IN DEFENSE OF ESSENTIALISM[1]

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Introduction

If an object has a property *essentially*, it has that property in every possible world according to which it exists.[2] If an object has a property *accidentally*, it does not have that property in every possible world according to which it exists. Claims about an object's essential or accidental properties are *de re* modal claims, and essential and accidental properties are *de re* modal properties. Take an object's *modal profile* to specify its essential properties and the range of its accidental properties. Note that "world" as I am using it is a term of art: a *modal realist* believes that there are many concrete worlds, while the *actualist* believes in only one concrete world, the actual world. The *ersatzist* is an actualist who takes nonactual possible worlds and their contents to be abstracta.

Essentialism is the view that objects have properties essentially, but one should distinguish *deep* essentialism from *shallow* essentialism. Deep essentialists take the (nontrivial) essential properties of an object to determine its nature—such properties give sense to the idea that an object has a unique and distinctive character, and make it the case that an object has to be a certain way in order for it to *be* at all.[3] As Stephen Yablo (1987, 297) describes it, the essence of a thing is "an assortment of properties *in virtue of which* it is the entity in question," as well as "a measure of *what is required* for it to be that thing." Intuitively, on the deep essentialist picture, an ordinary object has essential properties, and it *must* have its essential properties in order for it to exist. On this view, objects' essential properties are *absolute*, i.e., are not determined by contexts of describing (or thinking, etc.) about the object, and truths about such properties are absolute truths.[4] Shallow essentialists oppose deep essentialists: they reject the view that objects can be said to have essential properties independently of contexts of description or evaluation, and so substitute context-dependent truths for the deep essentialist's context-independent ones.

According to the deep essentialist, it cannot be the case that one context of description can make it true that, e.g., "*O* is essentially blonde" while another context of description can make it true that "*O* is accidentally blonde" (where *O* refers to the very same object in both sentences). Truths about an object's modal properties are not determined by the way we describe it. The deep essentialist also holds that most objects, and especially ordinary objects, have essential properties such that there are many ways they could not be, or many changes through which they could not persist. In this way, objects' modal profiles characterize their natures.

In the usual case, as with ordinary objects like persons, minds and books, objects are not possibly *P* for many properties *P*. (For example, I am not possibly a fried egg, I am not possibly a tree, etc..., independently of what can be asserted about me relative to certain sorts of contexts.) In addition, objects have a restricted range of properties *Q* such that they are possibly *Q*. (For example, if I am possibly blonde, this is independent of what can be asserted about me relative to certain sorts of contexts.) Because we think of the world as full of numerically distinct objects that have unique and absolute modal persistence conditions, deep essentialism does the best job of capturing the way we want to make sense of the world and the ordinary objects it contains. Deep essentialists can hold that, independently of a context, a brain state is essentially physical, a pain state is essentially painful, a book is essentially written by its author, persons are essentially sentient, and stallions are essentially male.

As I will argue below, deep essentialism is the only sort of essentialism that preserves this element of our ordinary understanding of everyday objects. Some have thought that deep essentialism falters when faced with a skeptical objection concerning arbitrariness and the need for a reductive account of *de re* modality, and have adopted shallow essentialism in response. But we need not resort to such a desperate act: I'll argue for a way to answer the skeptical objection that preserves the central elements of deep essentialism. The crucial move of my approach is to develop a reductive account of *de re* modality that is congenial to the absolutism of the deep essentialist. Once deep essentialists have a response to the skeptical objection, they can be gainfully employed in giving broadly reductive treatments of related topics such as material constitution, nonreductive physicalism, supervenience, and causal overdetermination. Such treatments should be more satisfactory than those currently on offer.

§1. Substance Essentialism

How does an object have its essential and accidental properties? What is the ontological basis for an object's modal profile? The need to explain the underlying ontological structure of how an object has its *de re* modal properties is resisted by many deep essentialists. Instead, the fundamental structure of an object, which

includes structure that determines how it has its modal properties, is taken as an unanalyzable primitive.

One popular version of this view takes objects to fall under sortal concepts. Call the advocate of the view that (a) objects are substances that fall under sortals and (b) we need no further ontological explanation of how objects have their *de re* modal properties a "substance theorist." Deep essentialists who defend substance theory hold that the *de re* modal and other persistence properties of ordinary objects correspond to which sorts they belong to, but that no more developed ontological account is available.[5]

Substance theory, as I am characterizing it, is a descendent of the Aristotelian theory of primary substances as individual objects which are "neither in a subject nor said of a subject, for example, the individual man or individual horse . . . examples of substance are man, horse."[6] On this view (which is separable from the substance-as-substratum view that we may take to descend from the work of Descartes and Locke), substances are basic things that do not admit of further reduction, and the concept of substance is not amenable to further philo-sophical analysis. At best, we may be able to characterize the concept indirectly by citing instances, for example, by saying that substances are simply ordinary objects that endure through time in characteristic ways and are metaphysically independent (in some sense) of other things.[7]

On the face of it, the view has intuitive appeal. Commonsensically, we *do* recognize objects by their sortal persistence conditions, and we do want to say that there is something conceptually basic about the way we distinguish between ordinary objects.[8] But the trouble with substance theory is that along with these appealing theses come the stipulation that little, if anything, is known about how or why objects have their *de re* modal properties. Any substance theorist, by definition, lacks a deep explanation of the ontological structure that determines how objects have their *de re* modal properties (since he takes it as primitive). Substance theorists who are deep essentialists are my target here, and I'll call such theorists *substance essentialists*. By taking substance, sorthood, and the way objects have *de re* modal properties as unanalyzable and hence primitive, any seemingly counterintuitive consequences of substance essentialism are difficult to explain or make palatable. Since we know so little about the way objects have the *de re* modal and other persistence properties they do, substance essentialists cannot answer objections related to how or why an object has its modal properties. Lauding our ability to recognize objects in some special way does not tell enough of the story.

This becomes clearer in the context of the famous Quinean challenge to deep essentialists, where Quine demands an explanation of how an object has some of its properties essentially and other properties accidentally. (Quine 1960, esp. p. 199, and 1963, p.155) As Kit Fine (2005, 4) puts Quine's objection: "The metaphysical notion of necessity [an object's necessarily being a certain way] . . . is capable of discriminating in an interesting way between different objects. The number 9, for example, is necessarily a number though not necessarily the number

of the planets; and Socrates is necessarily a person though not necessarily a philosopher. From whence derives these differences in the necessary features of an object?"

In the absence of an account of what it is about the object that determines the modal status of the properties it has, a skeptic about essence can argue that there is nothing that determines that an object has some properties essentially and some accidentally, so the distinction between absolute essential and accidental properties is, as Quine (1963, p. 155) puts it, "invidious." If nothing determines the *de re* modal status of such properties, it seems that properties simply aren't had (absolutely) essentially or accidentally—since surely modal properties aren't had *arbitrarily*.

It may seem that a deep essentialist has a reply to this argument, for she can argue that Quine is asking for too much. The world is a certain way, and when we read off the features of reality, these features include objects having some properties essentially and some accidentally. Compare Quine's objection to someone objecting that we cannot defend the view that there are forces unless we can explain why the laws of nature hold that force is proportional to acceleration rather than inversely proportional. Forces *just do* exist, and force *just is* proportional to acceleration, and when we learn about force we are learning about what is in the world. This reply to Quine amounts to the point that it isn't that *nothing* determines an object's *de re* modal properties, rather, what determines them is ontologically fundamental, and as such, is primitive and unanalyzable. Every ontology has its primitives, and deep essentialism is no exception.

The deep essentialist is surely correct to point out that taking a matter to be primitive is different from taking it to be arbitrary. Moreover, rejecting deep essentialism simply because it involves a measure of primitivism would be unwarranted, and (setting aside Quine himself and taking the Quinean to be a contemporary Quinean) the Quinean is not justified in rejecting deep essentialism on these grounds alone.[9]

Unfortunately, however, the Quinean will not be satisfied with the deep essentialist's defense of primitivism. The Quinean will respond that yes, every ontology has its primitives, but there are primitives and then there are primitives. Taking it to be a fundamental, unanalyzable fact that force is proportional to acceleration is acceptable only if there is no reduction to be had. The same goes for taking the determination of an object's *de re* modal properties to be primitive: it is only justified if there is no reduction to be had. The deep essentialist who holds that *de re* modal properties are unanalyzable features of the world needs to show that no suitable reduction is available.

In other words, primitivism *per se* is not what the Quinean objects to—his objection is to unmotivated primitivism, in particular, unmotivated primitivism about how objects have their *de re* modal properties. According to the Quinean, for primitivism about an entity to be acceptable, it must be nonarbitrary, plausible and well-motivated, rather than stipulated in an *ad hoc* manner. This means that primitive entities are only acceptable when they are included in an otherwise

well-developed ontology, and only when no further reduction is available. But, as it turns out, the Quinean will argue, well-motivated, acceptable reductions of how objects get their *de re* modal properties are available, as are reductions of *de re* modality to purely general or qualitative facts. Moreover, the Quinean can adopt a "natural" explanation of why we want to ascribe certain *de re* modal properties to certain objects: following the lead of the shallow essentialist, it is simply a matter of privileging certain descriptions or evaluations of the objects.

At this point in the dialectic, we can think of the Quinean as presenting the deep essentialist with three requirements for an adequate theory. (i) Any primitives of the theory of essentialism need to be well-motivated, i.e., not amenable to further reduction, and not *ad hoc*. (ii) The theory must give a reductive account of how objects have their *de re* modal properties. (iii) The theory must reduce *de re* modal facts to purely qualitative or general facts. The contemporary interpretation of Quine's objection to deep essentialism is that deep essentialism is untenable because it cannot satisfy (i)-(iii): I'll call this interpretation the *skeptical objection* to essentialism.

Requirement (i) seems straightforwardly acceptable. One view that fails the test for (i) is David Lewis's (1968) original version of counterpart theory (revised in his 1983 "Postscript"), according to which objects have their *de re* modal properties solely in virtue of being similar in special ways to possible individuals. On this view, an object has the same counterparts however it is referred to, and thus can be ascribed properties essentially or accidentally independently of contexts of description. The trouble is that since there are many respects in which objects are similar to possible individuals, but (intuitively) only some of those possible individuals should count as counterparts of the object (and thus count towards determining which properties are essential or accidental), certain similarities are special, i.e., must receive priority. But what is responsible for this priority? An unjustifiable primitivism seems to be the only option.

Requirements (ii) and (iii) are reductive requirements. The Quinean's demand for a well-developed ontology to support theories of *de re* modality involves a demand for a reductive account of *de re* modality, especially given the fact that there are widely accepted reductions available. (ii) requires a reductive explanation of how objects get their *de re* modal properties and (iii) is based on the idea that a full-blown reduction of the *de re* modal to the qualitative allows certain desirable theoretical and methodological virtues to be maximized.

Requirement (ii) is met by contemporary metaphysicians by taking *de re* modal properties of objects to be determined by relations the objects have to possible individuals (where such individuals are parts of possible worlds). Such possible individuals could be concrete counterparts (under modal realism) or ersatz individuals with counterparts (under ersatzism). If all the counterparts of the *F*-object (or the ersatz individual that represents the *F*-object) are *F*, this determines that the *F*-object is essentially *F*. If not all the counterparts of the *F*-object (or the ersatz individual that represents the *F*-object) are *F*, this determines that the *F*-object is accidentally *F*.

Saying that objects have their modal properties in virtue of standing in relations to possible individuals makes standing in such relations what determines modal properties. *De re* modal properties of objects are therefore not mysterious constituents of them: they are determined (and thus explained) by the counterparts an object is has or is represented as having. Counterpart relations are qualitative similarity relations (or ersatz similarity relations somehow based on the qualitative similarities that would exist between actual objects and their counterparts, should those counterparts exist).

Although I have fleshed things out in terms of qualitative counterparts, note that the requirement for an explanation of how objects have their *de re* modal properties is not in the first instance an objection to primitivism about all sorts of unreduced modality *de re*. In particular, it may be consistent with (ii) to hold that it is a primitive fact about the world that actual objects can have their *de re* modal properties in virtue of standing in some sort of nonqualitative relation to possibilia (i.e., in virtue of standing in some sort of relation to possibilia that supervenes on specific *de re* facts).[10] (ii) is a demand for a reductive explanation of how objects get their *de re* modal properties, which might fall short of a full-blown reduction of *de re* modality.

