the connection between a biological organism like George W. Bush and its biological origins in George H.W.

[31]Here, I understand essential properties to be those properties individuals have in all possible worlds in which they exist. See Chapter Seven for discussion.

Bush). For these reasons, it is unlikely that any substantive form of essentialism is compatible with principles like Simple or Full Plenitude.[32]

Within the debate over essentialism, Humeans are liable to fall firmly on the anti-essentialist side. Since my interest here is in developing the strongest version of the Humean approach to plenitude, I will simply follow the current and assume anti-essentialism. In the present context, this assumption is well-warranted. Recall that Lewis's approach to plenitude is the primary competitor to the approach I defend here and that Lewis's version of counterpart theory also precludes a commitment to substantive truths about essences. For this reason, my preferred view is no better or worse off than Lewis's own view with regard to flouting essentialist scruples.[33]

Now, while I will assume anti-essentialism in proceeding, it is worth noting that there is no formal obstacle to reconciling principles of *de re* plenitude with essentialism. If we suppose that some independent account of the essential properties of individuals has been supplied, we can introduce an essentialist-friendly principle of *de re* plenitude as follows:

> **Essentialist Plenitude**: For every set of qualitative profiles included in a maximal qualitative possibility, P, and for every set of possible individuals, S, and for every one-to-one mapping from S into P that is *essence-compatible*, there is a maximal possibility where members of S instantiate the qualitative profile in P that they are mapped into.

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[32]An interesting open question regarding the Humean's commitment to modal independence is whether necessary connections are flatly incoherent or merely theoretically vicious. If they are flatly incoherent, there is an unqualified stricture against them. If they are theoretically vicious, something like what Forrest (2001) calls Hume's Razor ought to be adopted: given otherwise equally good theories, we ought to prefer whichever theory is committed to the fewest necessary connections between distinct existences.

[33]The primary difference that arises between these views is that, for Lewis, what *de re* possibilities there are varies with how context selects counterpart relations, while, on the present approach, what possibilities there are will also vary with context, but this need not require an appeal to counterpart relations.

The appeal to essence-compatible mappings in Essentialist Plenitude allows us to reconcile principles of *de re* plenitude and essentialist scruples. Intuitively, essence-compatible mappings only generate possibilities consistent with the specified essences of individuals. For instance, something that is essentially a lion will not be mapped into a qualitative profile belonging to a park bench.[34] So, while I set aside worries about essence in what follows, there is still ample room to endorse essentialism and something like the present treatment of *de re* plenitude.

3.9 Indiscernibles

The fourth issue that arises concerns the relation between haecceitism and distinct indiscernibles. Consider, for example, a maximal qualitative possibility according to which there are only two qualitatively indiscernible iron spheres arranged five feet from one another.[35] Since we aim to accommodate the full range of haecceitistic possibilities, our principle of *de re* plenitude must include sufficient structure to discriminate between various haecceitistic possibilities regarding this maximal qualitative possibility. If we focus upon only two possible individuals—Lois and Clark—our principle of *de re* plenitude, must discriminate between the two possible ways that Lois and Clark might be located.[36] Intuitively, the puzzle that arises is how to ensure that, despite the fact that there is only a single qualitative profile, there are two ways for Lois and Clark to fit into this maximal qualitative possibility.

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[34]The essentialist will also likely place non-qualitative constraints on the essence-compatible mapping such that only certain individuals (e.g., a table and the tree from which it was made) are jointly mapped into profiles that stand in certain relations like *being made from*.

[35]I unabashedly assume the falsity of the Principle of the Identity of Indiscernibles. See Adams (1979) for discussion.

[36]There are a number of competing views about the kinds of possibilities that ought to be discriminated. Here, my aim is not to settle among them, but only two show how distinct indiscernibles and haecceitism can, in principle, be accommodated.

I take this puzzle to concern how we ought to interpret talk of qualitative profiles. For our purposes, we need some way to distinguish between a world where Lois occupies Q_1 and Clark occupies Q_2 and *vice versa*.[37] But, unless we have a way to discriminate Q_1, Q_2, there is no way to guarantee the desired plenitude.

Here, the easiest way to proceed is to hold that, strictly speaking, there is only a single qualitative profile, Q, whose instances can be represented by pairing Q with ordinal numbers. Since we can determine how many indiscernible qualitative profiles are realized within a world by considering the cardinality of the set of entities that satisfy the Ramsey sentence that describes the world, we can go on to represent the various possibilities using ordered pairs of numbers and sets of properties. So, strictly speaking, the sequences that individuals are mapped into are pairs of a single qualitative profile and a real number like $\langle \mathrm{Q}, 1 \rangle$, rendered more simply as Q_1. This provides the resources needed to distinguish possibilities involving distinct indiscernibles.[38]

3.10 Contingent Identity

The fifth and final issue I will consider concerns contingent identity. For those who accept contingent identity, facts about the identity and distinctness of individuals vary from world to world. So, while you and I are actually distinct, we might not

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[37]To be sure, the structure imposed by the sequences of qualitative profiles will be arbitrary, but arbitrariness in this regard is not objectionable. Notice, for example, the pervasive appeal to sequences in our representation of propositions. We distinguish ⟨Mary, John, *was kissed by* ⟩ from ⟨John, Mary, *was kissed by* ⟩ as the distinct contents of "Mary was kissed by John" and "John was kissed by Mary", but there is no intrinsic or principled nature to this specific ordering. It is a matter of convention which sequences represents which content. So, too, with our appeal to sequences of qualitative profiles. No principled ordering is needed, since any ordering with sufficient structure will suffice.

[38]There is a related family of questions concerning the cardinality of the entities involved in principles of plenitude. For example, if there are worlds with proper class-many qualitative profiles or if there are proper class many possible individuals, Full Plenitude will have to be formulated in terms of proper classes rather than sets. While this gives rise to various complications—most notably, how to make sense of quantification over proper classes—I will set these kinds of concerns aside here. See Nolan (1996) for discussion.

have been. Note, however, that contingent identity is ruled out by Full Plenitude, given that the only admissible mappings are one-to-one. That said, if we wish to accommodate contingent identity, a simple generalization of Full Plenitude is available: admit many-to-one (and perhaps one-to-many) mappings from individuals onto sequences of qualitative profiles and interpret contingent identity as distinct individuals occupying the very same qualitative profile.[39] According to this proposal, the following principle results:

> **Contingent Identity Plenitude**: For every set of qualitative profiles included in a maximal qualitative possibility, P, and for every set of possible individuals, S, and for every many-to-one or one-to-one mapping from S into P, there is a maximal possibility where members of S instantiate the qualitative profile in P that they are mapped onto.

Contingent Identity Plenitude is a strange and powerful principle. For example, it admits a mapping that takes the entire domain of possible individuals onto a single qualitative profile and thereby guarantees, for all possible individuals, there is a world where they are a single individual.

Whether one accepts contingent identity, it remains noteworthy that the present approach provides a way to interpret talk that presupposes contingent identity. This is because one of the putative advantages of Lewis's counterpart theory is that it accommodates that apparent contingent identity of, say, a statue and the clay it is composed of. Notice, however, that, since Lewis holds individuals to be worldbound, there is a sense in which, strictly speaking, he denies that what one might consider "genuine" contingent identity ever takes place. (Lewis would, of course, deny there is a "genuine" sense of contingent identity over and above the kind he accommodates.) And, given that Contingent Identity Plenitude interprets talk of contingent identity

[39]See Yablo (1987) for a distinct yet related proposal.

in terms of occupation of the very same qualitative profile, it also avoids commitment to "genuine" contingent identity, and offers a metaphysically well-behaved surrogate instead.

3.11 Alternatives to Full Plenitude

I have now developed a principle of *de re* plenitude and indicated how competing principles can capture various metaphysical commitments. To be sure, there are alternative principles that warrant additional consideration. For example, one might consider principles that restrict the kinds of entities subject to Full Plenitude.[40] Alternatively, one might hold that different principles of *de re* plenitude apply to different kinds of entities.

Before proceeding, let me briefly mark one especially interesting view that emerges in considering the relation between haecceitism and plenitude. Suppose that one finds the Cylinder Case, presented in Section Two, entirely unconvincing, but takes both the Global Destruction and Twins Cases to provide compelling evidence for haecceitism. Further suppose that one explains their differing assessment of these cases by noting that only in the latter cases is the difference between worlds a difference in *what it's like* for the individuals involved. On such a view, the putative haecceitistic differences are therefore genuine only when they are differences *for* individuals to experience. Call this view about the scope of haecceitistic difference, *perspectivalism*, since it holds that haecceitistic differences between worlds must be differences *for* individuals with perspectives upon the world.[41] For the perspectivalist, no worlds

[40] Arguably, the most natural restriction holds Full Plenitude to apply only to concrete objects and remain silent on the modal features of abstracta. Another example: Suppose that the Hole Argument given by Earman and Norton (1987) pushes us towards the view of Maudlin (1988) that, while material objects are subject to Full Plenitude, individual spacetime points have all of their properties essentially and therefore fall outside the scope of Full Plenitude. The natural way to represent such a view is to simply restrict the domain of the principle to material objects.

[41] See Chapter Two for discussion of the various arguments for haecceitism.

without individuals that bear perspectives and enjoy conscious experience are ever separated by a haecceitistic difference.

Perspectivalism can be naturally represented by restricting the scope of Full Plenitude to apply only to those individuals with perspectives upon the world. In doing so, the perspectivalist can leave open what the proper principle of *de re* plenitude for other non-perspectival individuals might be. But, granted this distinction, perspectivalism is noteworthy for two reasons. First, it marks a non-arbitrary view of the scope of haecceitistic difference. Second, it delivers a novel kind of modal dualism. Specifically, it secures a metaphysical difference between individuals that bear perspectives and those that do not, since only the latter give rise to possibilities that differ haecceitsitically. Furthermore, this modal dualism distinguishes the perspectival and non-perspectival parts of the world without a commitment to a Cartesian dualism of material and immaterial individuals.[42] Here, I draw attention to perspectivalism only in order to illustrate the fertility of principles of *de re* plenitude for suggesting and developing novel views in the metaphysics of modality.

3.12 Interpreting Full Plenitude

My aim in the previous section was to develop a complete Humean Approach that characterized the entirety of logical space. While my discussion was intended to be broadly neutral with respect to a variety of competing metaphysical views, there is a natural tendency to wonder how this framework is best realized within a metaphysics of modality. Prior to concluding, I will briefly outline what I believe to be the most natural implementation of this framework.[43] My remarks here will be

[42]On the simplest view, a divide between perspectival and non-persepectival individuals is assumed and, as a consequence, certain broadly Cartesian intuitions are ratified. Most notably, perspectival individuals are essentially perspectival.

[43]I motivate and defend this implementation on the basis of other considerations in Chapter Five.

cursory and partisan, glossing over a number of standing controversies. They also look forward to Chapter Five where I develop in detail the view sketched here. Even so, I believe that for those ammenable to the framework developed, the following represents an attractive and novel conception of possible worlds and *de re* representation for interpreting the preceding framework.

Recall that our complete Humean Approach employs two principles of plenitude—HPR and Full Plenitude.[44] Intuitively, the former concerns the qualitative features of the world, while the latter concerns non-qualitative or *de re* matters. And, while one interpretation of this approach takes both of these principles to concern fundamental properties—qualitative and non-qualitative, respectively—a more natural interpretation holds the former to concern the ontological category of properties (specifically, fundamental qualitative properties) and the latter to concern the "thin" or "bare" particulars that instantiate these properties.[45] This interpretation therefore assumes a view of particulars according to which they have a *binary* rather than *unary* structure. On this binary conception (alternatively, "substratum theory"), particulars have two kinds of constituents: qualitative properties—here, I assume them to be universals—and bare particulars. So, unlike a unary conception (alternatively, "bundle theory") which holds particulars to be exhaustively composed of properties, the binary conception posits a fundamental instantiation relation between bare particulars and sparse universals.[46] There is a further component to this view. It holds that thick particulars are most naturally interpreted as the entities that have or instantiate properties and that, in our ordinary thought and talk, the instantiation relation is just the internal relation that thick particulars bear to their universal constituents.

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[44]Here, I set aside concerns about the relation of a plenitude of arrangements assumed in HPR.

[45]See Sider (2006) for a recent discussion and defense of a bare particular metaphysics.

[46]As I argue in Chapter Five, there is an ambiguity in our talk of instantiation between the fundamental external relation universals bear to bare particulars and the internal relation that thick particulars bear to the constituent universals.

On the resulting view, bare particulars have no accidental intrinsic properties, since their relation to universals, unlike thick particulars, is an external one.

Granted this binary conception of particulars, the preceding framework admits of a natural interpretation: HPR characterizes the space of possible worlds in all qualitative respects, while Full Plenitude (or one's preferred principle of *de re* plenitude) determines the distribution of bare particulars across this space of possible worlds. Notice that this interpretation restores the desired connection between recombination and fundamentality, since each principle concerns one of the two fundamental ontological categories, universals and bare particulars that intuitively represent *de re* possibilities for us. And, while it is tempting to think that this interpretation requires us to identify ourselves with bare particulars, this is not so. There is good reason to believe that we are, in fact, thick particulars—i.e., the sum of our bare particulars and qualitative properties. After all, bare particulars have no accidental intrinsic properties, but we have myriad accidental intrinsic properties.[47] How, then, can this metaphysics of particulars and interpretation of principles of plenitude make sense of our *de re* modal properties?

To fully answer this question, sides must be taken with respect to issues of actualism and possibilism. Here, I will simply mark my affinity for possibilism and note that, for the modal realist who accepts the existence of merely possible worlds, a novel proposal emerges. This proposal falls comfortably between Lewisian counterpart theory and the acceptance of our literal identity across worlds. On this view, bare particulars enjoy numerical "transworld identity", since, by virtue of having no accidental intrinsic properties, they do not succumb to Lewis's argument for the worldbound status of individuals.[48] Furthermore, these bare particulars determine

[47]Indeed, the fact that we have accidental intrinsic properties is precisely why Lewis (1986) denies that we can be numerically identical across worlds. See Chapter Five.

[48]See McDaniel (2004) for another way to preserve literal transworld identity within the modal realist framework.

non-qualitative relations between thick particulars, since the non-qualitative relation of *having a common bare particular* can now be used to analyze *de re* representation. And, while these relations are not counterpart relations in the Lewisian sense—after all, they are non-qualitative—they are ideal candidates for determining *de re* representation. On the intuitive picture that emerges, the persistence of our bare particulars across worlds determine what is possible for us even while we are not identical to bare particulars. So, while there is numerical identity across worlds for bare particulars, we as thick particulars remain worldbound entities. The resulting view is therefore properly viewed as a kind of non-qualitative counterpart theory and as an attractive way to realize the framework of *de re* plenitude outline above.

3.13 Conclusion

I have argued that the Humean approach to plenitude as developed in Lewis (1986) delivers an incomplete characterization of logical space. For those of us attracted to a unified treatment of plenitude, the Humean approach ought to be supplemented with a principle of *de re* plenitude like Full Plenitude. Such a principle, in conjunction with HPR, characterizes the complete range of qualitative and non-qualitative possibilities. Furthermore, it provides a conception of logical space in which haecceitistic differences are commonplace, where, for example, there is a possible world in which you and I swap qualitative roles and yet another where you and my favorite mug swap qualitative roles. This is an extreme view of the scope of haecceitistic difference, and, in subsequent chapters, I elaborate on how it might be reconciled with a version of modal realism. Prior to doing so, I turn to the challenge of clarifying the distinction between qualitative and non-qualitative properties which underlies a proper understanding of haecceitism.

CHAPTER 4

NON-QUALITATIVE PROPERTIES

4.1 Introduction

The Principle of the Identity of Indiscernibles (hereafter, PII) enjoys a storied history. In a fairly recent chapter, Max Black presented what is now commonly taken to be a decisive counter-example to PII.[1] Rather intuitively, Black suggested that we can conceive of a world including only two iron spheres—perfect duplicates of one another—located a small distance apart and, since we have no problem conceiving of such a world, there is good reason to believe it to be a possible one. And, if such a world is possible, PII no longer enjoys the status of a necessary truth and is thereby robbed of most, if not all, of its metaphysical significance.

Along with making problems for PII, Black's argument also brings to salience an important metaphysical distinction: the distinction between qualitative and non-qualitative properties and relations. (Hereafter, I mostly ignore relations and speak primarily of properties.) This distinction is relevant to the present case because Black's spheres—let's call them 'Bruce' and 'Clark'—agree with respect to all of their qualitative properties, and disagree only with respect to their non-qualitative ones. Not only are Bruce and Clark *duplicates*, since they share all the same intrinsic qualitative properties like *being spherical* and *being made of iron*, they are also *indiscernibles*. They share all the same extrinsic and relational qualitative properties like *being next to another sphere* and *being one of two iron objects*. The sole differ-

[1] See Black (1952).

ences between Bruce and Clark are non-qualitative: they involve only properties and relations like *being Bruce* and *being distinct from Clark*.

By considering Black's sphere case, we get a rough account of the distinction between the qualitative and the non-qualitative. Qualitative properties like *being made of iron* are what Bruce and Clark share; non-qualitative properties like *being Bruce* are what they do not share. This rough account is widely assumed and near-universally employed. Unfortunately, our rough grip on the distinction does not provide us with knowledge of the nature of non-qualitative properties (e.g., whether they are universals, tropes, or something else altogether) or knowledge of the precise contours of the distinction (e.g., whether properties like *being an even number* or *being a tiger* are qualitative). Instead, it supplies us with only a very rough account typified in remarks like the following:

> [H]aecceitistic properties—such as being identical to John or being the daughter of Jim—are those which, in some intuitive way, make direct reference to a particular individual(s).[2]

> [A] qualitative property or relation is one which can be adequately specified without reference to any particular individual.[3]

These remarks suggest that only non-qualitative properties depend upon individuals in some unspecified way, and that properties like *being Saul Kripke* are paradigmatically non-qualitative. Unfortunately, they tell us remarkably little else.

It is surprising that rather little attention has been paid to the distinction between qualitative and non-qualitative properties.[4] (Hereafter, I call this "the qualitative

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[2]Hawthorne (2006: 8).

[3]deRossett (2010: 74 fn. 4).

[4]For example, Divers (2002: 349) says "I know of no detailed discussion of the qualitative/non-qualitative distinction for properties." His ignorance is easily explained: there is no detailed discussion of the qualitative distinction.

distinction".) So, in what follows, I aim to take some initial and overdue steps towards clarifying the nature and scope of the qualitative distinction. Alongside this clarificatory undertaking, I will also offer a partisan defense of a certain reductionist analysis of the distinction.

The discussion runs as follows: In Section Two, I demonstrate the importance of the qualitative distinction for a range of philosophical projects, and consider certain kinds of potentially non-qualitative properties. In Section Three, I discuss the three views of the qualitative distinction: eliminativism, primitivism, and reductionism. In Sections Four through Eight, I examine various forms of reductionism. After detailing their respective virtues and vices, I defend the view that non-qualitative properties are distinguished by their failure to supervene upon natural properties. In Section Nine, I draw upon this view of non-qualitative properties to defend a novel thesis about the nature of non-qualitative properties. Specifically, I argue that there are non-qualitative properties that are no more or less fundamental than the fundamental qualitative ones. I conclude in Section Ten.

A terminological note before proceeding: rather than switching between familiar but non-standard terms for non-qualitative properties (e.g., "haecceities", "thisnessnes", "impure properties", and "identity properties"), I take "non-qualitative property" to subsume all properties of these kinds. That said, I do suggest a specific use of "haecceities" and "impure properties" in Section Two that singles them out as a distinct kind of non-qualitative properties.

4.2 The Distinction in Action

In this section, I demonstrate the relevance of the qualitative distinction for two core philosophical issues. In doing so, I show that we cannot reasonably go without some account of this distinction. Furthermore, since appeal to the qualitative distinction is commonplace in metaphysics, I leave aside discussion of its more eas-

ily recognized importance for understanding concepts like intrinsicality, resemblance, parthood, identity, modality, and so on.

Laws and Explanation The qualitative distinction plays a central role in debates regarding both laws and explanation. In particular, it is widely (although tendentiously) assumed that fundamental laws are purely qualitative property-involving such that no explicit appeal to non-qualitative properties or specific individuals is admissible in the formulation of fundamental laws.[5] This commitment traces back (at least) to Hempel and Oppenheim (1948) where they defend this stricture in order to sustain the covering law view of explanation:

> [T]he idea suggests itself of permitting a predicate in a fundamental lawlike sentence only if it is purely universal, or, as we shall say, purely qualitative, in character; in other words, if a statement of its meaning does not require reference to any one particular objects or spatio-temporal location. Thus, the terms 'soft', 'green', 'warmer than', 'as long as', 'liquid', 'electrically charged', 'female', 'father of', are purely qualitative predicates, while 'taller than the Eiffel Tower', 'medieval', 'lunar', 'artic', 'Ming' are not.[6]

Although we may disagree with both this particular conception of the qualitative distinction and the attendant view of laws and explanation, it is clear that, for Hempel and others, a suitable account of laws and scientific explanation will require some account of the distinction.

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[5]For discussion, see Lange (1985). See Tooley (1977) for a defense of the possibility *de re* laws, which posit nomic connections involving non-qualitative properties.

[6]Hempel (1948: 155-156).

Content and Attitudes According to descriptivism, the semantic content of names and certain predicates are synonymous with definite descriptions that express only qualitative properties.[7] The moral of Kripke and Putnam's Twin Earth arguments is that descriptivism is false, and that names and predicates, unlike any putatively synonymous descriptions, can divide individuals and kinds that are qualitatively indiscernible.[8] In this context, the qualitative distinction proves crucial because, unless the restriction to qualitative properties is added to thesis of descriptivism, the view is immune to Kripke and Putnam's arguments. This is because the descriptivist can appeal to descriptions expressing non-qualitative properties like "the blahs on Earth" or "near *me*" and thereby divide qualitatively indiscernible individuals and kinds. More generally, the fact that attitudes and reference relations can divide qualitatively indiscernible individuals is useful for illustrating and diagnosing the uniquely *de re* status of certain attitudes and relations.

Given its importance for philosophical concerns like those just considered, we have good reason to pursue a suitable account of the qualitative distinction. But, before evaluating these competing accounts, let me lay the groundwork for this evaluation by considering some properties that might reasonably be deemed non-qualitative[9]:

Haecceities: *Haecceities* like *being Saul Kripke* are paradigmatic non-qualitative properties associated with the identity of specific individuals like Saul Kripke. Sometimes called "individual essences", haecceities are uniquely instantiable by a specific individual.

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[7]See Kripke (1980) for discussion.

[8]See Kripke (1980) and Putnam (1975).

[9]I leave open whether some of these properties might ultimately prove to be qualitative or that their status is to be settled only after adopting a specific account of the qualitative distinction

Negative Haecceities: If *being Saul Kripke* is non-qualitative, it is plausible that *negative haecceities* like *being distinct from Saul Kripke* are similarly non-qualitative. Notice, for example, that the indiscernible spheres, Bruce and Clark, differ with respect to the negative haecceities *being distinct from Bruce* and *being distinct from Clark*.

Disjunctive Haecceities: If *being Saul Kripke* and *being David Kaplan* are non-qualitative, it is plausible that there is a *disjunctive haecceity* of *being Saul Kripke or David Kaplan* that is also non-qualitative. Notice also that, if there were two additional indiscernible spheres in Black's world, disjunctive haecceities would divide Bruce and Clark from those other spheres without any of the spheres differing qualitatively.

Impure Properties: *Impure properties* like *being the same height as Saul Kripke* or *being next to David Kaplan* seem non-qualitative by virtue of involving specific individuals. It is unclear, however, precisely what kind of involvement makes for a non-qualitative rather than qualitative property. For example, if Kripke is actually five feet tall, then *being the same height as Saul Kripke actually is* might still be identified with the qualitative property *being five feet tall*. Despite this, it is uncontroversial that at least some impure properties are non-qualitative.

Species Properties: *Species properties* like *being a tiger* behave like haecceities.[10] This is because Twin Earth cases suggest that species terms like 'tiger' function much like proper names like 'Saul Kripke'. And, since proper names and their associated properties like *being Saul Kripke* divide

[10]Indeed , some have argued that species are individuals and, as a consequence, the *species property* of *being a tiger* is analogous to the impure property of *being a part of the tiger-species*. See Lange (1985) for an overview.

qualitatively indiscernible individuals, there is some reason to believe that species terms and their associated properties like *being a tiger* do the same. Species properties are therefore plausibly held to be non-qualitative.

Tense and Modal Properties: Suppose, for a moment, that you accept both eternalism—roughly, the existence of non-present times—and possibilism—roughly, the existence of non-actual words—but hold that there is a fundamental ontological distinction between both present and non-present entities and between actual and merely possible entities.[11] In order to make sense of this distinction, you ought to accept the existence of fundamental non-qualitative properties that divide what presently or actually exists from what non-presently or merely possibly exists. After all, if these properties—*being present* and *being actual*—are qualitative, then there is a qualitative difference between any present or actual things and non-present or merely possible things. But, since present or actual things can be qualitatively indiscernible from non-present or merely possible things (e.g., in a world of eternal recurrence), you and those like you who accept distinctions of this kind ought to accept that these sorts of tense and modal properties are non-qualitative.

Structural Properties: Some *structural properties* are bound up with facts about identity, distinctness, composition, coexistence and other structural facts about the world. Intuitively, these properties like *being distinct from something* or *being a part of something* contribute nothing to the "qualitative character" of the world. At the same time, these structural properties do not depend upon any specific individual, and, in the case of

[11]I have in mind the view according to which temporal passage is explained in terms of a fundamental tense property and the view that actuality is distinguished by a fundamental modal property. See Zimmerman (2008) for discussion of the former and Bricker (2006) for discussion of the latter.

being self-identical, never divide qualitatively indiscernible individuals.[12] The qualitative status of these structural properties is therefore an open question for any account of the qualitative distinction.

Mathematical Properties: The qualitative features of the world are bound up with relations of qualitative resemblance. But, when we turn to questions regarding abstract entities—in particular, *mathematical properties* of mathematical entities like *being even*—it is unclear what mathematical entities might contribute to the qualitative character of the world. Mathematical properties are therefore potentially viewed as non-qualitative. But, since the status of these properties will turn on the controversial issues regarding the nature of mathematical entities, whether mathematical properties are qualitative is reasonably viewed as an open question.

I have now introduced the kinds of properties that a view of the qualitative distinction ought to deliver a verdict about. Furthermore, any view of the distinction that runs afoul of our core intuitions about these properties incurs a theoretical vice. With this in mind, I will now consider the various options for understanding or analyzing the qualitative distinction.

4.3 Eliminativism and Primitivism

The qualitative distinction can be approached from one of two directions. We might target the concept of a *qualitative property* for analysis and understand *non-qualitative property* as merely its negation. (Again, I omit discussion of relations for convenience's sake.) Alternatively, we might reverse the order of conceptual priority and proceed by analyzing *non-qualitative property*. Since it is unclear whether any substantive issues turn on which direction one opts for, I will remain neutral and

[12]See Bricker (2006) for discussion of structural properties.

proceed in somewhat broad strokes. The main question is therefore the following: What is required for a property to be a qualitative or non-qualitative property? Drawing on paradigm cases, we might also put the question as follows: What feature of *being red* entails that it is qualitative, and what feature of *being Saul Kripke* entails that it is non-qualitative?

