Abstract: Rather infamously, Kit Fine provided a series of counter-examples which purport to show that attempts to understand essence in terms of metaphysical necessity are ‘fundamentally misguided’. Here, my aim is to put forward a new version of modalism that is, I argue, immune to Fine’s counter-examples. The core of this new modalist account is a sparseness restriction, such that an object’s essential properties are those sparse properties it has in every world in which it exists. After first motivating this sparseness restriction, I proceed to show how the resulting sparse modalism circumvents Fine’s original counter-examples. After dismissing a potential problem concerning the membership relation, I conclude that, as at least one form of modalism is viable, the project of understanding essence in terms of metaphysical necessity is not so fundamentally misguided after all.

The modal analysis of essence – ‘modalism’ for short – analyses or grounds the notion of essence in terms of metaphysical necessity, such that essentialist truths turn out to be merely special cases of modal truths. Modalism was once the dominant account of essence, being ‘so widespread that it would be pointless to give references’.1

Times have changed, however. Modalism has fallen out of favour, primarily due to an objection of Kit Fine’s that some properties satisfy the modalist definition but remain non-essential2 – i.e. satisfy the right but not the left-hand side of

\[
\text{M} \quad \text{A property } \Phi \text{ is essential to } x \text{ iff necessarily, if } x \text{ exists, then } x \text{ has } \Phi
\]

Offering five such properties, Fine concludes that the modal analysis of essence is so ‘fundamentally misguided,’ that ‘the notion of essence which is of central importance to the metaphysics of identity is not to be understood in modal terms or even to be regarded as extensionally equivalent to a modal notion’(p. 3). He then goes on to invert the analysis, treating essence as an un-analysable, fundamental notion, in terms of which metaphysical necessity is to be analysed.

The modest aim of this paper is to show that Fine has gone a step too far in completely rejecting the modal analysis: at least one modalist account is immune to Fine’s counter-examples (and others of similar type) and so is at minimum extensionally adequate. Should Fine wish to show that modalism is fundamentally mistaken, such that no modal understanding of essence can be given at all, he still has some work left to do. And, while this doesn’t do nearly enough to properly restore modalism to its former place in the sun, it is the first step.

With regards to handling Fine’s objection, there are two basic strategies. The first is to modify M by adding some further condition which, provided Fine’s counter-examples fail to satisfy it, ensures that neither side of the bi-conditional are true. To succeed, the restriction should not be ad hoc or question-begging, should block Fine’s counter-examples, and should not lead to any new counter-examples.3 Meanwhile, the second strategy is to bite the bullet and argue that Fine’s properties aren’t counter-examples – rather, they are genuine essential

2 K. Fine, ‘Essence and Modality’, Philosophical Perspectives, 8 (1994), pp. 1-16. Unless noted, all the following Fine references are to this paper.
properties. Success here requires soothing any initial intuitions regarding the apparent non-essentiality of Fine’s counter-examples. By necessity, this second strategy is bespoke, tailored to address the particular reasons why a proposed property seems non-essential, though it in fact is.

The response on offer here is a hybrid of these strategies. I argue (§1) that \( M \) should be modified by the addition of a sparseness condition, such that being a sparse property is a necessary (but not sufficient) condition for essentiality. This restriction, I contend, emerges from considerations about the metaphysical insignificance of abundant properties which are neutral regarding the success or failure of the modal analysis. As I go on to show (§2), the resulting sparse modalism is immune to Fine’s counter-examples: the problematic necessary-but-not-essential asymmetry Fine’s objection turns upon never crops up.

One potential fly in the ointment concerns the membership relation holding of \( \langle \text{Socrates}, \{ \text{Socrates} \} \rangle \). Properly handling this issue requires determining what the best view about the metaphysics of sets is, then seeing how it fits with sparse modalism – a monumental task. To salve any worries, I show (§3) how one plausible candidate position, the Platonic iterative conception, is congenial to sparse modalism. Here the second strategy kicks in, as I argue that the intuitions concerning Socrates’ non-essentially being a member of \( \{ \text{Socrates} \} \) stem from the priority thesis, a questionable metaphysical addition to the conception. Rejecting the priority thesis undercuts Fine’s objection, ensuring that the sparse modalist need not be troubled by the membership relation.

The end result is that, as at least one version of modalism is prima facie plausible despite Fine’s counter-examples, modalism ought to not be so casually dismissed after all.\(^4\)

With the plan now laid out, let us begin by introducing the sparseness restriction.

§1. Sparseness, Metaphysical Significance, & Modalism

There is a rather standard, Lewisian argument for accepting the sparse/abundant property distinction (where ‘property’ is here understood to cover both properties and relations). Assume that for any set of (actual or merely possible) objects, no matter how arbitrary the collection, there corresponds a property; one might do so on the grounds that we need a massive plurality of properties to play the role of semantic values in formal linguistics, or to act as the contents of mental states. So understood, this ‘immense abundance’ of properties ‘carves reality at the joints – and everywhere else as well’ – i.e. it gives us so many properties that they are unable to properly perform many of the central tasks for which properties are postulated in the first place (e.g. to fix qualitative similarly, track causal powers, etc.).\(^5\) Yet, if there was an elite minority of special properties, these special properties could perform the tasks the abundant rabble could not – the elite could fix qualitative similarity, track causal powers, etc.