An Objection may arise at this point.[11] The Objection runs as follows: taking an object's essential and accidental properties to be determined by the relations it has to otherworldly individuals (even if the determining relations are, say, nonqualitative crossworld identity relations) gets the explanation the wrong way around. Intuitively, it is the object's essential and accidental properties that determine whether an object exists according to a world, not the other way around.[12]

This objection has *prima facie* intuitive pull. The reductionist may simply grant the force of the intuition, but argue that the reduction has benefits sufficient to outweigh the intuitive cost of rejecting it. But closer inspection of the motivation behind the Objection weakens its intuitive pull. How is the determination of an object's relations to possible individuals supposed to work if it runs in the direction the objector says it does? What is responsible for it? It is as though there is some sort of mysterious Modal Force that objects are supposed to have which determines whether they exist according to possible worlds. Again, the primitivism of this essentialist story fails to provide a satisfactory explanation of the *de re* modal facts.

A further consideration arises if one accepts a reductive interpretation of what Sider (2003) calls "Leibnizian biconditionals": proposition P is possible iff P is true in some possible world and proposition P is necessary iff P is true in every possible world. The Leibnizian biconditionals interpret modal claims in terms of truths about possible worlds, whether such worlds are concrete worlds of a kind with our own, as the modal realist would have it, or abstract entities like propositions, sets, or combinations of states of affairs, such as the erstazist and many other actualists would have it. For theoretical as well as intuitive reasons, the idea that a proposition is possibly true iff it is true in some possible world

and necessarily true iff it is true in every possible world has become ubiquitous in contemporary philosophy. On the reductive interpretation of this approach, modal truths are reducible to facts about possible worlds: *P*'s being possibly true *just is P*'s being true in some possible world.

The reduction of *de re* modal properties of objects to relations or relational properties had to possibilia can be seen as an extension of the reductive version of the Leibnizian framework.[13] If one accepts the general idea that possibility and necessity reductively supervene upon facts about possibilia, whatever claim the Objection has on our intuitions about how objects have *de re* modal properties should be recognized as deeply misguided. The defender of the Objection either needs to explicitly reject the reductive version of the Leibnizian framework and provide reasons for doing so or needs to explain why essences must be determined differently from how possibilities more generally construed are determined.[14]

Requirement (iii) involves the reduction of *de re* modality to something more fundamental. (Ideally, this would involve a reduction of the *de re* modal to the nonmodal. In fact, as I note below, what we may have to be satisfied with is a reduction of the *de re* modal to purely qualitative facts involving the nonmodal and the *de dicto*.) Lewis (1986) argues that a reductive treatment of *de re* modality should be preferred because it maximizes the virtues of simplicity, elegance, and ontological parsimony (in terms of the kinds of entities we must posit). Sider (2001, 2003 & unpublished *b*) argues that accepting ungrounded (i.e., primitive) *de re* modal or tensed facts about the world is methodologically inferior to giving more reductive accounts. According to Sider, the fundamental properties of the world should be categorical rather than hypothetical (2001 p. 41, 2003 p. 185), where categoricity involves the actual nature of things and hypotheticality involves outward looking facts such as merely possible facts.

Others, such as Heller (1990), Sosa (1987) and Zimmerman (1995) add to the chorus for the reduction of the *de re* modal by arguing that it seems intuitively right to say that an object's *de re* modal characteristics are determined by its nonmodal features. Sosa (1987, 173–4) argues that just as we should be able to explain objects' dispositions by their nonmodal properties (e.g., a marble's disposition to roll is explained by its roundness), we should be able to explain objects' modal properties by their nonmodal properties (e.g., a marble's being unable to survive squashing should be explained by its hardness, shape, and other physical properties). Heller tells us to "[c]onsider two objects that exist on two distinct planets. Suppose that these two objects [share all their nonmodal properties] and have exactly the same forces acting on them at every time during their existence. Moreover, suppose that if either of them were to have been in a different situation than the one it is in (have different forces acting on it than do in fact act on it) then the other would have been in a completely analogous situation (the two objects would still have had the same forces acting upon them). Given these suppositions, it seems to me incredible to suppose that one of the objects could have gone out of existence before the other." (1990, 31)

The point of these arguments about *de re* modal properties being determined by nonmodal properties is to suggest that any acceptable ontology of *de re* modal properties will take them to reductively supervene on nonmodal properties, or at least on purely qualitative, non *de re* properties.[15] (In many cases, depending on associated views about modality, the reduction will be to the nonmodal plus a few associated *de dicto* facts, rather than to the nonmodal *simpliciter*. This is because (as Lewis 1986 argues) those who reject modal realism usually need to accept certain *de dicto* modal facts as primitive.)

I find the sorts of arguments given by Sider, Heller, Sosa and Zimmerman plausible, but I am most influenced by Lewis's view that the savings in terms of theoretical economy makes the reduction worth having. The value of this sort of economy becomes clearer when we consider that a number of central topics in metaphysics involve reduction: supervenience, causation, dispositions, laws, physicalism, naturalism, and materialism in mind, just to name a few. Moreover, when the fan of *de re* modality is pushed to explain the consequences of her views, she can give real answers, rather than be forced to fall back on claims about primitivism. So, I am convinced that the deep essentialist must respond to parts (i) and (ii) of the skeptical objection, and think there is a fairly strong case for (iii) as well.

The skeptical objection presses particularly hard on the substance essentialist, whose every joint is swollen with primitivism. Consider requirement (i): that a theory of essence not rely on *ad hoc* or gratuitous primitivism. The substance essentialist may be intuitively justified in holding that there exist sorts or categories in the world, and in holding that knowing the sortal concept that the object falls under can tell us what its modal properties are. But the contemporary skeptic does not dispute this datum (at least, not here). Rather, he argues that the substance essentialist needs a story about what *makes it the case* that an object is the kind or sort of thing that it is. A natural answer is that an object's modal and other persistence properties are (part of) what make it the sort of thing it is. If the substance essentialist disagrees and holds that the sort an object belongs to determines its *de re* modal properties (rather than the other way around), then he needs to give an (ontological, not conceptual) explanation of what determines an object's sort. Simply stipulating that it is a primitive fact that being of a certain sort determines the modal profile of an object is unacceptably *ad hoc*, especially given the availability of the natural explanation that an object's having the persistence properties that it does are what make it a particular sort of thing.

Similar considerations apply to the substance essentialist who holds that some other sort of primitive entity, such as a form, determines an object's sort (or perhaps determines both its sort and its modal properties).[16] In the context of a reductive account of *de re* modality, especially one that can explain how objects' *de re* modal properties determine its sort, such primitivism is not defensible. At the very least, it is not defensible without a reductive account of how an object's form determines its sort and a reductive account of how an object's *de re* modal properties are determined.

Requirements (ii) and (iii) fit neatly into this objection to substance essentialism, since whether or not the substance essentialist agrees that an object's *de re* modal persistence properties make it the sort of thing it is, his view makes no room for a reduction of how objects get their *de re* modal properties or for a reduction of the *de re* to the purely qualitative.

The trouble with nonreductive theories like substance essentialism is that in the context of well-developed theories of modality, where *de re* modal properties are determined by objects' relations to possibilia, simply stating that the world is such that objects have primitive essential and accidental properties (or simply fall under sorts, or have certain forms) just isn't good enough. To make matters worse, such theories don't seem to fit into larger reductive or partly reductive projects involving supervenience, analyses of causation, dispositions, laws and persistence, and mereology, or with reductions of possibilia, mental states and properties to more fundamental entities, which greatly increases the cost of the view. The lack of economy of substance essentialism shows up in substance essentialists' inability to defend many of the consequences of their views.

Such consequences have been well-discussed in the literature on material constitution. The problem of material constitution arises because of differences between persistence conditions, which include differences in *de re* modal properties. In the relevant cases, there can exist multiple material objects—such as a person and the hunk of tissue that constitutes him—in the same place at the same time. The explanation of material constitution given, for example, by many versions of substance essentialism is that there are multiple objects because a person (Person) is essentially human-shaped in virtue of falling under the human-sort, while the hunk of tissue (Hunk) constituting Person is accidentally human-shaped in virtue of falling under the tissue-sort.[17]

But this does not explain enough. Hunk and Person share the same substance (and the same material) and occupy precisely the same spatiotemporal region.[18] If Hunk and Person share their material and region and thus share properties like their shape, color, location, mass, weight, texture, etc., then the properties that seem to be relevant to determining an object's sort are just the properties that Hunk and Person share. In other words, it seems, at least *prima facie*, that there is not enough difference between Hunk and Person to support their differences of sort (or differences of form) and their ensuing *de re* modal differences. How can Hunk and Person be of different sorts, or fall under different sortal concepts, or have different forms if they share everything that determines which sorts they are, which sortal concepts they fall under or which forms they have? In substance theory terms, the puzzle is about what grounds we have for saying that an object falls under the person sort and not the tissue sort, or vice-versa. Substance essentialists, as primitivists, must say it is a matter of brute fact. They will give no further explanation of how objects related by constitution have their *de re* modal properties and hence no explanation of the modal difference.[19] This highlights the *ad hoc* nature of their primitivism.

A related worry involves the ability of the substance essentialist to explain the coincidence implied by constitution. When Hunk constitutes Person, they coincide: two numerically distinct material objects share their matter and occupy the very same spatiotemporal region. But without any explanation, this seems to contradict our usual way of thinking about material objects, i.e., as objects individuated by their matter and region. On what grounds do we distinguish the two objects, and how can we make conceptual sense of this situation? Aside from emphasizing that the matter and their materials are shared in some way while their forms or sorts aren't, the substance essentialist has little to say in response—coincidence *just is* a consequence of his view. Again, his primitivism prevents him from having sufficient materials to construct an adequate explanation.

There is a further problem: substance essentialists who take the person and the hunk of tissue to be numerically distinct while sharing their matter and region cannot endorse classical extensional mereology and the theory of objects it implies (that objects are simply hunks of matter in spacetime).[20] The mereology of the coincident objects of the substance essentialist is dark and mysterious, since coincident objects seem to share very small spatiotemporal parts but not large spatiotemporal parts. How can such a distinction be defended? What is the mereology of substance theory according to the substance essentialist?[21]

Substance essentialists, and deep essentialists generally, must also face objections to the coherence of their position. Chisholm (1979) argues that Ship of Theseus-style examples involving seemingly plausible small changes in essential properties of objects across many worlds require deep essentialists to accept haecceities or other unpalatable consequences. Nathan Salmon (1986) develops a related objection involving origin essentialism he calls "The Four Worlds Paradox." Add to these objections the notorious variability of modal intuitions: I might think that Sandy is essentially human, but revise that view when reminded of (let's imagine) scientific advances that can replace her body with sophisticated plastics while retaining mental continuity, memories and other psychological traits. Doesn't such waffling make deep essentialist intuitions unreliable?