Within philosophical analysis, there are three stances one might take towards a concept or, in this case, a distinction: (i) **Eliminativism**: There is no distinction—or at least not a metaphysically interesting one—between qualitative and non-qualitative properties. (ii) **Primitivism**: There is a metaphysically interesting distinction, but it cannot be analyzed without appeal to the concepts at issue—here, the concepts of qualitative and non-qualitative properties—and therefore resists reductive analysis. (iii) **Reductionism**: There is a metaphysically interesting distinction, and it can be analyzed without appeal to the concepts in question. Before considering the prospects for reductionism, I briefly consider both the merits of eliminativism and primitivism.

The case against eliminativism is compelling. Consider once again Black's lonely iron spheres. Intuitively, there is some metaphysically interesting respect in which they are alike, but, despite this commonality, they differ by virtue of their numerical distinctness. Here, our grip on the distinction is especially clear. The only respects in which the spheres differ are non-qualitative respects, so, while they are discernible in the broadest sense, they are not qualitatively discernible.

If the eliminativist is to deny that there is a genuine distinction, she must either accept PII and hold that "qualitative" indiscernibility is just indiscernibility *simpliciter*. Alternatively, she can deny that there is an interesting difference between the properties the spheres share and those they do not. Neither of these options is attractive. Black's example succeeds in showing PII to be counter-intuitive and unmotivated, and denying these properties differ in kind is tantamount to denying that notions like duplication—understood in terms of qualitative properties—are meta-

physical interesting.[13] We should, therefore, reject eliminativism and its strange kind of conceptual blindness and accept the distinction as both genuine and metaphysically interesting.

The remaining non-reductionist option, primitivism, enjoys some promise. After all, the distinction between *being red* and *being Saul Kripke* strikes most as "metaphysically deep" and such distinctions provide good candidates for theoretical primitives.[14] But, like any primitivist view, primitivism about the qualitative distinction is difficult to motivate. This is because the case for primitivism requires us to show, first, that all available accounts—as well as any that might be forthcoming—are inadequate, and, second, that the concept in question is a suitable and useful primitive that we cannot dispense with.

Given the paucity of discussion about the qualitative distinction, there is little reason to think the project of analyzing it has already been confounded. So, while primitivism remains as a last resort, we ought to turn to our most attractive and well-worn primitives in an attempt to provide a reductive analysis of the distinction. In subsequent sections, I will therefore introduce and argue against several versions of reductionism: the linguistic view, the modal view, the definability view, and the grounding view. After arguing against these analyses, I examine and defend the supervenience view.

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[13]For discussion, see Adams (1979).

[14]Diekemper (2009: 1) accepts primitivism. He says "The distinction between a qualitative and a non-qualitative property is one that belongs to that family of philosophical distinction which, though not admitting of analysis, can be made easily enough through the use of a loose definition and some intuitive examples."

4.4 The Linguistic View

The linguistic view of the distinction is suggested in Adams (1979).[15] And, although it is unclear that he takes his remarks to aim at a genuinely reductive analysis, he says the following:

> We might try to capture the idea by saying that a property is purely qualitative—a suchness—if and only if it could be expressed, in a language sufficiently rich, without the aid of such referential devices as proper names, proper adjectives and verbs (such as 'Leibnizian' and 'pegasizes'), indexical expressions, and referential uses of definite descriptions.[16]

A view that these remarks suggest—I do not claim it to be Adams' own—analyzes the distinction in terms of the elements of possible languages. Such a view might be motivated by the intuition that certain types of expressions like 'Saul Kripke' are necessarily connected to the non-qualitative features of the world and the identities of individuals. When made explicit, the **linguistic view** amounts to the following: a property, F, is *qualitative* if and only if, for any possible and "sufficiently rich" language, L, F is expressible in L without employing any items of lexical type, T, where T includes proper names, proper adjectives and verbs, indexicals, and so on.

There are a number of reasons why this linguistic view is untenable. Some concern the specifics of the proposal. For example, the specification of the relevant lexical types is incomplete, and, absent this specification, the proposal is unsatisfactory. Furthermore, it is unclear how, given that we are concerned with all possible languages, one might exhaustively specify which lexical types are to be included within T. In addition, without providing some account of "sufficiently rich" possible languages,

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[15] What Adams' exact view is is unclear. In addition to a linguistic "definition", he also offers a second definition, but, since it explicitly appeals to non-qualitative "thisnesses" to define qualitative properties, such a view would constitute a form of primitivism.

[16] Adams (1979: 7).

the proposal fails to give an exhaustive procedure for determining whether properties are qualitative or not.

The more serious worries about this view are methodological in nature. Since it employs language to analyze a fundamental metaphysical feature of reality, the putative order of explanation seems mistaken. For the metaphysical realist, the notion that language—something plainly mind-*dependent*—perfectly carves this distinction in reality—something plainly mind-*independent*—seems misguided or implausibly optimistic. Furthermore, even if the linguistic approach proved to be extensionally adequate, one might worry that this proposal leads to a form of eliminativism: the distinction between qualitative and non-qualitative properties is *just* the distinction between which lexical items express them. But—the worry continues—there is something metaphysically deep about the distinction that is not reducible to mere facts about which lexical items express which properties. For these reasons, this Adams-style view and, more generally, any linguistic view is liable to be unsatisfactory. An analysis of the distinction should, therefore, be offered in terms of fundamental metaphysics. With this in mind, I will now turn to those views that employ metaphysical notions like modality, naturalness, and grounding.

4.5 The Modal View

The modal view aims to analyze the qualitative distinction in terms of the unique modal dependence of non-qualitative properties upon specific individuals. For example, Hawley (2009) characterizes the qualitative distinction in explicitly modal terms:

> 'Qualitative' more usually picks out those properties and relations whose instantiation does not require the existence of any specific object: thus

> *composing something* usually counts as qualitative, while *composing the Eiffel Tower* is non-qualitative.[17]

Hawley's remarks do not aim at analysis of the qualitative distinction, but there is reason to consider whether one might be developed along these lines. And, since the nature of this modal connection is clearest in the case of individuals and their haecceities, the defender of the modal view is well-served to look to haecceities for an analysis of the qualitative distinction.

A good candidate for an analysis of *haecceity* is the following: a property, F, is a *haecceity* if and only if, for some specific individual, a, necessarily, F is instantiated only if a exists.[18] While this might be a tenable analysis of haecceity, it is clearly inadequate as an analysis of non-qualitative properties in general. Consider, for example, the disjunctive haecceity of *being Saul Kripke or being David Kaplan*. Since this property can be instantiated in worlds without Kripke or without Kaplan, but not without both, it does not depend upon the existence of both individuals, but rather on the existence of one of the plurality of Kripke and Kaplan. So, while we cannot use our analysis of haecceity to reduce the qualitative distinction, we can build upon it to offer a version of the modal view that accommodates the non-qualitative status of disjunctive haecceities. Let the **modal view** therefore be the following thesis: a property F is *non-qualitative* if and only if, for some individual or individuals, *the as*, necessarily, F is instantiated only if *the as* exists.

Is the modal view a plausible analysis of the qualitative distinction? Probably not. Consider a possible world where Saul Kripke does not exist. At such a world, all individuals instantiate the negative haecceity, *being distinct from Saul Kripke*. Since the modal view can only use existence to single out non-qualitative properties, this

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[17] Hawley (2009: 102).

[18] Some will prefer to include a uniqueness clause: only a can instantiate F. Humeans like myself who hold that a can exist without any other individuals need no such clause.

property will either be qualitative or will be uninstantiable in worlds without Kripke. But, since it is very plausible that some Kripke-less worlds are such that individuals in them instantiate *being distinct from Saul Kripke*, the biconditional in the *analysans* of the modal view fails in the left-to-right direction.

Notice, in addition, that the modal view guarantees that the tense and modal properties discussed in Section Two are qualitative. These properties—held to distinguish the present and the actual from the non-present and merely possible—do not depend upon the existence of any specific individuals. For this reason, the modal view cannot accommodate their intuitively non-qualitative status and therefore delivers another undesirable result.

Along with the two problems just noted, the modal view also faces a threat from necessary existents. Suppose that some individual, Rex, exists necessarily. Since the modal view holds properties to be non-qualitative when they have the existence of a particular individual as a necessary condition, the necessary existence of Rex—a trivial necessary condition for the instantiation of any property—would seem to guarantee the objection result that all properties are non-qualitative.[19]

In light of these difficulties, the resources of the modal view, while apt for distinguish haecceities, seem inadequate for analyzing the qualitative distinction in general. For this reason, I will turn now to reductionist approaches that help themselves to resources other than modality alone.

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[19]Perhaps this problem arises even if no specific individual is a necessary existent. For example, if we assume there is a plurality of all possible individuals and that plurality exists at a world so long as some of the plurality exists, then the necessary existence of this maximal plurality will also trivialize the above formulation by virtue of a being a necessary condition for the instantiation of any property.

4.6 The Definability View

For those who accept the distinction between natural and non-natural properties, not all properties are created equal. Only a certain number of properties carve nature at its joints.[20] These properties play several unique theoretical roles. They comprise a supervenience base that fixes the distribution of other properties. They place constraints on the interpretation of language and thought. They serve as the value of the predicates of our ideal physical theory. Furthermore, they guarantee objective similarity between objects that instantiate them.

Following Lewis (1983), we can call the properties that play these and other important theoretical roles *natural properties*. Among these natural properties, we can also distinguish certain properties as *perfectly natural* insofar as they are the ultimate grounds of resemblance and the deepest joints in nature.[21] In contrast to these sparse natural properties, other properties are abundant. Abundant properties are not part of the supervenience base formed by the natural properties. They need not make for objective similarity between objects. They need not figure in our best physical theory.

Lewis employs the primitive distinction between natural and non-natural properties to offer a wide and impressive range of philosophical analyses.[22] It is reasonable, then, to look to natural properties for the makings of an analysis of the qualitative distinction. (As I will discuss in Section Eight, there are several ways such an analysis might be developed and several views of the distinction Lewis seems to have consid-

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[20]See Lewis (1983) and (1986) for discussion and defense of the indispensability of naturalness.

[21]I ignore the subtle but orthogonal issues that divide views that reject perfect naturalness in favor of a comparative primitive of "more natural than".

[22]Lewis (1983) considers whether we might analyze the distinction between natural and non-natural properties in terms of the members of the sets identified with natural properties as sharing tropes or universals. On such a view, the distinction is no longer primitive, but turns on facts about tropes and universals.

ered.) Here, I want to consider the prospects for one such approach: the definability view.

The definability view aims to distinguish the qualitative and the non-qualitative in terms of relations of definability they bear to perfectly natural properties. I take this view to be suggested by some remarks made in Lewis (1986). There, Lewis says the following about non-qualitative properties:

> I am no haecceitist; but I hold that (on one legitimate conception of properties among others...) 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.[23]

This passage expresses Lewis's commitment to the existence of non-qualitative properties—most notably, haecceities—and his denial that they play a role in *de re* representation. It also marks Lewis's assumption that, in at least one sense of "property", properties are sets of possible individuals. Elsewhere, Lewis says more about how exactly to distinguish non-qualitative properties while clarifying the notion of indiscernibility:

> Two things are *indiscernible* iff they have the same intrinsic and extrinsic qualitative character. Extrinsic qualitative character, wherein duplicates may differ, consists of extrinsic properties that are, though not perfectly natural, still somewhat natural in virtue of their definability from perfectly

[23]Lewis (1986: 225).

> natural properties and relations. Indiscernibles share all their somewhat natural properties. They do not, of course, share all their properties without exception...[24]

I take the definability view suggested by these remarks to run as follows: Perfectly natural properties are qualitative. Whether a given property is "somewhat natural" and therefore qualitative turns on how, if at all, that property is definable in terms of perfectly natural properties. Since some properties—e.g., haecceities—are not "appropriately definable", they are not "somewhat natural" and are therefore non-qualitative. So understood, there is a qualitative cut-off point of what I have called "appropriate definability" in terms of the perfectly natural properties, and certain paradigmatic non-qualitative properties like Saul Kripke's unit set are held to fall on the non-qualitative side of this cut-off point.

To take an example: *being a primary color*—understood as a first-order property—is qualitative, since it can be constructed out of the disjunction operation on what we might suppose to be reasonably natural properties, *being red*, *being blue*, and *being yellow*. In contrast, sets with arbitrary members drawn from various worlds—"haecceities", on one understanding—will be non-qualitative, since there is either no way or only gruesome ways to define these sets through operations on the sets associated or identified with natural properties. As Lewis says, certain of the abundant properties "pay no heed to the qualitative joints but carve up things every which way."[25] Made explicit, the **definability view** is as follows: a property, F, is *non-qualitative* if and only if it is not appropriately definable in terms of operations upon perfectly natural properties.

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[24]Lewis (1986: 63).

[25]Lewis (1986: 59).

One might reasonably wonder why Lewis cannot hold that any and all properties definable in terms of perfectly natural properties are qualitative. This option is precluded by Lewis's desire to remain agnostic about whether or not there are qualitatively indiscernible worlds.[26] If there are no such worlds, any and all properties—including haecceities—will be definable in terms of perfectly natural properties. So, in order to accommodate his neutrality on this issue, Lewis is forced to appeal to either what I have called "appropriate definability" or the comparably sketchy notion of a property being "somewhat natural".[27]

Unsurprisingly, the commitments of the definability view are not as clear one might hope. Consider properties like *being five or thirty feet from an iron sphere or a brass triangle*. Such a property seems *prima facie* qualitative, but it is not clear that it is appropriately definable by Lewis's lights. For this reason, we might worry, first, whether the definability view is extensionally adequate with respect to more gerrymandered yet intuitively qualitative properties, and, second, whether it can supply us with definitive answers to questions about the qualitative status of certain properties. Unfortunately, it is unclear how to settle these questions for the definability view. Furthermore, these issues point us towards a more serious problem that afflicts the view: arbitrariness.

Since the definability view draws the distinction in terms of what we have called "appropriate definability", how this notion is to be understood is of crucial importance. But, not only is Lewis silent about what might distinguish "appropriately definable" properties, it is unclear what any satisfactory account of "appropriate definability" would look like. Proposals that turn on the mere number of operations performed on the perfectly natural properties will be inadequate in light of logical

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[26]See Lewis (1986: 220-247).

[27]One might prefer the latter approach, but my objections to the definability view can equally well be extended to this alternative.

equivalences.[28] Other proposals that turn on definability within a language will encounter the same problems as linguistic approaches to the distinction canvassed above. In addition, proposals that invoke some primitive notion of "appropriateness" forgo the ideological virtue of analyzing the distinction through naturalness alone.

In light of these problems, it seems that the definability view is saddled with drawing some arbitrary distinction between the appropriately and inappropriately definable. Given this, it remains unclear whether the defender of the definability view is, in fact, entitled to assert that unit sets or intuitively gerrymandered sets are non-qualitative. This is worrying insofar as the definability view would seem to count *being Saul Kripke* as non-qualitative by virtue of stipulation alone rather than by some informative account of what is needed for appropriate definability. Furthermore, even if we did know where to draw the line in the qualitative/non-qualitative sand, there would be no principled explanation for why the proposal delivers the result it does. I take this to show the definability view is unsatisfactory for providing a complete characterization of the distinction. And, although the definability view is unattractive, it is worth noting that Lewis (2003) suggests an alternative analysis that also appeals to natural properties. Before examining this alternative analysis, I consider a view that analyzes the distinction via the primitive metaphysical relation of grounding.

4.7 The Grounding View

In metaphysics, claims of dependence are pervasive. Properties are said to depend upon their bearers. Wholes are said to depend on their parts. Sets are said to depend upon their members. One way to make sense of this talk is to accept that there is a

[28]One might appeal to the shortest definition using natural operations available, but then the question arises of what determines the "shortest definition" or "natural operations". Here again, it looks as though arbitrariness will arise.

primitive relation of metaphysical dependence—*the grounding relation*—that unites entities together in the relevant dependence relations.[29] Furthermore, in light of the orthodox gloss of non-qualitative properties as depending upon specific individuals, the **grounding view** of the distinction suggests itself: a property F is *non-qualitative* if and only if it is grounded in a specific individual.

If the grounding view is to be at all plausible, the following objection must be rebutted: Suppose Kripke is the only material object, and further suppose that Kripke therefore grounds the property of *being a material object*.[30] From this and the grounding view, it would seem that *being a material object* is non-qualitative, but, intuitively, this is incorrect. How, then, can the grounding view count *being Saul Kripke* but not *being a material object* as non-qualitative? Here, we must include the proviso that a property F is *non-qualitative* if and only if it is grounded in a specific individual and could not be grounded by any other individual. In this way, the grounding view must avail itself of the resources employed by the modal view in addition to a primitive grounding relation.

Despite overcoming this initial obstacle, the grounding view still encounters several problems. First, it is not obvious that the grounding relation is of the right metaphysical kind to do this work. Notice that the analysis just proposed requires that properties are grounded in individuals, so if one holds grounding to be a relation only between, say, propositions or facts or between properties and other properties, the analysis will not get off the ground. The grounding view of the distinction therefore requires a liberal conception of the possible relata of the grounding relation.

Second, the grounding view must be generalized in order to accommodate disjunctive haecceities like *being Saul Kripke or David Kaplan*. This property cannot be said

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[29]The case for primitive grounding is made in Schaffer (2010).

[30]The defender of grounding could of course deny that properties are grounded by the individuals that instantiate them. Fortunately, my interest in this example is illustration rather than refutation.

to be grounded exclusively by Kripke, Kaplan, or their mereological sum. Rather, it requires that the grounding relation take plural individuals as its relata if these sorts of properties are to qualify as non-qualitative. Again, this raises difficult questions about the nature and logic of pluralities, but I will simply assume, for the sake of the grounding view, that a suitable account can be offered.

Third, the grounding view fares poorly in making sense of negative haecceities like *being distinct from Saul Kripke*. It will not suffice to say that this property is grounded by Saul Kripke and it is counterintuitive to hold that it is grounded by all other individuals. Indeed, any view that would accept this consequence invites an oddly monadological metaphysics in which everything grounds the negative haecceity of everything else.

Fourth, it is not clear what individuals could be the ground of impure properties like *being between Saul Kripke and David Kaplan*. If the grounding relation holds of necessity, neither Kripke, Kaplan, whatever falls between them, or the sum of all these individuals will be plausible candidates for grounding this property. Since, on their own, none of these individuals necessitate the instantiation of *being between Saul Kripke and David Kaplan*, there is no obvious candidate individual for being the ground of this property. Furthermore, if one appeals to facts as the grounds for these properties, the intuitive appeal of the grounding view is lessened, since it aimed to make good on the intuition that non-qualitative properties were grounded in specific individuals rather than facts.

Fifth, what is the status of the grounding relation itself? Is it a qualitative relation or a non-qualitative one? If it is non-qualitative, then it must be grounded in a specific individual. But suppose that there is a grounding relation that holds between two properties (e.g., a mental property and a physical one). Since this grounding relation is not itself grounded in a specific individual, it must be qualitative; however, it is far from clear that the grounding relation is properly viewed as qualitative. And,

while there may be a plausible account the grounding view can provide here, this much is clear: employing the grounding relation raises difficult and potentially costly questions about its own relation to the qualitative distinction.

Despite these concerns, there are two considerable virtues the grounding view enjoys—virtues one might reasonably hold to outweigh the potential vices just noted. The first virtue is that the grounding relation is a primitive one. It is therefore open to those who accept it to hold that, for whatever pattern of grounding one wants for the purposes of analyzing the qualitative distinction, grounding exhibits that very pattern. After all, the notion is a primitive one, so, within the bounds of consistency, it must do the bidding of those who deploy it. As such, it is unclear that any charge of extensional inadequacy against the grounding view can be made to stick.

The second virtue is that grounding is plausibly viewed as a hyperintensional relation and fits naturally with a hyperintensional conception of properties.[31] Such an account allows for the distinctness of properties like *being trilateral* and *being triangular* that are necessarily coextensive and, in doing so, allows for an account of the qualitative distinction that could, in principle, hold that *being the actual height of Michael Jordan* and *being six foot six* are necessarily coextensive while only one of them is qualitative. The resources of hyperintensionality are considerable and, in the face of the many difficult question that arise around the qualitative distinction, this aspect of the grounding view provides room to assuage a number of difficult intuitions.

In light of these virtues, I take it that, if one is antecedently committed to a grounding relation, there is reason to hope that some grounding-based analysis of the qualitative distinction—perhaps one that is revisionary in certain respects—can be provided. Even so, I reject the proposed account. I do so for two reasons. First,

[31]For discussion of the hyperintensional conception of properties, see Eddon (2011).

I do not accept a primitive grounding relation of the sort required to analyze the distinction. Insofar as I accept talk of dependence, it is properly conceived of as either a family of cross-categorial relations like the instantiation and singleton relations that unify distinct ontological categories (e.g., objects, properties, and sets), or it is to be captured in terms of supervenience and degrees of naturalness. On such a view, dependence might be the right notion for making sense of the distinction, but it will not be dependence understood along the lines of grounding.

Second, there is reason to believe that our talk of properties and relations vacillates between at least two different conceptions of property. On the first conception, properties are individuated only intensionally, so their identity and distinctness is wholly independent of our linguistic intuitions. This conception naturally comports with our concerns of fundamental metaphysics—i.e., concerns about resemblance, sparseness, and so on. On the second conception, properties are individuated hyperintensionally, so they track the distinctions language inclines us to draw between, say, trilaterality and triangularity.[32] This second conception gives precedence to the role properties play in semantics as semantic values for predicates.

I take it that concerns about the qualitative distinction are, at bottom, issues that concern properties on the first conception. Furthermore, I believe a suitable account of properties—conceived of as non-hyperintensional—will also afford us the resources needed to provide entities that can satisfy the demands of the hyperintensional conception of properties. Following Lewis (1986), once we have sufficient ontological resources, we can construct "structured properties" via set-theoretic constructions that provide them with what Lewis calls a "quasi-syntactic structure".[33] In light of this, I take it that, by focusing on the intensional conception of properties, there is

[32]I do not claim that the hyperintensional distinctions depend upon language. I hold only that our intuitions that count in favor of hyperintensional distinctions are motivated by semantic intuitions.

[33]See Lewis (1986: 55-59).

reason to think we can nevertheless secure the putative advantages of a hyperintensional view of properties. To be sure, this is an open matter of some controversy; however, for present purposes, I am content to mark my rejection of the grounding view as partisan against the primacy of the hyperintensional conception of properties.

Having surveyed the prospects for the grounding view, I now turn to a final proposal for reducing the qualitative distinction.

4.8 The Supervenience View

Natural properties figured prominently in the definability view, but, in that case, worries about arbitrariness proved fatal. In this section, I turn to another view that employs the concept of natural properties but in a different fashion. Lewis (2003) offers remarks that suggest sympathy for a view of this sort. After drawing a distinction between qualitative and non-qualitative propositions (understood as properties of entire worlds), where the latter are miscellaneous classes of worlds that might divide qualitatively indiscernible worlds, he says:

> Likewise, when we said that less-than-fundamental properties of things supervened on the fundamental properties and relations of things, we meant less-than-fundamental qualitative properties. Again our supervenience thesis was not meant to apply to non-qualitative 'properties' determined by miscellaneous classes of possible individuals. Again, what at first seemed to be a substantive supervenience thesis turns into a definition, this time of 'qualitative property'.[34]

[34]Lewis (2003: 26). Lewis puts forward these remarks as one of two possible replies to concerns about propositions whose truth does not supervene on being. Since he also considers an alternative reply that dispenses with qualitatively indiscernible possible worlds and ultimately remains neutral on this matter, it is not clear what should count as Lewis's "considered view".

If we take Lewis to intend natural properties by his talk of "fundamental properties", the resulting view holds non-qualitative properties (and therefore non-qualitative propositions) to fail to supervene upon the natural properties. Whether Lewis officially endorses such a view is unclear. Even so, it warrants closer scrutiny and has been endorsed by others. For example, Bricker (1996) formulates and endorses the **supervenience view** as follows: "the qualitative supervenes upon the natural: fixing the natural properties and relations suffices to fix all the qualitative properties and relations."[35]

In certain respects, the supervenience view is a hybrid of the modal and definability views. It employs modality—in the form of supervenience—as well as naturalness to analyze the qualitative distinction. Intuitively, it holds that worlds that share the same distribution of natural properties are like Black's spheres, Bruce and Clark. They and their parts share all the same qualitative properties and relations and differ only with respect to their non-qualitative ones.

The most obvious concern with the supervenience view is that it requires a commitment to either natural properties or some cognate primitive like "being more natural than".[36] If one objects to this distinction, one will find nothing attractive about the current view. But, as Lewis (1983) persuasively argues, a notion of naturalness is needed for our core philosophical projects. There is therefore little that can be done here to overcome this worry that has not already been done. Note, however, that if the supervenience view is satisfactory, it further strengthens Lewis's case by showing naturalness to be useful for yet another purpose.

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[35]Bricker (1996: 227). See also McDaniel (2007: 250).

[36]If one accepts the latter view and holds that every property stands in the "being more natural than" relation to some other property, problems will arise in the formulation of supervenience theses. Here, I assume that there are maximally natural properties that are such that no properties bear this relation to them.

A second concern is that an illicit circularity arises when we analyze the qualitative distinction in terms of naturalness, since the primitive concept of naturalness can only be grasped by appeal to the conceptually prior notion of a qualitative property. I take this objection to be flatly mistaken. While the pattern of distribution of natural properties throughout the concrete world may be intimately bound up with its qualitative features, the concept of naturalness can also be grasped by considering whether there are more or less natural mathematical properties and relations.[37] And, while it is both unclear whether mathematical properties are qualitative and whether naturalness extends to mathematicalia, the fact that we can grasp the concept of naturalness along those lines shows it to be, in principle, separable from qualitative concerns. Furthermore, some have defended a view on which naturalness carves the world up, not only at the level of properties and relations, but also at the level of quantificational structure.[38] If such a view is correct, we have even better evidence that naturalness need not be understood only through an antecedent grasp of the qualitative distinction. Setting these worries aside, I now turn to concerns about the extensional adequacy of the supervenience view.

In order to determine which properties the supervenience view deems non-qualitative, we need to fix upon the relevant kind of supervenience relation between the natural and the qualitative. The most plausible candidate notion is global supervenience, but global supervenience admits of two main flavors and therefore delivers two competing versions of the supervenience view. The first candidate employs weak global supervenience[39]:

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[37]See Lewis (1983).

[38]See Sider (2009).

[39]Here, I largely follow Bennett (2004) on weak and strong versions of global supervenience.

> **Weak Version**: A property F is *qualitative* if and only if F is such that, for any worlds w_1 and w_2, if there is a natural property-preserving isomorphism between w_1 and w_2, then there is an F-property-preserving isomorphism between them.

The second candidate employs strong global supervenience:

> **Strong Version**: A property F is *qualitative* if and only if F is such that, for any worlds w_1 and w_2, every natural property-preserving isomorphism between w_1 and w_2 is an F-property-preserving isomorphism.