But that’s not all! According to Lewis, the elite could be employed in analysing the laws of nature, causation, intrinsicality, and supervenience; are needed to account for Moorean facts of common sense, provide a minimal notion of physicalism, handle Kripke’s

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\(^4\) It is worth noting that \( M \) is an existence-dependent modalist definition; alternatives include identity-dependent (A property \( \Phi \) is an essential property of object \( x \) iff necessarily, if \( x \) is to be itself, then \( x \) has \( \Phi \)) and simple formulations (A property \( \Phi \) is an essential property of object \( x \) iff necessarily, \( x \) has \( \Phi \)). There are, I think, good reasons for preferring the existence-dependent formulation – the identity formulation collapses into the existence-dependent formulation, while the simple formulation entails that no contingent existent has any essential properties – however, I here employ the existence-dependent formulation because (i) it is the formulation most widely favoured by modalists; and (ii) as Fine’s existence objection (see §2.2 below) only applies to the existence-dependent formulation, by defending a version of it, I thereby treat all of Fine’s purported counter-examples. However, the sparse modalist account offered below can, mutatis mutandis, be incorporated into one of the other accounts if need be.

rule-following worries, and respond to Putman's objections to metaphysical realism; and, perhaps most importantly, are required to determine what, in the fundamental sense, objects are like—without the elite properties fixing the objective facts about the comparative characters of objects, we'd have to 'fall back into the unpalatable position that the only real structure of the universe is its cardinality'.

The picture that emerges accepts both the (potentially gruesomely gerrymandered) rabble of abundant properties—e.g. being such that Gore won a Nobel Prize, having a left ear or, if a dinner table, being wobbly—and the elite, sparse properties, which are, according to Lewis (pp. 60), intrinsic, highly specific, carve nature at the joints, and characterize things 'completely and without redundancy'. And, while there is plenty of room for disagreement about the exact metaphysical underpinnings for the distinction (e.g. 'abundant properties are sets while the elite properties are sparse universals' versus 'all properties are sets but there is a primitive naturalness distinction that applies only to the elite properties'), Lewis' laundry list of applications makes it clear that commitment to distinguishing sparse and abundant properties is vital to systematic philosophy.

Some have qualms about this picture. One specific point of contention is Lewis' identification of the sparse with the natural properties: naturalness is often accused of being spooky or mysterious, with sparseness guilty by association. However, the sparse/abundant distinction can be drawn using Non-Lewisian, 'vegetarian' alternatives, like Taylor's T-cosy predicates. This is important because it indicates that the notion of sparseness isn't itself spooky or mysterious. What might be spooky are some ways of distinguishing the sparse from the abundant. Coupled with the above list of applications, this gives us a good reason to accept the sparse/abundant distinction—one might go so far as to say that believing in sparse and abundant properties is an offer you can't refuse. As such, to those who won't accept the sparse properties, 'here we must say farewell…and carry on without them'.

Yet what does this have to do with essentialism? Prior to presenting his counter-examples to modalism, Fine (p. 2) rhetorically asks,

...one of the central concerns of metaphysics is with the identity of things, with what they are. But the metaphysician is not interested in every property of the objects under consideration. … What is it about a property which makes it bear, in the metaphysically significant sense of the phrase, on what an object is?

He immediately answers, 'It is in answer to this question that appeal is naturally made to the concept of essence. For what appears to distinguish the intended properties is that they are essential to their bearers' (ibid). So, not every property an object has is important to 'what it is', and what distinguishes those properties with requisite metaphysical import from their irrelevant cousins is their essentiality. It therefore seems fair to say that, according to Fine, a property's being essential is at least sufficient for its being metaphysically significant.

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7 As the sparse properties are in fact a proper subset of the abundant, it would be more precise to write 'merely abundant' instead of 'abundant'; however, for succinctness, I employ the latter throughout.


9 B. Taylor, 'On natural properties in metaphysics', Mind, 102 (1993), pp 81-100. The availability of Taylor's account is important not only for the reason stated above, but also because (i) it shows that something like the sparse/abundant distinction is amenable to property nominalists and internal (rather than metaphysical) realists; and (ii) it is one of the best philosophical puns ever made.

Now, given the sparse/abundant distinction, it seems that a *necessary* condition for metaphysical significance is sparseness – in other words, abundant properties cannot bear, in the metaphysically significant sense of the phrase, upon what an object is. Suppose that an abundant property $P$ is metaphysically significant to an actually existing object $o$, such that $P$ plays a part in determining what $o$ is. Because $P$ is metaphysically significant to $o$, any attempt to characterize the actual world without citing $P$ would not fully determine what $o$ is and would therefore be incomplete. As such, $P$ is required to characterise things completely and without redundancy. And, since the sparse properties are those properties which characterise things completely and without redundancy, $P$ must then be sparse. This, however, contradicts the initial assumption regarding $P$’s abundance. So either $P$ is not metaphysically significant or $P$ is a sparse property, which is logically equivalent to the claim that being sparse is a necessary condition for being metaphysically significant.

Linking this with Fine’s claim about the connection between essentiality and metaphysical significance draws out the connection between sparse properties and essentialism: if being essential is sufficient for being significant and no abundant property is significant, it follows that no abundant property is essential. Abundant properties lack the metaphysical gravitas to be essential. So we have a connection between sparseness and essentiality: only sparse properties are eligible for essentiality.

Importantly, this result emerges from considerations independent of any modal analysis of essentiality – even if Fine is correct, abundant properties are, by their nature, excluded from essentiality. However, with regards to the modal analysis, the above proves that $M$ is too simplistic, as it is compatible with essential, abundant properties. A suitable replacement, restricted so as to exclude such properties, is

\[ \text{SPM} \quad \text{A property } \Phi \text{ is essential to } x \text{ iff (i) necessarily, if } x \text{ exists, then } x \text{ has } \Phi; \text{ and (ii) } \Phi \text{ is a sparse property.} \]

Call the position characterized by SPM *sparse modalism*. The sparse modalist’s *credo* is that the essential properties of an object are those *sparse* properties the object has in every world in which it exists.