Any deep essentialist without a developed story of how objects have *de re* modal properties lacks the resources to address these puzzles. Such essentialists are in the unfortunate position of being able to marshal strong and plausible commonsense intuitions to support the view that objects have essential properties but of being unable to accommodate these intuitions in a philosophically respectable way. For these reasons, while I embrace the commonsense plausibility of deep essentialism, I reject the amount of primitivism needed to support the view that the having of *de re* modal properties is an ontologically primitive matter. Although I have focused on substance essentialism as the best-known version of deep essentialism that takes this stance, my rejection is a blanket rejection. Any deep essentialist view that does not give a sufficiently developed account of how objects have their *de re* modal properties, i.e., that does not address at least (i) and (ii) of the skeptical objection, will face problems with giving satisfactory accounts of related ontological topics. (In order to thoroughly respond to the skeptic, one

should also address (iii).) The skeptical objection has merit, and any acceptable theory of deep essentialism must respond either by accomplishing the reductions it calls for or by showing why primitivism is acceptable after all.[22]

§2. Shallow Essentialism

Enter the shallow essentialist. This sort of essentialist responds to Quine's original objection by giving an account of the *de re* modal claims we make about an object in terms of its falling under certain sorts of descriptions in certain contexts, fleshed out within the context of a reductive approach to modality. The shallow essentialist thus offers a reductive and (what he takes to be a) natural explanation for the differences between objects that the substance essentialist or the old-style counterpart theorist took as primitive, and fully endorses the skeptical objection. Viz. Fine: "[t]he Quinean will respond that [differences between the necessary features of an object] derives from our privileging certain descriptions over others." (2005, 4)

There are three important facets of the shallow essentialist's position. For simplicity's sake, start with the shallow essentialist who endorses genuine modal counterpart theory (i.e., endorses modal realism with counterpart theory). On such a view, the first facet of shallow essentialism is a developed account of how objects have their *de re* modal properties in terms of possibilia: according to the shallow essentialist, objects have their *de re* modal properties in virtue of having counterparts. The second facet is the reduction of *de re* modality to purely qualitative, general facts: objects have their counterparts in virtue of being similar to them in nonmodal, purely qualitative respects. (As I note below, one might add a further requirement involving context here.) The third facet is the treatment of *de re* representation as description-dependent or inconstant. Objects are said to have their modal properties depending on how they are *de re* represented by their counterparts, but can only be said to have their counterparts in virtue of being nonmodally similar to them in *relevant* ways, where what is relevant is determined by describing or evaluating the object in a certain way. So there can be many different *de re* representation relations, depending on which counterparts are included in the set that does the representing. The description or name used to denote an object evokes a context that makes certain of the object's nonmodal properties relevant, which then determines the relevant counterpart-theoretic similarities and so selects a *de re* representation relation.

Matters are somewhat more complex for the shallow essentialist who endorses ersatz modal counterpart theory, since *de re* representation for the ersatzist is more complex. On the ersatzist view, the first facet of shallow essentialism is also an account of how objects have their *de re* modal properties in terms of possibilia, but this time, objects have their *de re* modal properties in virtue of being *de re* represented by ersatz individuals that stand in counterpart-theoretic relations to counterparts (other ersatz individuals). On this view, to say an ersatz

individual has a red-haired counterpart is to say that the ersatz individual has a counterpart that represents something red-haired, and to say that an (actual) object has a counterpart is to say that it is *de re* represented by an ersatz (actual) individual that has a counterpart. The second facet again involves a reduction of *de re* modality to purely qualitative, general facts: the ersatz individuals that *de re* represent objects have their counterparts at least in part by standing in some sort of ersatz similarity relation to their counterparts. (Intuitively, ersatz similarity is defined by how the object represented by the ersatz individual would be similar to the objects represented by the ersatz individual's counterparts if the represented objects had existed.) Finally, *de re* representation is again description-dependent: the ersatz individuals that *de re* represent objects are only ascribed counterparts relative to certain contexts of description or evaluation, so there can be many different *de re* representation relations depending on which counterparts are included in the structure (of an ersatz individual plus some counterparts) that does the representing.

Shallow essentialism, whether realist or ersatzist, thus meets the skeptical objection on its own terms. It provides a reductive account of *de re* modality and of how objects have their accidental and essential properties according to which *de re* modal claims about objects are determined in part by how such objects are described. On such a view, modal *de re* representation is inconstant: there is no "settled answer, fixed once and for all, about what is true concerning a certain individual according to a certain (genuine or ersatz) world" (Lewis 1986, 198).

The characterization of the *de re* representation of shallow essentialism as inconstant admits of two interpretations. On the first interpretation, shallow essentialism takes modal *properties* to be context dependent. On this interpretation, counterparthood is determined in part by qualitative similarity (or ersatz similarity), and in part by contexts of description or evaluation. *De re* representation of an object is inconstant because the modal properties are inconstant. Call this interpretation of shallow essentialism the *evaluative* interpretation.

On the second interpretation, shallow essentialism takes modal properties to be context independent, but takes modal *predication* to be context dependent. On this interpretation, counterparthood is determined by qualitative similarity (or ersatz similarity), but how counterpart relations are *ascribed* is governed by contexts of description or evaluation. Here, correctly ascribing modal predicates is determined partly by what we can say relative to a context (while counterparthood itself is independent of context), and so *de re* representation of an object is inconstant simply because modal predication is inconstant. Call this interpretation the *antiessentialist* interpretation.

On both views, the truth of "*O* is essentially blonde" can vary with context, but it varies for different reasons. On the evaluative interpretation of shallow essentialism, the counterparts and thus the modal properties of an object are determined in part by contexts of description or evaluation, and so an object's modal properties can vary with context. On the antiessentialist interpretation of shallow essentialism, the modal properties of an object are determined by

context independent counterpart relations, but what modal predications we can make of an object (what counterparts we can truthfully ascribe to it) varies with context.

On either interpretation, there is a huge cost to shallow essentialism: we lose the intuitive power of the deep essentialist view that ordinary objects have a substantial number of (absolutely) essential properties. Each view carries with it a bizarre view of the modal properties that objects, especially ordinary objects, have. On each view (but for different reasons) modal profiles of objects no longer capture what we commonsensically take an object to be, either because (on the evaluative view) modal properties are partly dependent upon contexts of evaluation, or because (on the antiessentialist view) objects have (almost?) no essential properties and far too many accidental properties.

Evaluative essentialism denies that Sandy has essential properties in any absolute, context-independent sense, for she (or the ersatz individual that represents her) does not have modal counterparts in any absolute, context-independent sense. This is fundamentally implausible: the evaluative essentialist has sold his soul to Quine by making seemingly deep facts about an object's essence partly dependent upon mere matters of evaluation. For example, according to the genuine counterpart theorist's version of evaluative shallow essentialism, given my similarity to a fried egg or a tree, I could have been a fried egg or I could have been a tree if a context exists that can make a fried egg or a tree one of my counterparts. Similar consequences derive from the ersatzist version of the view. Since such suitably philosophical contexts surely exist, then according to evaluative shallow essentialism I am possibly a fried egg.

This cannot be right, for I am not possibly a fried egg. More generally, evaluative shallow essentialism is false because the modal properties of an object determine—independently of a context of evaluation—whether an object could survive a change in its shape or its color or whether it could be a fried egg. What objects *are* is determined by their modal properties, and these are determined in a context independent matter. The problem with evaluative shallow essentialism comes down to the fact that if the essential and accidental properties of an object are not absolute, then there are no absolute facts about what an object has to be like in order for it to exist. And this seems wrong. The evaluative version of counterpart theory and its inconstant *de re* representation should be rejected for this reason.

The antiessentialist version of shallow essentialism is even less acceptable. This view trivializes essentialism, preserving little about the essentialist position other than the permission to mouth certain essentialist attributions in certain contexts. For example, according to the genuine counterpart theorist's version of antiessentialist shallow essentialism, since anything is similar to almost to anything else in some way (speaking in the broadest metaphysical sense), every object has an immense variety of counterparts. On this view, since for (almost) any property P, an object will have a counterpart that is P, an object is possibly P for (almost) any property P.[23]

On this view, I have fried eggs and trees as counterparts (since I am similar in certain respects to fried eggs and to trees), but we can only truthfully *say* that "I am possibly a fried egg" or "I am possibly a tree" if context permits. On such a view, there is no substantial way for an object to have a unique and distinctive modal character, since anything has almost anything as a counterpart, and so there is very little content in the idea that object has to be a certain way in order for it to exist. If there is almost no way an object *needs* to be in order for it to exist, the "what-it-is"-ness of an object has been eviscerated. Similar consequences derive from the ersatzist version of antiessentialist shallow essentialism. Again, we should reject the view.

Whether evaluative or antiessentialist, the shallow essentialist turns out to be an essentialist only in the sense that he grants that objects have *de re* modal properties of some sort and will grant the truth of *de re* modal claims like "Sandy is essentially female" as true with respect to a certain context or class of possibilia. "The true-hearted essentialist might well think me a false friend, a Quinean skeptic in essentialists' clothing." (Lewis 1968 [1983], 42) Lewis is right: shallow essentialism is no sort of acceptable essentialism at all.

(Note that the deep essentialist may still accept a version of *de re* modality as determined by *constant de re* representation and counterpart theory. Such view would hold that there *is* a settled answer, fixed once and for all, about what is true concerning a certain individual according to a certain (genuine or ersatz) world. See §4 for just such an account of deep essentialism in terms of constant *de re* representation and constant ersatz modal counterpart theory.)

The issues here are mirrored by another sort of counterpart theory that has been recently been defended: temporal counterpart theory (Hawley 2001, Sider 2001). Examining temporal counterpart theory will help to further clarify what is so objectionable about shallow essentialism. Temporal counterpart theory holds that objects have their this-worldly temporal persistence properties in virtue of having temporal counterparts.[24] If temporal counterpart theory is analogous to modal counterpart theory, then presumably, if temporal counterpart theory is true, objects have their temporal persistence properties in virtue of their temporal counterparts. For example, "Sandy will be blonde at *t*" is true iff Sandy has a blonde temporal counterpart at *t*.

Under temporal counterpart theory, it is natural to adopt a stage theory of how objects persist. According to the stage view, an object persists by being an instantaneous temporal stage of a temporally extended crosstime worm. Instantaneous stages are ordinary objects, in the sense that they are "... the referents of ordinary terms, members of ordinary domains of quantification, subjects of ordinary predications, and so on." (Sider 2001, 60) Temporal counterpart relations can then unite the stages of spacetime worms.

Stage theory has much to recommend it, and some version of stage or worm theory may be correct. But just as we have shallow and deep essentialism, we can have shallow and deep persistence theory. For the same reasons that we should reject shallow essentialism, we should reject shallow persistence. The objection is

not to stage or temporal counterpart theory *simpliciter*, but to stage theory built on the shifting foundation of inconstant *de re* temporal representation.

According to shallow persistence theory, the temporal *de re* representation relation is inconstant in just the way the shallow essentialist takes the modal *de re* representation relation to be inconstant: for any stage, whether and how that stage is *de re* represented by a time is relative to different contexts of evaluation or description. Any temporal counterpart theorist will hold that "Sandy will be blonde tomorrow" is true iff Sandy has a blonde temporal counterpart tomorrow. But according to the shallow persistence theorist, which temporal counterparts Sandy can be said to have depends on our context of evaluation.

Shallow persistence admits of multiple interpretations in the same way that shallow essentialism does: one may take temporal counterparthood to be context dependent, or one may take temporal predication (but not temporal counterparts) to be context dependent. Either way, according to the shallow persistence theorist, the truth of "I was at the bar last night" might vary because there is no settled answer, once and for all, about what is true concerning me according to a time, since in general, there is no settled answer about what is true about individuals according to times. This may be because our temporal properties depend upon contexts of evaluation, or because which such properties we can ascribe to an object depends upon contexts of evaluation (and we have many more temporal properties than we commonsensically thought, since temporal counterparthood is determined by similarity alone).

On the evaluative version of shallow persistence, whether or not I was at the bar last night depends on what my temporal counterparts are, and this depends on contexts of evaluation. On the antiessentialist version of shallow persistence, things have as many temporal counterparts as similarity will allow, but temporal predications are context-dependent. On the latter view, I have a bar-going counterpart, and a sleeping counterpart, and a fried-egg counterpart, etc, all of which exist at appropriate times—what stops it from being true that "I was at the bar last night" (or "I was a fried egg last night") is not the *metaphysics* of the temporal facts, but mere *semantics*: there is no context of evaluation in which to make the claim. Either version of shallow persistence is implausible.[25]

So the truth about whether or not *I* have a temporal counterpart that was at the bar last night (or whether *Sandy* will have a blonde counterpart tomorrow, etc.) is not dependent on a context of description or evaluation. Moreover, I *don't* have such a counterpart, full stop (though I have one that was at the bar two nights ago). Such things are a matter of constant temporal *de re* representation: another way to put the point is to say that the gen-identity relation is absolute.[26] Shallow views fail to respect intuitively correct context-independent modal and temporal persistence facts about objects.

Whether the debate is over temporal persistence or over *de re* modality, I conclude that it is better to be deep than to be shallow. If deep essentialism can be justified in the face of the skeptical objection, it must be preferred: we should not be driven to shallow waters unless there is no hope of otherwise surviving.