Crucial to both the Weak and Strong Version is the notion of a *ψ-preserving isomorphism*: a one-one isomorphism μ between the inhabitants of w_1 and w_2 is ψ-preserving if and only if, for every ψ-property F, Fx in w_1 if and only if $F\mu(x)$ in w_2. Intuitively, then, property-preserving isomorphisms ensure sameness of the pattern of distribution of a relevant class of properties. And, as I will now show, Weak and Strong Versions differ in significant respects.

In order to mark their differences, let us begin by considering a world that exhibits two-way eternal recurrence such that there are qualitatively indiscernible "epochs" laid side-by-side and extending infinitely far into the past and future.[40] Let us further suppose that we occupy a certain epoch, Sooner, that is followed by a distinct epoch, Later.

If we formulate the supervenience view using the Strong Version, the existence of worlds of this kind shows why the non-qualitative fails to supervene upon the natural.[41] This is because, within this world, there is a isomorphism that preserves natural properties but fails to preserve non-qualitative ones: the isomorphism that

[40] See Sider (1999) for discussion of this point.

[41] As Sider (1999) notes, any worlds that exhibit the relevant kind of symmetry like those including Black's spheres suffice for this purpose.

takes the properties and relations of any epoch (and its parts) to those of the subsequent one (and its parts). So, while there is an isomorphism between the natural properties strewn throughout Sooner and Later, this isomorphism will not preserve non-qualitative properties, since the individuals occupying Later have distinct non-qualitative properties (e.g., their respective haecceities) than we do. So, if we reject PII—thereby allowing for worlds of eternal recurrence with indiscernible epochs—and accept the Strong Version, we can demonstrate the failure of the non-qualitative to supervene on the natural.

In contrast, if we accept the Weak Version, we require the existence of qualitatively indiscernible worlds—not merely individuals within worlds—to avoid the result that all properties are qualitative. To see why, notice that, on the Weak Version, the non-qualitative will supervene upon the natural so long as there is at least one isomorphism between worlds that preserves the pattern of distribution for the natural and the non-qualitative. And, in worlds of eternal recurrence, there will be a trivial isomorphism of each individual's properties and relations onto themselves. For this reason, the Weak Version requires qualitatively indiscernible worlds where different non-qualitative properties are instantiated to generate a failure of weak global supervenience of the non-qualitative on the natural.

One might conclude from the preceding that the defender of the Strong Version of supervenience view can avoid commitment to qualitatively indiscernible worlds, but doing so comes at a cost. To see why, let us name the actual world, 'Doug'. Since Doug is an individual, there is reason to believe Doug has a haecceity, *being Doug*.[42] But, if there is no world qualitatively indiscernible from Doug, then *being Doug* will count as qualitative on both the Weak and Strong Versions. For this reason, those

[42]Following Lewis (1986), it is natural to view properties of entire worlds like Doug's haecceity as propositions. So understood, the present issue can be recast as an issue of whether there are non-qualitative propositions that differ in truth-value between qualitatively indiscernible worlds.

who eschew qualitatively indiscernible worlds and accept the Strong Versions, will incorrectly classify *being Doug* as qualitative.[43]

For the defender of the Strong Version, the need to count *being Doug* as non-qualitative supplies reason to accept qualitatively indiscernible worlds. Furthermore, qualitatively indiscernible worlds also prove attractive if one prefers to remain agnostic between Weak and Strong Versions. So long as there are such worlds, both views will deliver the same results and taking sides is therefore unnecessary. The supervenience view therefore invites commitment to qualitatively indiscernible worlds, which, in turn, suggests that the supervenience view requires a kind of haecceitism, according to which some worlds are qualitatively indiscernible.[44]

While some might hold a commitment to haecceitism to be a cost, I have defended haecceitism elsewhere and am content to assume it here.[45] This point is also of particular interest, since Lewis (1986) maintained a studied neutrality about whether there are qualitatively indiscernible worlds. In particular, Lewis claimed to have found nothing that would count for or against a commitment to them. Here, we have evidence that the tie can be broken: by accepting that, for each world, there is a distinct world qualitatively indiscernible form it, we can offer an attractive analysis of the qualitative distinction.

The supervenience view faces no problems with haecceities, negative haecceities, or impure properties. It does, however, encounter a puzzle that arises with respect to disjunctive haecceities. Recall that our intuitive conception of non-qualitative properties holds that each haecceity is non-qualitative and, since disjunctive haecceities are

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[43]I assume here that worlds are individuals. If one accepts the Strong Version and denies worlds are individuals, they avoid the problem at hand.

[44]For Lewis, "haecceitism" amounts to the denial that *de re* representation supervenes upon the qualitative character of worlds. Since the denial of haecceitism, so understood, is compatible with accepting the existence of qualitatively indiscernible worlds, it does not require haecceitism as Lewis conceives of it.

[45]Omitted for blind review.

built out of haecceities, they, too, should count as non-qualitative. Consider, however, the disjunction of the haecceities of all possible individuals that are qualitatively indiscernible from you, strewn across an equivalence class of indiscernible worlds. Since the property of being one of these myriad individuals is a disjunctive haecceity, it is liable to seem non-qualitative. But, since each and only those things that instantiate it are qualitatively indiscernible with one another, it also seems qualitative. What to do?

Proponents of hyperintensionality will hold that this kind of case requires us to distinguish cointensive properties. For the hyperintensionalist, there are two properties: the non-qualitative property of *being you or your first doppelganger or your second doppelganger and so on* and the qualitative property of *being qualitatively such-and-so*. On the supervenience view, we cannot admit this hyperintensional distinction at a fundamental level, and must therefore hold the relevant property to be a qualitative one by virtue of its supervenience upon the natural. I take this to be a satisfactory result, but, for some, it will be a strike against the view.

Notice, however, that it is a principled bullet to bite, since the view holds that disjunctive haecceities are non-qualitative *except* for the limit case of the disjunctive haecceity of all individuals that are qualitatively indiscernible from one another (or any of a plurality of individuals). So, for example, if we took the disjunctive haecceity of all possible individuals qualitatively indiscernible from you with exception of yourself, the resulting property would still be non-qualitative according to the supervenience view.[46]

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[46]Notice also that the defender of the supervenience view can appeal to structured properties—set-theoretic constructions out of individuals and properties conceived of non-hyperintensionally. One might, for example, distinguish the fundamental qualitative property shared by all individuals qualitatively indiscernible from you as the set of all the relevant individuals. At the same time, one could cook up an ordered sequence of the very same individuals to serve as the semantic value of the intuitively non-qualitative predicate "being you, or your first doppelganger, Pat, or your second doppelganger, Kelly..." that picks out each individual by name. In this way, the present view can

Let me now consider how the natural supervenience view bears upon structural properties like *being self-identical*, *being such that there is a property that seven other things instantiate* and *being composed of three things*. At first pass, some of these properties come out as uniformly qualitative: since *being self-identical* is had by all possible individuals, it will never divide any individuals and is therefore intuitively qualitative. Similarly, no worlds will be the same with respect to their natural properties yet differ with respect to the distribution of properties like *being distinct from something*, so those structural properties also emerge as qualitative. While these results are tenable, I believe there is more that the supervenience view can do to illuminate the interesting status of structural properties. Specifically, once we employ natural properties in describing the world, we can clarify the difference between structural properties and qualitative properties in general.

The idea is this: consider a "mighty language", L, which has a unique constant for each individual and a unique predicate for each natural property. Sentences of L encode different kinds of information. They encode haecceitistic or non-qualitative information, since they include individual constants that pick out specific individuals. They also encode qualitative information, since they include predicates that pick out the natural and therefore qualitative properties. In this respect, there is a parallel in the information encoded and the corresponding kinds of properties: individual constants are typically associated with non-qualitative properties, while predicates typically express qualitative properties.

Now take the complete and correct description of the actual world provided in L. Remove each constant and replace it with a variable and then attach a corresponding existential quantifier. By doing so, all the non-qualitative or haecceitistic information

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go some distance to capturing the hyperintensionalist intuition that there are distinct "properties" at issue here.

is removed, but the qualitative information remains.[47] This is a first-order Ramsey sentence. Now repeat the process using second-order quantifiers to replace each of the predicates. The result is a second-order Ramsey sentence that expresses purely structural information about the pattern of instantiation throughout the world: that there is something, that that thing is distinct from seven things, and that something instantiates some property that something else does.

Although the supervenience view holds these structural properties to be qualitative, it is useful to distinguish them from non-structural qualitative properties. In the present framework, this is handily accomplished by singling out structural properties as the only properties about which second-order Ramsey sentences can express information. In light of this, one might be tempted hold that the space of properties ought to be divided, not between just qualitative and non-qualitative properties, but instead between structural, qualitative, and neither structural nor qualitative properties. Here, I take it that so long as these distinctions can be drawn there is little harm in subsuming the structural under the more familiar aegis of the qualitative. Structural properties therefore present no obstacle for the supervenience view.

Let me now consider the status of the tense and modal properties discussed in Section Two that some views hold to divide past and actual individuals from non-present and merely possible ones. These properties require careful attention because their status with respect to the qualitative distinction is most likely to depend upon one's particular views about naturalness.

Consider, first, a conception of naturalness that holds natural properties to be whatever carve at nature's joints, where joint-carving amounts to figuring into laws or involving fundamental distinctions. On this joint-carving conception, it is difficult to resist the view that, if there is a fundamental property of *being actual* or *being present*

[47]For more on Ramseyfication, see Lewis (1970).

that merely possible and non-present things lack, this property will be natural, since it is surely joint-carving. But, as noted earlier, if these properties are deemed natural and therefore qualitative, implausible results follow (e.g., there are no merely possible duplicates of anything actual).[48] Accordingly, we ought to resist the blind application of the joint-carving heuristic for discerning naturalness and deny that the relevant distinctions are marked by natural and therefore qualitative properties. Properly understood, then, modal and tense properties of the aforementioned sort need not qualify as qualitative.

The final properties I will consider are mathematical ones. On the supervenience view, these are liable to emerge as trivially qualitative, since mathematical objects and their properties (the pure ones, anyways) are typically thought to exist and bear their properties necessarily. One might hold, however, that they are not trivially qualitative, since certain mathematical properties are natural and some mathematical properties are therefore *non*-trivially qualitative.

There is likely to be some hesitancy in deeming mathematical properties qualitative. That said, mathematical objects and properties are strange and controversial creatures, so there is also liable to be a countervailing hesitancy in claiming mathematical properties to be non-qualitative. For example, if one accepts a robust platonism, it is natural to view the non-qualitative properties of numbers as broadly analogous to the non-qualitative properties of concrete individuals. But, since platonism is far from mandatory, the status of mathematical properties still remains unclear. In light of this, the interaction of the qualitative distinction with mathematical ontology re-

[48]Furthermore, if one accepts *de re* laws, which involve specific individuals (e.g., anything five feet from a spacetime point, Dan, will rapidly decelerate), non-qualitative properties like *being Dan* will seem to carve at the joints, but would also threaten the adequacy of the supervenience view. Here, again, we need to resist blindly taking joint-carving to be a sufficient condition for naturalness. See Tooley (1977) for discussion of *de re* laws.

mains a live issue. There is therefore no reason to believe a compelling or non-partisan objection to the supervenience view can be offered.

I have now considered a battery of issues with and objections to the supervenience view. None of these objections proved compelling and none of the issues threaten the view. It therefore stands as an attractive option for extending the analytic ambitions of naturalness and as a serviceable way to understand the qualitative distinction. Furthermore, the view enjoys a healthy measure of neutrality since the primitive concept of naturalness is itself neutral with respect to the nature of properties. It is compatible with views on which properties are universals, tropes, classes or whatever. So, in this respect, the supervenience view requires no partisanship about what kinds of things properties are.

In a less modest vein, it likely commits us to the existence of qualitative indiscernible possible worlds. And, prior to concluding, I will argue that, given the this commitment and the supervenience view, it is very plausible that there are fundamental non-qualitative properties.

4.9 Fundamental Non-Qualitative Properties

The necessary and sufficient conditions for being a fundamental property are, at best, controversial, but a core platitude that fundamental properties ought to satisfy is that they jointly determine the distribution of all other properties. Specifically, the plurality of fundamental properties ought to satisfy the following:

> **Completeness**: Possible worlds that do not vary in terms of their fundamental properties do not vary in terms of the distribution of any properties.

There is some temptation to hold natural properties to be fundamental in light of their central role in metaphysical inquiry. But, if the supervenience view is correct, natural properties cannot exhaust the stock of fundamental properties. This

is because the distribution of non-qualitative properties is not jointly determined by the distribution of natural properties. Indeed, non-qualitative properties are precisely those properties that fail to supervene upon the natural ones. As a consequence, natural properties can satisfy Completeness only in conjunction with some non-qualitative properties. In particular, it seems that only the haecceities distributed throughout the world, along with the natural properties, are capable of satisfying Completeness. It therefore follows that at least some non-qualitative properties must be fundamental in nature.

Now, if one rejects qualitatively indiscernible worlds, qualitative properties alone will satisfy Completeness. But, as I indicated earlier, we have good reason to accept qualitatively indiscernible worlds and retain the supervenience view. So, given Completeness, we ought to accept that, along with qualitative properties like *mass* and *charge*, there are fundamental non-qualitative properties—perhaps those like *being Saul Kripke*. And, while I will not pursue the question of which non-qualitative properties are fundamental here, it is suggestive that impure properties like *being between Saul Kripke and David Kaplan* supervene upon the conjunction of qualitative properties and haecceities *being Saul Kripke* and *being David Kaplan*. On what is perhaps the most intuitive view, it is therefore haecceities like *being Saul Kripke* that emerge as and are uniquely distinguished by their status as fundamental non-qualitative properties.

4.10 Conclusion

I have surveyed a number of ways to conceive of the distinction between qualitative and non-qualitative properties. After arguing that various proposals for reductively analyzing the distinction are inadequate, I examined and defended the supervenience view according to which non-qualitative properties are all and only those properties that fail to supervene upon natural properties. While the supervenience view emerged

as a strong candidate for successfully reducing the qualitative distinction, a host of open and difficult questions remain about the nature and limits of this distinction.

CHAPTER 5

COUNTERPARTS AND BARE PARTICULARS

5.1 Introduction

Metaphysical commitments are often challenged on the grounds that they are superfluous or theoretically troublesome. Faced with these charges, the best response for those who take on the commitments in questions is to illustrate their value by showing them to be especially useful. Here, in light of familiar accusations that bare particulars are superfluous or theoretically troublesome, I aim to show that bare particulars are remarkably useful for a core metaphysical enterprise: the analysis of modality.[1]

This partial defense of bare particulars is offered with the moral of Lewis (1986) firmly in mind: concrete possible worlds are also remarkably useful for the analysis of modality and other concepts. Following Lewis, I assume the existence of concrete possible worlds in what follows. My aim is therefore to show not only that the defender of concrete possible worlds ought to accept bare particulars, but also that, taken together, concrete possible worlds and bare particulars deliver an attractive analysis of modality preferable even to Lewis's own.

Along with this partial defense of bare particulars, the following discussion speaks to an independently interesting question: what happens when bare particulars are introduced into the metaphysics of modal realism? While Lewis remained agnostic about bare particulars, what follows can be viewed as an attempt to trace the

[1]See, for example, Lowe (2003: 86): "Few philosophers now think that bare particulars, or substrata, are theoretically fruitful additions to our ontology."

consequences of abandoning this agnosticism for a metaphysics of bare particulars. As I will argue, the consequence are considerable and have significant implications for counterpart theory, the problem of accidental intrinsics, and the metaphysics of haecceitism.

My project is as follows. After presenting bare particular theory in Section Two, I present Lewisian Modal Realism—the reductive metaphysics of modality presented in Lewis (1986)—in Section Three. In Section Four, I examine the interaction between haecceitism and counterpart theory within Lewisian Modal Realism (hereafter, LMR). In Section Five, I present Lewis's argument against non-qualitative counterpart theory. In Sections Six and Seven, I demonstrate the utility of bare particulars by taking on three challenges: addressing the problem of accidental intrinsics, answering Lewis's objections to non-qualitative counterpart theory, and improving upon LMR's treatment of haecceitism. I then conclude in Section Eight.

5.2 Bare Particulars

Bare particular theory is a theory about the metaphysical structure of particulars. It holds particulars to have a binary structure that divides into two ontological categories: bare particulars and properties.[2]

Bare particular theory has one main rival: bundle theory. According to bundle theory, particulars have a unary metaphysical structure and are composed or constituted entirely out of properties.[3] On this view, there is no underlying substratum to a given particular. There is only a single ontology category, property, and only certain

[2]For more on bare particular theory, see Armstrong (1978), Giberman (forthcoming) and Sider (2006).

[3]For more on bundle theory, see Armstrong (1978), Campbell (1990) and Paul (2002).

collections of properties—typically, fusions of maximal compresent properties—are identified with particulars.[4]

The arguments for and against bundle theory and bare particular theory are difficult to assess and much-discussed. Here, I aim to add to this debate by demonstrating the utility of bare particulars. I will therefore set aside bundle theory and assume bare particular theory in what follows.

Bare particular theory is most naturally paired with and understood alongside universal theory. Universal theory is a theory about the nature of properties. According to universal theory, properties like *redness* are universals, repeatable entities instantiated by particulars. Like bare particular theory, universal theory has many competitors: trope theory, class theory, and so on. There are also many competing versions of universal theory.[5]

Competing universal theories can be divided in two ways. The first division concerns the multiplicity of universals. Sparse theories hold that, of the world's properties, only an elite few are universals. In contrast, abundant theories hold that almost all predicates express universals.[6] The second division concerns the nature of universals. Aristotelian theories hold that universals are immanent or *in re*. They are located wherever they are instantiated. In contrast, Platonist theories deny the immanence of universals.[7] They hold universals to exist outside of space and time, lacking any location in the concrete world.

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[4]A third rival—the no-structure theory—denies that particulars have any internal metaphysical structure and rejects both bundle and bare particular theory for positing structure where there is none. I set aside such a view in what follows.

[5]For more on universals theory and competitors, see Armstrong (1978).

[6]See Lewis (1983) for discussion of the sparse and abundant conceptions.

[7]See Armstrong (1978) for a defense of Aristotelianism and Jubien (2009) for a defense of Platonism.

Here, I assume the truth of sparse Aristotelian universal theory. Other views of properties could be employed for present purposes, but sparse Aristotelian universal theory is especially well-suited to the task at hand. In what follows, my talk of universals ought to be understood accordingly. And, with this conception of universals, we can now easily express the commitments of bare particular theory.

According to bare particular theory, ordinary objects—the referents of natural language—are thick particulars. Thick particulars have two kinds of non-spatiotemporal parts: universals and bare particulars.[8] So, for example, the electron, Sparky, has the universal, *electronhood*, as a non-spatiotemporal part.

Bare particular theory aims to explain the fact that Sparky is an electron by positing a fundamental relation, *instantiation*, that unifies particulars with their universals. This fundamental instantiation relation holds between universals and bare particulars, but talk of "instantiation" within bare particular theory requires careful attention. This is because bare particular theory should treat our talk of "instantiation" as ambiguous between the relation bare particulars bear to universals and the relation thick particulars bear to universals. These relations differ significantly.

The relation a thick particular bears to any universal it "instantiates" is an internal relation.[9] Since the universal *electronhood* is a part of the thick particular, Sparky, the fact that these entities stand in what is sometimes called an "instantiation relation" supervenes upon the thick particular, Sparky. In contrast, the instantiation relation a bare particular—Sparky's bare particular—bears to a universal like *electronhood* is external. While this latter "instantiation" relation is fundamental and external,

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[8]Bare particular theory owes a suitable account of the composition relation between bare particulars, universals, and the thick particulars they are parts of. Here, I assume that the relevant composition is mereological in nature. Officially, I leave open whether bare particular theory requires a commitment to a non-mereological composition relation.

[9]See Lewis (1986: 174-191) for discussion of internal and external relations.

the former relation, between Sparky and *electronhood*, is neither fundamental nor external.

Since a bare particular can fail to instantiate any given universal, facts about instantiation do not supervene upon the intrinsic natures of the bare particular and the universal alone.[10] The world must cooperate in unifying these entities through instantiation. So, while the relation between thick particulars and the universals they are said to "instantiate" is internal, only the external relation that holds between universals and bare particulars is an external relation suitable for explaining the fundamental tie between particulars and their properties.

For the bare particular theorist, thick particulars are therefore anchored together by the external instantiation relation between bare particulars and universals. So, while universals supply the world with its qualitative character, bare particulars provide the metaphysical foundation in which this character inheres. Put metaphorically, bare particulars are the hooks on which the coats of quality are hung.[11]

Prior to demonstrating how bare particulars contribute to the analysis of modality, I present the main features of LMR and its analysis of *de re* modality. I will then turn to the interaction between LMR and bare particulars.

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[10]A familiar challenge to bare particular theory is that the notion of something existing without properties is incoherent. As Sider (2006) shows, bare particular theory requires no such commitment. Bare particulars, while they might fail to instantiate any qualitatively or sparse universals, will invariably instantiate—in some attenuated sense that does not appeal to universals—properties like *being a bare particular*, *being self-identical*, and so on.

[11]A familiar motivation for positing bare particulars is to hold them to "individuate" substances. I ignore this motivation in what follows and focus instead on what I take to be a considerably less opaque and confusing enterprise: analyzing modality. See Lowe (2003) for more on the putative role of bare particulars as sources of individuation.

5.3 Lewisian Modal Realism

LMR is a theory of possible worlds that aims at a reductive analysis of our modal concepts.[12] It begins by taking on an enormous ontological commitment: a plurality of concrete, maximal spatiotemporal sums. These sums are identified as "possible worlds". On the resulting view, there is no difference in ontological kind between the actual and the merely possible. All worlds are concrete, qualitatively determinate particulars. As a consequence, actuality proves to be an indexical notion rather than a metaphysically fundamental distinction.[13]

LMR offers an interpretation of our *de dicto* modal thought and talk in terms of these possible worlds. Most notably, the box and diamond of modal logic are analyzed as quantifiers over these possible worlds rather than taken as theoretical primitives. According to this analysis, for it to be possible that there are blue swans is just for it to be the case that some world has blue swans as parts. Similarly, for it to be necessary that there are blue swans is just for it to be the case that all worlds have blue swans as parts.[14]

The final component of LMR is the most complicated: a reductive analysis of *de re* modality. LMR's analysis of *de re* modality proceeds by way of counterpart theory.[15] Counterpart theory holds that an individual, x, might be F if and only if there is some counterpart of x which is F. Our *de re* modal claims are therefore analyzed in terms of counterpart relations that hold between individuals strewn across the various possible worlds. Interestingly, counterpart theory does without the numerical identity of individuals across possible worlds. For example, a *de re* modal claim about Herman

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[12]Throughout this section, I follow the presentation of LMR in Lewis (1986).

[13]See Bricker (2006) for an alternative to LMR that upholds a fundamental distinction between the actual and merely possible.

[14]I set aside a number of complications regarding the proposed analysis. See Divers (2002) for discussion of the niceties of LMR's analysis of modality *de dicto* and *de re*.

[15]See Lewis (1968), (1971), and (1986) for the development of counterpart theory.

Melville is analyzed in terms of the properties instantiated by an individual distinct from Melville located in an entirely different possible world.[16]

Counterpart theory is a powerful philosophical tool, but why should we accept it instead of an analysis that allows for the numerical identity of particulars across possible worlds? For Lewis, the motivation for counterpart theory and the commitment to possible individuals as "worldbound"—never part of more than a single world—is the problem of accidental intrinsics.[17]

The problem of accidental intrinsics begins simply enough: Suppose that Rube exists at two possible worlds, w and w^*. Further suppose that at w, Rube has the accidental property of squinting, and that at w^* Rube has the accidental property of not squinting. Given that Rube at w is identical to Rube at w^*, Rube is both squinting and not squinting. But, since nothing can be both squinting and not squinting, the assumption that Rube exists at two possible worlds must be mistaken.

Faced with this initial argument, the natural response is to hold that the contradiction is merely apparent: Rube simply stands in two distinct albeit perfectly consistent relations. He bears the *squinting at* relation to w and the *not squinting at* relation to w^*. In this way, his accidental squinting is no more contradictory than his squinting now and his failure to squint five minutes ago.

The problem with this response is that it requires us to recast intuitively intrinsic properties as mere relations to worlds (or times). Suppose Rube is actually five feet tall, but Rube could have been six feet tall. Given the proposed solution, this is just to say Rube bears the *being five feet tall* relation to the actual world and the *being six feet tall relation* to another world. But this seems mistaken. To be five feet tall is not merely to bear a relation; it is to instantiate an intrinsic property. But,

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[16] As discussed shortly, Melville's worldmates might also be his counterparts.

[17] Since Lewis accepts unrestricted mereological composition, some individuals—transworld fusions—are "impossible" and have parts at distinct worlds. Here, the prohibition on having parts at distinct worlds applies only to "possible individuals".

if Rube or any other individual exists in distinct worlds, their accidental intrinsic properties must be recast as mere relations to worlds in order to avoid contradiction. For Lewis, this result is untenable and provides sufficient grounds to hold individuals to be worldbound and analyze *de re* modality via counterpart theory.

Having rehearsed the basics of LMR, I turn now to haecceitism and its treatment within the framework of LMR.

5.4 Haecceitism for Modal Realists

Possibilities can be distinguished in many ways. For our purposes, two distinctions are of particular importance. The first distinction is between *maximal* and *non-maximal* possibilities. Intuitively, maximal possibilities are total ways for the world to be. For any possibility, a maximal possibility includes that possibility or its negation.[18] Non-maximal possibilities are possibilities that are not maximal. For example, the possibility that there is a brown dog or that money grows on trees are both non-maximal, but only the former is included in the actualized maximal possibility.

The second distinction is between *non-qualitative* and *qualitative* possibilities. Non-qualitative possibilities are possibilities *for* specific individuals like the possibility that Herman Melville is the tallest human. These possibilities are to be analyzed through counterpart theory, since non-qualitative possibilities are intimately connected with *de re* modality. In contrast, qualitative possibilities are general: they depend upon no specific individuals, and require no appeal to counterpart theory to make sense of. The possibility that there is a massive sphere or that something—anything at all—is red are therefore qualitative rather than non-qualitative possibilities.

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[18]For present purposes, we can understand "inclusion" as entailment.

Once we distinguish between these kinds of possibilities, we can introduce the following thesis:

> **Alethic Haecceitism**: There are maximal possibilities that differ only in terms of the non-qualitative possibilities they include.

Alethic haecceitism places demands upon modal reality. It guarantees that there are maximal possibilities that agree in all qualitative respects yet differ non-qualitatively.[19] Maximal possibilities that differ in this way can be said to *differ haecceitistically*.

To get a better sense of haecceitistic difference, we can introduce the notion of a *qualitative profile*, where the qualitative profile of an individual is the set of all the qualitative properties—intrinsic, extrinsic, and relational—it instantiates according to a maximal possibility.

Consider now a maximal possibility that differs from actuality only insofar as Bush occupies the qualitative profile Obama actually occupies and *vice versa*. If there is such a maximal possibility, alethic haecceitism is true, since that possibility will differ haecceitistically from the actualized maximal possibility. Intuitively, this sort of haecceitistic differences involves actual individuals "swapping" their qualitative profiles.