Sparse modalism has a lot going for it. First, the line of reasoning that brought us to sparse modalism made no appeal to the success or failure of the modal analysis itself. Instead, Fine’s link between metaphysical significance and essentiality, combined with Lewis’ distinction between sparse and abundant properties indicated that no abundant property could be essential. This independence from the modal analysis ensures that the addition of a sparseness criterion is not *ad hoc* or question begging.

Second, like standard modalism, sparse modalism analyses essence in modal terms. Unlike standard modalism, it doesn’t do so in modal terms *alone*: sparseness facts play an equally important role in determining what is essential to an object. Thus two essentialists could “agree on all of the modal facts but disagree on the essentialist facts by disagreeing about the sparseness extension. As Fine rightly points out (p. 7), such a disagreement would be impossible on the standard modalist account – but not for sparse modalism!

This allows us to quickly dismiss a potential objection to sparse modalism. According to Lewis, sparse properties occur only at the level of fundamental physics – they are the sorts of properties that the microphysical entities alone can possess. Consequently, macro-level objects have no sparse properties. Given sparse modalism, macro-objects have no essential properties either. Thus the objection: sparse modalism entails that Socrates’ essence – and those of all other macro-objects – is empty.

The reply is straightforward: sparse modalism is not tied to the Lewisian, *fundamental* conception of sparse properties, which is the source of the objection. For example, Schaffer offers the *scientific* conception, according to which the sparse properties are those properties
invoked in the total scientific understanding of the world, regardless of level of occurrence.\footnote{J. Schaffer, ‘Two Conceptions of Sparse Properties’, Pacific Philosophical Quarterly, 85 (2004), pp. 92-102.} Dumping the fundamental for the scientific conception ensures that macro-objects can have sparse – and therefore essential – properties after all.

The mere availability of conceptions like Schaffer’s scientific conception undercuts the objection: sparse modalism does not entail that Socrates’ essence is empty. This is because sparse modalism does not actually fix the sparse or modal facts; instead, it merely generates essentialist results from a sparseness conception and modal facts pairing. In essence, sparse modalism is a general account of essence, a framework, compatible with a whole range of essentialist positions – austere, micro-only essentialists, along with their more liberal counterparts, can all be sparse modalists. So while certain conceptions of sparseness entail that Socrates lacks essential properties, sparse modalism itself doesn’t do so. That’s enough to block the objection. And, while sparse modalists must eventually settle on a particular sparseness conception, for our purposes, the matter can be left open: Fine’s counter-example properties – the heart of the supposed fundamental failure of any modal analysis – aren’t the sorts of properties whose placement, given the sparse/abundant distinction, will be disputed. Regardless of which conception one adopts, Fine’s properties are hardly borderline cases.

This brings us to the third and most important point in favour of sparse modalism: it is immune to Fine’s counter-examples to the modal analysis.

§2. SPM at work: dismissing Fine’s counter-examples

In this section, I demonstrate how Fine’s five counter-examples to modalism – being such that there are infinitely many prime numbers, being such that the Eiffel Tower essentially is a tower, existing, being distinct from the Eiffel Tower, and being a member of [Socrates] – each fail to satisfy the conditions specified in SPM. The upshot is that these properties are not counter-examples to sparse modalism.

Necessity- & essence-facts as properties

The first two counter-examples, being such that there are infinitely many prime numbers and being such that the Eiffel Tower essentially is a tower, can be treated as a pair, since both concern necessity facts re-cast as properties. For any necessary fact \( N \), necessarily, if Socrates exists then he is such that \( N \) obtains. Further, because, according to the modal analysis, essence facts are necessary conditionals (i.e. the Eiffel tower’s essentially being a tower amounts to it being necessarily true that if the Eiffel tower exists, then it is a tower), for any essence fact \( E \), necessarily if Socrates exists then he is such that \( E \) obtains. Given \( M \), it follows that Socrates essentially has \( N \) and \( E \). However, says Fine, it simply isn’t the case that Socrates essentially is such that there are infinitely many prime numbers. And, since the process used for the second property iterates (e.g. necessarily, if the Eiffel Tower exists, it is such that necessarily, if Socrates exists, he is such that necessarily, if the Eiffel tower exists it is a tower), Fine quips (p. 3), ‘O happy metaphysician! For in discovering the nature of but one thing, he thereby discovers the nature of all things’.

Thankfully, such properties are paradigmatically abundant (compare being such that Kit Fine actually wrote an article titled ‘Essence and modality’: everything necessarily has this property, but nothing is genuinely characterized by it). As such, these properties fail to satisfy SPM’s sparseness condition. Consequently, sparse modalism is immune to Fine’s first two counter-examples: while it is (perhaps) true that the set of prime numbers essentially has an infinite number of members and that the Eiffel tower essentially is a tower, none of this has anything to do with Socrates’ essence, just like the sparse modal analysis says.

Existence
The third counter-example concerns existence. It is trivially true that, necessarily, for any object \( x \), if \( x \) exists, then \( x \) exists. Given \( M \), it therefore follows that existence is essential to every object. According to Fine (p. 5), this is mistaken: ‘Consider Socrates again: it is necessarily the case that he exists if he exists. But we do not want to say that he essentially exists’.

Early in his paper, Fine (p. 2) introduces the notion of ‘essential beings’, entities whose essence includes their existence; God might be one such entity. Contrasted with these special beings are the mundane, non-essential beings, whose essences don’t include their existence; Socrates is one of these. The problem is that the modal analysis makes all entities ‘essential beings’ – in the eyes of the modalist, there is no difference between God and Socrates (concerning essential existence, at least). As such, the modal analysis incorrectly entails that Socrates is an essential being – i.e., that he essentially exists.