The world is such that there is an absolute fact of the matter whether I would survive if I changed my hair color, whether something with a different origin could have been me, and that I could not survive being turned into a fried egg. By recognizing ordinary objects as discrete, persisting individuals with characteristic histories separable from the rest of the world, we are recognizing that objects have a number of distinctive, absolute essential (and temporal) properties and that the truths about such properties are context independent.[27] These facts about the properties of ordinary objects are facts about the nature of the world, and we need an account that can preserve these facts.[28] Shallow explanations are unacceptable.

§3. Deep Essentialism Redux

Shallow essentialism eliminates the very heart of what motivates essentialism in the first place, but it has seemed to many to be the only game in town for fans of reductive (but not eliminativist) treatments of *de re* modality. The skeptical objection shows that the primitivism of substance essentialism and (to a lesser extent) old-style counterpart theory is untenable. Many seem to think that, in the face of the skeptical objection, adopting shallow essentialism or some equally toothless view is the only option the essentialist has. Must those who wish to preserve an explanation of our *de re* modal attributions resort to shallow essentialism? No. Real essentialists can do better.

To justify a return to deep essentialism, we need a deep essentialist account that avoids unmotivated or *ad hoc* primitives, gives a reductive account of how objects have their *de re* modal properties, takes *de re* representation to be constant, and, ideally, allows *de re* modality to be reduced to purely qualitative facts. I shall develop such an account below.

Like many others, I prefer an ersatzism that characterizes the having of *de re* modal properties in terms of (modal) *de re* representation, i.e., in terms of objects being *de re* represented by ersatz possibilia.[29] The most popular versions of ersatzism take ersatz possibilia to be maximal consistent sets of sentences, or propositions, or states of affairs, or the like, and take modal truths to be evaluable in terms of such abstract objects. For example, according to Robert Adams, "For me to feel a pain in some possible world is just for a proposition, to the effect that I feel a pain, to be a member of a certain set of propositions." (1979, p. 205)[30]

Like the shallow essentialist, I think the best reductive approach to how objects have their *de re* modal properties takes the having of *de re* modal properties to be determined by relations to ersatz possibilia. Therefore, I shall understand *de re* representation in these terms, but broadly, in terms of objects being *de re* represented by some sort of abstract objects or relational complexes of abstract objects, whatever they may be. (In other words, I will not choose between ersatz possibilia as propositions, sets of sentences, states of affairs, etc., nor will I specify

the method of *de re* representation, although linguistic ersatzism is probably the leading candidate.)

Now, a deep essentialist such as myself needs a response to the skeptical objection that will satisfy its reductive requirements. If (for example) an account of *de re* modal properties in terms of ersatz possibilia that are (sets of) propositions is correct, then I am possibly in pain *because* the proposition that *I am in pain* is a member of a certain set of propositions, not the other way around. Correspondingly, if an account of *de re* modal properties in terms of ersatz possibilia that are (possible) states of affairs is correct, then I am possibly in pain *because* in a maximal nonactual state of affairs in which I am included, I am in pain—not the other way around.[31]

This points to a fundamental difference between my views and those of many contemporary deep essentialists, including many ersatzist ones, since I reject the view that *de re* modal properties are had primitively and I reject the view that an object's *de re* modal properties determine its relations to possibilia. Most deep essentialists reject reductionism about how an object gets its *de re* modal properties: either they take *de re* modality as flat-out primitive and have no truck with possibilia, or they take an object's *de re* modal properties to determine how it is represented by possibilia. As I discussed in §1, these assumptions create problems that lead to the skeptical objection.

So, like the ersatzist shallow essentialist, my story about how objects have their *de re* modal properties will be conducted under the auspices of an ersatzist reduction.[32] Also following the (ersatzist) shallow essentialist, let us take objects to be *de re* represented by ersatz individuals that have counterparts, where counterparthood is based on ersatz similarity. To avoid skeptical worries about unmotivated selectivity principles for counterparts, like the ersatzist shallow essentialist, I will assume that ersatz similarity is ontologically cheap: ersatz similarity is (somehow) as cheap as similarity *simpliciter*, and since everything is similar to everything else, ontologically speaking, similarity *simpliciter* is extremely cheap. This means that the counterpart relation is extremely easy to get. (Two caveats. One: at the end of this section I'll come back to an important issue that relying on ersatz similarity raises. Two: one way I am not following shallow essentialists is that I take *de re* representation to be constant. I discuss this below.)

My version of ersatzism will take objects to have their *de re* modal properties in virtue of having counterparts in the following way. An object *O* is *de re* represented by an ersatz individual *I*, where *I* has counterparts (usually, other ersatz individuals). When *O* is *de re* represented by a structured complex of *I* plus some of its counterparts, *O* has certain *de re* modal properties. For example, the actual Humphrey is *de re* represented by an ersatz actual Humphrey, such that the ersatz actual Humphrey has a counterpart that has the property of being a winner. Because the actual Humphrey is *de re* represented by an ersatz actual Humphrey that has a counterpart that is a winner, the actual Humphrey is possibly a winner. More simply: the actual Humphrey is *de re* represented as

having a winning counterpart (because the actual Humphrey is *de re* represented by an ersatz actual Humphrey that has a winning counterpart), so he is possibly a winner. Even more simply: if Humphrey is *de re* represented as a winner, he is possibly a winner.

This approach is different from that of the ersatzist shallow essentialist with regard to the nature and the constancy of the *de re* representation involved. Given the shallow essentialist's account of *de re* representation, it is easy for the ersatz actual Humphrey to have many counterparts, and thus easy for Humphrey to be *de re* represented in many different ways—context permitting, of course. For example, the shallow essentialist holds that even though we can say that Humphrey is possibly a winner, we can also say that Humphrey is essentially a loser. We can say this, claims the ersatzist shallow essentialist, because there is a context in which the actual Humphrey can be *de re* represented by an ersatz actual Humphrey that has no winning counterparts. In a different context, holds the shallow essentialist, we may say that Humphrey is possibly a winner because relative to this context, the actual Humphrey is *de re* represented by an ersatz actual Humphrey that has a winning counterpart. Thus, on the shallow essentialist view, an object like Humphrey can be *de re* represented in many different, conflicting, ways.

As a deep essentialist, I think this is all wrong. Objects are *de re* represented constantly, so the truth about whether an object is essentially or accidentally *P* does not depend on context. Suppose that the person I refer to as "Humphrey" is essentially descended from his parents, Ragnild and Hubert. An ersatzist deep essentialist will thus hold that this person, Humphrey, is not *de re* represented as having counterparts with different parents, no matter what the context. Likewise, Humphrey is only accidentally a loser. In ersatzist terms, this means that the ersatz actual Humphrey does not *de re* represent the actual Humphrey as having counterparts with different parents, and does *de re* represent the actual Humphrey as having winning counterparts. Period.

Or consider Sandy: she has her origin essentially, so she could not have developed from a different zygote. Sandy is also a blonde, but had she decided to dye her hair red, she would have persisted through the change, and in this sense she could have been a redhead. (She also could have been a redhead because of a mistake made by an incompetent stylist, but this is a more troublesome sense of "could have been a redhead.") If Sandy could not have had a different origin, then she is not *de re* represented without that origin, but if she could have been a redhead instead of a blonde then she is *de re* represented as having red hair.

In other words, if Sandy could not have had a different origin, then she has no counterparts that have different origins, i.e., she is not *de re* represented as having counterparts with different origins. That is, in my ersatzist terms, the ersatz individual that *de re* represents her has no counterparts with different origins. If Sandy could have been a redhead instead of a blonde then she has red-headed counterparts, i.e., she is *de re* represented as having red hair by being *de re* represented by an ersatz individual that has red-headed counterparts. (From

now on, I will assume that claims like "Sandy has a redheaded counterpart" are to be understood in my ersatzist way unless otherwise specified.)

Of course, as I noted above, counterparthood is extremely easy to get, since ersatz similarity is extremely cheap. How, then, can the ersatzist (or even the realist) deep essentialist maintain that Humphrey has no counterparts with different parents or that Sandy has no counterparts with different origins? Must she add further requirements to the counterpart relation to make it extremely selective or nonqualitative in some mysterious way, just as Lewis did in his original counterpart theory? Does nonreductionism threaten? Does the skeptical objection loom?

The deep essentialist does not need to endorse a selective counterpart relation, but to see why will take some honest metaphysical labor. In order to have a reductive account of how objects have their *de re* modal properties that can address the skeptical objection, I need more than just ersatzism and counterpart theory: I also need to have a reductive account of objects. We need to know just how objects have their *de re* modal properties, just how objects are *de re* represented, and just how *de re* representation plays a role in what an object is in order to show how we can have a cheap counterpart-theoretic relation while keeping *de re* representation (and thus *de re* modal properties and *de re* modal predications) constant.

§4. *De Re* Modal Properties and *De Re* Representation

My deep essentialist explanation of what it is for an object to have *de re* modal properties will characterize an object as a *sum* of properties, so objects have properties as qualitative parts. This means that I embrace a property mereology in addition to a spatiotemporal mereology. Composition with respect to qualitative parts is restricted.[33]

This theory takes ordinary objects to be nothing more than bundles of properties, such that bundling is a type of mereological fusion. My property mereology has an antecedent in Nelson Goodman's (1951) interpretation of Rudolf Carnap's (1928) phenomenalistic construction of quality classes in the *Aufbau*. Goodman develops a version of a property mereology in terms of spatiotemporally located trope-like property appearances. Goodman's system expands upon the little-noticed point that Leonard and Goodman's (1940) formal calculus of individuals included property instances as parts along with spatial and temporal parts. A mereological version of bundle theory can also be found in the work of D.C. Williams (1953, 1986). (As Williams is not even minimally explicit about how a trope-theoretic mereological approach is to be formulated, he cannot be seen as venturing beyond more than a straightforward adoption of a nonphenomenalist version of Goodman's system.)

Unlike many advocates of bundle theory, I am not defending a conceptual analysis of the term "ordinary object," but rather a reductive theory of the

ontology of objects, especially ordinary objects, in the actual world and in worlds suitably like ours.[34] I am also perfectly happy to allow for other sorts of entities to exist in the world, such as spatiotemporal relations or points, so there is no need to construct everything in the world out of fusions of properties alone. [35] Finally, I prefer a relatively sparse approach to properties: not just any predicate defines a property, and there are no negative properties, merely negative predicates: to say an object includes $\sim F$ is for it to fail to include F in its fusion.[36] This should be enough of a sketch of my view for current purposes: there are many other features of my mereological theory of objects, but they are not directly relevant to what follows. Interested readers should consult Paul (2002), Paul (2004), and Paul (2006 forthcoming) for more details.

Now that we have a theory of objects in hand, we can return to the issue of how objects have their *de re* modal properties. The way my view reductively accommodates Sandy's essential and accidental properties is to reduce them to fusions of Sandy's basic nonmodal properties, such as her properties of *being blonde*, *being of origin O*[37], *having mass m*, etc., plus the relational properties of being *de re* represented in certain ways. This combines my mereological bundle theory with an ersatzist reductive account of how objects have their *de re* modal properties in a way that is perfectly consistent with the spirit of an ersatzist account of *de re* modality.

I'll start with a concrete example in order to focus the discussion. Recall Sandy: she has her origin essentially, so she could not have developed from a different zygote. Sandy is also a blonde, but she could have been a redhead. This supervenes on certain sorts of *de re* representational facts: if Sandy could not have had a different origin, then she is not *de re* represented without that origin (she has no counterparts with different origins), but if she could have been a redhead instead of a blonde then she is *de re* represented as having red hair (she has redheaded counterparts).

On my view, if Sandy is accidentally blonde, the sum that is Sandy includes the property of *being blonde* plus the monadic relational property of being *de re* represented as red-haired: in this way, she is *de re* represented as *being red-haired*. If Sandy has her origin O essentially she includes the property of *having origin O* and does not include any relational *de re* representational property of being represented with some other origin. This highlights an important supervenience principle that is part of my treatment of *de re* modal properties: *de re* modal properties supervene on fusions of nonmodal properties with relational properties of being *de re* represented in certain ways. (Call such relational properties *de re representational properties*.)