In characterizing alethic haecceitism, I have helped myself to talk of possibilities. For those like Lewis, who accept possible worlds theory, possibilities are to be reduced to or identified with possible worlds. The following thesis therefore follows naturally:

> **Modal Correspondence**: Each maximal possibility is identical with a unique possible world.

As I argue in Section Seven, modal correspondence is an attractive commitment of any analysis of modality. And, while the inference from alethic haecceitism to modal

[19]For discussion of haecceitism, see Lewis (1986: 220-247) and Fara (2009).

correspondence is highly intuitive, LMR denies modal correspondence yet accepts alethic haecceitism.

LMR's denial of modal correspondence flows from LMR's view of counterpart relations and commitment to the following thesis:

> **Qualitative Counterpart Theory**: The *de re* modal properties of individuals are to be analyzed in terms of relations of qualitative resemblance they bear to individuals.

Qualitative counterpart theory requires that each and every counterpart relation is a relation of qualitative resemblance. *De re* modality is therefore analyzed solely by appeal to counterpart relations of qualitative resemblance that never divide qualitatively indiscernible individuals. To see precisely what this requires, consider a world like the one considered in Black (1952) that contains only two duplicate iron spheres, Castor and Pollux, located five feet apart.

According to LMR, the possible world including Castor and Pollux represents three non-qualitative possibilities for an actual individual, Herman Melville. Since there is some degree to which Melville resembles the fusion of Castor and Pollux, there is at least one counterpart relation that holds between Melville and that fusion. Provided that context selects one of these counterpart relations, it is true that Herman could have been qualitatively just as that fusion is.

Melville also resembles each of Castor and Pollux and, by virtue of their qualitative indiscernibility, he resembles them to the very same degree. And, since there is some degree to which Melville resembles each of Castor and Pollux, there is at least one counterpart relation that holds between Melville and Castor as well as Melville and Pollux. Again, provided the right context, it is true that Melville could be qualitatively just as Castor is and it is also true that he could be qualitatively just as Pollux is.

In one respect, LMR's acceptance of counterpart relations is generous: a single counterpart relation—provided it is qualitative—delivers distinct non-qualitative possibilities for an individual. In another respect, LMR is stingy: it denies there is any counterpart relation that holds between Melville and Castor that does not also hold between Melville and Pollux and *vice versa*. This is because any relation that would divide Castor and Pollux would be non-qualitative and at odds with LMR's reduction of *de re* modality to facts of qualitative resemblance.

Since LMR denies that qualitatively indiscernible individuals can differ with respect to the counterpart relations they stand in, LMR denies such individuals can differ in the non-qualitative possibilities they represent. This denial has a significant consequence: if there are any qualitatively indiscernible possible worlds, those worlds cannot differ with respect to the *de re* possibilities they represent. As Lewis sometimes puts this point: which *de re* possibilities a world represents supervenes upon the qualitative character of that world.

How, then, does LMR aim to accommodate haecceitism? Conveniently, the above example perfectly illustrates LMR's accommodation of haecceitism. Consider the possibility that Meville is just as Castor is and the alternative possibility that Melville is just as Pollux is. Since these possibilities, which we can assume to be included within distinct maximal possibilities, differ only non-qualitatively, LMR has a clever tactic for making sense of alethic haecceitism: allow one and the same possible world to represent distinct maximal possibilities that differ haecceitistically. Accordingly, a single possible world represents the possibilities that Melville is like Castor, that Melville is like Pollux, and that Melville is like their fusion.

Lewis (1986) presents this view as follows:

> To illustrate, consider these two possibilities for me. I might have been one of a pair of twins. I might have been the firstborn one, or the secondborn one. These two possibilities involve no qualitative difference in the way

> the world is. Imagine them specified more fully: there is the possibility of being the firstborn twin in the world of such-and-such maximally specific qualitative character. And there is the possibility of being the secondborn twin in exactly such a world.... I say: two possibilities, sure enough. But they are two possibilities within a single world. The world in question contains twin counterparts of me. Each twin is a possible way for a person to be, and in fact is a possible way for me to be. I might have been one, or I might have been the other. These are two distinct possibilities for me. But they involve only one possibility for the world: it might have been the world inhabited by two such twins.[20]

Lewis's solution preserves qualitative counterpart theory and alethic haecceitism by holding a single world to represent various non-qualitative possibilities for a given individual. As Lewis's example indicates, the world of the twins represents not only the non-qualitative possibility that Lewis is the youngest twin but also that Lewis is the oldest one.

A natural way to generalize Lewis's view is to distinguish between possible worlds and the maximal possibilities they represent, where the latter are the various maximally consistent non-qualitative and qualitative possibilities represented by a world. According to this generalization, there is a many-one relation between maximal possibilities and possible worlds, since every possible world represents each and every maximal possibility consistent with the qualitative character of the world. So, for example, the actual world represents both the actualized maximal possibility as well as any maximal possibilities that differ haecceitistically from it (e.g., the maximal possibility where you and I swap qualitative profiles). I believe there is very little that separates this generalization from the view Lewis's remarks endorse. And, while

[20]Lewis (1986: 231).

this is best marked as an open interpretive question, it will be a useful simplifying assumption to interpret Lewis in this way. In proceeding, I do precisely this.

The motivation for LMR's denial of modal correspondence can now be made explicit: alethic haecceitism, qualitative counterpart theory, and modal correspondence form an inconsistent triad. So, if one accepts alethic haecceitism and qualitative counterpart theory, one must reject modal correspondence.

Consider the argument for the incompatibility of these three theses: If alethic haecceitism is true, there are maximal possibilities that differ haecceitistically. If modal correspondence is true, each maximal possibilities is identical with a distinct possible world. But, since maximal possibilities differ haecceitistically, these possible worlds must be qualitatively indiscernible. But, if qualitative counterpart theory is true, these possible worlds represent the same maximal possibilities. And, if these possible worlds represent the same maximal possibilities, the maximal possibilities that differ haecceitistically cannot be identified with unique possible worlds, since each world will represent many maximal possibilities. We must therefore abandon either alethic haecceitism, qualitative counterpart theory, or modal correspondence.

For Lewis, the choice is easy. Alethic haecceitism and qualitative counterpart theory stay; modal correspondence goes. This decision to abandon modal correspondence in favor of qualitative counterpart theory is buttressed by Lewis's rejection of non-qualitative counterpart theory. This is because the adoption of non-qualitative counterpart theory would allow us to uphold alethic haecceitism as well as modal correspondence.[21] In the next section, I present Lewis's arguments against non-qualitative counterpart theory. I then show how a commitment to bare particulars allows us to undermine Lewis's arguments and gives rise to an alternative to LMR that preserves modal correspondence.

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[21]See Heller (2005) for an argument for the necessity of non-qualitative counterpart relations.

Before proceeding, let me note two assumptions. First, I follow Lewis and many others in accepting alethic haecceitism.[22] Second, I assume the existence of qualitatively indiscernible possible worlds. A commitment to modal correspondence and alethic haecceitism requires that there such worlds exist, and, while Lewis was content with agnosticism about qualitatively indiscernible worlds, I aim to show that their use for analyzing modality provides reason to decide in their favor.[23]

5.5 Non-Qualitative Counterpart Theory

Lewis (1986) offers two arguments against non-qualitative counterpart theory. The first concerns the isolation and unification of worlds; the second concerns the intelligibility of non-qualitative counterpart relations. Since the second argument is the more challenging, I begin by briefly addressing the first argument.

Lewis's first objection to non-qualitative counterpart theory turns on the relations that unify possible worlds. He argues:

> I suggested that perhaps there are no natural external relations whatever between parts of different worlds; and that if so, we could bypass the idea of 'analogically spatiotemporal' relations and say simply that worlds are unified by external interrelatedness. A non-qualitative counterpart relation would presumably sink that hope.[24]

In order to evaluate this argument, we need to clarify the distinction between external and internal relations. Internal relations like *being a duplicate of* and *being*

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[22]See Lewis (1986: 231) for a defense of alethic haecceitism. See Chapter Two for a defense of alethic haecceitism.

[23]See Lewis (1986: 224) and Lewis (2003: 26). I argue in Chapter Four that qualitatively indiscernible worlds serve an additional purpose: they furnish us with a reductive analysis of the distinction between qualitative and non-qualitative properties.

[24]Lewis (1986: 230).

shorter than supervene upon the intrinsic properties of the *relata* considered separately. External relations like *being five feet from one another* and *being incongruent with one another* supervene upon the intrinsic properties of the fusion of their *relata*. Intuitively, the former kind of relations are fixed by the intrinsic natures of their relata alone, while the latter kind of relations require that the world and the intrinsic natures of the relata cooperate.

Spatiotemporal relations are paradigmatic external relations and, for Lewis, it is spatiotemporal relations and their analogues that unify worlds. Specifically, individuals, x and y, are worldmates if and only if each and every part of x is spatiotemporally related to each and every part of y.[25] The worry Lewis raises here is that, if there are non-qualitative counterpart relations, they would be external and, therefore, inconsistent with this attractive generalization.

The non-qualitative counterpart theorist has a plausible response to the charge that the isolation of worlds is jeopardized by non-qualitative counterpart relations: accept the generalization but define the unification and isolation of worlds in terms of *qualitative* external relations. This response squares well with the onus Lewis places upon natural properties and relations, which are *ex hypothesi* qualitative in nature. So, granted this amendment, there is little reason to worry that non-qualitative counterpart theory threatens either the general commitments of modal realism or its treatment of the isolation or unification of worlds. Having addressed this warm-up objection, we can now turn to what I will call the Intelligibility Objection.

The Intelligibility Objection purports to show that any non-qualitative counterpart theory is unintelligible. Lewis says, for example, that "there is no way to make sense of a non-qualitative counterpart relation."[26] He adds that LMR avoids "buying

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[25]As Bricker (1996) argues, an attractive way to generalize Lewis's modal realism—a way that Lewis himself finds appealing—is to define the worldmate relation in terms of external relations rather than spatiotemporal relations and their analogues.

[26]Lewis (1986: 230).

into any mysterious non-qualitative aspects of worlds".[27] Lewis then presents the Intelligibility Objection as follows:

> I ask what the non-qualitative determinants of representation *de re* are, and how they do their work.... Perhaps the [non-qualitative counterpart theorist] thinks that some of all these relations or properties or sums are somehow special, and he mean to speak only of the special ones. (Perhaps he also thinks that only the special ones exist.) Then he 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 must 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.[28]

In evaluating the Intelligibility Objection, it is important to note that Lewis's argument does not turn on a denial of non-qualitative properties. Lewis is explicitly committed to the existence of both non-qualitative properties and relations.[29] The problem with non-qualitative counterpart theory is not in the acceptance of non-qualitative properties or relations, but in their employment for counterpart theory.

Lewis's argument presents the non-qualitative counterpart theorist with a challenge: given the vast plurality of non-qualitative relations, some of these relations must be singled out as the counterpart relations suitable for analyzing *de re* modality.

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[27]Lewis (1986:230).

[28]Lewis (1986: 229)

[29]Lewis (1986: 232).

According to Lewis, the non-qualitative counterpart theorist cannot meet the challenge just posed. While she might stipulate non-qualitative counterpart relations are those used for the analysis of *de re* modality, the resulting circularity forecloses the possibility of reductively analyzing *de re* modality. And, without an alternative specification of the elite relations, the non-qualitative counterpart theorist has no theory of *de re* representation and their putative analysis will be wholly mysterious. Rightly, Lewis finds this untenable.

There are two avenues for responding to Lewis's challenge. The first kind of response refuses the challenge that some elite relations be singled out. Instead, each and every relation is viewed as a genuine counterpart relation. Since every relation accomplishes the task of *de re* representation, nothing needs to be said about which ones are the counterpart relations.[30]

The second response accepts the challenge and aims to meet it by fixing upon some elite non-qualitative relations that can underwrite counterpart theory. I pursue this second kind of response in the next section by drawing upon the resources of bare particular theory.

5.6 New Work for Bare Particulars

Recall that bare particular theory admits two relations that have some claim to being "the instantiation relation". The first relation is the internal relation thick par-

[30]This proposal is barely a counterpart theory. Counterpart relations have distinctive logical features. They are, for example, non-transitive and non-symmetric. Since some relations are transitive or symmetric, not all relations are counterpart relations. Let us suppose, then, that all counterpart-*ish* relations—relations that satisfy the relevant logical criteria—are counterpart relations. Despite this, we still have more counterpart relations than we bargained for. Consider the various relations we might define using concrete individuals as well as pure set theory. Some of these relations will be counterpart-ish, but, if accepted as genuine counterpart relations, entail that you or I could have been pure sets. We must therefore restrict counterpart relations to counterpart-ish relations among concrete objects. Despite this further restriction, problems still arise. We can define counterpart-ish relations involving "impossible objects"—transworld fusions—that are concrete, so further restrictions—whatever they may be—are still needed.

ticulars bear to the universals they have as parts. The second relation is the external relation bare particulars bear to the universals that are also parts of a common thick particular. Of these relations, the second is metaphysically fundamental, while the first naturally comports with our talk of predication. Consider, for example, that an electron, Sparky, is most naturally identified with a thick rather than bare particular. Sparky therefore "instantiates" the universal, *electronhood*, by virtue of bearing an internal relation to one of its own parts.

The difference between these instantiation relations is important for the defense of non-qualitative counterpart theory. This is because the version of modal realism that overcomes Lewis's Intelligibility Objection invokes bare particulars to analyze counterpart relations.

According to Bare Particular Modal Realism (hereafter, BPMR), counterpart relations are analyzed as follows: x is a counterpart of y if and only if some bare particular, z, overlaps x and y. The idea here is that bare particulars—entities that make no qualitative difference in the world—will unify numerically distinct thick particulars that inhabit distinct possible worlds. And, by virtue of thick particulars sharing a common bare particular, the thick particulars in question are counterparts.

Like LMR, BPMR posits a plurality of concrete worlds. In addition, BPMR holds that, for any qualitative description of a world, there is a plurality of qualitatively indiscernible worlds—all satisfying the same qualitative description. All of these worlds are made up of thick particulars, and these thick particulars have two kinds of non-spatiotemporal parts: universals, which determine the qualitative character of the world, and bare particulars, which bear an external relation of instantiation to universals.

Like LMR, BPMR identifies ordinary objects with thick particulars, and denies thick particulars overlap possible worlds. Since the connection between thick particulars and universals is an internal relation, thick particulars have their intrinsic

properties in virtue of themselves alone. For this reason, it is implausible to view putatively intrinsic properties of thick particulars as being mere relations to worlds.

Unlike LMR, BPMR accepts bare particulars and denies they are worldbound. According to BPMR, bare particulars are numerically identical across possible worlds, since the problem of accidental intrinsics does not apply to bare particulars. Since bare particulars bear an external relation to universals, they do not have any universals as intrinsic properties. And, for any properties like *being a bare particular* or *being self-identical* that bare particulars might be ascribed, those properties, which do not correspond to universals, will be either relations or had essentially. So, while the internal relation thick particulars bear to their universals provides reason to believe them to be worldbound, the external relation bare particulars bear to universals provides no reason to believe bare particulars have universals as intrinsic properties.

BPMR accommodates the intuitions that underwrite the problem of accidental intrinsics: these intuitions concern thick but not bare particulars.[31] And, once we accept the numerical identity of bare particulars across possible worlds, we can use bare particulars to define a non-qualitative counterpart theory between thick particulars.

An intuitive picture of BPMR can be presented as follows: suppose we have before us the qualitative descriptions of all possible worlds. For any of these qualitative descriptions, there are a plurality of ways the world might be non-qualitatively that are consistent with these descriptions. Intuitively, then, we can view the qualitative profile of a thick particular as a "slot" into which any bare particular might be inserted. We can now stipulate that, for every qualitative description of a world and

[31]For more on overlap within modal realism, see McDaniel (2004). The view developed there, Modal Realism with Overlap (hereafter, MRO), accepts the numerical identity of material objects across worlds, but accepts counterpart theory for spatiotemporal regions. In contrast to MRO, BPMR accepts the numerical identity of bare particulars across worlds, but accepts counterpart theory for thick particulars. One consequence of MRO is that a dualism of material objects and spatiotemporal regions is something like a necesary truth—perhaps some worlds have only one but not the other—but, since non-dualist alternatives seem possible, MRO's analysis of modality seems at odds with the body of modal facts.

every way of mapping or "inserting" bare particulars into those slots, there is some world where those bare particulars occupy those very slots. Abstractly, there is a plenitude of non-qualitative possibilities for every maximal qualitative possibility.

This intuitive picture can be further detailed by attending to the non-qualitative counterpart theory for analyzing *de re* modal claims about thick particulars: a thick particular, x, has a thick particular, y, as a counterpart if and only if there is a bare particular, z, that overlaps both x and y. On the resulting view, the maximal possibility according to which Bush and Obama swap qualitative profiles is identified with the possible world where Bush and Obama's actual bare particulars swap qualitative profiles and all else remains the same. Notice, however, that Bush and Obama do not overlap worlds. They are thick particulars incapable of overlapping worlds, and, for this reason, counterpart theory is still needed to explain their modal properties.

The counterpart relations of BPMR make no qualitative contribution to the world. Since all qualitative matters are fixed by universals, facts about bare particulars—the facts which determine counterpart relations—are exclusively non-qualitative. BPMR is therefore a form of non-qualitative counterpart theory capable of meeting Lewis's challenge: non-qualitative counterpart relations are relations of bare particular overlap. These relations are well-suited for the job of undewriting *de re* representation, since they unify only those entities that share a fundamental ontological constituent—a bare particular.

Why prefer BPMR to LMR? As I argue in the next section, BPMR's commitment to non-qualitative counterpart theory sustains modal correspondence and therefore confers theoretical virtues upon BPMR that LMR lacks. Before turning to the virtues of modal correspondence, let me consider three objections to BPMR.

A first objection: that two things share bare particulars provides no reason to believe that they might represent possibilities for one another. A response: BPMR holds that *de re* representation works by way of thick particulars sharing a funda-

mental non-spatiotemporal part, a bare particular. In contrast, LMR holds the other fundamental non-spatiotemporal parts of thick particulars, universals, do the work of representation *de re*. I suspect that, if one rejects BPRM's explanation of counterpart relations, one has equal reason to reject LMR's. Both proposals come as part of a package deal, and neither are motivated on the basis of any pre-theoretic intuitions. Furthermore, LMR does not hold that an individual represents a *de re* possibility for something *because* of their qualitative resemblance; it holds only that the analysis of *de re* modality proceed using these relations. Notice, for example, that even the maximally qualitatively diverse individuals will be counterpart related according to LMR. There is therefore little reason to think LMR squares with our intuitions about what grounds representation *de re* in a way that BPMR does not.

A second objection: BPMR is tenable only if bare particular theory is coherent, but BPMR has said nothing about, say, the relation of the bare particulars of composite individuals and the bare particulars of their proper parts. It seems, then, that BPMR is no theory, but rather a sketch of one. A response: Fair enough. Bare particular theory comes with a number of open questions. For example, do only fundamental or mereologically simple thick particulars have bare particulars are non-spatiotemporal parts, or do all thick particulars—mereological composites included—have bare particulars? If only simple thick particulars have bare particulars, BPMR owes some extension of its counterpart theory to mereologically complex thick particulars. While such an account is likely to appeal to either fusions of bare particulars or plural quantification over them, we ought to leave open whether such an account is needed. This is because the open and more general question for bare particular theory—whether bare particulars run throughout the hierarchy of particulars—need not be settled here. And, without settling this matter, a theory sketch is the best that can be offered and it suffices to provide reason for optimism about bare particular theory as well as further impetus to develop and clarify the theory.

A third objection: According to BPMR, thick particulars that share a common bare particular are counterparts of one another, but no thick particular has more than a single bare particular. The non-qualitative counterpart relations between individuals will therefore never be many-one or one-many relations. So, when we consider claims like "Bush and Obama might have been one and the same" or "I could have been twins", these claims will either be false or require analysis in terms of something other than the non-qualitative counterpart relation defined using bare particulars.

A response: the defender of BPMR might take this to provide evidence for accepting the necessity of identity. And, while I incline to do so, there is an interesting alternative available. The defender of BPMR might accept a pluralism about the ways in which modal thought and talk can be analyzed given the metaphysical resources of BPMR. In particular, she can hold that BPMR affords (at least) two ways to analyze modal claims and assign them truth-values. On the most natural one, which precludes contingent identity and employs only non-qualitative counterpart relations, the above claims are trivially false. On the less natural analysis, which allows for contingent identity and employs both qualitative and non-qualitative counterpart relations, the above claims are true. And, while BPMR's use of bare particulars allows us to sustain modal correspondence on this most natural analysis, it is no requirement that any less natural analysis do the same. So understood, BPMR can provide a non-trivial interpretation of contingent identity claims while marking these interpretations—in addition to modal thought and talk that runs afoul of the necessity of identity—as less natural, since the required interpretation does not uphold modal correspondence.

Having addressed these objections to BPMR, I now turn to the case in favor of modal correspondence.

5.7 Modal Correspondence

In this section, I defend the merits of modal correspondence. I begin by considering an objection from Fara (2009) that takes issue with LMR's denial of modal correspondence as it relates to the implementation of an actuality operator, ACT, within LMR's analysis of modality.[32]

Following Fara, let's suppose that our world exhibits two-way eternal recurrence such that qualitatively indiscernible regions of spacetime are connected in an infinite series extending backwards and forwards in time. Let's further suppose that the only epoch in which we are located is epoch-A. Now, since Lewis accepts alethic haecceitism, he accepts that some maximal possibilities differ from the actualized maximal possibility only in terms of the non-qualitative possibilities they include. One possibility that differs from our supposed actual maximal possibility is the possibility according to which we inhabit epoch-B rather than epoch-A. Since the defender of LMR accepts this possibility, she has good reason to accept the following premise:

(3) ACT Fara lives in epoch-A $\wedge$ $\Diamond$ Fara lives in epoch-B.

From (3), Fara argues that there is good reason for the defender of LMR to accept the following thesis:

(4) ACT Fara lives in epoch-A $\wedge$ $\Diamond$ ACT Fara lives in epoch-B.

From (4), Fara then argues that a proposition being possibly actual entails its being actual such that:

(5) ACT Fara lives in epoch-A $\wedge$ ACT Fara lives in epoch-B.

This delivers the evidently inconsistent conclusion:

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[32]Fara adopts the interpretation of ACT defended in Fara and Williamson (2005). There are a number of issues about the proper semantics and inferential profile of actuality operators. For our purposes, most of these issues can be set aside.

(6) ACT (Fara lives in epoch-A $\wedge$ Fara lives in epoch-B.)

Since both (5) and (6) contradict our earlier assumption that Fara lives only in epoch-A, the defender of LMR is faced with a *reductio*.[33]

As Fara acknowledges, the defender of LMR has a natural response to her argument. The defender of LMR can deny that Fara could have actually lived in epoch-B. And, indeed, when we consider Fara's case for this premise, it appears to turn on a confusion about the distinction between maximal possibilities and possible worlds. Fara's case for the inference from (3) to (4) runs as follows:

> If every interval and region of the actual world that's just like the interval and region that I'm in contains a person who's a counterpart of me—in the sense that's relevant for determining what's possible for me—then since this counterpart actually lives in [epoch-B], actually living in [epoch-B] is a possibility for me.[34]

Fara argues that the possibility that Fara lived in epoch-B could have actually obtained, since it is represented by the same possible world that represents the actualized maximal possibility. But it is crucial to LMR's treatment of haecceitism that due attention is paid to the distinction between possible worlds and maximal possibilities.

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[33]If the problem Fara has spotted is genuine, it is far more pervasive than she acknowledges. While a world of eternal recurrence is a natural setting in which to consider haecceitistic possibilities, notice that, for the defender of LMR, our own world is such that many individuals represent possibilities for one another. For example, Bush, who is actually a man, has an actual woman, Thatcher, as a counterpart. In virtue of this, Bush could have been just as Thatcher is even while things could have been the very same qualitatively. In light of this, we can also run Fara's argument involving the actual Bush and Thatcher, (3*) ACT Bush is a man $\wedge$ $\Diamond$ Bush is a woman. Employing the same argument Fara offers, we would conclude, (5*) ACT Bush is a man $\wedge$ ACT Bush is a woman. It should be clear, then, that the purported problem does not turn exclusively on exotic worlds of eternal recurrence, but would be a symptom of some more basic problem with LMR.

[34]Fara (2009: 292).

According to LMR, the maximal spatiotemporal sums labelled as "possible worlds" provide the resources to analyze modality. But, given LMR's denial of modal correspondence, possible worlds cannot be identified maximal possibilities. On the contrary, the defender of LMR must identify maximal possibilities with something like set-theoretic constructions out of possible worlds and their parts. Accordingly, our deployment of modal operators like ACT has inferential connections with maximal possibilities rather than the spatiotemporal hunks that provide the resources for building up maximal possibilities.

Notice, however, that Fara defends (3) by arguing that "since [Fara's counterpart] actually lives in the 18th epoch, actually living in the 18th epoch is a possibility for [Fara]." Here, Fara's argument requires an inference about actuality that issues from a fact about possible worlds rather than maximal possibilities. While we can grant that Fara is indeed part of the same possible world as her counterpart and that the world in question represents the actualized maximal possibility, it does not follow from this that other maximal possibilities represented by that world might have been actual.

Although Fara's counterpart will indeed represent a possibility for Fara, this possibility is no more or less possibly actual than a maximal possibility represented by an entirely distinct possible world. Facts about which possible world represents which maximal possibility are irrelevant to which maximal possibilities are actual or might have been actual. This is part and parcel of LMR's resistance to identifying possible worlds with maximal possibilities. As a result, the fact that two maximal possibilities are represented by the same world provides no additional reason to believe that both might have been actual but that some other maximal possibilities—represented by other possible worlds—might not have been actual.

If the problem Fara has hit upon is geuine, it is therefore not one unique to LMR. A commitment to LMR does not require that every maximal possibility represented

by the the possible world that represents the lone actualized maximal possibility is therefore possibly actual or that maximal possibilities represented by other worlds are therefore not possibly actual. For the defender of LMR, maximal possibilities—regardless of the possible world that represents them—are on the same footing. As such, the problem that Fara hits upon is a problem for any view that licenses the inference from (3) to (4); however, there is no reason to believe LMR provides any better reason to endorse than inference than any ersatzist alternative.