Before directly addressing the counter-example, we should note that the special-mundane object distinction can be drawn without any talk of essence, provided we distinguish between those objects that necessarily versus merely contingently exist: ‘necessary beings’ possess the special, modal property of necessary existence (i.e. existing in every possible world), while mundane objects don’t. This seems to pick-out the intuitive difference between God and Socrates perfectly well. Further, there is no prima facie reason for thinking that only special things essentially exist; extending essential existence to everything isn’t going to force us into accepting the existence of Gaunilo’s Island or anything of the sort. It just means that, necessarily, everything exists if it exists, a banality of the highest order. These two points seem to take the wind out of Fine’s sails: if we can distinguish the supposed special entities (God, the number 2) from the mundane (Socrates, Fine), without appeal to ‘essential’ versus ‘non-essential’ beings, and accepting that everything essentially exists just amounts asserting a banality, what’s wrong with saying that Socrates essentially exists?

Yet let us set the above aside and grant that there is something fishy about saying Socrates essentially exists. The modalist can quickly reply that, if, as is typically thought, existence is not a property, it cannot be a counter-example: after all, anything that isn’t a property obviously cannot be an essential property. In short then, no property, no problem.

Again, however, let’s give Fine a fighting chance. Assuming that, contra tradition, existence is a property, SPM’s modal condition is satisfied for Socrates (indeed, for all objects). But what of the sparseness condition? Is existence a sparse property?

This seems to depend upon whether there are (in the relevant sense) non-existent objects. If there are none, then, as any property that everything has cannot ‘carve nature at the joints’ in any relevant sense, existence is clearly not a sparse property. Consequently, existence would not satisfy the sparseness condition, and would not be a counter-example to sparse modalism. However, if there are non-existent objects, we must then determine whether the divide is necessary – i.e., whether ‘once an existent, always an existent’. If non-existents are necessarily so, the resulting view is a kind of neo-Meinongianism that, as Sider notes, is best understood as postulating a sparse existence property that carves nature at the ‘existential joints’, clearly marking off Socrates and the other existents from their non-existent cousins. So, here again, existence wouldn’t be a counter-example, as it’s being essential to Socrates fits his falling on the ‘existent’ side of the necessary divide. On the other hand, should non-existents not necessarily be so, then actual non-existents could exist (and, presumably, vice versa). A pressing question for this view is whether non-existing objects have properties at worlds where they don’t exist – i.e. does my actually non-existent sister have any properties in the actual world? If she and her ilk can possess properties at worlds where they don’t exist, then we can drop the existence condition from SPM to get

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12 Note that, as mentioned in fn4 above, this counter-example only applies to existent-dependent formulations of the modalist principle, of which \( M \) and SPM are instances.

SPEM  A property \( \Phi \) is essential to \( x \) iff (i) necessarily, \( x \) has \( \Phi \); and (ii) \( \Phi \) is a sparse property.\(^{14}\)

Of course, according to SPEM, existence isn’t an essential property of Socrates: in any world where he is a non-existent, he lacks existence, meaning it fails to satisfy clause (i). So, again, no problem! Meanwhile, if non-existent entities cannot have properties at worlds where they are non-existent, then existence isn’t a sparse property: existence would then trivially satisfy SM for all objects, and, as before, any property that everything has doesn’t carve nature at the joints in any relevant sense. In the end, it seems existence isn’t a problem here either.\(^{15}\)

To sum up: first, it is fundamentally unclear why the modalist should even treat existence as genuinely problematic in the first place, as Fine’s underlying argument seems to rely upon the dubious essential versus non-essential being distinction. Further, as it is standardly understood, existence isn’t a property, let alone an essential one. So here again, it seems the objection is undercut. Setting these two points aside, unless we go in for non-existent entities, existence is an abundant property. Meanwhile, if we accept non-existent entities, whether existence is essential depends on our metaphysical story and, in the cases where it does prove to be sparse, having it be essential to entities like Socrates provides a useful means of distinguishing the existents from the non-existents. For all of these reasons, it seems existence is not a counter-example to sparse modalism.

**Distinct From the Eiffel Tower**

Fine’s fourth counter-example concerns the distinctness of Socrates and the Eiffel Tower. Granting that Socrates and the Eiffel Tower are actually distinct, the necessity of distinctness entails that they are necessarily so. As such, according to M, Socrates essentially is distinct from the Eiffel Tower. Yet, according to Fine (p. 4), ‘it is not essential to Socrates that he be distinct from the Tower; for there is nothing in his nature which connects him in any special way to it’.

As should be familiar, in order for this to still be a counter-example to SPM, we must determine whether **being distinct from the Eiffel Tower** is a sparse property. To see why it isn’t, note that it is a relational property, where such properties are formed by taking a relation – in this case, the **distinct from** relation – and filling in one of the two relational ‘gaps’ with an object (the Eiffel Tower). Since the underlying relation does the real metaphysical work, relational properties are abundant: they are unnecessary to ‘characterise the world completely and without redundancy’.

Support for this point can be found in Ramsey’s argument that complex properties lead to an ‘incomprehensible trinity of facts as senseless as that of theology’.\(^{16}\) Suppose that there are two particulars, \( a \) and \( b \), a relation \( R \), such that \( a \) bears \( R \) to \( b \), and two relational properties, \( xRb \) and \( aRy \), each of which apply to the appropriate object. Given this assortment, there exist three facts: \([a, xRb] \), \([aRy, b] \), and \([a, R, b] \). Assuming that facts are structured entities, composed (in some sense) by their constituents, because these three have different constituents, they must then be distinct. However, these apparently three distinct facts are merely different ways of expressing the same fact – namely that \( a \) has \( R \) to \( b \)’ (ibid). Hence the incomprehensible trinity: three facts that must be distinct yet which are identical.