In particular, for any object O:[38]

O is *accidentally F* iff O includes F and includes the *de re* representational property of being represented as not-F.[39]

O is *essentially F* iff O includes F and lacks the *de re* representational property of being represented as not-F. (Recall that negative properties are really absences

of contrary properties. "Being essentially F" means one lacks the ability to be ∼F, so one's fusion lacks a certain *de re* representational property, i.e., *being represented as ∼F*.)

It is important to be clear about what these *de re* representational properties are. Call the sum of the basic nonmodal properties of an object its *core*. (Roughly, such basic nonmodals are physically fundamental property instances. For simplicity's sake, I'll assume that the core can be specified using somewhat less fundamental physical property instances like those of having color *c*, having origin *O*, having mass *m*, etc., and take "properties" to refer to property instances.) Call the properties included in the sum the *core properties*.[40] The *de re* representational properties are monadic relational properties that are ontologically generated by the core of the object standing in a modal *de re* represented-by relation to possibilia and can be included in the object: I define this as the *object's* being *de re* represented by these possibilia.[41] So Sandy is *de re* represented by some possibilia when her core stands in a modal *de re* represented-by relation to these possibilia *and* she includes her core plus the *de re* representational properties generated by her core's standing in these relations. The possibilia, as is usual for ersatz views, are ersatz individuals that have counterparts: thus, on my ersatzist view, a core of an actual object stands in *de re* represented-by relations to an ersatz actual individual *I* that can have other ersatz individuals as counterparts. In virtue of standing in such a *de re* represented-by relation, the core of the object generates a relational *de re* representational property.

So *de re* modal properties reductively supervene on core properties plus *de re* representational properties, and for an object to have a *de re* modal property, both the core properties and the core-generated *de re* representational properties that the *de re* modal property supervenes on must be included in the sum that is the object.[42]

This has a very important consequence: since *de re* modal properties supervene on core properties plus core-generated *de re* representational properties, *de re* modal properties are included in the sum that is the object. We can picture the underlying ontology of how Sandy is accidentally blonde using Figure 1 (for simplicity, I've assumed that the ersatz individual that *de re* represents Sandy has only one counterpart).

If an object's *de re* modal properties are included in what it is, when we use names and other referring expressions, they pick out individuals that are sums that include basic nonmodal properties and core-generated *de re* representational properties (and perhaps other relevant properties). In the usual case, they do not pick out sums that include the ersatz individuals that help to generate the *de re* representational properties: these are not parts of objects such as Sandy.

My account of how objects have their essential and accidental properties gives the deep essentialist everything she needs to respond to the skeptical objection. It is worth being explicit about how this response should go. First of all, in response to requirement (i) of the skeptical objection, I reject the
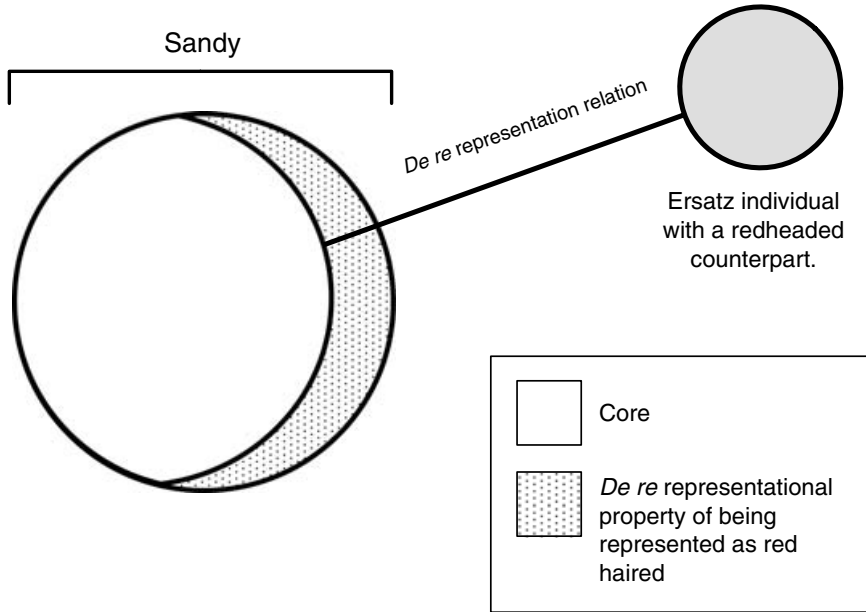
Figure 1. The Deep Essentialist Account of how Sandy is Accidentally Blonde.

need for any *ad hoc* or primitive privileging of ersatz similarities in order to restrict the counterparts of ersatz individuals. Ersatz individuals have a full range of counterparts, restricted only by the weak limitations (if any) imposed by ersatz similarity. However, analogously to shallow essentialism, different *de re* representation relations exist for the different ways counterparts are included in the structure that does the representing. (The analogy is incomplete because context does not play a role: there is a full range of *de re* representation relations corresponding to every way of carving up the structure of the ersatz individual and its counterparts.) An ersatz individual thus stands in many different *de re* representation relations to a core, since it has many counterparts, and so many different *de re* representation properties are generated by that core. However—and here is the key—since an object (such as Sandy) is carved at its qualitative joints, it need not include all of these core-generated *de re* representational properties just because it includes the core.

So: Sandy includes the *de re* representational properties of having redheaded counterparts, but need not include other *de re* representational properties (e.g., she does not include core-generated *de re* representational properties of having counterparts with different origins). Sandy is *de re* represented as being redheaded if she includes her core and the core-generated *de re* representational properties of having redheaded counterparts, and not otherwise. Sandy is accidentally blonde iff she includes her core and the relevant core-generated *de re* representational properties of having counterparts with differently colored hair, and not otherwise.

So it is not a context-dependent matter that the object that we are calling "Sandy" is accidentally blonde. Objects that include more core-generated *de re* representational properties will usually have more accidental properties. I will discuss this in more detail in §5.

My responses to requirements (ii) and (iii) in the skeptical objection should be clear from the foregoing discussion: objects have their *de re* modal properties by including core-generated properties of being *de re* represented, in the way I described above, such that these *de re* representational properties are ontologically generated by the object's core standing in *de re* represented-by relations to ersatz possibilia.[43] Thus, *de re* modality is reducible to the purely qualitative, in a perfectly acceptable ersatzist, counterpart-theoretic way.

To see where my view is located on the essentialist spectrum, it will be helpful to review David Lewis's essentialist treatments of *de re* modality and compare my view to his. Lewis's original counterpart theory was a deep essentialist, partly reductive account of how objects had their *de re* modal properties. On Lewis's original account, objects had their *de re* modal properties in virtue of having counterparts, and an object's counterparts were determined by similarities to the basic nonmodal properties of the object. The properties of the object's counterparts then determined which properties were essential and which were accidental to the object. However, since objects can be similar to many different individuals in many different ways, if the intuitive content of deep essentialism is to be preserved, not all similarities can be treated as equal. Unfortunately, as I mentioned in §1, the privileging of similarities can be given no further explanation, and thus seems arbitrary. Quinean skeptics reject Lewis's original counterpart theory for this reason.

In response to the problem of arbitrariness, Lewis jettisoned his original counterpart theory and adopted shallow essentialism, according to which claims about counterparts are relative to contexts of evaluation or description. Thus, Lewis's original reduction of how objects have and can be said to have their *de re* modal properties, spelled out in terms of constant *de re* representation, was replaced by a reduction in terms of inconstant *de re* representation.[44]

Let me emphasize a key move implicit in Lewis's approach that shows why one's theory of objects matters to one's account of essentialism and *de re* modality. What I take to be the core of an object—its fusion of basic nonmodal properties— is what Lewis takes to *be* the object. Lewis's mistake in both his original and his revised (genuine) counterpart theory is to overlook the existence of monadic *de re* representational properties, and thus to exclude *de re* modal properties from what an object is.

According to Lewis, if Sandy is possibly red-haired, this is because what Lewis takes to be Sandy (but what I take to be her core) stands in a counterpart relation to something that is red-haired. For Lewis, when an object stands in a counterpart relation to other objects, neither the crossworld counterpart relation nor the counterpart itself is included in what the object is, nor is any monadic relational property such as *being de re represented as F* included. Since for Lewis,
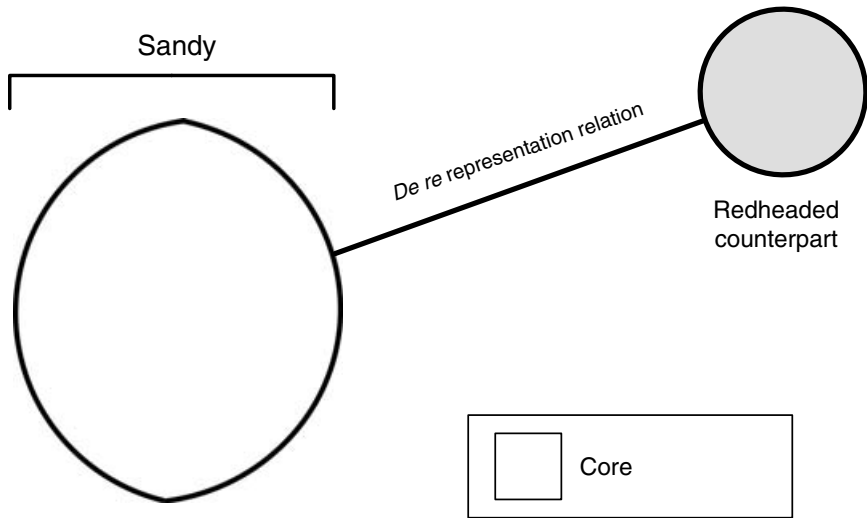
Figure 2. The Lewisian Account of how Sandy is Accidentally Blonde.

Sandy's *de re* modal properties reductively supervene on more than what Sandy is—they supervene on relational complexes that include Sandy as well as her counterparts—then whatever Sandy is, she is not something that includes her *de re* modal properties.[45] This is particularly clear when we recall that, despite his modal realism, Lewis insists that individuals such as Sandy are worldbound. If Sandy is worldbound, she cannot include her counterpart relations, since such relations are crossworld relations. Thus, Lewis's view implicitly *separates out* the *de re* modal properties from the rest of the object. The Lewisian approach is pictured in Figure 2.

In order to bring out the comparison between my view and the shallow essentialist even more explicitly, consider an ersatzist who follows a Lewisian shallow essentialist program. This sort of shallow essentialist interprets counterpart theory in terms of ersatz individuals, but in other important respects follows Lewis's lead as shown in Figure 3.

Lewis and his followers could accept that Sandy includes this-worldly relational properties such as modal *de re* representational properties generated by Sandy's core properties standing in *de re* representation relations to possibilia (which would keep Sandy worldbound), but they do not. For Lewis and his followers, the property of being possibly red-haired can be predicated *of* Sandy, but it is not constitutive of what Sandy *is*.

This view is extremely counterintuitive from the deep essentialist perspective. Such *de re* modal properties, supervening in part on similarity relations to counterparts, are like spatiotemporal relations and points in spacetime: they are not included in what we take an object to be. By keeping *de re* modal properties external to the objects that have them, Lewis alienates objects from their *de re*
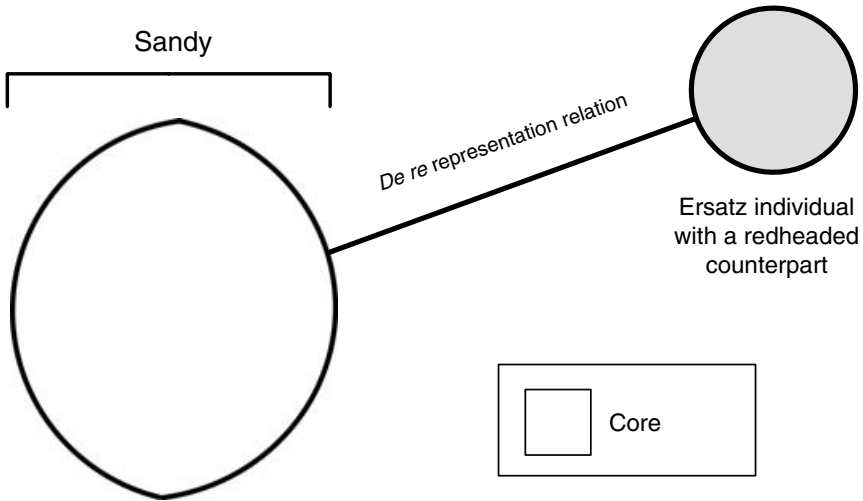
Figure 3. The Ersatzist Shallow Essentialist Account of how Sandy is Accidentally Blonde.

modal natures. Keeping *de re* modal properties external to objects makes it easy for Lewis (and his followers) to drop deep essentialism in favor of a shallow essentialism that takes truths about objects' natures to be dependent on how they are described or evaluated. Once we have made the false step of alienating objects from their modal properties, it is easy to continue down the dangerous path to shallow essentialism.