Against this diagnosis, Fara argues as follows:

> This brings to the fore the feature of Cheap Haecceitism that both gives it its power and ultimately betrays it. The betrayl comes when we realize that these possibilities must not be treated as actual, even though they are parts of the actual world. They are genuinely alternative possibilities. Given this, the Cheap Haecceitist has ceased to treat the actual world as itself being a possibility. In letting in proper parts of worlds as possibilities to be quantified over, he has kicked out improper parts of some genuinely possible worlds (the repeating ones). Possible worlds themselves no longer always represent a possibility. Cheap Haecceitism does not seem worth this cost for the similarity-based counterpart theorist. He cannot coherently admit Haecceitistic possibilities while retaining the very essence of the theory of modality he shares with most of those who disagree with him: possibility is truth in some possible world.[35]

I believe Fara's response is more than mere question-begging against LMR but less than a convincing case. Properly understood, it shows that the bifurcation of possible worlds and maximal possibilities required by LMR is theoretically vicious. This viciousness consists in the inelegance and revisionary character of analysis of

[35]Fara (2009: 296).

modality that does without modal correspondence. This viciousness was a matter Lewis himself was sensitive to. In considering the consequences of denying modal correspondence, he says the following:

> I think there is [a cost]—simply the cost of making a break with established theory, on which all differences between possibilities are supposed to be differences between possible worlds. It is chaos if too many questions come open all at once, therefore theoretical conservatism is a good idea. There should be a presumption in favour of the incumbent theory, and against gratuitous substitutes.[36]

Although Lewis hastens to add that he views LMR as a suitably cheap substitute, the point he concedes here remains: modal correspondence is part of our established theory and therefore enjoys some presumption in its favour. The ubiquitous slide between talk of possible worlds and talk of maximal possibilities is harmless if modal correspondence is true, but problematic if LMR is adopted. So, if an equally attractive alternative is available and this alternative upholds modal correspondence and allows for interchangeable talk of possible worlds and maximal possibilities, we have reason to prefer it to LMR. For this reason, we have evidence in favour of BPMR over LMR.

Along with this construal of Fara's objection, there are further benefits to adopting BPMR and upholding modal correspondence. Earlier, I alluded to the reduction of logical space—the space of possibilities—to possible worlds. This reduction identifies possibilities, maximal and otherwise, with sets of possible worlds in the much the same way semantic theory reduces extensions of predicates to sets of individuals. A primary cost of abandoning modal correspondence is that this reduction of logical space to possible worlds is no longer available, since there will be insufficient worlds to issue

[36]Lewis (1986: 235).

a full-scale reduction of maximal possibilities to possible worlds. The preservation of this natural reduction is, therefore, a point in favour of modal correspondence.

Another reason for accepting modal correspondence emerges from the theoretical unifications and simplifications it allows. If we treat abundant properties as sets of individuals, we can unify our metaphysics of properties and propositions. Granted modal correspondence, all propositions—even *de se* propositions—can be identified with sets of possible worlds and, since possible worlds are individuals, propositions prove to be mere properties of maximal individuals.[37]

In contrast, if we reject modal correspondence by accepting LMR, we are forced to treat certain *de se* or "centered" propositions as ordered pairs of individuals and worlds, since no possible worlds differ only non-qualitatively.[38] This precludes an appealing unification and generalization of our property and proposition theories. Recently, Stalnaker (2008) makes a similar point in defending haecceitistic differences between his own ersatz possible worlds:

> Even though belief states are represented by sets of centered possible worlds, the contents of belief can be taken to be ordinary propositions—sets of uncentered possible worlds... By taking the contents of belief to be (uncentered) propositions, we can straightforwardly compare the beliefs of different subjects, and we can model the way assertions change the context in a straightforward way. We can also model the dynamics of belief for a single agent–the facts about preservation and change of belief–in a straightforward way.[39]

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[37]As Lewis (1986) notes, there are many conceptions of propositions and many roles associated with these various conceptions. Here, my concern is with the conception of propositions sparsely conceived such that no hyperintensional distinctions are admitted. I leave open that propositions, conceived in some other fashion, might be needed for other theoretical purposes.

[38]See Lewis (1979) for discussion.

[39]Stalnaker (2008: 69-71).

Perhaps there are still uses for which centered propositions are better suited than a conception of propositions as sets of worlds alone. Even so, the availability of a plenitude of propositions—understood as sets of possible worlds—is attractive and allows for the natural identification of propositions with properties of entire worlds and unifies our proposition and property theories.

More generally, the denial of modal correspondence seems at odds with the robust realism about possible worlds that LMR accepts. By resisting the identification of possible worlds with maximal possibilities, the "worlds" of LMR severs their natural analytic connection with modality.[40] While LMR's disconnected concrete spatiotemporal sums supply a massive reservoir of concrete individuals for constructing maximal possibilities, the denial of modal correspondence suggests that it is a distortion to call these sums, "possible worlds". Recall, for example, that LMR holds the concrete sum which we are parts of is the very same thing according to which you swap qualitative profiles with Bush or Obama. By adopting a theory that sustains modal correspondence, we can avoid this counter-intuitive commitment and go a considerable distance towards restoring the analytic connection between modality and concrete possible worlds.

Taken together, these considerations suggest that an analysis of modality that preserves modal correspondence enjoys virtues that LMR does not. And, since BPMR enjoys this virtue, it is to be preferred to LMR.

5.8 Conclusion

LMR is a powerful and reductive analysis of modality. I have argued that it has a superior competitor, BPMR. BPMR reconciles alethic haecceitism and counterpart

[40]Some like Jubien (2009) find any proposed analytic connection incredible. I take the matter to be by and large negotiable, but, as my remarks here indicate, less straightforward than Lewis seemed to believe.

theory while retaining the modal correspondence thesis. It therefore enjoys several virtues that LMR does not. Furthermore, BPMR improves upon LMR by virtue of employing bare particulars to ground non-qualitative counterpart theory. For this reason, bare particulars afford us an analysis of modality superior to LMR. I take this to be a point in their favor. I also take it to suggest that the best defense of bare particulars is a good offense: demonstrating their usefulness for various metaphysical enterprises.[41] Naturally, some who accept modal realism will resist bare particulars and some who accept bare particulars will resist modal realism. Better, I believe, to help ourselves to the theoretical advantages ensured by commitment to both concrete possible worlds and bare particulars.

[41]Most notably, since bare particulars help us with the problem of accidental intrinsics, it is natural to think they have implications for the problem of temporary intrinsics as well.

CHAPTER 6

QUIDDITISMS

6.1 Introduction

Haecceitism is not well understood. While most are convinced it concerns modality and non-qualitative properties like *being identical to Napoleon*, there is considerable disagreement about how exactly these pieces fit together. For this reason, the content of haecceitism is best grasped by way of example. Consider a possible world, distinct but qualitatively indiscernible from our own, that differs only with respect to facts about the identity of individuals. So, for instance, suppose it is a world where two twins "swap" their actual qualitative roles—the set of all their qualitative properties, intrinsic, extrinsic, and relational, like *being red* or *being round* or *being near a stop sign*—but all qualitative matters are the same. In a similar vein, suppose there is a world where things are just as they actually are, but you are "replaced" with some non-actual individual who occupies your qualitative role. If there are such worlds, haecceitism is true. And, if no possible worlds differ in this way, anti-haecceitism is true: there are no *haecceitistic differences*—exclusively non-qualitative differences—between possible worlds.[1]

If haecceitism is not well understood, quidditism is in even worse shape. All parties agree that quidditism concerns properties rather than individuals, and most agree that it is an analogue of haecceitism, but, beyond this, it is far from clear

[1]For the moment, I set aside various complications regarding alethic and ontic versions of haecceitism and quidditism. I take up these issues in Section Six. See Chapter One for extended discussion.

what quidditism amounts to. Fortunately, we can grasp the content of quidditism by way of example. For Lewis (1986), it requires that "We can distinguish our world from one in which, say, one of the quark colours has traded places with one of the flavours."[2] Schaffer (2005) characterizes anti-quidditism along similar lines: "the [anti-quidditist] does not allow that there is a world that differs from actuality solely in that charge and mass swap powers."[3] Very roughly, then, quidditism involves properties trading roles—either by swapping or replacement—in the natural order of things just as haecceitism involves individuals trading—also, either by swapping or replacement—qualitative roles.

In what follows, I have two aims. The first is to clarify the thesis of quidditism and distinguish it from related theses often conflated with it. The second aim is to develop a positive argument for quidditism. These aims dovetail, since the conception of quidditism I defend holds it to be a strong analogue of haecceitism, and the argument I offer is a variation of a familiar argument for haecceitism. After presenting an argument for quidditism, I examine possible responses and, after considering how we ought to accommodate quidditism within our metaphysics of modality, conclude that no satisfactory anti-quidditist response is available.

One topic I will not address here is the epistemology of quidditism. In particular, I set aside issues raised by Ramseyan Humility, the thesis that we are irremediably ignorant of the world's fundamental properties, which Lewis (2009) argues is a rather striking consequence of quidditism. Since I set aside this and other epistemic issues,

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[2]Lewis (1986: 162). Note that he does intend "distinguish" in an epistemologically interesting sense.

[3]Schaffer (2005: 5). Schaffer's remarks are not intended as a definition. After all, quidditistic differences can be generated by both "swapping" properties between roles and "replacing" a property with a property it is not co-actual with.

my concerns here are exclusively metaphysical.[4] I am therefore happy to remain agnostic on these difficult epistemological matters.[5]

6.2 Quidditism and Properties

Since Shoemaker (1980), the relation between properties and their causal and nomic roles—the totality of causal and nomological relations properties bear to one another—has been at the forefront of inquiry into properties. A standard procedure is to distinguish three views about the relation between properties and their causal-nomic roles:[6]

> **Structuralism**: Properties are individuated by their causal-nomic roles. For example, occupation of the causal-nomic role associated with "mass" is both necessary and sufficient for a property to be identical with *mass*. Structuralism therefore holds the causal-nomic role of a property to be its individual essence—i.e., an essence uniquely instantiable by that property.[7]

> **The Double Aspect View**: Properties are not individuated by their causal-nomic roles, but they do have some or perhaps all of their causal-nomic relations essentially. It is therefore a necessary condition of *mass*

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[4] I also set aside the cardinality argument against quidditism offered in Black (2000: 96-99).

[5] See Lewis (2009) and responses in Hawthorne (2001), Whittle (2005), Schaffer (2005), and Locke (2009).

[6] In what follows, I make a number of simplifying assumptions regarding causal-nomic structure. I assume, first, that causal structure supervenes upon nomic structure such that worlds that are nomically indiscernible are—in the sense relevant here—"causally indiscernible". (Note: there many and varying senses of "causal indiscernibility".) I assume, second, that only fundamental properties and relations occupy roles in the world's causal structure. Finally, I assume that all causal relations are general relations and thereby set aside worries about singular causation. These are blatantly controversial assumptions that I take on for simplifying purposes. Even so, I take it that they can be set aside without doing violence to inquiry into general content of quidditism. More importantly: I outline the resources needed to parse these issues and their impact on quidditism below.

[7] My terminology follows Hawthorne (2001).

that it occupy the causal-nomic role associated with "mass", but it is not a sufficient condition. On this view, the individuation of properties is a primitive affair, but there are constraints on what is possible for properties that flow from the essences of properties.

Neo-Humeanism: Properties are neither individuated by their causal-nomic role nor do they have any of their causal-nomic relations essentially. On this view, the relation between properties and causal-nomic roles is extremely loose. Properties can occupy extremely diverse causal-nomic roles and their individuation across possible worlds is a primitive matter.

These are theses about property individuation and the essences of properties. Presented with them, one might expect that quidditism turns out to be a thesis of this sort. After all, if the individuation of properties is primitive, there seems to be no obstacle to believing that *mass* could occupy the role actually associated with "charge" and vice versa. And, while these views are close cousins, I will now offer two arguments that show they are distinct.

Notice, first, that Neo-Humeanism is exclusively a thesis about individuation and essence. It holds that the individuation of properties across worlds is a primitive matter and that properties do not have their causal-nomic roles essentially. So put, it neither entails nor precludes the existence of possible worlds that are distinguished by a characteristically quidditistic difference (e.g., the difference that distinguishes worlds where *mass* and *charge* swap roles). A further commitment is needed to generate instances of *quidditistic difference*. This further commitment is a modal one. It holds that, for some permutation of properties across causal-nomic roles, there is a possible world where that permutation is realized.[8] This thesis outstrips

[8]If one holds that, for any such permutation, there is a possible world where it is realized, one accepts *extreme quidditism*. Further restrictions on the permutations that correspond to possible worlds deliver progressively more modest forms of quidditism.

Neo-Humeanism, since it posits possible worlds that exhibit quidditistic difference rather than merely denying properties have causal-nomic essences.

There is a second reason for distinguishing quidditism from Neo-Humeanism: quidditism can be accepted without Neo-Humeanism. For example, the Double Aspect View, which accepts both the primitive individuation of properties and essentialism, is compatible with quidditistic differences between worlds. To see why, consider a bilaterraly symmetric world where distinct properties exhibit a symmetric pattern of instantiation yet stand in the same causal-nomic roles to other properties. Now consider a world that differs only quidditistically, where those properties occupy the very same causal-nomic roles but at different locations. Intuitively, these possible worlds differ only quidditistically, but are perfectly compatible with the causal-nomic essentialism of the Double Aspect View. We therefore have a second reason to distinguish quidditism from Neo-Humeanism.

Quidditism is not merely a thesis about property individuation or essence. It is a thesis that guarantees there are certain kinds of possibilities. It is unfortunate, then, that several philosophers have made the mistake of conflating quidditism with mere primitive property individuation. For example, Black (2000) characterizes quidditism as "the acceptance of primitive identity between fundamental qualities across possible worlds."[9] Similarly, Bird (2007) defines it as the acceptance of identity for fundamental qualitative properties across worlds "that is not dependent on identity of nomic or causal roles or powers more generally."[10]

In both cases, it is alleged that quidditism is just primitivism about property individuation; however, the primitive identity of properties and quidditism come apart in several ways. In large measure, this is because the primitive identity of properties carries no modal implications. To take the most extreme case, one might accept

[9]Black (2000: 92).

[10]Bird (2007: 71).

necessitarianism—the thesis that actual truth entails necessary truth—and still believe that the individuation of properties is a primitive matter. But, since necessitarianism precludes any intuitive cases of quidditistic difference, there is reason to believe that quidditism is in part a modal thesis: a thesis not solely about the individuation of properties, but about the differences between possible worlds or possibilities.

Since quidditism is neither Neo-Humeanism nor primitivism about property individuation, let us introduce the following thesis as a first pass at defining quidditism:

> **Quidditism-CN**: There are possible worlds that are alike in causal-nomic structure, but differ only in terms of which fundamental properties occupy which causal-nomic roles.

I believe Quidditism-CN improves upon any view that identifies quidditism with Neo-Humeanism or primitive property individuation. Despite this, it raises a number of issues.

The first issue concerns the scope of Quidditism-CN. It arises because Quidditism-CN is restricted to *fundamental* properties rather than properties *simpliciter*. This restriction is widely accepted.[11] It makes quidditism a thesis about properties "sparsely conceived"'—most notably, fundamental physical quantities and qualities like *mass* and *charge*—as opposed to properties "abundantly conceived", where abundant properties include *being to the left of a barn* or *being a dog or a sandwich* and any other disunified collection of individuals. For those who accept this distinction, not all properties are created equally: only sparse properties correspond to universals, tropes, or privileged "natural classes" of individuals. In contrast, abundant properties correspond any sets of individuals, gerrymandered or otherwise.

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[11] See Hawthorne (2001), Lewis (2009), and Schaffer (2005).

For some, this restriction means that quidditism concerns only *perfectly natural properties*.[12] For Lewis, the distinction between these and others properties is a primitive matter, and it is only perfectly natural properties that carve at the world's causal and nomic joints, ground qualitative resemblance, and form a supervenience-base for abundant properties. For others, the distinction between the natural and non-natural properties is accepted, but is analyzed in terms of the divide between universals or tropes and mere sets of individuals. While views of this kind avoid Lewis's primitivism, they require a partisan metaphysics of properties (e.g., universals or tropes). It is fortunate, then, that the differences between these views can be set aside in what follows; however, as we proceed, I will mark the differences as needed.[13]

By restricting quidditism to fundamental (alternatively, "sparse", "natura", or "perfectly natural") properties, Quidditism-CN fails to guarantee (or rule out) what would be particularly strange quidditistic differences between worlds. For instance, it is silent on whether *being the number seven or a baseball* could occupy the causal-nomic role—whatever it might be—of *being a barn located south of Chicago*. Perhaps some unrestricted quidditistic thesis could accommodate quidditistic differences for these abundant properties. Certainly, such a view raises interesting questions. For instance, would the resulting quidditistic differences be uniformly less plausible than differences involving fundamental properties? Here, I will simply set aside this issue and follow orthodoxy by restricting quidditism to fundamental properties. Having marked this assumption, let me now turn to a second issue with Quidditism-CN: the nature of quiddities.

Quidditism is sometimes interpreted as the thesis that properties themselves have special second-order properties called "quiddities". In some cases, these second-order

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[12]See Lewis (1983) and (1986) for discussion.

[13]If one accepts a comparative notion of naturalness, one might hold that certain sufficiently natural properties, even while not perfectly natural, are relevant to quidditism. I set aside complications of this sort here.

properties are identified with the "nature" or "essence" of the property that instantiates them. Unsurprisingly, views about quiddities—which vary in different ways—have invited confusion with quidditism. While it would be preferable to avoid settling questions about the existence or nature of quiddities, we can illuminate the possible views by considering analogous views about haecceities. For example, one might accept the existence of haecceities for individuals insofar as one identifies them with the singleton sets of individuals. On this view, *Socrateity* or *being identical to Socrates* is just the singleton of Socrates. This *lightweight* conception of haecceities is to be contrasted with the *heavyweight* view that there are fundamental non-qualitative properties of individuals—perhaps universals, tropes, or something else altogether—that *Socrateity* and other haecceities are to be identified with.

These light and heavyweight views of haecceities have analogues with respect to quiddities. One might accept quiddities insofar as there is, say, a set that includes just the universal *mass* or the set of all *mass* tropes and go on to identify this with the quiddity of *mass*. At the same time, one might hold that, in addition to a fundamental *mass* property, there is also a fundamental *being identical to mass* property. I believe the former view is largely unproblematic, but that the latter is untenable. Not only does it count against the economy of our metaphysics of properties, it seems to invite a regress of fundamental quiddities being invoked to individuate other quiddities and so on. Better, it seems, to hold that the individuation of properties does not require us to move up the ontological hierarchy. With this in mind, I set aside a heavyweight metaphysics of fundamental quiddities and assume that the individuation of properties is—as the quidditist ought to maintain—a primitive matter. Let me now take up the third difficult issue that arises in defining quidditism: fixing upon the structure relevant to the content of quidditism.

6.3 Quidditism and Structure

Given the focus on properties and the connection to their causal-nomic roles, it is not surprising that some have taken quidditism to be exclusively concerned with causal-nomic structure. For instance, Bird (2007) focuses his discussion of quidditism on properties and their powers, where powers' are exclusively causal powers and dispositional features. On views of this kind, Quidditism-CN is likely to seem a natural way to conceive of quidditism. I will now argue against these views by showing that causal-nomic structure provides too narrow an understanding of quidditism as well as one that is unduly partisan regarding certain metaphysical issues.

The first problem with defining quidditism in terms of causal-nomic structure is that it strongly prejudices us against any Humean view of laws. To see how, notice that, on this conception of quidditism, determining whether quidditistic differences are genuine requires us to undertake the following project described by Hawthorne (2001):

> Assume, then, that a causal necessitation relation N holds between certain universals. At the risk of oversimplication, let us look a simple world where the lawbook for properties instantiated in that world is very small. There are five properties A, B, C, D, E. Here are the laws in the lawbook: ANB, ANC, BND, and DNE... Take the laws of the lawbook and conjoin them. Replace each property name by a distinct variable (F_1..., F_n) and prefix each variable by a quantifier... Call this the Ramsified lawbook.[14]

Granted this Ramsified lawbook, questions about quidditistic difference now boil down to questions about whether distinct worlds realize the Ramsified lawbook in different ways (i.e., with different properties standing in different N-relations). So understood, quidditistic difference is solely a matter of whether or not properties

[14]Hawthorne (2001: 369).

can be permuted across causal-nomic structure. The process just described assumes, however, that causal-nomic necessitation—the *N*-relation—is fundamental, either as a piece of theoretical ideology or as a genuine metaphysical relation. Humeans about causation and nomicality will, however, balk at the assumption that there is any fundamental *N*-relation and, as a consequence, deny that causal-nomic structure is of unique relevance to the more general content of quidditism.[15] Although there is almost certainly an Anti-Humean procedure that might serve as a surrogate for the process Hawthorne describes, definitions like Quidditism-CN still threaten to obscure the more general, theory-neutral sense that we can give to quidditism—a sense that should require neither acceptance of fundamental causal-nomic necessitation nor exclusive reference to causal-nomic structure.

Quidditism-CN also presupposes certain substantive constraints on the nature of quidditistic difference. Notice, for example, that Quidditism-CN straightforwardly rules out the possibility of quidditistic differences between worlds without any causal or nomic structure (e.g., extremely simple worlds or massively chaotic ones). It is far from obvious, though, that such worlds cannot exhibit quidditistic differences. It therefore seems a further vice of Quidditism-CN that it holds causal and nomic structure to be preconditions for quidditistic difference.

A third concern: it seems that permutation across locational structure often suffices to secure quidditistic differences in the absence of causal-nomic swapping. To see how, consider the following case alluded to earlier:

> Suppose that our world is, rather surprisingly, bilaterally symmetric. There is another half to our world, but, within this other half, there is a property, *schmass*, that occupies the role that *mass* occupies on our half of the uni-

[15]Indeed, for those of us attracted to a combinatorial conception of modality, there is good reason to believe that causal-nomic structure is far from fundamental and therefore not plausibly thought to be the lone structure relevant to quidditistic difference. See Hawthorne (2001: 370-371) and Schaffer (2005: 12-13) on the connection between combinatorialism and quidditism.

> verse. While *mass* and *schmass* are indiscernible in causal-nomic respects, they differ with respect to their pattern of instantiation. Furthermore, it seems possible that the pattern of instantiation might have been switched, and we would be *schmassive* objects, while our doppelgangers are *massive*.

Intuitively, the difference between these worlds is a quidditistic one. That said, there is no difference in the causal-nomic structure of these worlds. Instead, the difference between these possible worlds is purely locational. It concerns where *schmass* and *mass* are, not what *schmass* and *mass* do. So, if our definition of quidditism is to be satisfactory, we require a broader conception of the relevant structure—one broad enough to include *at least* locational structure, where this structure is determined by primitive occupation relation, *Uxx*, that holds between spatiotemporal regions and either objects or objects as well as properties and relations.[16]

Can we get by, then, by defining quidditism in terms of just causal-nomic and locational structure?[17] I do not believe so. Consider another case:

> Suppose that our world is one where dualism of an unruly sort holds. There are epiphenomenal, atemporal ectoplasmic souls. They have no causal purchase in the world. Their existence is not connected in any lawlike fashion to physical goings-on. They exhibit no nomological ties to one another. Suppose that they have a chaotic existence, randomly instantiating fundamental phenomenal properties akin to (perhaps even identical to) pain and pleasure. Now, consider an alternative possible world, where the distribution of phenomenal properties across epiphe-

[16]If one goes for the former approach, one will need some further structure to make sense of how properties and relations occupy regions by being instantiated by objects. I prefer the latter approach as it is neutral with respect to substantivalism and supersubstantivalism, which holds properties to be "pinned directly into spacetime". See Schaffer (2009b) for discussion.

[17]It seems as though Lewis (2009) and Schaffer (2005) think that this structure suffices for defining quidditism.

nomenal souls is isomorphic, but permuted such that all the "pains" are swapped with "pleasures.

Intuitively, this difference is a quiddditistic one. But, since the differences involve properties that lack causal, nomic, and locational roles, it is a matter independent of causal, nomic, and locational structure. So, if this sort of difference is quiddditistic, we require some more general notion of structure—one broader than causal-nomic and locational structure—in order to define the nature of quiddditistic differences between possible worlds. What kind of structure might this be?

6.4 Quiddditism and Fundamentality

Let me now suggest that correct conception of quiddditism makes irreducible appeal to *fundamentality structure*, where the fundamentality structure is determined exclusively by the distribution of fundamental properties and relations, regardless of what, if any, causal, nomic, or locational roles they occupy. In order to sharpen the notion of a fundamentality structure, it will be helpful to bear in mind our assumption of either Lewis's primitive notion of perfectly natural properties or a reductive account that distinguishes fundamental properties as uniquely corresponding to universals or tropes. On either account, we can help ourselves to a distinction between an elite class of fundamental properties and the remaining abundant properties.

Once we help ourselves to this distinction, we can introduce an ontologically perspicuous language, L. Within L, there is a predicate that uniquely expresses each fundamental property, and, for each individual, there is a unique constant that names that individual.[18] As a consequence, for any world, there is some sentence of L that exhaustively and accurately states the facts about the fundamental properties and individuals within that world—the structure that determines all the supervening facts

[18]I assume that fundamental properties are qualitative and therefore grounds of qualitative resemblance.

about that world. L is a powerful language, and, by way of Ramsification, we can now use L to define different kinds of structures, facts, and information.

To begin, consider, a possible world with a single object, Alpha, that instantiates a single property, *electronhood* and an alternative possible world in which only a different individual, Beta, exists and instantiates *electronhood*. The difference between these worlds is a haecceitistic difference: they differ only with respect to which individuals occupy which (i.e., the only) qualitative role. Using L, we can describe these worlds as Fa and Fb. In doing so, these sentences encode *haecceitistic information*: they tell us which individuals occupy which world, and expresses haecceitistic facts about those worlds.

By Ramsifying sentences of L, we can remove different sorts of information. For instance, by replacing individual constants with corresponding, unique existential quantifiers, we can *first-order Ramsify* the sentences just considered and thereby remove the haecceitistic information. The resulting sentences, $\exists xFx$, are the same. And, while they include no haecceitistic information, they still encode *qualitative information*: they tell us which properties are instantiated, and expresses qualitative facts about worlds. Let the totality of qualitative information about a world constitute that world's *quality structure*. Granted this notion, we have a natural way to conceive of haecceitism. It is the thesis that distinct possible worlds can realize the same quality-structure. In a moment, I will argue that there is a similarly natural way to conceive of quidditism.

Since we can first-order Ramsify any sentence of L and thereby remove the haecceitistic information, we can also *second-order Ramsify* these sentences by replacing each predicate with a unique second-order existential quantifier. Call this procedure full *Ramsification*. Fully Ramsified sentences, which contain only strings of first- and second-order quantifiers (e.g., $\exists X \exists x Xx$), are realized by many possible worlds. And, while these sentences encode neither haecceitistic or qualitative information, they

still encode *structural information*: they tell us how many individuals and how many properties are instantiated and specify certain structural features about the relations between individuals and properties.[19]

Suppose, however, that instead of fully Ramsifying our L-descriptions of worlds, we only second-order Ramsify them. The resulting sentences therefore encode both haecceitistic and structural information, but not qualitative information. They tell us only about how many fundamental properties are instantiated and about various structural relations between these properties and specific individuals. Let us say that the resulting second-order Ramsey sentence expresses all the facts about the *fundamentality structure* of a world.

Now consider once again the possible world where Alpha instantiates *electronhood* and another possible world where Alpha instead instantiates *protonhood*. Intuitively, these worlds differ quidditistically from one another, since they differ only in terms of which fundamental property occupies a certain role in the world. Using L, these worlds can be described as Fa and Ga, and, for this reason, they both realize the same fundamentality structure—i.e., the second-order Ramsey sentence, $\exists XXa$—but do so in different ways.