To avoid the three-who-are-one, Ramsey suggested a wholesale rejection of complex (relational) properties. If modalists follow Ramsey, then the counter-example is blocked – as before, no property, no problem. Yet Ramsey’s strong conclusion is controversial, as many

\(^{14}\) Zalta (p. 679ff) offers a relatively similar, concreteness-dependent proposal for non-abstract objects.

\(^{15}\) It is worth pointing out that such a picture is incredibly strange, entailing that non-existent objects fail even to have properties like being self-identical, being non-existent, and even being a possible existent.

metaphysicains are not willing to completely reject complex properties. A sensible compromise is to classify complex properties – like the relational one involved in the counter-example – as abundant abstractions from sparse, relational facts. This lets us have relational properties (understood as propositional functions, say) without forcing us to dispute Ramsey’s claim that only the relational fact carves nature at its joints. And, because relational properties are abundant, they fail to satisfy the sparseness condition of SPM. So, if the Ramseyan-conclusion is correct and there are no complex properties, then is distinct from the Eiffel Tower cannot be essential to Socrates. Meanwhile, if the more moderate conclusion is correct and there are complex properties but they are abundant, the property remains non-essential. Either way, sparse modalism is immune to the counter-example.

A potential complication, however, concerns cases where a relational property is abundant and non-essential but the underlying relation is sparse and essential. Suppose that greater than is a sparse relation. Given the above, we know that being greater than 5 is abundant and therefore that nothing essentially has it. Even so, it is plausible that 9 essentially bears the greater than relation to 5 – i.e. 9 essentially is greater than 5, even though being greater than 5 is not an essential property of 9’s.

Returning to the present case, it might be that distinct from is a sparse relation that Socrates necessarily bears to the Eiffel Tower. If so, ‘Socrates essentially is distinct from the Eiffel Tower’ would be true, read as expressing a relation rather than a relational property. Fine could then still object that nothing in Socrates’ essence ties him in any way to the Tower. What then should the sparse modalist say about the distinct from relation – does it satisfy the conditions for being an essential relation of Socrates?

Answering this question is difficult because, as the discussion has only ever focused upon essential properties, there is nothing concerning analysing the essentiality of relations in the modalist literature. So, to evaluate the relational version of the counter-example, we must first determine what the sparse modalist says about essential relations.

Let us begin by attempting to formulate a modalist definition for essential relations. A first stab is:

\[ R \quad \text{An object } x \text{ essentially stands in relation } \Psi \text{ iff necessarily, if } x \text{ exists, then } x \text{ stands in relation } \Psi \text{ to some } y. \]

The bound existential quantifier in the right-hand consequent allows one relatum to vary across possible worlds, thereby accommodating generic essential relations: e.g. Don Juan is

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18 This is related to, though distinct from, Hawthorne’s observation that for any natural relation \( R \), there is a monadic property bearing \( R \) to something (the ‘existential derivative of the relation’) which may not be quite as natural, but is still ‘pretty natural’; see J. Hawthorne, ‘Intrinsic Properties and Natural Relations’, *Philosophy and Phenomenological Research*, 63 (2001), pp. 399-403, at p. 399.

19 A related issue I will here not touch upon concerns whether asymmetric relations are ‘neutral’ or not – i.e., whether greater than and lesser than are, at bottom, the same relation. See e.g. K. Fine, ‘Neutral Relations’, *Philosophical Review*, 109 (2000), pp. 1-33 and F. MacBride, ‘Neutral Relations Revisited’, *Dialectica*, 61 (2007), pp. 25–56 for a further discussion.

20 As written, this principle accounts only for binary relations, but it can be extended in the obvious manner for relations with more places. Similarly, the quantifier can be replaced by a plural quantifier with no significant changes.
essentially a lover but lacks an essential beloved, such that he essentially bears the *loving* relation, though not to any particular thing.

For all its merits, \( \mathbf{R} \) is fundamentally flawed. The left-hand side asserts that a relation \( \Psi \) is essential to an object \( x \) which, read literally, amounts to the claim that an individual object stands in a binary relation (essentially or otherwise) *alone*. However, binary relations hold between pairs of objects, not of a single object alone: it is ungrammatical to simply say ‘9 is greater than’. Something is needed to complete the sentence.\(^{21}\) This point can be obfuscated by certain apparently grammatical statements; for example, we might say, ‘Don Juan loves,’ and think that we have thereby asserted something about Don Juan alone – namely, that he bears the *loves* relation – but there is a ‘gap’ in the relation and until it’s filled, we’ve not formulated a complete sentence.\(^{22}\) The easiest way to fill the gap is to plug in a quantifier (literally filling the gap with ‘*something*’), thereby giving us the grammatical and complete sentence, ‘Don Juan loves *something*.’ Now, this sentence can be understood as ascribing a relational property (loves something) to Don Juan or a relation (loves) to the ordered pair \(<\text{Don Juan}, \text{some } y>\), but it cannot be understood as ascribing to Don Juan *alone* a relation – this would lead us right back into nonsense. For this reason, \( \mathbf{R} \) is not a good analysis of essential relations.