Taking *de re* modal properties to be partly external to the objects that have them is strange if we want to hold on to the intuitive idea that an object's *de re* modal properties capture its nature, or that *de re* modal properties "bear, in the metaphysically significant sense of the phrase, on what an object is." (Fine 1994, p. 2) For it does not seem right to say that something that is the essence of an object is partly external to the object: such things should be included in what the object is, like *being blonde* or *being female*. For the deep essentialist who takes the skeptical objection seriously, this must be true even while the modal character of the object is determined by objects outside of itself. Objects' natures are its potentialities, that is, an object's nature is determined by what it potentially can or cannot do (or can or cannot be), that is, determined by what it is (context-independently) *de re* represented as being or doing. But since its nature is part of what an object is, we need to include it in the sum that is the object.

I agree with the shallow essentialist that (ersatz) similarity is easy to get, and that we should not primitively restrict which counterparts an object (or an ersatz individual) has. But instead of making *de re* representation inconstant when faced with skeptical worries, we should pay more attention to the way objects are constructed and the way they have properties such as *de re* modal properties. It is not enough for the core of the object to stand in a *de re* represented-by relation

to a suitable individual to say that the object is accidentally F: the object must also include the core-generated property of *being de re represented as not-F* in its fusion.[46] However, if we can be sure that an F-object exists that includes the core-generated property of *being de re represented as* $\sim F$ in its fusion, we can endorse constancy: the fact that the object is accidentally F will not depend on a context of description. (Being sure that such an object exists is important: I shall devote the next section to this topic.)

Shallow essentialism makes objects' natures external to them and (at the very least) takes claims about natures to be dependent on contexts of evaluation, while my deep essentialism takes objects' natures and claims about them to be independent of context yet outward-pointing. The deep essentialist must somehow give an explanation of an object's nature that captures the way it is outward-pointing (i.e., hypothetical) while keeping it internal to the object: the way to capture both elements of an object's *de re* modal nature is to grant that certain properties included in what the object is are properties that are partly determined by external facts, i.e., by the ways the world might be.[47]

There is one final complication with this picture. I have been describing my deep essentialist, ersatzist treatment of counterpart theory as supervenient on ersatz similarity. This is because I am not a modal realist, so, strictly speaking, I cannot take counterparthood to supervene on similarity. Instead, just as any ersatzer who defends a similarity-based account must do, I must hold that counterparthood supervenes on some sort of qualitative relation of ersatz similarity (intuitively, this is a purely qualitative relation of represented-similarity). Lewis (1986, 238) and Sider (unpublished *a*) discuss this feature of the ersatzist ontology.

Presumably, as I assumed in earlier sections, since ersatz similarity is modeled on similarity, it is as ontologically cheap as real similarity. (It has to be, if ersatzers are to avoid Quinean worries about selectivity.) But how is ersatzist similarity to be fleshed out? Ersatzists have not yet developed an adequate response to this worry. (Sider unpublished *a* discusses the problem and some options for the ersatzist.) In any case, however ersatzism addresses the problem, my point still holds: the ersatzist deep essentialist can respond to the skeptical objection as well as the ersatzist shallow essentialist, and the realist deep essentialist can respond to the skeptical objection as well as the realist shallow essentialist.[48]

§5. **Modal Composition**

Having made it this far, you may be content with my answers to parts (ii) and (iii) of the skeptical objection, but feel that I have been glossing my reply to part (i). You are correct. I have not yet said enough about why my account should be thought to avoid *ad hoc* primitivism.

The place to locate the worry about *ad hoc* primitivism is in response to my assertion that there is no need to privilege certain *de re* representational properties

as eligible to be included in an object. The objection can be formulated in the following way: what determines whether an object includes the specific *de re* representational properties that it does? If the reply is that it is a primitive matter of eligibility, it might seem as though we are back where we started, or at least no farther along than Lewis's original counterpart theory. (This isn't quite right—we wouldn't be back where we started—I'll come back to this point later.) However, the answer does not require any special eligibility. The deep essentialist can reply without resorting to primitivism, but only because she has developed her view within the context of a clear theory of objects, and in particular, because she has developed her view in terms of mereological bundle theory.

The reply is straightforward: the deep essentialist can hold that for any class of a core C and some of the *de re* representational properties it generates, there is a sum of the members of that class. In other words, if the sort of composition between a core and the *de re* representational properties it generates is unrestricted, then there is no *ad hoc* primitive restriction on which objects exist. They all do. We have objects with different modal profiles because we have different objects that are proper parts of the sum of C and all the *de re* representational properties C generates. (Each object includes C but may include different *de re* representational properties.) If there is no primitive stipulation restricting which *de re* representational properties are parts of an object, deep essentialism does not fall victim to part (i) of the skeptical objection.

This is the short answer to the objection. But a longer answer will help us to see how the deep essentialist can accept that composition between a core and the *de re* representational properties it generates is unrestricted while preserving the natural idea that ordinary objects such as persons and cats have some properties essentially and other accidentally. The longer answer develops the worry about *ad hoc* primitivism in terms of whether a sum that is the object that we are talking or thinking about has the relevant *de re* representational properties as parts. This, in turn, can be divided into two questions: (1) a question about which sum we are referring to when we name an object and (2) a question about which sums exist.

In answer to (1), I take it that it is partly a contextual matter and partly a matter of which properties we definitionally associate with names (including descriptive names) of objects. (See my (2004) for discussion.) In answer to (2), we must determine whether (and if so, how much) mereological composition of C with the *de re* representational properties it generates is restricted. The deep essentialist can reply that this sort of composition is unrestricted, and thus that there is no *ad hoc* selection of certain *de re* representational properties to be summed with the core. Showing why the answer to (2) is plausible requires discussion.

Call the sort of composition described by (2) *modal* composition: it is a species of qualitative composition. Modal composition occurs when an object's core—a sum of material properties—is fused with (modal) *de re* representational

properties it has generated. A discussion of restrictions on modal composition puts us squarely in the familiar territory covered by extant discussions of whether the mereological relation of composition is restricted or unrestricted. Following van Inwagen (1990), the General Composition Question asks what mereological composition *is*, and the Special Composition Question asks about the circumstances in which composition occurs. (See van Inwagen (1990) and Markosian (1998) for discussion.) What I'll call the Modal General Composition Question asks what modal composition *is*, and what I'll call the Modal Special Composition Question asks about the circumstances in which composition of a core with some *de re* representational properties it generates occurs.

Most defenders of mereology take composition to be a primitive, unanalyzable relation, and I am no exception: just as with spatiotemporal composition, qualitative composition is a primitive, unanalyzable relation. This dodges both the General Composition Question and the Modal General Composition Question. But there is debate over Special Composition, i.e., whether composition is unrestricted or whether it is restricted, i.e., whether any class of the relevant sort of entities has a sum or whether only some classes are summed. (I am assuming that composition occurs, at least sometimes.) In the case of classes of things that could be spatiotemporal parts, commonsense intuition supports moderate composition, i.e., the view that not just any class is summed. However, there are many cases of possible spatiotemporal composition where our intuitions are silent or confused.

As there is no clear case for restricting spatiotemporal composition in a particular way, many avoid the problem of determining when summing occurs by holding that spatiotemporal composition is unrestricted, that is, any class of spatiotemporal objects is summed. Others hold that spatiotemporal composition must be restricted (there is no object that is the sum of my microwave oven with the top of Mt. Everest) but admit that they lack precise or comprehensive guidelines for the conditions under which spatiotemporal composition does or does not occur.

The intuitive case for whether there is restricted composition of properties is different from the spatiotemporal case. Although we might not be able to come up with necessary and sufficient conditions for when qualitative composition occurs, it is clear that it must be restricted, since absolutely unrestricted qualitative composition would imply that objects with incompatible properties and objects such as winged pigs or golden mountains were actual. A very plausible view is that qualitative composition is restricted in such a way so as to ensure that there are no sums of incompatible properties or horned horses and the like. Note that in answering the skeptical objection, the deep essentialist is only trying to determine whether *modal* composition is unrestricted, i.e., whether qualitative composition is unrestricted along the dimension of which *de re* representational properties are summed with the cores that generated them. (I am ignoring cases where the vagueness of qualitative composition piggybacks on the vagueness of spatiotemporal composition.)

If modal composition is entirely unrestricted, every possible sum of a core with *de re* representational properties it generates exists. Friends of unrestricted spatiotemporal composition will embrace this view since they think that in principle composition must always be as unlimited as possible, so they will argue that there is no ontological justification for limiting modal composition. Thus, qualitative composition is only minimally restricted, and there are many more objects than common sense would endorse, since there are many, many sums, and there are also many, many proper parts of these sums that are also objects.

The view that there exist lots of objects that have all of their core properties accidentally is no exception to the general rule that any sort of minimally restricted mereological composition generates many objects: if we have such objects, we also have lots of proper parts of those objects that are similar to them but do not have all their core properties accidentally. The friend of unrestricted modal composition defends this implication by arguing that most of these objects are regularly ignored and that our quantifiers describing what there is are implicitly restricted. The objects that do not have all their core properties accidentally will be sums of the core of the object with some but not all of the different properties of being *de re* represented in different ways in different possible worlds. Such sums are proper parts of the sum that consists of the core of the object and all of the different properties of being *de re* represented in different ways in different possible worlds.

Is the view of the deep essentialist who embraces unrestricted modal composition bizarre? It implies that there are many objects with the actual core parts (properties), say, of *being blonde* and *having origin O*, where these objects differ with respect to whether they are accidentally blonde or essentially blonde, whether they accidentally have *O* or essentially have *O*, and so on, for each core property. To be sure, in all or most nonphilosophical contexts we will refuse to assent to the existence of such objects, but according to the deep essentialist, they nonetheless exist. (The shallow essentialist who tries to make this point into an objection is on especially weak ground, since he already grants that there are as many modal profiles as there are contexts.)

My deep essentialist view is only bizarre to the extent that mereology and the fact that we are often ambiguous or indeterminate in our reference is bizarre, for it is the mereological ontology that creates new objects for every part of an object, and the ambiguity or indeterminacy of referring that allows us to forget that the world contains many more objects than we commonsensically want to grant. By better understanding mereology and the ways we refer to objects, we can see how to understand and discount the existence of these unwanted objects.

This problem of unwanted objects is an explicitly recognized and accepted consequence of any approach to mereology that takes proper parts of objects to be objects in their own right while allowing for more than a minimal amount of composition. It has been well-discussed with respect to the consequences of

popular interpretations of spatiotemporal mereology, where it has been dubbed "The Problem of the Many." (Unger 1980, Lewis 1999)

Consider a roughly cat-shaped cloud over Paris that occupies a vaguely specified spatiotemporal region. Call the cloud "Claude." For any boundary we can draw that defines Claude's edges, we can shift the boundary a tiny bit (say, by a water molecule or two) and have a new edge that defines where Claude ends and the rest of world begins. Each time we shift the boundary of what we take to be Claude, we pick out a slightly different sum of water molecules (we add or subtract a molecule or two). As Lewis and others have argued, this means there are many sums of water molecules that are equally good candidates to be called "Claude." (In fact, since we can shift the boundary infinitesimally small amounts to include or exclude smaller and smaller spatiotemporal parts of water molecules, there are more such sums than there are real numbers. Anyone who accepts classical mereology is thus committed to the existence of far, far more objects than common sense grants.) Each candidate sum occupies a slightly different spatiotemporal region that partially overlaps almost all of the other candidate regions, and independently of some way to highlight it, no candidate stands out as the sum that especially deserves to be called "Claude." It is important to note that although we may have many different objects, the differences are *partial* and *minimal*, i.e., there is much overlap.