What emerges from the distinctions just drawn is that there are three ways for any structurally-indiscernible worlds—i.e., worlds with L-descriptions that encode the same structural information—to differ. Worlds that *differ haecceitistically* satisfy the same first-order and full Ramsey sentences, but not the same second-order Ramsey sentences. Worlds that *differ quidditistically* satisfy the same second-order and full Ramsey sentences, but not the same first-order Ramsey sentences. And, worlds that differ neither haecceitistically nor quidditistically satisfy only the same full Ramsey

[19]Perhaps this structural information is "qualitative" in some more generous sense. Here, I take it that my preferred taxonomy differs only terminologically from one that posits an ambiguity in "qualitative".

sentences. Intuitively, then, haecceitism and quidditism are theses about axes of difference between possible worlds. Haecceitism allows for differences along the axis of individuals, where these differences concern only haecceitistic facts. Quidditism allows for differences along the axis of properties (specifically, fundamental qualitative properties), where these differences concern only qualitative facts.

On the view just outlined, quidditism is a more general thesis than Quidditism-CN. It concerns fundamental properties, regardless of their causal-nomic and locational roles, and is best expressed by reference to fundamentality structure, understood through metaphysically perspicuous *L*-descriptions. Let us define quidditism, in this most general sense, as follows:

> **Quidditism**: There are possible worlds that are alike with respect to all structural and haecceitistic facts, but differ solely in terms of which properties occupy which roles in fundamentality structure.

This definition of quidditism is likely to meet with three complaints. (Recall that I am still setting aside until Section Five complications regarding the relation between possibilities and possible worlds.) The first complaint is that it distorts the content of quidditism by making certain quidditistic differences non-quidditistic. If, for example, there is a possible world where *mass* and *charge* swap actual causal-nomic roles and, at that same world, you and I are replaced by alien, non-actual individuals, the present account denies that such a world differs either haecceitistically or quidditistically from actuality. This is because, as I have defined fundamentality structure, sameness of this structure requires sameness of haecceitistic and structural information. But, goes the objection, it seems that worlds might differ both haecceitistically and quidditistically as in the case just described.

I concede there is something puzzling about the connection between haecceitism and quidditism if no worlds that differ haecceitistically ever differ quidditistically. At

the same time, I take this puzzle to be largely a terminological one. On the above definition, quiddditistic differences are *bare quiddditistic differences*, since they distinguish worlds that agree both haecceitistically and structurally from one another. Similarly, haecceitistic differences are *bare haecceitistic differences*, since they distinguish worlds that agree both qualitatively and structurally from one another. Perhaps the more natural terminology would be something like the following: worlds w and w^* differ quiddditistically if and only if either w and w^* are distinguished by a bare quiddditistic difference or there is a world, w^{**}, such that w is distinguished by a bare haecceitistic difference from w^{**}, and w^{**} is distinguished from w^* by a bare quiddditistic difference. (A similar sense can also be given to "haecceitistic difference".) Here, I take these matters to boil down to largely terminological book-keeping. Regardless of one's intuitions about how to talk about quiddditism, the present framework affords us the resources to clarify any differences we might like to, and, in this way, still marks an improvement over definitions like Quiddditism-CN.

A second complaint is that the present view makes quiddditism too cheap. Since almost all of us will accept that there are distinct worlds—one where Alpha is an electron, another where Alpha is proton—almost all of us are quiddditists. But, goes the objection, this makes quiddditism too cheap, since it ought to be a controversial thesis.

I concede the first point. On this definition, almost all of us are quiddditists—or, if one resists even the weakest form of quiddditism, their view will seem implausible. But this is no vice. What would be a vice is if this definition settled the harder question about the scope of quiddditistic difference—e.g., whether, say, *mass* and *charge* could swap their roles. Quiddditism admits of many forms that differ regarding the scope of potential quiddditistic differences. And, while we should all be *minimal quiddditists* insofar as we accept both the Alpha-as-electron and Alpha-as-proton worlds, it is controversial whether we should be *extreme quiddditists* and allow that *mass* and *charge*

might swap roles and preserve the fundamentality-structure of the actual world. Quidditism, as I have defined it, is perfectly compatible with any number of views on this matter.

The third complaint is that the proposed view of quidditism, by employing only fundamentality to whittle down the structure relevant to quidditism, cuts out too much. It leaves it unclear how we can ask or understand the interesting and difficult questions about whether *mass* and *charge* could swap causal-nomic roles as an issue independent of any concerns about fundamentality.

This complaint ignores the primary virtue of the present account: it makes quidditism a general issue, independent of a narrow focus on causality and nomicality. At the same time, this complaint is easily resolved by noting that we can add to the apparatus we have employed in a way that reflects a commitment to fundamental causal-nomic relations, and whatever else we might hold to distinguish the world's fundamentality structure.[20]

Recall the procedure Hawthorne (2001) describes according to which we posit a fundamental causal-nomic relation, N, and take questions about quidditism to concern permutations across N-preserving structure. On the present view, this merely reflects a partisan commitment regarding causal-nomic structure that can be added to, but is not constitutive of quidditism. Furthermore, we can ask questions about the scope of quidditistic difference within views of this sort by straightforwardly adding the N-relation into L and holding the fundamentality structure of world to be wholly determined by Ramsifications of the sentence exhaustively and exclusively describ-

[20]There is additional virtue of the present approach: it straightforwardly accommodates quidditistic differences that are solely locational in nature. Granted the assumption that spacetime points are individuals, there will be sufficient structure to make sense of the permutation of properties across locations, given that locations are individuation by haecceitistic information regarding spacetime points. Perhaps worries about this result might push us towards the view considered in Maudlin (1988), according to which all truths about spacetime points are general ones expressible through the language of quantification over points but with no individual constants.

ing the worlds various N-relations. Similarly, we can, if we care to, separate nomic structure from causal structure by introducing distinct fundamental relations, C and N. Moreover, we can introduce the relevant location structure, if we so choose, by including the occupation relation, U, within our language, L.

I have now defended a way of conceiving and defining quidditism that I believe improves upon existing alternatives. This framework offers an intuitive way of understanding the dispute between haecceitists and quidditists and their opponents. For haecceitists, some worlds differ only along the axes of haecceitistic facts. In contrast, anti-haecceitists hold that qualitative facts suffice to fix the haecceitistic facts, so there can be no possible worlds that differ only along the haecceitistic axis. In a similar vein, quidditists hold that some worlds differ only along the axis of qualitative facts. While, for anti-quidditists, structural and haecceitistic facts suffice to fix all the qualitative facts.

In addition to the intuitive treatment of our target concepts, the framework employed for defining quidditism also enjoys an additional benefit, since it allows us a natural way to pose questions and formulate certain theses. Chief among these questions are those concerning ontological priority. For example, are qualitative facts—facts about the identity of fundamental properties—ontologically prior or posterior to haecceitistic facts or the more general structural facts expressed by full Ramsey sentences? Or are haecceitistic and qualitative facts of equal ontological priority? (Perhaps such a view is what best explains the independent variation across worlds that quidditism and haecceitism guarantee.) Settling questions about priority and posteriority is not my business here, but it is worth noting that these questions and their cognates are naturally expressed in the present framework. I take this to provide further evidence that the characterization of quidditism just offered is on the right track.

6.5 Chisholming Quidditism

Having clarified the thesis of quidditism, I now turn to the question of whether it is true. This question and the parallel one regarding haecceitism are often thought to be properly settled by appeal to modal intuition. So, if it seems as though *mass* and *charge* might have swapped roles in the world's fundamentality structure, there is reason to accept quidditism.[21] Conversely, if this does not seem to be a genuine possibility, there is reason to reject quidditism. On this score, Lewis (2009) holds the evidence for quidditism and haecceitism to be roughly even and favourable. He says, "In both cases alike, haecceitistic or quidditistic distinctions between possibilities seem offhand to make sense." Others, like Black (2000), have opposing intuitions: "My intuition is that to play the nomological role of colour or flavour is to be that colour or flavour, and that the idea of two qualities swapping nomological roles is thus unintelligible."[22]

In light of the countervailing and inconclusive intuitions about quidditism, there is reason to look for an independent argument that might settle the matter. I take the most promising candidate to be a property-theoretic analogue of Chisholm's Paradox.[23] To see how such an argument might establish quidditism, let me begin by introducing Chisholm's Paradox, which some have used to defend haecceitism, and then develop a property-theoretic version suggested by Bird (2007). I will then canvas possible responses to this argument and argue that Bird's anti-quidditist response to the argument is unsatisfactory.

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[21] Perhaps there are certain constraints. If, say, a fundamental property only admitted of determinables corresponding to the real number-structure, while another admitted of determinables that correspond to some less generous structure, one might hold that essences would be violated upon swapping.

[22] Black (2000: 94)

[23] Phillip Bricker (personal communication) has suggested that the possibility of inverted spectrums, when realized in worlds where property dualism obtains, provide an argument for quidditism. Whether such an argument differs in kind from Chisholm's Paradox is, I believe, an open question.

Chisholm's Paradox, presented in Chisholm (1967), begins innocuously. Suppose that individuals are identical across possible worlds such that *de re* modal claims like "Fred could have been taller" are true only in case there is some possible world where the very same individual, in this case, Fred, is taller than he is in the actual world. Now, consider that two actual individuals, Adam and Noah, could have had slightly different qualitative properties. For example, Adam, instead of dying at age 930, could have died at age 931. Similarly, Noah, instead of dying at age 950, could have died at age 949. If Adam and Noah can tolerate these incremental "changes" to each of their qualitative profiles, it seems that had they been a different way than they actually are, they could have tolerated even further incremental change. Moreover, it seems that Adam and Noah could be subject to a finite series of changes and, in each case, the way that Adam and Noah could have been would vary only slightly from possible world to possible world.

Now, if we allow incremental possible changes to the ways that Adam and Noah could have been and accept the transitivity of identity, we are committed to a finite series of incremental changes that ends in a possible world where Adam has all the qualitative properties Noah actually has and Noah has all the qualitative properties that Adam actually has. This is because the relevant iterated modal claim "Adam could have been such that he could have been such that he could have been such..." is, by our initial assumption, true in virtue of one and the same individual, Adam, existing at different possible worlds. So, if Adam and Noah could be incrementally different and the individuals they could have been could also be incrementally different, we must accept that Adam and Noah could "swap" their respective qualitative properties. And, if so, there is a possible world that differs from the actual world only in haecceitistic terms—that is, it differs only in terms of which individuals instantiate which qualitative profiles.

We can clarify Chisholm's Paradox in terms of a particular schema of modal inference. This schema involves a two-place predicate 'M' that relates an individual and either their actual components (represented as c_1) or their possible components (represented as successors up to c_N, a set of components wholly disjoint from c_1). The term 'components' is intended here to be a piece of neutral terminology. Certain instances of Chisholm's Paradox concern the hunks of matter that compose an object; other instances concern the qualitative properties that comprise the qualitative profile of an individual.[24] Formally, the relation between the components of an individual—understood as material parts or qualitative properties—is the same. But, in each case, it purports to establish that a particular individual might have had different components and, through iteration and the transitivity of identity, that it might have had wholly different components. Presented schematically, it runs as follows:

P1. $M(a, c_1)$

P2. $\Box(M(a, c_1) \rightarrow \Diamond M(a, c_2))$

P3. $\Box(M(a, c_2) \rightarrow \Diamond M(a, c_3))$

...

PN. $\Box(M(a, c_{N-1}) \rightarrow \Diamond M(a, c_N))$

C1. $\Diamond M(a, c_N)$

In the version presented in Chisholm (1967), the two place relation represented by *M* is the relation *instantiates each member of*; the constant 'a' is the individual Adam; the constant 'c_1' represents the set of Adam's actual qualitative properties; the constant 'c_N' represents the set of Noah's actual qualitative properties. So, given

[24]See Salmon (1986) for discussion.

these values, the initial presentation Chisholm's Paradox involves (i) a claim about the actual world, P1, (ii) a large yet finite series of apparently innocuous claims about how individuals could have been slightly different than they are, and (iii) the conclusion that Adam could swap all his actual qualitative properties and relations with Noah.

From the conclusion that Adam and Noah could swap their qualitative profiles, we arrive at the truth of haecceitism since, in addition to Adam and Noah's intrinsic properties, their qualitative profiles also include their relational and extrinsic qualitative properties. As such, in order for Adam and Noah to genuinely swap their qualitative profiles, there must be one or more possible worlds that are indiscernible from actuality, where Adam and Noah occupy the qualitative profiles in question.

If successful, Chisholm's Paradox seems to establish not only haecceitism, but also a particularly extreme form of anti-essentialism. Since we can construct a "Chisholm-sequence"with any two individuals, the absolutely general acceptance of Chisholm's Paradox guarantees that, for any individuals, there is a possible world where those individuals swap their qualitative profiles. For instance, there would be a possible world where I occupy the qualitative profile of my favourite mug and vice versa. This would, of course, entail that neither my mug nor myself have any interesting essential properties.[25]

While some have taken haecceitism and this extreme anti-essentialism to be a natural package, it is important to note that they are distinct conclusions and, as we will see, one can take Chisholm's Paradox to establish haecceitism without also holding it to establish extreme anti-essentialism.

In order to transform Chisholm's Paradox into an argument for quidditism, certain modifications are needed. First, we dispense with talk of individuals and recast

[25]One might grant that, while we still have our haecceities and certain other non-qualitative properties essentially, we would nevertheless lack any qualitative essential properties.

the argument in terms of fundamental properties and their second-order properties. So, for illustration, we can replace talk of Adam and Noah with talk of *mass* and *charge*. Second, we need to fix upon the suitable analogue for the sets of qualitative properties that Adam and Noah instantiate. Here, the most natural candidates are the causal-nomic, locational, and cardinality-based second-order properties of *mass* and *charge*. So, for example, properties like *being that in virtue of which individuals resist acceleration*, *being located at such-and-such a location*, and *being instantiated n-many times*. Perhaps the relevant second-order properties are more or less diverse, but, as we will see, it is unlikely that a plausible restriction will help avoid a quidditist-friendly conclusion.

With this recipe for filling out the Chisholm's Paradox schema, we can consider the various incremental changes to the roles of *mass* and *charge*. For example, could *mass* be instantiated at such-and-such a location rather than at one of its actual locations? Could *charge* tolerate similar alternations to its pattern of instantiation? In both cases, these changes seem possible, and, if these slight changes are possible, further changes would then seem possible. Very quickly, we are off and running towards the quidditistic conclusion that, given the acceptance of certain incrementally different possibilities, *mass* and *charge* might swap places altogether.

Prior to considering the most natural essentialist response to Chisholm's Paradox, let me quickly set aside a more radical, logically revisionary response. According Salmon (1986), the anti-essentialist consequences of many instances of Chisholm's Paradox show the assumed modal logic to be unsatisfactory. In particular, the underlying problem is that the logic of metaphysical modality is assumed to involve a transitive accessibility relation between worlds, which validates the inferences from the necessitated conditionals to the actual truth of the conclusion. For this reason, Salmon holds that we ought to abandon the standard assumption that S5 is the

correct modal logic for representing metaphysical modality and, in doing so, hold possibility and impossibility to be only relative to a world.

Following Lewis (1986), I take logically revisionary approaches of this sort to be untenable. Against the concomitant world-relativity of possibility and impossibility and the intransitivity of accessibility, Lewis argues:

> [T]his is no defence, this is capitulation. In these questions of haecceitism and essence, by what right do we ignore worlds that are deemed inaccessible? Accessible or not, theyre still worlds. We still believe in them. Why don't they count? ... I think it is like saying: there are things such that, ignoring them, there are no such things. Ignoring all the worlds where such-and-such obnoxious things happen, it is impossible that such things happen. Yes. Small comfort.[26]

Here, I will follow Lewis in assuming logical revisionary approaches to be either too costly or too mysterious to accept.

As just hinted at, the most natural response to Chisholm's Paradox is to invoke essentialism in order to block the argument. According to this response, some premise between P1 and PN is mistaken, since it contravenes the essence of a by holding a to be possibly something that a simply could not be. This premise has undeniable plausibility when invoked to block a Chisholm-sequence involving, say, the Eiffel Tower and my mug or, in the case of properties, *mass* and *charge*. But, despite this plausibility, it carries a certain burden: If one rejects the argument by denying some premise, it seems that one must also specify which particular premise is to be rejected. And, here, the essentialist faces their most pressing challenge. In large measure, this is because intuitions about essence are murky at best. As Cartwright (1968) notes:

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[26]Lewis (1986: 247).

> Advocates of [essentialism] can be expected to disagree over particular cases. What are the essential attributes of, say, Dancer's Image? No doubt it will be counted essential that he is a horse and accidental that he was disqualified in this years Kentucky Derby. But what of the attribute of being male, or of being a thoroughbred, or of not being a Clydesdale stallion? Here, I suppose, essentialists may disagree. Indeed, a reasonable essentialist might well take the position that these are hard cases that admit of no clear decision.[27]

Given the difficulty in homing in on one or more specific premises that flout essences, it is unclear where the burden of proof lies between essentialists and extreme anti-essentialists who defend their view by way of Chisholm's Paradox. What is crucial to note for present purposes, is that the fates of haecceitism and quidditism come apart from those of anti-essentialism at precisely this point.

The haecceitist or quidditist can concede that Chisholm's Paradox does not succeed in establishing extreme anti-essentialism. Indeed, haecceitists and quidditists can accept that individuals and properties have rather rich essences. But, so long as they reject "individual essences"—essences that are uniquely instantiable by objects or properties—their argument by way of Chisholm's Paradox can still be held to establish haecceitism or quidditism.

Consider, first, a case relevant to haecceitism. Suppose there are two "identical twins", Kelly and Ruby, and grant the essentialist thesis that individuals have their biological origins essentially. Such a view will rule out a possible world where Kelly or Ruby swap qualitative roles with my coffee mug. But, since we can construct a Chisholm-sequence where Kelly and Ruby swap their qualitative roles even while retaining their common and essential biological origin, essentialists will still be forced

[27]Cartwright (1968: 615).

to accept some instances of haecceitistic difference: the difference between the world where Kelly is the first-born twin and Ruby is the second-born and the world where their birth order is swapped.

Consider, now, a case relevant to quidditism. Suppose that there are two properties, *fuzz* and *buzz*, located at distinct regions but with the same causal-nomic roles. Further assume that *fuzz* and *buzz* have these causal-nomic roles essentially. This commitment to essentialism allows us to resist the Chisholm-sequence that concludes there is a world where *fuzz* has the causal-nomic role of *charge*. Despite this, we can construct a Chisholm-sequence where *buzz* and *fuzz* swap locations yet retain their common and essential causal-nomic role. For this reason, the essentialist will still be forced towards accepting some instances of quidditistic difference: the difference between the worlds where *fuzz* and *buzz* swap locations.

The moral here is a simple one: essentialism with respect to properties is no obstacle to quidditism. And, while richer essentialisms reduce the scope of quidditistic difference, it is important to see that, unless one opts for a view that holds properties to have a unique set of, say, causal, nomic, locational or other essential properties, Chisholm's Paradox guarantees at least some form of quidditism. Furthermore, the gambit of accepting individual essences in order to block the case just surveyed seems, at best, controversial.

Faced with the *buzz* and *fuzz* case, there are two responses available to the anti-quidditist: hold properties to have their locations essentially or accept Structuralism and deny distinct properties can have the same causal-nomic role. In either case, quidditism seems a preferable option. It is, at the very best, surprising to think properties have their locations essentially. And, if sameness of causal-nomic role entails identity for fundamental properties as Structuralism requires, there can be

only one epiphenomenal property—a conclusion that seems considerably less plausible than quidditism.[28]

The moral just drawn has been missed by some commentators. For example, Bird (2007) holds that, in order to meet the Chisholm's Paradox argument for quidditism, we need only appeal to essences. He says, "Just as we should reject haecceitism we should reject quidditism, which we many do by allowing both particulars and properties to have essential properties."[29] As we have seen, however, a commitment to essentialism does nothing to preclude haecceitism, since two properties might have one and the same causal-nomic essence but still occupy different roles in the worlds fundamentality structure. At best, essentialism prevents certain quidditistic differences—e.g., differences involving radically different properties like, say, *mass* and phenomenal *redness*.

As I have now argued, essentialism does not supply anti-quidditists with a satisfactory response to Chisholm's Paradox. For this reason, anti-quidditists might look to challenge the argument by taking issue, not with any first-order modal premise or with the relevant modal logic, but by showing it to assume an unsatisfactory view about *de re* representation for individuals or properties. To see how this response might go, recall that Chisholm's Paradox proceeds under the assumption that *de re* modal claims are analyzed in terms of the literal identity of individuals across possible worlds. So, for example, Adam and *mass* are held to have their *de re* modal properties by being different ways at different worlds. And, given the transitivity of identity,

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[28]The appeal to heavyweight quiddities is of no help to the anti-quidditist here. Even if there are quiddities of that sort, it remains an open question what alternative causal, nomic, and other properties fundamental properties might have had and, provided there are different possibilites in this regard, Chisholm's Paradox stands.

[29]I believe this confusion traces back to an earlier misunderstanding of quidditism and haecceitism. For example, Bird (2007) says that "the simplest expression of haecceitism is that particulars lack essential properties" and that "the haecceitist conception of particulars is that they are essentially all alike, differing only in that they are mutually distinct." As we have seen, these proposals conflate importantly distinct views.

possibilities for Adam and *mass* at any world are possibilities for Adam and *mass* at all worlds. So understood, the background assumptions about *de re* representation play a significant role in this argument for claims about what is possible.

An alternative account of *de re* representation, *counterpart theory*, offers a potential response to Chisholm's Paradox. For the counterpart theorist, *de re* representation is not underwritten by literal identity. Instead, counterpart relations—in the case of individuals, relations of qualitative resemblance—are what ground *de re* representation. For the counterpart theorist, a is possibly F if and only if there is some individual, even an individual distinct from a, that suitably resembles a and is F. So, for example, the possibility that I am a scrimshandler is represented by a world if and only if I bear a certain level of qualitative resemblance to an individual that instantiates the property *being a scrimshandler* at that world.

Since the logic of resemblance is not the logic of identity, the counterpart relation need not be transitive. And, if the accessibility relation between individuals and properties is not transitive, we can accept that Adam or *mass* might have been such-and-so and that, if they are such-and-so, they could have been thus-and-so, but deny that Adam and *mass*, as they actually are, could have been thus-and-so. There is, then, some reason to think that, if one accepts counterpart theory for individuals, one is well-positioned to resist haecceitism and, if one accepts counterpart theory for properties, one is similarly well-positioned to resist quidditism.[30]

In the next section, I will argue that this is not the case. After introducing counterpart theory for properties, I will argue that, if one accepts counterpart theory for properties, one ought to accept quidditism. In doing so, I foreclose the last remaining option for anti-quidditists.

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[30]Lewis (1986: 220-247).

6.6 Quidditism and Counterparts

As Heller (1998) shows, property counterpart theory can be motivated in several different ways. As noted above, anti-quidditists might find property counterpart theory attractive because it provides a potential response to Chisholm's Paradox. A second and more general source of motivation is that one might hope to accommodate the truth of certain modal claims that defy the logic of identity. If, for example, one wants to make sense of claims like "If *mass* and *charge* were the same property, physics would go to hell"or "*Mass* could be two separate properties", property counterpart theory is a promising option. A third source of motivation is the belief that properties are not, in some relevant sense, identical across possible worlds and, for this reason, a surrogate for identity—here, counterpart relations—is needed to make sense of *de re* representation for properties.

As far as the second and third motivations go, I mark them here only to show that they provide some independent motivation for property counterpart theory.[31] Perhaps considerations of this sort ultimately prove decisive, but perhaps not. Fortunately, my aim is not assess arguments for property counterpart theory that issue from these considerations. Instead, my focus is on the first motivation—the desire to avoid the argument for quidditism presented above. Before evaluating this strategy, it is worth noting that property counterpart theory is perfectly compatible with quidditism. That said, it is an open question adopting property counterpart theory allows one to avoid a commitment to quidditism. As I will argue shortly, this is not the case. Before doing so, I will begin by drawing a distinction between various ways that counterpart theorists might accept or reject haecceitism. I then discuss how parallel options regarding quidditism emerge. After clarifying these options, I present a problem for defenders of property counterpart theory and argue that defenders of

[31]Ehring (2004) accepts property counterpart theory in order to get around a certain puzzle for his preferred metaphysics of properties, according to which properties are natural classes of tropes.

property counterpart must accept quidditism. I then discuss broader methodological reasons why property counterpart theory is a particularly poor fit for those drawn to anti-quidditism on the basis of modal intuitions.

6.7 Cheap Haecceitism

According to the counterpart theory developed in Lewis (1986), individuals are worldbound and therefore have their *de re* modal properties in virtue of bearing counterpart relations—relations of qualitative resemblance—to various individuals.[32] One challenge that arises for counterpart theory is that of accommodating haecceitism. After all, if you and I do not strictly and literally swap qualitative roles at another world, how can another world represent the possibility according to which we swap qualitative roles? For Lewis, there is an additional factor that complicates and constrains his answer to this question. Since he holds counterpart relations to be relations of qualitative resemblance, he cannot accept qualitatively indiscernible possible worlds that represent different *de re* possibilities. For this reason, Lewis holds that which *de re* possibilities a world represents supervenes upon the qualitative character of that world.

Lewis's answer to this challenge is ingenious. He takes a single possible world to represent a plethora of *de re* possibilities for individuals, some of which are incompatible with one another. He says:

> To illustrate, consider these two possibilities for me. I might have been one of a pair of twins. I might have been the firstborn one, or the secondborn one. These two possibilities involve no qualitative difference in the way the world is. Imagine them specified more fully: there is the possibility of being the firstborn twin in the world of such-and-such maximally specific

[32]Lewis takes the Problem of Accidental Intrinsics to be the primary motivation for endorsing a worldbound conception of individuals. See Lewis (1986: 198-209).

> qualitative character. And there is the possibility of being the secondborn twin in exactly such a world... I say: two possibilities, sure enough. But they are two possibilities within a single world. The world in question contains twin counterparts of me.[33]

Lewis's solution preserves the view that counterpart relations are relations of qualitative resemblance and his acceptance of alternative haecceitistic possibilities for individuals. It also delivers an interesting and novel view about the relation between possible worlds and possibilities. Specifically, it holds that a single possible world represent various alternative *de re* possibilities for individuals. As Lewis's example indicates, the actual world represents not only the actualized *de re* possibility that Obama is President but also the non-actual *de re* possibility that Obama is cellist who occupies precisely the qualitative role that Yo-Yo Ma actually occupies.

A natural way to generalize Lewis's view is to distinguish between possible worlds and the maximal possibilities they represent, where the latter are the various maximally consistent sets of *de re* and qualitative possibilities represent by a world.[34] According to this generalization, there is a many-one relation between maximal possibilities and possible worlds, since every possible world represents each and every maximal possibility consistent with the qualitative character of the world. So, for example, the actual world represents both the actualized maximal possibility as well as those maximal possibilities that differ haecceitistically from it (e.g., the maximal possibility where you and I swap qualitative profiles). I take it that there is very little that separates this generalization from the view Lewis's remarks suggest. And, while this is best marked as an open interpretive question, it will be a helpful simplifying assumption to interpret Lewis in this way, so, in proceeding, I will do precisely this.

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[33]Lewis (1986: 231).