The closest one can come to asserting that an object essentially bears a relation is to say either that the object essentially bears a relational property constructed from that relation or that an ordered \( n \)-tuple which includes the object essentially instantiates the relation. One might then be tempted to understand essential relations in terms of relational properties (e.g. 9’s essentially being greater than 5 is best understood as 9 essentially bearing *being greater than* 5) but this won’t do as the abundant nature of relational properties excludes them from essentiality. Consequently, provided they want to allow for essential relations, modalists must understand expressions of an object’s essentially bearing a relation as involving ordered \( n \)-tuples bearing the relation – e.g., ‘9 essentially is greater than 5’ is true because the *greater than* relation holds for the ordered pair \(<9, 5>\) in every world in which 9 exists. Incorporating the requisite sparseness restriction, we get

\[
\text{SRM} \quad \text{Object } x \text{ essentially bears relation } \Psi \text{ to } y \text{ iff (i) necessarily, if } x \text{ exists, then } \Psi \text{ holds of the ordered pair } <x, y> \text{ and (ii) } \Psi \text{ is a sparse relation.}\(^{23}\)
\]

Treating the ‘\( y \)’ as a quantifier phrase, \( \text{SRM} \) can capture generic essential relations (e.g. Don Juan’s essentially loving of no particular beloved), while replacing it with a name captures particular essential relations (e.g. Socrates’ essentially originating from these gametes). Further, \( \text{SRM} \) accounts for asymmetries in the essentiality of a relation via modal variation: assuming origin essentialism, it is essential to Socrates that he originates from gametes \( g \), but not essential to \( g \) that Socrates originates from them. According to \( \text{SRM} \), the former is true because, in every world where Socrates exists, the *originates from* relation holds of \(<\text{Socrates, gametes}>\). Meanwhile, the latter is true because there are some worlds where the gametes exist but the *is the origin of* relation doesn’t hold of \(<\text{gametes, Socrates}>\) – e.g. any gamete-inhabited worlds where Socrates doesn’t exist. This makes \( \text{SRM} \) a rather attractive way to understand essential relations in sparse modal terms.

Having now secured an analysis of essential relations, we can return to task at hand, determining whether the *distinct from* relation satisfies \( \text{SRM} \). There are two reasons for thinking it does not. First, the relation fails to satisfy the modal criterion, as there are worlds

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\(^{21}\) One might think that reflexive relations raise a problem here – don’t I *alone* bear the identity relation to myself? However, even in these cases, the relation holds of an ordered pair consisting of the same object appearing twice: as I bear the identity relation to myself, the relation holds of the ordered pair \(<\text{me, me}>\).

\(^{22}\) The argument is here phrased in terms of sentences, though it could be re-formulated using propositions.

\(^{23}\) Again, this can be modified in the obvious manner for relations requiring more places.
where Socrates exists and the relation doesn’t hold of <Socrates, Eiffel Tower> – e.g.- in all worlds where Socrates exists and the Tower doesn’t. Note that this doesn’t undercut the necessity of identity (or distinctness) because, as Kripke (p. 137) points out, we can simply understand the necessity weakly, holding in every world where both objects exist.\textsuperscript{24} Second, the relation also fails to satisfy the sparseness criterion. This is because \textit{distinct from} is an internal relation and, since the holding of an internal relation is entailed by the mere existence of the \textit{relata}, we can provide a complete description of the world without mentioning them.\textsuperscript{25} As such, all internal relations – \textit{distinct from} included – are abundant.

So Fine’s fourth counter-example can also be dismissed. Read as involving the relational property \textit{being distinct from the Eiffel Tower}, the abundant nature of the relational property prevents it from being a counter-example to sparse modalism. Meanwhile, read as a claim about Socrates’ bearing the \textit{is distinct from} relation to the Eiffel Tower, both the modal and sparseness criteria of \textit{SRM} fail to be satisfied. Either way, there really is nothing in Socrates’ nature which connects him to Eiffel Tower according to sparse modalism.\textsuperscript{26}

\textit{Membership}

Given that, necessarily, if Socrates exists, he is a member of \{Socrates\}, \textit{M} entails that Socrates essentially is a member of \{Socrates\}. ‘But,’ asserts Fine (p. 4),

\begin{quote}
intuitively, this is not so. It is no part of the essence of Socrates to belong to the singleton. Strange as the literature on personal identity may be, it has never been suggested that in order to understand the nature of a person one must know to which sets he belongs. There is nothing in the nature of a person, if I may put it this way, which demands that he belongs to this or that set or which even demands that there be any sets.
\end{quote}

The previous arguments apply here: \textit{being a member of \{Socrates\}} is a relational, and hence abundant, property, so it does not satisfy the sparseness condition of \textit{SPM}. Therefore it is not a counter-example to sparse modalism. And once the property is dismissed, all five of Fine’s counter-example properties are neutralised!

\begin{quote}
…of course, as in the previous case, there is a relational reading of the counter-example, such that, even if the relational property fails to satisfy \textit{SPM}, the underlying membership relation might satisfy \textit{SRM}. This would enable Fine to effectively repeat his objection and leave sparse modalism in the lurch. So, to complete the vindication of the sparse modal analysis of essence, something must be said about the membership relation.
\end{quote}

\textbf{§3. Socrates, \{Socrates\}, & Membership}

As the earlier discussion concerning the relation between sparseness, metaphysical significance, and essentiality hopefully made clear, essentialist theorizing does not occur in a theoretical vacuum: the position one takes regarding the nature and extension of properties directly impacts your essentialist story, determining (at least in part) what is and is not essential. Similarly, the position one takes concerning the metaphysics of sets will go a long way towards determining whether the membership relation is or is not a problem for sparse modalism: different views about sets entail different results regarding the membership relation, only some of which are genuinely problematic. For example, given strict nominalism


\textsuperscript{26}There is a further argument against the relational property: according to Armstrong, impure predicates never pick out genuine universals (World pp. 85-6). And since the predicate ‘being distinct from the Eiffel Tower’ is impure, it follows that \textit{being distinct from the Eiffel Tower} is not a property. Since this argument depends upon Armstrong’s idiosyncratic views about the nature of universals, I do not here rely upon it.
or fictionalism about sets, the membership relation fails to satisfy SRM – if there are no (real) sets, then Socrates is not related to them. So evaluating the success or failure of sparse modalism in the face of the membership relation requires surveying the possibilities concerning the metaphysics of sets, deciding which view is best, and only then seeing how the issue plays out.