One widely (but not universally) accepted treatment of this consequence of mereology is to grant that there exist many partly different but partly identical objects in a region, but to recognize that for the most part such objects are ignored or receive attention only when we must decide which object (or objects) are picked out (for example, by "that cat-shaped cloud over Paris" or "Claude"). Moreover, when we choose between candidate sums, since we are choosing between objects that overlap with respect to nearly all of their parts, strictly speaking, there are many objects, but as Lewis puts it, there are "almost one." (Lewis 1999)

We can think of the idea informally like this: imagine a person, Sandy, sitting in front of you in a chair. Mereology tells us that there are many spatiotemporal sums in the region in front of you, each sum minimally different from the others, and each sum including enough material to constitute a person. It makes perfect sense to grant that there are these different sums, since they differ in what they include, even if they are not *entirely* different due to overlapped parts. But just because there are many minimally different sums does not mean that we can say there are many different *persons* in front of you. We need more than a minimal difference in parts to say that we have different *persons*, even if a minimal difference in parts is all it takes to say that we have different *objects*. So mereology does not entail that we can say there are many persons in the chair. Instead, mereology entails that there are many candidates for the referent of "the person in front of you," or "Sandy," while the way we use language entails that we either refer indeterminately to many of those candidates when we use the name and (or) use context to help us to narrow down the field.

The situation is *exactly* the same with unrestricted modal composition, except that the different candidate sums occupy precisely the same spatiotemporal region instead of roughly the same spatiotemporal region (the different candidate sums occupy roughly different regions of "modal space" instead). Presumably, in the chair in front of me, there are many almost-identical sums of particles that are candidates for the name "Sandy." Likewise, there are many almost-identical sums of core properties with *de re* representational properties that are candidates for the name "Sandy." But this does not mean that in any acceptable context we will grant that there are many *people*, or many Sandys, in the region that these sums occupy. There is only one person, but there are many candidates. The skeptic who rejects modal composition simply because it implies the existence of many almost-identical sums must reject ordinary cases of spatiotemporal composition as well, since the reasoning is parallel. Few are willing to deny the existence of persons in order to solve the spatiotemporal version of the problem of the many. For the same reason, few should deny the existence of persons with essential and accidental properties.

If modal composition is unrestricted, there is no primitive privileging of certain properties or certain sums, and the deep essentialist can rebut part (i) of the skeptical objection.[49] There are many objects, it is true, but the deep essentialist can explain this in the usual pragmatic or semantic way, using reasoning that is accepted by most Quineans in regard to the parallel case of the Problem of the Many. Since Quineans tend to be extremely sanguine about the proliferation of objects generated by mereology, they have little or no grounds for rejecting the proliferation of objects endorsed by the deep essentialist. (They even tend to accept the view that spatiotemporal composition is entirely unlimited, thus allowing for many more objects than just those we get from the Problem of the Many, since for such Quineans there *is* an object that is the sum of my microwave and the top of Mt. Everest, and many more bizarre things.)

Note also that the proliferation of objects and modal profiles goes a long way to explaining the vagueness of our modal intuitions. (I discuss this in detail in my (2004).) So the deep essentialist can thoroughly answer the skeptical objection.

Now, my defense of the Problem of the Many notwithstanding, I admit that accepting the Many comes at a certain cost to common sense, both for Quineans and for deep essentialists. Quineans shouldn't mind, partly because they tend to grant unrestricted composition in other contexts, but also because they should not object to the possibility of having many modal profiles—since the Quinean grants that there are as many modal profiles as there are contexts of description or evaluation. There really isn't much left here for the Quinean to object to.

But some deep essentialists might feel aggrieved at the idea that there exist so many objects with so many different modal profiles, even if we usually ignore most of them. It would be nice if such a deep essentialist could rebut the skeptical objection while holding that modal composition is restricted in a moderate way such that there are only as many objects and modal profiles as she wants to

sanction (allowing, of course, for many borderline cases where there is indecision). Such a fan of moderate modal composition could allow enough composition to explain the seeming variability of our modal intuitions, or could defend a sparse view according to which there is just enough modal composition to allow for a few objects to have some properties accidentally. The right choice would depend on the account given of the circumstances under which modal composition occurs, and would require a careful balancing of considerations of ontological economy and the explanation of modal intuitions.

It would be nice to endorse such a view, but I'm not convinced that one should be willing to do it. I think the prospects for a more moderate sort of deep essentialism are unclear, and I do not think one should reject the version of deep essentialism I defended above simply because of the modal compositional version of the Problem of the Many.[50] However, because a moderate version of deep essentialism is attractive, it is worth exploring it in more detail. Some may think it worth the ontological expense.

If modal composition is moderate, then not every combination of a sum of core properties with the *de re* represented-by properties it generates exists. If Sandy is blonde, and there is no sum of her core properties with a *de re* representational property of having a different hair color, then she is essentially blonde. But if there is such a sum, then she is accidentally blonde. Having fewer sums reduces the number of objects in the world, and reduces the distribution of essential and accidental properties they have. This is a nice result, and one that many, especially those who think that spatiotemporal composition should be restricted, will find appealing. The issue is whether moderate modal composition violates the skeptic's prohibition against arbitrary or *ad hoc* primitivism.

Before we evaluate this issue further, it will be useful to compare the case of restricted spatiotemporal composition, since the issues at stake in a debate over moderate modal composition are familiar from discussions of moderate spatiotemporal composition. If primitively restricting spatiotemporal composition is *ad hoc* by the skeptic's lights, then primitively restricting modal composition will be as well. However, while some skeptics will think that moderate spatiotemporal composition is *ad hoc*, others may not agree.

Friends of unrestricted spatiotemporal composition argue that since we lack an acceptable account about how spatiotemporal composition could be restricted, there is no way to satisfy commonsense intuitions about just how or where to limit spatiotemporal composition. The trouble is that there are good intuitive reasons for thinking that spatiotemporal composition is moderate, but there is no generally accepted answer to the Special Composition Question for spatiotemporal composition.[51] Friends of unrestricted spatiotemporal composition conclude that the only metaphysically respectable move is to accept that there are no limitations. (For example, Lewis 1986, 211–213.)

In reply, friends of moderate spatiotemporal composition can point out that leaving spatiotemporal composition unrestricted violates at least as many intuitions as restricting spatiotemporal composition. Some argue that we can

simply hold that when composition occurs is brute or unanalyzable (Markosian 1998), and some argue for a particular answer at the cost of violating many of our common sense views about what objects exist (e.g., van Inwagen 1990 holds that some *x*s compose a *y* when the activity of the *x*s constitute a life).[52] But most simply take the issue of when spatiotemporal composition occurs to be an unresolved question: it is restricted somehow, but just how is yet to be settled. (I suspect that if no acceptable answer is forthcoming, Markosian's brutal approach may win the day.)

So the situation of the friend of moderate spatiotemporal composition is this: she may take it to be primitive and unanalyzable when spatiotemporal composition occurs, or she may accept some sort of extremely controversial account such as van Inwagen's. The friend of unrestricted spatiotemporal composition may reject the moderate's primitivist move as arbitrary and other moves (such as van Inwagen's) as implausible, but the implausibility of his own view makes his position just as uncomfortable.

How does moderate spatiotemporal composition look from the perspective of the contemporary Quinean described in §1? Rather good, all things considered. Here is the crucial detail: given the state of the debate, unless someone discovers a generally acceptable reductive account of how spatiotemporal composition is restricted, taking it to be a primitive matter about when moderate spatiotemporal composition occurs should not be objectionable in principle to such a Quinean. (Our Quinean might find other answers to the special spatiotemporal composition question more plausible, but this is different from outright rejection of the primitivism of the moderate view.) We can see this once we recall that primitivism *simpliciter* should not be rejected as *ad hoc* by the contemporary Quinean, since he recognizes that we are all primitivists about something or other—for example, many otherwise ontologically conservative philosophers accept primitive naturalness, primitive distinctions between certain classes, or primitive eligibility for referents. What the Quinean (who embraces the skeptical objection) rejects is *unmotivated* primitivism, i.e., primitivism defended in spite of a successful reduction to something more fundamental. But there is no generally successful reduction of the conditions under which spatiotemporal composition occurs (all of the answers, including the "always" answer, are intuitively unacceptable). There is no "natural explanation" or even moderately plausible reductive story of when spatiotemporal composition occurs. This means that given the current state of the debate, the primitivism of moderate spatiotemporal composition is not *ad hoc* even by the contemporary Quinean's lights.

What works for the friend of moderate spatiotemporal composition works for the friend of moderate modal composition. If it is not *ad hoc* to satisfy our common sense intuitions about spatiotemporal composition by primitively restricting it (since there is no reduction or alternative natural explanation on the cards), it is not *ad hoc* to satisfy our common sense intuitions about modal composition by primitively restricting it, since there is no reduction or alternative natural explanation on the cards.[53] (I am assuming that from the perspective

of the moderate that unrestricted composition, either spatiotemporal or modal, does not provide a natural explanation. Of course, if unrestricted composition is accepted then the skeptical objection has already been rebutted.)

This suggests that the deep essentialist who defends moderate composition is in a relatively good position vis à vis the contemporary Quinean. Not as good, perhaps, as the deep essentialist who endorses unrestricted modal composition, but significantly better than the substance essentialist or the original counterpart theorist, both of whom rely on unmotivated primitivism. So while I do not officially endorse moderate composition, I think it has enough going for it that it deserves further consideration. In any case, whether one prefers unrestricted modal composition with a dose of pragmatism or restricted modal composition with a leaner, meaner ontology, the skeptical objection has been dealt with. Deep essentialism is back in black.

Notes

1. I thank the participants of the 2006 Arizona Ontology Conference and John Divers for helpful discussion. I am indebted to Agustín Rayo for a long and interesting discussion about shallow essentialism, and am especially indebted to Ted Sider for comments on several drafts.
2. There is a distinction between an object's trivially essential properties and its "real" essential properties: an object's trivially essential properties are properties that have nothing to do with the nature of that particular object, but nevertheless are had by it in every possible world. Examples include the property of *being self-identical* or the property of *being either female or not female*. Since trivial essential properties have little or nothing to do with what an object is (in the metaphysically interesting sense of determining an object's nature), they are not truly essential properties. They might be better called *trivially necessary* properties and taken to be somehow primitively different from essential properties. (Here I am impressed by Kit Fine's (1994) point about the difference between essential properties and other sorts of necessary properties.)
3. After this point, I'll drop the "nontrivial" qualification for ease of exposition.
4. I argue in my (2004) that essentialists should defend a certain sort of semantic indeterminacy consistent with this view in order to explain the vagueness of some of our modal claims.
5. David Wiggins is the best known proponent of the view that ordinary objects are things that fall under sortal concepts. Wiggins (in his 2001 and elsewhere) combines an Aristotelian approach towards substance with the Kantian idea that our ability to track the persistence of objects through change requires substance in order to make sense of our ability to individuate objects and navigate the world. Although Wiggins tells us that we know objects have certain modal properties when we recognize that they fall under certain sortal concepts, this is not an explanation of how objects have their *de re* modal properties. It is certainly not sufficient to address the objections I discuss below.
6. Aristotle, *Categories*, sec. I[b] lines 4–5, & 28. (Trans., Ackrill, 1987.)

7. Hoffman and Rosenkrantz (1997) develop a contemporary notion of substance as independent.

8. There is a developing literature in visual psychology that suggests that the way we use sortal concepts is more complex than this breezy generalization suggests. E.g., see Xu (1997). I hope to discuss this in more detail in Paul (unpublished).

9. Of course, Quine himself was opposed to all sorts of modality, and would have objected to any metaphysical project that purported to explain modality in terms of possible worlds. The contemporary Quinean will usually accept some primitive *de dicto* modality and will engage in projects involving modal metaphysics.