[34]Perhaps maximal possibilities are *de re* possibilities for a world. I leave this question aside here.

As some commentators have pointed out, the prospects of a many-one relation between maximal possibilities and possible worlds complicates our talk of haecceitism.[35] On the one hand, Lewis accepts that there are maximal possibilities that differ haecceitistically. On the other hand, Lewis holds *de re* representation to supervene upon qualitative character and therefore denies that any special non-qualitative properties determine which possible worlds represent which maximal possibilities. According to Lewis, this latter claim qualifies him as an "anti-haecceitist" even while he is content to say, in the appropriate context, that "You and I could have swapped places in the world".

There is no point in quibbling over the one true meaning of "haecceitism".[36] Even so, it is helpful to distinguish two relevant notions of "haecceitism". The first notion concerns only maximal possibilities, which we can take to include both *haecceitistic possibilities*—possibilities for a specific individual like Napoleon that depend upon haecceitistic facts—and *qualitative possibilities*—possibilities like *that there exists a red object* that are not tied to specific individuals, but are determined by qualitative facts.[37] Since Lewis—on the view just assumed—accepts that there a maximal possibilities where you and I swap qualitative roles, he is committed to the following thesis:

> **Alethic Haecceitism**: Some maximal possibilities differ in terms of the haecceitistic possibilities they include.

In contrast, Lewis rejects the following sense of "haecceitism" because it violates his qualitative resemblance-based counterpart theory:

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[35]See, for example, Fara (2009), where Fara argues Lewis's version of haecceitism creates problems for the accommodation of an actuality operator.

[36]See Skow (2008) for a helpful discussion about the possible confusions regarding haecceitism.

[37]Here, I understand inclusion in terms of entailment. So, for example, any maximal possibility will include a given possibility or its negation.

> **Ontic Haecceitism**: There are distinct possible worlds that represent maximal possibilities that differ haecceitistically.[38]

The view that emerges from Lewis's affirmation of alethic haecceitism and denial of ontic haecceitism is what he sometimes calls "cheap haecceitism". It is cheap insofar as it allows us to speak and think as alethic haecceitists, since we accept maximal possibilities that differ haecceitistically, but does so without commitment to possible worlds that uniquely correspond to each maximal possibility. In this way, it employs only a single possible world to do the work that costly haecceitists need a multiplicity of worlds to do.

6.8 Cheap Quidditism

Having already detailed the parallels between haecceitism and quidditism, it should not be surprising that a number of philosophers have suggested that we can extend the framework of Lewis's cheap haecceitism in order to advance a form of cheap quidditism.[39] Hawthorne (2001) lays out cheap quidditism as follows:

> Let a structural description of a world be a description which describes the world using certain structural primitives—like part/whole and causal necessitation—and which otherwise uses merely the resources of logic...The lesson learned [from Lewis's cheap haecceitism] can be applied here: dont multiply possible worlds whenever one has a multiplication of possibilities... What is crucial to this [view] is that it does not allow that worlds can be alike structurally and yet different concerning what is true *de re* of the properties in them.[40]

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[38]Complications arise here in virtue of Lewis's agnosticism regarding the existence of qualitatively indiscernible possible worlds. See Chapter One for discussion.

[39]See also Heller (1998).

[40]Hawthorne (2001: 374).

As with cheap haecceitism, the idea behind cheap quidditism is that a single possible world can be used to represent the various maximal possibilities that differ merely quidditistically from one another. Mirroring Lewis, the cheap quidditist accepts the analogue of alethic haecceitism:

> **Alethic Quidditism**: Some maximal possibilities differ in terms of the qualitative possibilities they include.

At the same time, the cheap quidditist rejects the analogue of ontic haecceitism:

> **Ontic Quidditism**: There are distinct possible worlds that uniquely represent maximal possibilities that differ quiddistically.

Since ontic quidditism entails alethic quidditism, we now have two ways for property counterpart theorists to implement quidditism. We can be *cheap quidditists* in the way just suggested or we can be *costly quidditists* and accept both alethic and ontic quidditism. It is important to note, however, that the Chisholm's Paradox-based argument we considered can, in principle, be used to establish both cheap and costly quidditism. While Chisholm's own discussion of Chisholm's Paradox suggests that a commitment to possible worlds is a precondition of the argument, the essential feature of the argument is, in fact, the transitivity of the accessibility relation between worlds. This feature is one that the cheap quidditist can preserve by recasting the argument in terms of maximal possibilities rather than the possible worlds that represent them. For this reason, even those who reject a Lewisian view of possible worlds and helps herself only maximal possibilities owes a response to the Chisholm's Paradox argument.

What's to be said for or against cheap and costly quidditism? Taken at face value, cheap quidditism seems preferable solely by virtue of the parsimony it secures. It allows us to posit only one possible world where the costly quidditist must admit a

multiplicity of worlds that differ quidditistically. At the same time, there is a price to this parsimony: disagreement with standing metaphysical thought and talk. Specifically, most metaphysicians slide back and forth between talk of maximal possibilities and possible worlds, but, if cheap quidditism is correct, this slide is illegitimate and threatens to distort our understanding of the metaphysics of modality. Indeed, Lewis raises a precisely analogous worry about the conservatism that his cheap haecceitism is at odds with. He says:

> I think there is [a cost]—simply the cost of making a break with established theory, on which all differences between possibilities are supposed to be differences between possible worlds. It is chaos if too many questions come open all at once, therefore theoretical conservatism is a good idea. There should be a presumption in favour of the incumbent theory, and against gratuitous substitutes.[41]

How are we to decide between these competing considerations? Here, I believe the deciding factor emerges by considering precisely what is given up when we opt for property counterpart theory. If one accepts property counterpart theory, there is, strictly speaking, no possible world where *mass* and *charge* swap roles. What good, then, is commitment to a world, distinct from the actual one that represents the relevant maximal possibility? Why not make due with the maximal possibilities being represented by the actual world alone? So put, it is not merely parsimony that makes cheap quidditism attractive, but, rather, a kind of explanatory or theoretical redundancy that it avoids once we grant that property counterpart theory can successfully use a single world to represent myriad maximal possibilities.[42] Moreover, property counterpart theory already requires a sufficiently revisionary account of the

[41]Lewis (1986: 235).

[42]See Fara (2009) for a dissenting opinion.

relation between worlds and modality. And, once such a view is accepted, we are better served to go "all in"and accept the parsimony it affords us. With this in mind, let us proceed under the assumption that defenders of property counterpart theory ought to be cheap rather than costly quidditists.

6.9 From Counterparts to Quidditism

We have now seen how we might combine quidditism with property counterpart theory. (Since we have set aside costly quidditism, I will, in this section, use "quidditism"to mean cheap quidditism.) But, remember that we turned our attention to property counterpart theory precisely because it promised a response to the Chisholm's Paradox-based argument for quidditism. What I will argue now is that the prospects for using property counterpart theory to avoid quidditism are grim. After doing so, I will argue that property counterpart theory is far more naturally paired with quidditism. In light of these considerations, I conclude that property counterpart theory proves to be an unsuitable response to the Chisholm's Paradox-based arugment.

Recall that Lewis's flight to cheap haecceitism was prompted by his particular views about the counterpart relations between individuals. Specifically, Lewis holds that counterpart relations are relations of qualitative resemblance. And, since qualitatively indiscernible worlds will therefore represent the same *de re* possibilities (and therefore maximal possibilities), Lewis cannot accept costly haecceitism.

One feature of property counterpart theory that we have yet to examine is how we ought to understand counterpart relations between properties. Most notably, what is that makes one property a counterpart of another property? In the case of individuals, fundamental properties played a central role in determining counterpart relations, but, since it is the counterpart relations between these properties that are now of interest, something other than properties themselves must be appealed to. For

this reason, the most natural candidates for serving as counterpart relations between properties are various relational features like the causal, nomic, and locational roles that properties occupy. On views of this kind, F is a counterpart of G if and only if F has the same causal-nomic role, locational role, or some combination thereof.

The bad news for anti-quidditists is that, at precisely this point, a dilemma arises. On the one hand, views of this sort are either unsatisfactory on their own or, if they are to be made suitable, seem to guarantee a commitment to quidditism. Schaffer (2005) presents the argument that establishes the first horn of this dilemma as follows:

> Furthermore, what could possibly determine counterparthood for properties? There are two candidates one finds in the literature: spatiotemporal distribution, and nomological role. But these factors are too extrinsic to capture *duplication*. Suppose there is a red cube here and a blue sphere there. Then, intuitively, it seems possible for a perfect duplicate of the red cube to exist alone, or to exist in a world full of green triangles that are governed by alien triangle laws... In general, it seems that perfect duplication is an *intrinsic affair* largely independent of the overall spatiotemporal distribution and nomological roles. But on the anti-quidditistic contingentists view of counterparthood, for the red cube to be perfectly duplicated is for there to be an object all of whose properties are counterparts of those of the orginal red cube. And this then depends on preserving the overall spatiotemporal distribution and nomological roles. Thus property counterparthood is *too extrinsic* to support robust duplication. What is missing is a crucial component of object counterparthood: *intrinsic similarity*.[43]

[43]Schaffer (2005: 14).

There are a number of difficult issues raised by Schaffer's argument, but the central point to bear in mind is that, if the defender of property counterpart theory holds counterpart relations to be grounded by causal, nomic, or locational roles, it will be mysterious how one and the same property could be instantiated in worlds with wholly different causal, nomic, and locational structures. As Schaffer points out, one consequence of this problem is that no sense can be made of duplication, since property counterpart theory would make the sameness of intrinsic properties—an intrinsic matter if there ever was one—a function of overall causal, nomic, and locational resemblance.

Presented with this objection, the best available response is to move towards a more generous conception of counterpart relations for properties. On this more generous conception, which we can call *generous counterpart theory*, any property that occupies a causal, nomic, or locational role will be a counterpart of any other property that occupies any causal, nomic, or locational role. And, as a consequence, even this minimal degree of role-sharing will serve to unite properties as counterparts—even those with radically different causal, nomic, and locational roles. In this way, the redness of the lonely cube can have a counterpart property even in a world full of green triangles.

There are two problems with this proposal. Recall, first, that we are concerned with developing a property counterpart theory that avoids a commitment to cheap quidditism. Notice, then, that on the now-revised proposal, counterpart relations are so cheap that any property will bear a counterpart relation to almost any other property. Accordingly, within many possible worlds, a property like *mass* will have myriad property-counterparts. For example, in the *buzz* and *fuzz* world discussed earlier, counterpart relations will hold between the actual property of *mass* and *buzz* as well as between *mass* and fuzz. As a consequence, there are too many counterpart relations, so any worlds with various properties will represent a multiplicity of

maximal possibilities that differ quidditistically from one another (e.g., where *mass* occupies the "buzz"-role and where *mass* occupies the "fuzz"-role). Intuitively, then, this revised proposal takes the anti-quidditist from not enough counterpart relations to quidditism-inducing excess of counterpart relations.[44]

A second problem: Recall the world we considered earlier with Cartesian souls that stand in no causal, nomic, or locational relations. Such worlds seem possible and, in such worlds, the souls instantiate various properties. But, if, as generous counterpart theory requires, counterpart relations are exclusively relations of causal, nomic, and locational similarity, there are no *de re* modal properties for the properties of these souls, since *de re* representation for properties is exclusively underwritten by relations of causal, nomic, and locational resemblance. In order to remedy this problem, we are therefore forced to rule out such worlds by fiat, deny the relevant properties have *de re* modal properties, or, as seems most plausible, opt for an even more generous conception of property counterpart relations.

According to *fundamentalist counterpart theory*, counterpart relations between properties are cheap and hold solely in virtue of properties being co-fundamental. On such a view, any fundamental properties are counterpart-related to one another, regardless of whether they figure in the worlds causal, nomic, or locational structure. In large measure, this proposal comports with generous counterpart theory but differs only insofar as it generalizes that view in order to resolve the Cartesian property case just considered. But, like generous counterpart theory, fundamentalist counterpart theory also accepts a rich array of quidditistic differences in virtue of giving a perfectly general account of *de re* representation for properties. But, if these are the only views suitable for meeting the present challenge, we now have reason to believe that

[44]Perhaps a restriction might be proposed: properties only have one counterpart per world. But, granted this restriction, we need some way to settle the question of which property in each world, if any, is the counterpart of mass? No principled, non-arbitrary response can be given, so what makes for counterpart relations quickly becomes an unacceptably mysterious matter.

defenders of property counterpart theory have only two choices. They can accept some mysterious, unanalyzed counterpart relation that is simply stipulated not to allow for any quidditistic differences. But, since this seemingly *ad hoc* treatment would require a primitive counterpart relation for properties, it represents an unacceptable theoretical cost. As such, the property counterpart theorist ought to prefer a second option: accept the quidditistic differences guaranteed by the fundamentalist and the generous counterpart theories that are required to meet Schaffer's objection.

I have now offered my argument that property counterpart theorists ought to be quidditists. It is worth marking a second consideration that I believe points towards the same conclusion, but in a less obvious way.

That property counterpart theory naturally leads to quidditism should not be particularly surprising. Lewis, the leading proponent of counterpart theory for individuals took *de re* modality to be, at bottom, a mostly conventional affair rather than a matter for fundamental metaphysics. By hewing *de re* modality to context and qualitative resemblance, counterpart theory provides a way to analyze almost any kind of modal claim, haecceitist or anti-haecceitist (provided the right context). For this reason, property counterpart theory seems a perfectly good way to make sense of quidditistic-sounding claims or, if we care to, anti-quidditistic sounding claims (provided the right context). But, with this in mind, it should seem odd that any anti-quidditist would opt for counterpart theory for properties. After all, it is a largely deflationary view of *de re* modality. And if one's anti-quidditism was initially motivated by robust anti-quidditist intuitions—intuitions that suggest modality is by not largely conventional—property counterpart theory and its deflationary character should already seem a bad fit.[45]

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[45]I take it that, for Black (2000: 94), it is this sort of intuition that counts against quidditistic differences. As he says, "My intuition is that to play the nomological role of colour or flavour is to be that colour or flavour, and that the idea of two qualities swapping nomological roles is thus unintelligible."

For those who approached the problem from this initial direction (i.e., guided by robust anti-quiddditist intuitions), the fact that property counterpart theory proves to be of no help would suggest that, in the end, the best option might be to accept the conclusion of the Chisholm's Paradox-based argument to begin with and sustain a non-deflationary view about *de re* modality for properties. Alternatively, for those amenable to a more deflationary treatment of *de re* modality, it is worth reiterating our previous, noteworthy conclusion: property counterpart theorists ought to be quiddditists and quiddditists who accept property counterpart theory are liable to be cheap quiddditists.

6.10 Conclusion

I have argued that quiddditism is best viewed as the thesis that there are possible worlds (or maximal possibilities) that are structurally and haecceitistically indiscernible, but differ with respect to which properties occupy which roles in the world's fundamentality structure. I have offered a property-theoretic version of Chisholm's Paradox as evidence for quiddditism. After showing that standard essentialist responses to this argument are unsatisfactory, I argued that property counterpart theorists ought to be quiddditists and, since property counterpart theory was the best option for blocking the Chisholm's Paradox argument, there is strong evidence in favour of quiddditism. As we have seen, this leaves open what kind of quiddditist we should accept. *Prima facie*, however, property counterpart theory seems well-suited for cheap quiddditism, and costly quiddditism seems a better fit for those who accept transworld identity for properties. Having now defended the truth of quiddditism, I believe this issue—i.e., the accommodation of quiddditism—along with those regarding the scope of quiddistic difference to be the most pressing in the neighbourhood.

CHAPTER 7

THE MODAL VIEW OF ESSENCE

7.1 Introduction

Views about the metaphysics of essence differ on two main issues. The first issue concerns what we can call the *scope* of essence. This is the issue that divides *hyper-essentialists*, who hold that all of an individual's properties are essential to it, from *anti-essentialists* who deny that individuals have any interesting essential properties.

A second issue concerns the *character* of essence. This issue, and our present focus, divides the *modal view* of essence, according to which essence is analyzed in terms of properties individuals have necessarily or in certain possible worlds, from competing views, according to which essence is to be understood in terms of "real definitions" or through some other primitive notion.[1]

Despite the prominence of the modal view, there has been something of a sea change in debates about the character of essence. This change in the status quo can be traced back to Fine (1994). There, Fine argues that the modal view is extensionally inadequate and delivers a view unsuitable for systematic metaphysics. Fine's case against the modal view has received a warm welcome and, surprisingly, defenders of the modal view have been slow to directly address his arguments.[2]

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[1]Defenders of the modal view include Marcus (1967), Parsons (1969), Plantinga (1974), Stalnaker (1979), Salmon (1981), Forbes (1985), and Mackie (2007). Proponents of non-modal views include Fine (1994) and Almog (1991).

[2]Some examples: Correia (2006) considers "Fine's compelling objections to the standard modal account of (objectual) essence"; Brogaard and Salerno (2007) "agree with [Fine's] critique" of the modal view as "fundamentally misguided"; Sider (MS) remarks that "Fine convincingly argues against the standard modal definition of essence". Hawthorne and McDonough (1997) present objections to the modal view of a piece with Fine (1994).

Here, my aim is to defend the modal view and restore its reputation as the best way to analyze essence and cognate notions like "having a property essentially". The discussion will run as follows: In Section Two, I present the modal view. In Section Three, I present Fine's challenge to the modal view. In Section Four, I canvas several strategies for responding to Fine's charges of extensional inadequacy. In Section Five, I turn to Quine's views on essence and examine the disagreement between Quine and Fine. In particular, I argue that a distinction between essences and natures must be drawn in order to make sense of the disagreement between Quine and Fine. I then argue that, once this distinction is drawn, it can be shown that the modal view is not the true target of Fine's challenge. I defend this response in Section Six, and conclude in Section Seven.

7.2 The Modal View of Essence

Reductionists about essence aim to analyze either the concept of essence or its cognate "being instantiated essentially". If a reductionist opts for the former approach, the properties that are included with an individual's essence are just those properties it instantiates essentially. On the latter approach, the properties an individual instantiates essentially are just those properties that make up its essence. Here, the difference between these approaches will be negligible, so I will treat them as interchangeable.

Non-reductionists about essence make no attempt to analyze essence. For *eliminativists* like Quine (1960), this is because talk about essence—or perhaps modality in general—is somehow confused or philosophically illegitimate. For *primitivists* like Fine (1994), talk about essence is in perfectly good order, but does not admit of reductive analysis. This is because essence is thought to enjoy some kind of conceptual primacy, serve as an especially fertile theoretical primitive, or, as Fine argues, resist any satisfactory reductive analysis.

Modal views of essence are reductionist. The guiding intuition behind these views is that the modal features of reality determine which properties are essential or merely accidental to particular individuals. Very roughly, modal views hold an individual's essence to consist of those properties that it *must* have or *could not* exist without having.

Since the modal view assigns a privileged role to modality in analyzing essence, tough questions about the nature of modality quickly arise. It will be helpful to note, then, that the modal view can be developed in terms of primitive modal operators like $\Box$ and $\Diamond$ or, if one accepts possible worlds theory, through quantification over possible worlds—entities in terms of which modal operators are themselves analyzed. In what follows, it will be helpful to assume the resources of possible worlds theory, but it is important to note that possible worlds theory and the modal view of essence can indeed come apart.[3]

We can consider the *Simple Formulation* as a first pass at capturing the guiding intuition of the modal view. It holds an individual, a, to instantiate a property essentially if and only if it is necessary that a instantiate F. In the language of possible worlds, it holds that an individual, a, has a property essentially if and only if a has that property at all possible worlds. Formally,

Simple Formulation: a is essentially $F =_{df} \Box Fa$.

The Simple Formulation encounters a serious challenge: Unless a is a necessary existent, there will be worlds at which a fails to exist. But, since a will fail to exist at some worlds, there will be worlds at which a fails to instantiate any properties. So, upon pain of denying that contingent existents have any essential properties, it

[3]See Jubien (2009) for recent opposition to possible worlds theory.

is natural to conclude that the Simple Formulation of the modal view delivers an unsatisfactory analysis of essence.[4]

In order to avoid the challenge just considered, a natural response for defenders of the modal view is to modify the Simple Formulation. Two modifications are typically proposed. The first modification yields the *Existential Formulation*, which holds an individual, a, to instantiate a property essentially if and only if necessarily, if a exists, a instantiates F.[5] Formally,

Existential Formulation: a is essentially $F =_{df} \Box\ (\exists\ x\ (x = a) \rightarrow Fa)$

A second modification yields the *Universal Formulation*. This formulation holds an individual, a, to instantiate a property essentially if and only if necessarily, for anything identical with a, that thing instantiates F. Formally,

Universal Formulation: a is essentially $F =_{df} \Box\ (\forall\ x\ (x = a \rightarrow Fx))$

While both the Existential and Universal Formulations address the challenge to the Simple Formulation by placing a further condition upon essential properties, the precise differences between these formulations turn upon complications regarding what is required for individuals to have properties at a world. According to the Existential Formulation, individuals need to exist at a world to instantiate properties at it. According to the Universal Formulation, they need only be such that there are facts about their identity and distinctness at that world. Following Kripke, I will set aside

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[4]This challenge to the Simple Formulation assumes *Serious Actualism*, which is sometimes called "the modal existence requirement" and is distinct from *actualism*—the thesis that only actual things exist. Serious Actualism holds that, for any object, x, any property, F, and world, w, x instantiates F at w only if x exists at w. Serious Actualism precludes non-existent objects from having any properties whatsoever. In some cases, this is intuitive, since non-existent objects do not seem to have properties like *being a material object*, *being twenty pounds*, or *being a round square*. In other cases, this counter-intuitive, since non-existent objects do seem to have certain properties like *being distinct from Saul Kripke*, *being thought of*, or *being nonexistent*. For discussion, see Plantinga (1979) and Salmon (1990).

[5]Fine (1994: 4) distinguishes these formulations, but labels them differently.

these "fussy considerations" as largely orthogonal to our present concerns and simply assume the Existential Formulation in what follows.[6]

The Existential Formulation also encounters a prima facie problem. Since the essence of an individual is the set of properties it has in every world where it exists, the modal view entails that every individual will exist essentially, since, at any world where an individual exists, it will have the property of existing.[7] Defenders of the modal view, when faced with this result, typically explain it away by distinguishing between *necessary* existence and *essential* existence and noting that only *necessary* existence—existence in each and every possible world—would be an objectionable consequence of the view. While this is a point Fine (1994) takes to count against the modal view, here and in what follows, I take it that, since the modal view has the resources to distinguish necessary from essential existence, the present problem is largely terminological in nature. Having now introduced the modal view, I will presently turn to Fine's challenge to it.

7.3 Against the Modal View

The primary competitor to the modal view is primitivism.[8] Fine (1994) characterizes his version of primitivism as follows:

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[6]See Kripke (1980: 3). These views come apart if one rejects Serious Actualism and allows that objects can have properties like *being distinct from Saul Kripke* even at worlds where Kripke exists and they do not. Since such a view severs the intuitive tie between existence and identity, it can overcome the objection to the Simple Formulation. Furthermore, it is able to rebut a problem for the modal view to be considered shortly. And, while, the Universal Formulation can allow any properties whatsoever to be instantiable by nonexistent objects, such a view proves implausible since it holds that nonexistent objects can instantiate properties like *being twenty pounds*.

[7]Here, I set aside familiar worries about whether *existence* is a "genuine" property, since nothing will turn on this particular issue. See Salmon (1990) for discussion.

[8]Here, I focus on the version of primitivism defended by Fine. I take it that, whatever its differences from the primitivism of Almog (1991) and others, nothing in what follows hangs on this.

> [T]he traditional assimilation of essence to definition is better suited to the task of explaining what essence is. It may not provide us with an analysis of the concept, but it does provide us with a good model of how the concept works. Thus [the definitional position] is the reverse of the usual one. It sees real definition rather than *de re* modality as central to our understanding of the concept.

For the primitivist, talk of essence is talk of the "real definition" of an individual, which is something like a description of the metaphysically significant features of an individual. This notion is a primitive, not explicable in terms of anything else. So, while we can note certain properties as strong candidates for inclusion within real definitions (e.g., *being human*, *being immaterial*, and so on), we cannot offer any general account of what distinguishes such properties.

There are important respects in which the modal view and primitivism differ; however, both views hold that, if some property is essential to an individual, it is necessary that the individual have it in any world where that individual exists. In this direction, both views agree. In the opposite direction, these views part company: the primitivist denies that every property an individual has in every possible world where it exists is an essential property of that individual.[9] For this reason, the primitivist accept only the left-to-right direction of the Existential Formulation biconditional. As we will see, this disagreement is at the heart of Fine's challenge to the modal view.

In the remainder of this section, I present Fine's challenge to the extensional adequacy of the modal view. I begin by assuming the moderate essentialist view about the scope of essence that Fine endorses and set aside extreme anti-essentialism and

[9]In addition to Fine's primitivism, he is also a *modalist* and, therefore, rejects the deployment of possible worlds to analyze modal locutions. I opt for talk of possible worlds here for ease of exposition.

hyperessentialism. Note also that I take on Fine's additional assumption regarding the theoretical role of essence: that it is the job of essence to provide answers to certain metaphysical questions about individuals like "What is Socrates?" According to Fine, these questions, which we can call *what-questions*, ask after the metaphysically significant features of an individual, and are answered only if they explain what some individual *really* is. These what-questions are therefore the primary subject matter of metaphysics, and are properly answered by appeal to facts about the essences of individuals. Fine marks this assumption as follows:

> For one of the central concerns of metaphysics is with the identity of things, with what they are. But the metaphysician is not interested in every property of the objects under consideration. In asking 'What is a person?', for example, he does not want to be told that every person has a deep desire to be loved, even if this is in fact the case. What then distinguishes the properties of interest to him? What is it about a property which makes it bear, in the metaphysically significant sense of the phrase, on what an object is? It is in answer to this question that appeal is naturally made to the concept of essence. For what appears to distinguish the intended properties is that they are essential to their bearers.

Fine's remarks invite us to conceive of essences as definitions that are distinguished by their unique ability to answer what-questions. But, since the modal view stands in opposition to primitivism, we should not take Fine's remarks to be simply begging the question against the modal view. Instead, Fine's remarks bring to salience what he takes to be a requirement of an account of essence: if some property is to be essential to an individual, it should furnish us with a satisfactory, if perhaps only partial, answer to what-questions like "What is man?" or "What is God?" So, if the modal view packs putatively irrelevant or uninteresting properties into the essence of

an individual, it will fail to meet Fine's *desideratum*. Such a view will fail to provide suitable answers to what-questions and therefore deliver an inadequate analysis of essence.

Following Fine, we can now take Socrates and his essence as our case study and consider whether certain properties the modal view deems essential to Socrates provide satisfactory answers to what-questions. If not, this will show the modal view to deliver an inadequate treatment of essence *qua* methodological centerpiece of metaphysics.