This is too grand an enterprise for our present investigation. What I propose to do instead is show how one widely accepted theory – the Platonic iterative conception – is congenial to sparse modalism. This is, I hope, enough to demonstrate that the membership relation is not as threatening as it might first appear.

*The (Platonic) Iterative Conception*

The core idea of the iterative conception is that sets are formed in progressive stages. We begin the iterative process with some prior, given objects (the *ur*-elements). Taking these, we then build all the sets we can, giving us the stage-0 sets; if we begin without any ur-elements, the result is the empty set. We next take the original individuals along with the stage-0 sets and build all the sets we can from the combination of these. This gives us the stage-1 sets. Then, we take the original individuals along with the sets formed in the previous two stages and build all the sets we can from these, giving us the stage-2 sets. We then keep repeating this process through stage-3, -4, -5, etc.

Central to the conception are the *temporal metaphor*, which states that elements *come before or exist prior to* the sets they are members of, and the *building metaphor*, which states that sets are *built from or constructed out of* their members. This pair serves to elucidate the hierarchical structure of the iterative conception – in fact, the previous paragraph’s informal gloss relied upon them. Whether we take these to be merely metaphors or not depends upon whether we accept the Platonic or Constructivist versions of the iterative conception.

According to Constructivism, the metaphors are literally true: sets really are built (e.g. via conceptual construction) by collecting together the available entities, where an entity is ‘available’ if it exists prior to the set. So, on the Constructivist account, Socrates has literal, temporal priority to {Socrates}, and {Socrates} really is built from Socrates. This view is congenial to sparse modalism – there are possible worlds where Socrates exists and the construction of {Socrates} is never undertaken, thereby ensuring that membership does not hold of <Socrates, {Socrates}> – but faces rather significant set-theoretic problems. As such, it is a bad version of the iterative conception.

According to the Platonic iterative conception, meanwhile, talk of ‘building’ and ‘priority’ are merely metaphors for the atemporal and necessary iterative process, and the hierarchical picture it brings about. It isn’t as if the ur-elements exist prior in time, sitting around like so much unused lumber; rather, once the element exists, so too do all the sets that can be formed from it – i.e. as soon as Socrates exists, so too does {Socrates}, {Socrates, Socrates}, etc. (And, of course, given Socrates’ existence, we also get all the sets that have only {Socrates} as a member, that have only Socrates and {Socrates} as their members, that have as members those sets that can be built from these (e.g. {{Socrates}}, {Socrates, {Socrates}}, and {{{Socrates}}}, {{{{Socrates}}}}), and so on).

A consequence of the Platonic iterative conception is that, when it comes to Socrates bearing the membership relation to {Socrates}, SRM’s modal clause is satisfied. Further, because sets are taken to be *sui generis* entities of which membership is the primary characterizing relation, membership seems to be a sparse relation.27 So given the Platonic iterative conception, the right-hand side of SRM is satisfied: in every world in which Socrates exists, the sparse membership relation holds of the ordered pair <Socrates, {Socrates}>. Hence the sparse modalist must concede that her analysis, coupled with the Platonic iterative conception, entails that Socrates essentially bears the membership relation to {Socrates}.

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27 Given how many there are, it seems sets are *sui generis* entities as well.
At this point, Fine would likely retort,

although it is plausible to suppose that the singleton essentially contains the man, it is not plausible to suppose that the man essentially belongs to the singleton … there is nothing in the nature of Socrates that demands that there be any sets, let alone one that contains him.²⁸

Thus we hit a version of the Finean objection again: sparse modalism tells us that Socrates essentially bears the membership relation to \{Socrates\}, which, according to Fine, is utterly implausible – there is nothing in Socrates’ essence which demands that he be related to any set, let alone \{Socrates\}. As such, given the Platonic iterative conception, the sparse modal analysis should be rejected.

What can the sparse modalist do at this point? One option is to reject the Platonic iterative conception in favour of some other, more congenial, understanding of sets. This however, is just giving up. A more fruitful alternative is to question the source of the objection: according to Fine, Socrates’ essentially bearing the membership relation to \{Socrates\} is implausible, while \{Socrates\}’s essentially bearing its converse to Socrates is plausible. But, whence this plausibility asymmetry?

One obvious source would be some modal difference: for example, it’s plausible to say that originating from a certain pair of gametes is essential to Socrates because, in every world where he exists, he bears the originates from relation to them, and implausible to say that the converse relation is essential to the gametes because there are worlds where they exist and don’t bear the relation to Socrates. If something similar was the case for Socrates and \{Socrates\}, we’d have a nice explanation; of course, given the Platonic conception, there couldn’t be any such modal difference. So this cannot be the source of the asymmetry – something else must be.²⁹

Another potential source concerns individuation conditions. ³⁰ The standard individuation condition for sets invokes their members – specifically,

\begin{align*}
\text{SET} & \quad \text{Sets } x \text{ and } y \text{ are identical iff necessarily, all and only the same entities are their members} \\
\text{OBJ} & \quad \text{Objects } x \text{ and } y \text{ are identical iff necessarily, all and only the same sets have them as members}
\end{align*}

Meanwhile, the similar condition for objects, whatever it might be, is typically thought to not involve sets. Fine might then explain that \{Socrates\}’s essentially having Socrates as a member is plausible because the set’s individuation involves Socrates, while Socrates’ essentially being a member of \{Socrates\} is implausible because the condition by which we individuate Socrates doesn’t involve \{Socrates\}.