10. Thus, an actualist could instead take the relation between an object and possible individuals that determines the object's modal properties to be based on crossworld identity relations instead of counterpart relations. The crossworld identity relations would be primitive relations somehow based on the sorts of crossworld identity relations that would exist between actual objects and otherworldly objects, had those otherworldly objects existed. Crossworld identity for the actualist is thus not *identity*: it is some other (ontologically basic) relation.

11. I'm indebted to Susanna Siegel for pressing me to address this objection.

12. I recapture some of the elements of this intuition in §3 by developing, as part of my reductive account of how objects have *de re* modal properties, the idea that *de re* modal properties must be internal to an object. For example, I hold that what a person *is*, is something that is *de re* represented in a certain way, and thus a person includes "outward pointing" *de re* representational properties.

13. Note that embracing the Leibnizian framework is independent of whether or not a full reduction of *de re* modality is accomplished: possible worlds or relations to possible individuals may still be taken to involve primitive modal notions. Sider (2003, 184) emphasizes this.

14. Another way to respond to the Objection is to argue that the best reductive explanation of how objects have their *de re* modal properties occurs in two steps: (1) we convert *de re* modal claims to *de dicto* modal claims, then (2) reduce *de dicto* modal claims to claims about possibilia. On this way of seeing the reduction, the Objection makes little sense, since there is no direct reduction of the *de re* properties of an object to relations to possibilia. (I am indebted to David Chalmers for suggesting this response.)

15. Why must *de re* facts about particular individuals must be reduced away while facts about particular properties (thought of as classes of objects, tropes, universals or what-have-you) are kept? While any reduction is attractive for reasons of parsimony and the arguments described in the text seem to support the idea that it is better to have a purely qualitative characterization of modality, more work needs to be done to sort out the motivation for the intuitive distinctions that are being defended here. (I am indebted to John Hawthorne for bringing this point to my attention.)

16. I'm indebted to Michael Rea for suggesting I consider this response.

17. Wiggins (1967, 1980, 2001) is one well-known proponent of this view.

18. For example, as Wiggins (1997, 2001) holds.

19. Bennett (2004), Sosa (1987) and Zimmerman (1995), among others, have pressed versions of this worry.

20. I am assuming that we must account for cases where the person and the hunk of tissue exist for exactly the same amount of time.

21. I develop these points in detail in my (2006, forthcoming).
22. In this paper I focus on addressing the skeptical objection. I address the puzzles of the ambiguity of our essentialist intuitions, material constitution and the cross-world paradoxes in Paul (2004), Paul (2006 forthcoming), and Paul (unpublished), respectively.
23. An antiessentialist shallow essentialist could insist on "speaking with the vulgar" at all times, and so deny that we can *ever* say, even in the strangest of contexts, that, e.g., an object is possibly a fried egg. Since I think we can perfectly well establish the relevant contexts (e.g., in the metaphysics seminar room), I find this maneuver unconvincing.
24. I will assume genuine temporal counterpart theory here.
25. From this point on, I will not distinguish between evaluative and antiessentialist interpretations of shallow views unless necessary.
26. The shallow persistence theorist can unify and solve a number of different onto-logical puzzles involving coincidence, the problem of the many, personal identity fission cases, and more. Sider argues that "[w]hen we consider these cases, our overwhelming feeling is surely that the answers to the questions depend on how we conceptualize the objects involved, that the world does not force single answers upon us." (2001, 207) I agree that there is semantic indeterminacy in the offing. But what sort of indeterminacy is controversial, since the deep (temporal) persistence theorist can give her own account of the semantic indeterminacy involved. In particular, I think many of the cases that Sider (2001, ch. 5) discusses, such as the case of the Ship of Theseus, the case of how two different establishments each laid claim to being the original Bookbinder's restaurant, or a case where a pile of trash undergoes partial replacement of refuse, can be better handled by postulating semantic indeterminacy with respect to which *objects* are referred to rather than semantic indeterminacy with respect to *how the same* object is temporally *de re* represented. This gives us the desired constant temporal *de re* representation: the different objects referred to might be different worms, or slightly different stages (stages that differ only with respect to some temporal representational properties). If I am right, the puzzlement engendered by Sider's paradoxical cases does not license the inference to any sort of shallow persistence. The same point holds with regard to puzzles about the variability of our modal intuitions. (In my (2004) I argue that the inconstancy of our modal intuitions can be explained by semantic indeterminacy with regard to the objects we pick out.)
27. For simplicity, I've ignored the possibility that objects might have some properties that are context-dependent, where such properties are *not* properties that define what an object is. If objects have such properties, they are not the relevant modal properties that are under discussion between the deep essentialist and the shallow essentialist. Thanks are due to Karen Bennett and Ted Sider for noting this point.
28. To some extent, we have empirical access to these persistence conditions, as Wiggins (2001) and Ayers (2005) argue. This is not to deny that significant epistemic indeterminacy about the precise details of objects' persistence conditions remains.
29. From now on, unless I say otherwise, I shall assume that "*de re* representation" refers to modal *de re* representation.
30. Other discussions of ersatzism can be found in, e.g., Plantinga (1974), Lewis (1986), Heller (1990), Divers (2002), Sider (2002) and Sider (2003).

31. Thus, one well-known ersatzist view I reject is Alvin Plantinga's. Plantinga's (1974) account of ersatz possibilia takes worlds to be maximal possible states of affairs, only one of which (the actual world) obtains. For Plantinga, to say that Socrates exists in a world W is to say that if W had been actual, Socrates would have existed, and Socrates is essentially human iff Socrates is human in every world in which he exists.

32. While I have not explicitly endorsed non-ersatzist ways of being actualist, if such ways are sufficiently reductive and can allow for objective *de re* predication, suitable modifications of my argument should be available.

33. I develop an earlier version of this theory of objects and their parts in my (2002), calling qualitative parts "logical parts." There I indicate that I prefer to hold that composition of property parts is restricted, but develop the account in terms of unrestricted property composition in order to keep the view as simple and broad as possible. I've borrowed heavily from my (2006 forthcoming) for the next few paragraphs on my mereological bundle theory: interested readers may wish to consult that paper for a more detailed treatment of my view.

34. It is unclear which ontology of objects is best supported by contemporary physics, in part because the ontology of the reigning view, quantum field theory (QFT), is so poorly understood. My view is well supported by classical field theory, or any theory that allows some of the building blocks to be properties (as QFT seems to allow).

35. Moreover, nothing I've said (yet) implies that qualitative parts must be qualitative properties, i.e., non-haecceitistic properties. While I will ultimately reject such properties, nothing about my treatment of objects as sums of qualitative parts requires such a rejection.

36. For simplicity, I've described sample properties in less-than-fundamental terms. I am assuming that, e.g., if Sandy has an instance of the property of *being blonde* then this instance reduces to some more complex conjunction of sparse fundamental properties.

37. On my view, Sandy includes the monadic relational property of *having origin O* in much the same way that she includes the monadic *de re* representational properties I describe below.

38. I am assuming that F is a nonmodal property and is not a *de re* representational property.

39. What if a property P is a single-case determinate? That is, P is a determinate property of the determinable Q and there are no other ways to instantiate Q except by instantiating P. It is not clear that such a property exists: determinables are usually instantiated by many different determinates (e.g., *color* has *redness*, *blueness*, *greenness* etc. as determinates). But if such a property does exist, how can an object be *de re* represented as $\sim P$? Must P always be had essentially?—Not necessarily. To be sure, a common way for an object O to be *de re* represented as $\sim F$ is to be *de re* represented as F^*, where having the determinate F^* is incompatible with having F. But another way for O to be *de re* represented as $\sim F$ is for O to be *de re* represented as lacking F, where there is no replacement property for F. I'm indebted to John Hawthorne for raising this question.

40. I'm going to ignore the fact that an object's sum may include more than just the core and *de re* representational properties in order to avoid introducing unnecessary complexity.

41. In other words, I stipulate that an object is *de re* represented as *F* in virtue of that object's including the *de re* representational properties generated by its core standing in a *de re* represented-by relation to an ersatz individual that has a counterpart that is *F*. (A modal realist could stipulate that an object is *de re* represented as *F* in virtue of that object's including *de re* representational properties generated by its core standing in a *de re* represented-by relation to a counterpart that is *F*.)

42. An alternative (actualist) view I find attractive that could also be used to solve the problems for essentialists is adverbialism about parthood, i.e., take parthood to be spatiotemporally and modally indexed. On this view, objects have their *de re* modal properties by being represented as having property parts indexed to worlds, so to say objects are sums of parts had essentially or accidentally is to say that objects can be represented as having property parts with respect to worlds.

43. There is a stipulative element here, as in more conventional Lewisian and ersatzist pictures, about what counts as *de re* representation of an object. I say that what counts as *de re* representation of an object is the *de re* representation of the core of the object by possibilia. Lewis and his followers in effect hold that *de re* representation of an object is the *de re* representation of the core of the object by possibilia, but for them, the core just is the object. Lewis (1986, 195-7), responding to objections from Kripke (1972), defends the right of the theorist of *de re* modality to rely on stipulative definitions of *de re* representation. Therefore, I take it that the skeptic who accepts shallow essentialism cannot object to this sort of stipulation.

44. I am not sure whether Lewis should be described as an evaluative shallow essentialist or as an antiessentialist shallow essentialist. Arguably, Lewis (1986) endorses evaluative shallow essentialism, but much of his earlier work seems to endorse antiessentialist shallow essentialism.

45. Presumably following Armstrong 1978, Lewis holds that such relational properties reduce to the relational complexes (the relata plus the relation). According to Lewis, relational properties are "*structured* properties: properties taken to have a quasi-syntactic structure whereby they are constructed from their constituents. The relational property [bearing-bent-at-to-t_1] has a dyadic relation as one of its constituents, and a suitable relatum as another." (Lewis 2002, p. 3)

46. Here I am emphasizing that for an object to be essentially *F* or accidentally *F* it must include the relevant *de re* representational properties. There might be some sort of "having" such that an object "has" a property *F* by being a proper part of a larger fusion that includes *F* or by standing in a relation to a *G*, but it is not the sort of having that is needed for the object to have a *de re* modal property.

47. The situation seems to be me to be parallel to cases of content externalism.

48. It's worth noting that I believe the ersatzist could make equally good use of some sort of purely qualitative ersatz crossworld identity relation instead of ersatz similarity, which means the deep essentialist might be able to dispense with counterpart theory. (First, crossworld identity for an actualist isn't identity, whatever it is. Second, it isn't crossworld identity but *ersatz* crossworld identity that we need, so why can't this relation, whatever it is, be based on a relation that is purely qualitative?) I hope to explore this point in more detail in Paul (unpublished).

49. To recap for the sake of clarity: on my view, whether an object is *de re* represented is absolute, not context dependent. There is a settled answer, once and for all, about

what is true concerning a certain object according to a world. I can endorse constancy because on my view the occurrence of *de re* representation alone is not enough for an object to have *de re* modal properties: for an object to be accidentally *F*, it must include *F* plus the property of being *de re* represented as not-*F*. We have objects with different modal profiles because we have different objects that are proper parts of a sum of core properties plus additional *de re* representational properties. (Each object includes a core but may include different *de re* representational properties.)

50. Especially because even if modal composition is restricted, unless it is so restricted that almost no sums exist or we endorse controversial views about parthood, some version of the Problem of the Many arises. (As with spatiotemporal composition: all we need is one normal-sized cloud to have many cloud-candidates.)
51. As van Inwagen (1990) shows, holding that relations such as contact, physical bonding or the like are sufficient for spatiotemporal composition fail to respect common sense views about what sums exist.
52. Few argue that taking spatiotemporal composition to be a primitive relation or our inability to satisfy common sense intuitions with respect to limits on spatiotemporal composition justifies the claim that *no* composition takes place. Those few who do argue this might feel the need to adopt variants of nihilism like those described in Rosen and Dorr (2003), van Inwagen (1990) and Unger (1979).
53. On the other hand, if the special composition question for spatiotemporal composition is adequately answered by discovering a reduction, e.g., that it occurs under when the activity of certain *x*s constitute a life or some other relation that the *x*s stand in, we may discover a corresponding acceptable reductive account of the conditions under which modal composition occurs.

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