The first class of properties that Fine discusses are *membership properties* like Socrates' property of *being a member of singleton Socrates*.[10] Since the modal view and modal set theory entail that Socrates will be a member of his singleton set, {Socrates}, in any world where Socrates exists, the modal view counts the membership property, *being a member of singleton Socrates*, as essential to Socrates. Against this result, Fine argues:

> But, intuitively, this is not so. It is no part of the essence of Socrates to belong to the singleton. Strange as the literature on personal identity may be, it has never been suggested that in order to understand the nature of a person one must know to which set he belongs. There is nothing in the nature of a person, if I may put it this way, which demands that he belongs to this or that set or which demands, given that the person exists, that there even be sets.[11]

The second class of properties are *distinctness properties* like Socrates' property of *being distinct from the Eiffel Tower* and *being distinct from every electron*. According to Fine, these properties are too extraneous to Socrates and other individuals to

[10]Socrates' singleton is the unit set, {Socrates}, of which Socrates is the lone member.

[11]Fine (1994: 5).

provide suitable answers to what-questions. For this reason, they cannot be essential to Socrates. Fine says, "Consider two objects whose natures are unconnected, say Socrates and the Eiffel Tower. Then it is necessary that Socrates and the Tower be distinct. But it is not essential to Socrates that he be distinct from the Tower; for there is nothing in his nature which connects him in any special way to it."[12]

The third class of properties are *necessary properties* like Socrates' property of *being such that 2 + 2 = 4* or *being such that triangles have three sides*. Fine argues against the essentiality of these necessary properties, since they provide no answer to what-questions that would serve to single out properties unique or fundamental to any specific individual. He says, "it is no part of Socrates' essence that there be infinitely many prime numbers of that the abstract world of numbers, set, or what have you, be just as it is."[13]

The fourth class of properties are *metaessential properties*. These are properties had in virtue of individuals being such that other individuals have the essences that they do. For example, Socrates—who is co-actual with Plato—instantiates *being such that being human is essential to Plato*. Fine argues against the essentiality of these properties as follows:

> Among the necessary truths, if our modal theorist is to be believed, are statements of essence. For a statement of essence is a statement of necessity and so it will, like any statement of necessity, be necessarily true if it is true at all. It follows that it will be part of the essence of any object that every other object has the essential properties that it has: it will be part of the essence of the Eiffel Tower for Socrates to be essentially a

[12]Ibid.

[13]Ibid.

> person with certain parents... O happy metaphysician! For in discovering the nature of one thing, he thereby discovers the nature of all things.[14]

The fifth and final class of properties are *existential properties* like *existence* discussed earlier. According to the modal view, everything essentially exists, since, at any world where something exists, it has the property of existing. As already noted, for most defenders of the modal view, this result is to be treated as a harmless artifact of the view, since a distinction can still be drawn between essential existence had by all things and necessary existence, which only a select number of entities enjoy. With this in mind, I set aside this fifth objection and focus on the previous ones in what follows.

7.4 Meeting Fine's Challenge

In this section, I examine two potential responses to Fine's challenge: revisionary and non-revisionary responses. While revisionary responses amend the letter of the modal view in an effort to avoid the putatively objectionable entailments, non-revisionary responses accept the entailments of the modal view that Fine's challenge draws upon but argue that they do not undermine the modal view.[15]

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[14]Fine (1994: 6).

[15]It is worth marking an issue regarding property-individuation that Fine ignores. According to the *coarse-grained view*, properties are individuated only intensionally. According to the *fine-grained view*, properties are individuated hyperintensionally. So, while the coarse-grained view holds that "being triangular" and "being trilateral" are distinct predicates that express the very same property, the fine-grained view holds that these properties are cointensive yet distinct. Notice that, on the coarse-grained view, necessary properties like *being such that 2 + 2 = 4*, certain distinctness properties like *being distinct from any round square*, metaessential properties like *being such that Socrates is essentially human*, and the property of *existence* are one and the same property. So, if we accept the coarse-grained view, we would be well-positioned to allow that the universal property—the property had by each and every individual—is a unique and principled exception to our intuitions about essence. One's views on the individuation of properties therefore have significant implications for the present dispute. It is puzzling, then, that Fine assumes the fine-grained view, and also claims that "any reasonable account of essence should not be biased towards one metaphysical view rather than the other. It should not settle, as a matter of definition, any issue which we are inclined to regard as a matter of substance." (Fine (1994: 5). Here, I note this individuation issue in order to set it aside, since my ultimate defense of the modal view does not turn on this issue.

7.5 Revisionary Response

Revisionary responses aim to show, for each of the problematic properties Fine discusses, the modal view does not, in fact, deem that property essential. To take one example, many defenders of the modal view have responded to Fine's worries about *necessary properties*—properties had by all possible individuals—along revisionist lines.[16] For these philosophers, necessary properties like *being such that 2 + 2= 4* are precluded from being constituents of essence, since they are had by every possible individual. On the resulting view, the second-order quantifier over properties in the correct formulation of the modal view is rather neatly restricted to non-necessary properties.

Revisionary responses enjoy some initial promise, but, as Fine shows, they leave many problems unsolved. Notice, for instance, that *being such that 2 + 2 = 4 and a man* is—let us suppose—had by Socrates in every world where he exists. And, while this is not a property instantiated by all possible individuals, it does seem to be inessential in the very same way as *being such that 2 + 2 = 4* is alleged to be inessential.[17] A second issue with this response arises when we note that *being such that 2 + 2 = 4* is intuitively essential to the number four. But, given the proposed restriction, it looks like the number four and any other necessary existent would thereby be stripped of their essence. For this reason, the revisionary response to the problem regarding necessary properties seems unsatisfactory. The modal view therefore seems to be saddled with the conclusion that *being such that 2 + 2 = 4* is indeed a part of Socrates' essence.

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[16] See, for example, Mackie (2007).

[17] Faced with this rejoinder, the revisionist might try to stipulate that essential properties must be non-conjunctive and non-disjunctive, but such a constraint is both *ad hoc* and ill-motivated once we consider that *being a man and a mammal* seems like a perfectly good candidate for being part of Socrates' essence. Similarly, if one held Socrates to have his mother and his father essentially, such a view would bizarrely preclude having both of his parents essentially.

Revisionary responses quickly begins to seem like plugging holes in a sinking-ship. This is because pursuit of the revisionary response forces us towards increasingly extreme measures to meet Fine's challenge: Worried about essential connections to sets? Why not accept nominalism and deny the existence of sets altogether? Worried about essential distinctness properties? Why not accept contingent identity and allow that anything might have been identical to anything else? These responses have an air of desperation about them, and, although some metaphysics could likely be cooked up to circumvent Fine's challenge, it would seem that such a view would be too partisan or *ad hoc* to count as a satisfactory defense of the modal view. For this reason, the revisionary response seems untenable.

7.6 Non-Revisionary Responses

Let me now consider a non-revisionary responses. Responses of this sort might take different forms, but are distinguished by aiming to show that the properties Fine draws upon do in fact provide suitable answers to what-questions. Let me now briefly sketch how one such response might look.

A plausible implementation of a non-revisionary response runs as follows: Consider, for example, distinctness properties like *being distinct from the Eiffel Tower*. It would seem, at least *prima facie*, that such a property cannot furnish us with an answer to what-questions about Socrates. There is, however, at least one distinctness property that can serve as an answer: Socrates' maximal distinctness property. This property—an infinitary conjunction of distinctness properties like *being distinct from the Mona Lisa*, *being distinct from Pluto*, and *being distinct from all non-humans*—would seem capable of telling us what Socrates is by telling us everything that he is not. For example, given the domain of all possible entities, the property of being distinct from all but one of these things is equivalent to the property of being that very thing. So understood, Socrates' maximal distinctness property is necessarily

coextensive with Socrates' identity property, *being identical to Socrates*.[18] And, since the latter supplies us with a satisfactory answer to what-questions, so, too, does the former. It would seem, then, that our initial intuition about the suitability of distinctness properties as answers to what-questions is shown, upon reflection, to be mistaken. Furthermore, once we consider how knowledge about what something *isn't* allows us to determine what something *is*, this version of the non-revisionary response holds that Fine's worries about distinctness properties are no longer compelling.

While there is some hope that this version of the non-revisionary response might succeed in meeting Fine's concerns regarding distinctness properties, it is unclear how, if it all, it might allow us to meet the rest of Fine's challenge. It is, for example, unclear how we might explain the essentiality of Plato's essence to Socrates along the lines of the non-revisionary reponse. For this reason, it is, at best, an incomplete defense of the modal view.

Perhaps a combination of revisionary and non-revisionary responses might, in some disjunctive fashion, meet Fine's challenge. While it is not clear how this might be accomplished, I leave this question open here, and, in what follows, pursue an alternative response that provides a more general solution to Fine's challenge. To this end, I now turn to a decidedly different view of essence: the eliminativism about *de re* modality championed by Quine.

7.7 Quine and Fine

Reductionism and primitivism about essence stand in opposition to eliminativism. According to the arch-eliminativist, Quine, talk of essences is in disrepair and ultimately incoherent. Quine's case against essence issues from a general skepticism

[18]Here again, issues regarding Serious Actualism arise, since some story would need to be given regarding the identity and distinctness properties individuals have regarding non-actual albeit possible individuals. I set these concerns aside here, given my focus on alternative strategies for meeting Fine's challenge.

about *de re* modality. This skepticism itself emerges from a general stricture against intensional notions and the problems that arise in accommodating quantification into the scope of modal operators.[19] For Quine, *de re* modality proves unintelligible unless one accepts "invidious Aristotelian essentialism", and, since Quine finds "essentialism" wildly implausible, he rejects *de re* modality altogether.

Unsurprisingly, many philosphers are quite happy to accept essentialism. Quine's objections have therefore been by and large dismissed. Despite this, Quine (1960) expresses what amounts to a foundational—perhaps even dogmatic—opposition to *de re* modality:

> But in connection with the modalities it yields something baffling—more so even than the modalities themselves; viz., talk of a difference between necessary and contingent attributes of an object. Perhaps I can evoke the appropriate sense of bewilderment as follows. Mathematicians may conceivably be said to be necessarily rational and not necessarily two-legged; and cyclists necessarily two-legged and not necessarily rational. But what of an individual who counts among his eccentricities both mathematics and cycling? Is this concrete individual necessarily rational and contingently two-legged or vice versa? Just insofar as we are talking referentially of the object, with no special bias toward a background grouping of mathematicians as against cyclists or vice versa, there is no semblance of sense in rating some of his attributes as necessary and others as contingent. Some of his attributes count as important and others as unimportant, yes; some as enduring and others as fleeting; but none as necessary or contingent.[20]

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[19]See Quine (1960).

[20]Quine (1960: 1999).

For Quine, there is simply no sense that can be made of *de re* modality and therefore no place in his metaphysics for essences. He says:

> Curiously, a philosophical tradition does exist for just a such a distinction between necessary and contingent attributes. It lives on in the terms 'essence' and 'accident'... It is a distinction that one attributes to Aristotle (subject to contradiction by scholars, such being the penalty for attributions to Aristotle). But, however venerable the distinction, it is surely indefensible...[21]

Quine's eliminativism is striking, and, when set against Fine's views, a puzzle arises. Recall that, for Fine, essences are distinguished by their unique methodological role of supplying us with answers to what-questions, which are the basis for metaphysical inquiry. If, however, we follow Quine in rejecting essences, we would, by Fine's lights, be unable to undertake metaphysics. But, quite clearly, Quine does not reject metaphysical inquiry.[22] Not only does Quine advance substantive metaphysical theses, he undertakes the very task Fine uses to single out essences: he provides answers to what-questions, which Fine holds to be answerable only by appeal to essences. Consider, for example, Quine's remarks on material objects:

> Physical objects, conceived thus four-dimensionally in space-time, are not to be distinguished from events or, in the concrete sense of the term, processes. Each comprises simply the content, however heterogenous, of some portion of space-time, however disconnected and gerrymandered. What then distinguishes material substances from other physical objects

[21] Quine (1960: 199-200).

[22] See, for example, his defense of sets on their ground of their indispensability in Quine (1960: 233-276).

> is a detail: if an object is a substance, there are relatively few atoms that lie partly in it (temporally) and partly outside.[23]

Quine's views and their departure from Fine's own reveal a contentious assumption at the heart of Fine's challenge to the modal view of essence. Fine assumes that essences and essences alone supply us with answers to what-questions and serve as the basis for metaphysical inquiry. But, in opposition to Fine, Quine holds essences are irrelevant to answering these questions. He therefore deploys an alternative tactic for answering what-questions. In light of Quine's pursuit of metaphysics in the face of eliminativism about essences, Fine's methodological assumption regarding essences can now be seen as highly controversial. Furthermore, Fine's case against the modal view turns on precisely this background assumption that essences are the resources we need for answering what-questions.

Before revisiting Fine's challenge, it will be useful to sharpen the disagreement between Quine and Fine. Let us begin, then, by holding the "nature" of an individual to be the collection of properties that supplies us with an answer to what-questions regarding that individual.[24] According to Fine, natures are to be identified with essences, since essences are what supply answers to what-questions. Fine therefore stipulates the following:

> **Natures as Essences** (NE): F is within the nature of $a =_{df}$ F is essential to a.

For Quine, there are no essences, so we must look elsewhere to determine the natures of things. And, given Quine's ardent naturalism, the right place to look

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[23]Quine (1960: 171).

[24]I do not claim this terminology to be motivated by ordinary langage. While I believe it to be consistent with ordinary talk—indeed, Fine himself slides between essence and nature-talk—I introduce it here as technical terminology well-suited for the philosophical goal of clarifying the disagreement at hand.

is into the findings of the physical sciences, suitably regimented. Determining the proper formulation of a Quinean account of natures would, however, be a considerable undertaking, and, rather than attempting to develop such an account here, I will simplify matters by introducing a quasi-Quinean figure, Linus.

Like Quine, Linus eschews essences for the purposes of answering what-questions. Instead, Linus aims to answer what-questions by appealing only to a certain class of elite properties that an individual actually instantiates. Linus therefore accepts the following:

> **Natures as Sparse Properties** (NSP): F is within the nature of $a =_{df}$ a instantiates F and F is a sparse property.

NSP holds that what-questions can only be answered by appeal to the sparse properties actually instantiated by individuals. These sparse properties, unlike abundant properties, figure into the causal-nomic joints of the world and ground relations of resemblance between things. In contrast, abundant properties, which play no significant role in the workings of nature and are shared by wildly gerrymandered collections of things.[25] So understood, NSP holds that for a human like Socrates or an electron like Sparky, their respective natures will include the sparse properties they instantiate like *being human*, *being an electron*, *being a material object* and exclude non-sparse properties like *being discussed in the previous sentence*, *being within twenty miles of Earth*, or *being smaller than an elephant*.

Quine and Linus share a disinterest in essence and modality that Fine does not. For Fine, essence is needed to discern the natures of things, but, for Quine and Linus, appeal to modality and essence is unnecessary for providing suitable answers

[25]Here, I follow the roughly Lewisian line developed in Lewis (1983) and (1986), but, for clarity's sake, I opt for talk of "sparse" rather than "natural properties". Furthermore, I leave open, for the moment, which properties qualify as sparse. For example, *being human* will be assumed to be sparse even while certain conceptions of natural properties would resist this conclusion.

to what-questions. This disinterest in the modal might be motivated by a Quinean anti-realism about modality, or, alternatively, by an unorthodox view about the scope of essence. If, for example, one accepts hyperessentialism or anti-essentialism, one will need to appeal to non-modal resources to offer substantive answers to what-questions. Setting aside the question of motivation for NSP, it is now helpful to clarify what is at stake in the disagreement between Fine and Quine.

The dispute between Fine and Quine is not a dispute about essence. It is not that Quine holds unorthodox views about essences. In Quine's case, he simply denies there are any essences. So understood, the present disagreement cannot be assimilated into a disagreement over essence. We must therefore distinguish essences—conceived of either along the lines of the modal view or via Fine's primitivism—from natures, which, for Quine, are distinguished by their theoretical role in metaphysical methodology. Furthermore, notice that Linus could in principle endorse the modal view of essence and retain his commitment to NSP on the grounds that essences are not suitable for playing the role that natures ought to. On the resulting view, Linus would accept the modal view's conception of essence, but denies essence is of particular relevance to fundamental metaphysics. This provides further evidence for the separability and multiplicity of our concepts of nature and essence.

Recall, now, that the modal view of essence on its own—*pace* Fine's partisan assumptions—does not hold that essential properties determine the natures of individuals. Nor does it require that essential properties furnish us with answers to what-questions. It is neutral with respect to these methodological matters and committed only to an analysis of the concept of essence and locutions like "x is essentially F". Notice also that Fine's challenge assumes that the modal view of essence is satisfactory only if the properties it deems essential supply answers to what-questions. For Fine, the failure of the modal view turns precisely on the fact that properties like *being distinct from Socrates* or *being such that 1+1=2* fail to answers what-questions. But,

since this requirement follows only upon the assumption of NE, it is a commitment distinct from the modal view.

The moral to draw from Fine's challenge is that if the modal view is conjoined with NE, the modal view is untenable. But this does not show that the modal view is untenable. It shows only that defenders of the modal view must resist the assimilation of nature to essence. This is because Fine has refuted only the following thesis, which is the conjunction of NE and the modal view of essence:

> **The Modal View of Natures**: F is within the nature of $a =_{df}$ a instantiates F at any world at which a exists.

Better, then, for the defender of the modal view of essence to reject the modal view of natures and hold that, while a property like *being distinct from Alcibiades* is essential to Socrates, it is no part of Socrates' nature. Similarly, the defender of the modal view of essence can deny, for any of the properties Fine's challenge appeals to, that those properties are part of Socrates' nature even while they are essential to him.

I have now argued that, once we draw the distinction between essence and nature, Fine's challenge undermines, not the modal view of essence, but only the modal view of natures. In light of this, the defender of the modal view ought to reject NE. And, once they do so, Fine's challenge presents no obstacle to upholding the modal view of essence. Prior to concluding, let consider two objections to the present defense of the modal view.

7.8 Against Nature

A natural objection to the just-offered defense of the modal view of essences aims to show that the distinction between nature and essence is spurious since they are one and the same concept. If this is correct, then the modal view cannot be defended by holding Fine's challenge to undermine only the modal view of natures rather than the modal view of essence.

One way to develop this objection is to hold that, even while the defender of NSP and the defender of NE seem to be disagreeing about something other than essence, these initial appearances are deceiving. This objection maintains that the defender of NSP is in fact concerned with essence; she simply has a non-standard view of essence that denies it has any connection with modality. Once this is granted, the objector now recasts the debate between the defender of NSP and the defender of NE as a dispute about essence, so we need not introduce the distinct concept of a nature to capture it.

In meeting this objection, recall, first, that the motivation for drawing the distinction between essence and natures is non-partisan. Its aim is to allow us to make sense of the dispute between Fine and Quine. Furthermore, if we hope to avoid drawing this distinction by holding Fine and Quine's disagreement to be concerned with essence rather than nature, we cannot interpret the claims of either party straightforwardly. Notice, for example, that both Fine and defenders of the modal view hold essence to be a modally loaded concept such that essential properties "must be had" by their bearers. Notice also that Quine is expressly uninterested in modality. So, if we are to take Quine to be talking about essence (despite appearances to the contrary), we must either deny that essence is modally loaded and disagree with both Fine and defenders of the modal view, or hold Quine to be guilty of a kind of conceptual incompetence by virtue of failing to recognize that he is actually talking about a modally loaded notion of essence.

These are immodest and uncharitable interpretive maneuvers. There is good reason to believe that, regardless of the particular character of essence, essence is indeed modally loaded. There is also good reason—in particular, the principle of charity—that invites us to interpret Quine as talking about natures rather than a modally loaded notion they are expressly disinterested in. It would seem, then, that the account of this disagreement I have defended, which takes both parties' claims at face

value, is preferable to the interpretation required by the present objection. As a consequence, there is good reason to accept the more charitable interpretation and draw the relevant distinction between essence and nature. Furthermore, there is some reason to think that the concept of a nature is a broader one that admits of qualification insofar as we might ask after the "intrinsic nature" of things without any interest in the modal features of a thing.

Let me now address a second objection, which takes issue with any modal view of essence that rejects NE. This objection holds that, once NE is abandoned, there is no interesting theoretical role for essence to play. So, unless we are willing to dispense with a theoretically useful notion of essence, we are obliged to retain NE and, for this reason, Fine's challenge does indeed present a threat to the modal view of essence.

I believe the most attractive response to this challenge holds that, while essence does not exhaustively determine nature, it nevertheless plays an important role in doing so. To see how such a response might be developed, we can now sketch an account of how essences and sparse properties like those Linus appealed to might jointly furnish us with an account of natures.[26] Consider the following thesis:

> **The Sparse Essence View of Natures** (SEN): F is within the nature of $a =_{df}$ F is instantiated by a in every world where a exists and F is a natural property.

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[26]Since it is an open question orthogonal to present concerns, I set aside how we ought to understand sparse properties although two views seem attractive. On the first view, "sparse" is shorthand for fundamental such that the only sparse properties are the fundamental ones borne by microphysical entities that comprise a supervenience basis for the rest of the world. Such a view would hold that, while *being an electron* is sparse, *being a mammal* is not. On the second view, "sparse" is shorthand for something like kind properties, which are not limited to the properties of microphysics like *being an electron*, but includes kind properties from higher-level phenomena like biology (e.g., *being a mammal*) and astronomy (e.g., *being a red dwarf*). The appeal of the latter view is, of course, that it sustains the possibility of macrophysical objects having natures, whereas the former view seems to require a commitment to microphysicalism, according to which only fundamental entities have natures and are therefore proper targets of metaphysical inquiry. See Schaffer (2004) for discussion of these competing conceptions of sparse properties.

SEN identifies natures with the intersection of the essential—here, understood in terms of the modal view—and the sparse.

To get a feel for how this view would look in practice, consider the case of spacetime. In asking about the nature of spacetime, we aim to learn its metaphysically significant features and thereby answer the what-question: what is spacetime? In this regard, the essentiality requirement excludes certain contingent features of actual spacetime that, while sparse, do not constitute its essence. For example, if spacetime is actually Minkowskian, but might have been Euclidean, *being Minkowskian* will not be part of the nature of spacetime. Such a property, while sparse, is not essential. In the other direction, the property of *not being occupied by a round square* is essential to spacetime, but not a sparse property of spacetime. For this reason, it, too, is excluded from the nature of spacetime. The candidates for being both sparse and essential properties of spacetime—the properties that constitute its nature—are therefore properties like *being unified by external relations* and *having an intrinsic metrical structure* (though not necessarily any particular structure).

Let us now consider how SEN avoids Fine's challenge. For Fine, membership properties like *being a member of singleton Socrates* are not suitable answers to what-questions. According to SEN, such properties fall outside the nature of Socrates, since *being a member of singleton Socrates* is not a sparse property. The same goes for other allegedly problematic properties of Socrates like *being distinct from Aristotle*, *being such that Aristotle is essentially human*, and *being such that 2+2=4*. Since none of these properties are sparse, none of them figure into Socrates' nature and, in this way, Socrates' challenge is avoided.[27]

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[27]One might object that singleton Socrates will have no nature, since *having only Socrates as a member* will be essential to singleton Socrates, but is not a sparse property. Here, I take this to be the correct result: since abstract objects can be discerned from the concrete by virtue of lacking natures, even while they might have essences.

We have now seen that SEN can avoid Fine's challenge and still afford essence an ineliminable role in metaphysics, but there is a notable worry that arises from a common view about the essential properties of things. For origin essentialists, the material or biological origins of things are essential to them. So, for example, Nicomachus essentially bears the relation *being the son of* to Aristotle. But, since relations of this kind are not good candidates for being sparse relations (nor are the corresponding relational properties good candidates for being sparse properties), there is a tension between the view that these origin properties are part of individuals' natures and the stricture against non-sparse properties being included within individual natures.

In responding to this concern, my first point is a partisan one: for those amenable to a Humean approach to modality, the necessary connections posited by the origin essentialist will seem implausible and arguments in favor of origin essentialism will not be compelling.[28] Since I am sympathetic to this Humean approach, I am content to discount these properties and relations as candidates for being essential.

Second, for the non-Humean, there are two options. The first option is to revise one's conception of sparseness and hold that these origin properties—contrary to the prevailing Lewisian conception of sparse properties—are metaphysically privileged in some way. The second option is to simply bite the bullet and hold that, while these relations or properties are essential, they are not part of individuals' natures. While this might seem initially unattractive, I will argue in a moment that, if talk of natures is context-sensitive, there is reason to believe that, in some contexts, appeal to essences rather than sparse properties will furnish us with suitable answers to what-questions. Granted this context-sensitive view of natures, the defender of origin properties' importance ought to be satisfied.

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[28]For discussion, see MacKay (1987).

SEN, as just presented, is unhelpfully silent on a number of issues; however, it does illustrate how a bicameral treatment of natures—one that draws on essences and sparse properties—provides essence an ineliminable role in answering what-questions; however, there is a final issue to be addressed. This issue concerns the extent to which what-questions admit of determinate answers. In the preceding, I have assumed, following Fine, that there is some objective and context-insensitive standard for answering these questions. Many are likely to think this assumption is implausible and that the suitability of answers to what-questions will vary with context.

If this assumption is abandoned, Fine's conception of essence is likely to be less appealing. Even so, what I want to note prior to concluding is that, if one accepts that what-questions are context-sensitive a slightly modified version of SEN fares rather well. On a context-sensitive version of SEN, in asking what-questions, we are often interested in different features of reality. On the one hand, our interest might be modal and therefore be directed at the essential properties of things. On the other hand, our interest might be in what things are actually like and would therefore be directed at the sparse or fundamental properties of things. Within the context-sensitive version of SEN, we can conceive of natures *qua* answers to what-questions as context-sensitive and varying along the essential and sparse axes. So understood, we might hold that the most eligible sense of nature is the intersection of the spares and the essential, but that, in certain contexts, the proper answer to what-questions are exclusively essential properties or exclusively sparse properties. In this way, the resulting view affords the sparse and the essential a privileged status in determining the natures of things while acknowledging that the correctness of an answer might vary with context.

Furthermore, the modal view of essence, when supplemented with context-sensitive version of SEN, provides an attractive way to conceive of the interaction of context with the what-questions that drive metaphysical inquiry. For example, if our focus

is on the modal, *being rational* would be a suitable answer to the question "What is man?" since it is—let us suppose—essential but not sparse. Similarly, if sparse properties are our focus, *being an electron* might be a proper answer to what-questions, despite—let us suppose—being sparse but not essential. This context-sensitive conception of natures leaves open the possibility of endorsing the modal view of essence and avoids the immodest conclusion that there is a uniquely delimited class of properties that, across all contexts, supply answers to what-questions. To be sure, it remains an open question how to conceive of this putative context-sensitivity, but, here, I hope to have shown that the modal view of essence can be readily supplemented with a view of natures that is equal to the task laid out in Fine's challenge.

7.9 Conclusion

In previous sections, I surveyed Fine's challenge to the modal view of essence and a number of possible responses to this challenge. While none of these responses is, on its own, satisfactory, I have argued that a distinction between essence and nature must be drawn to capture the disagreement between Fine and the modal deflationist. Once this distinction is made clear, an assumption behind Fine's challenge becomes clear: he assumes that the modal view of essence entails the modal view of natures and that, as a consequence, essence alone must provide answers to what-questions. I have shown that the modal view of essence and the modal view of natures are separable, and that, for this reason, Fine's challenge to the modal view is unsuccessful.

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