Of course, we can provide a criterion of individuation for objects in terms of sets:

\begin{align*}
\text{OBJ} & \quad \text{Objects } x \text{ and } y \text{ are identical iff necessarily, all and only the same sets have them as members}
\end{align*}

Now, the only way individuation conditions motivate Fine’s plausibility asymmetry is if SET is metaphysically deep, but OBJ somehow isn’t. The problem is that there seems to be no principled reason for thinking that, while OBJ is true (as it must be, if SET is), it somehow

²⁹ Another possible explanation concerns the connection between a relation and its converse: if one thought that only one of the two genuinely exists, while the other was a mere abstraction, then there would be a legitimate way to track the asymmetry. While something fruitful might emerge from this line of reasoning, pursuing it requires delving into the rather hefty debate regarding the difference – or lack thereof – between a relation and its converse; see fn19 for references concerning this ‘neutrality’ issue. As this would take us too far afield, I here set the matter aside, leaving it as an open avenue for sparse modalists to potentially pursue.
³⁰ Thanks to an anonymous referee for raising this suggestion.
doesn’t properly reveal the individuation conditions for objects. We might explain this ‘individuation asymmetry’ by appeal to the essences of the entities involved, but doing so would result in an explanatory circle: Fine’s asymmetry is explained in terms of the individuation asymmetry, which is in turn explained by Fine’s asymmetry. As such, it seems appealing to individuation merely shifts the bubble in the carpet, leaving us still seeking the deep, metaphysical source of the plausibility asymmetry.  

The closest Fine comes to offering an argument for the plausibility asymmetry is the claim that we can ‘recognize a sense of nature… according to which it lies in the nature of the singleton to have Socrates as a member even though it does not lie in the nature of Socrates to belong to the singleton’ (p. 5). In other words, because there is a sense of ‘nature’ according to which Socrates just doesn’t have anything to do with {Socrates}, it is implausible to say that Socrates essentially bears the membership relation to {Socrates}. Meanwhile, the lack of such a ‘nature’ for {Socrates} ensures that it is plausible to think that it essentially has Socrates as a member. Pressing the point, we must ask, where do we get this sense of ‘nature’ from? And, more importantly, why think that it corresponds to the genuine metaphysical essences of Socrates and {Socrates}?

To answer the first, recall the temporal and building metaphors, so useful in elucidating the iterative conception. They appear to give us Fine’s requisite sense of ‘nature’: Socrates’ nature doesn’t mention {Socrates} because he ‘comes before’ the set, while {Socrates} nature includes Socrates because it is ‘built’ from him. The problem is that, given the Platonic iterative conception, it isn’t obvious why these metaphors ought to be taken as any sort of guide to metaphysical reality – having rejected Constructivism, we’ve already granted that the metaphors are in fact metaphorical, so just because the metaphors we use in describing the iterative conception push us towards the idea that elements ‘come before’ sets and sets are ‘built from’ their elements doesn’t mean that there is a genuine metaphysical asymmetry between sets and elements. Some further assumption must be found to explain why we should take these merely metaphorical natures as metaphysically genuine.

I take the requisite further assumption, and the real source of Fine’s asymmetry, to be what I call the priority thesis, according to which a set bears a metaphysical dependence relation to its members, characterised by ‘a modality distinct from that of time or necessity… arising in some way out of the manner in which a collection is constituted from its members’. Accepting the priority thesis amounts to taking the metaphorical talk of temporal precedence and construction as metaphysical gospel: there is a substantial, metaphysical dependence that {Socrates} bears to Socrates, and it is this dependence which ensures that {Socrates}’s nature includes having Socrates as a member, while Socrates’ not depending on {Socrates} (or any other set) ensures that his nature contains no reference to {Socrates}. Without the thesis, there is no reason to think that the ‘natures’ described by the temporal and building metaphors match the genuine metaphysical essences of Socrates and {Socrates} and therefore no reason to assert that it is implausible that Socrates essentially is a member of {Socrates} though plausible that {Socrates} essentially has Socrates as a member.

However, nothing about the Platonic iterative conception requires the priority thesis. This is clear because there is a coherent interpretation of the conception that rejects the priority thesis. On the minimalist account, the content of the iterative conception is ‘exhausted by saying that it is the conception of set according to which sets are the objects that occur at one level or another of the cumulative hierarchy’, an upshot of which is that, ‘it is no part of

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31 A similar point holds concerning the individuation of e.g. events and their constituents: whichever we think is ‘metaphysically prior’ will be the one in terms of which we will define the other. Fittingly, this directly supports my claim that the dark heart of Fine’s asymmetry is the priority thesis.


33 Note that the priority thesis could support the assertion that SET is a ‘good’ criterion of individuation while OBJ isn’t: SET tracks the ‘constitution’ of sets by their members, while OBJ does nothing of the sort.
the iterative conception that sets are metaphysically dependent upon their members’. According to the minimalist, talk of Socrates’ ‘priority’ to \{Socrates\} is merely a concise way to say that Socrates stands lower on the set-theoretic hierarchy, while \{Socrates\}’s ‘dependence’ on Socrates is just short-hand for the claim that \{Socrates\} has Socrates as a member. Such metaphorical talk is, in principle eliminable, at the expense of ease of exposition.

To reassess: given the Platonic iterative conception, sparse modalism entails that membership is an essential relation of Socrates’. Fine objects, claiming that membership is not essential to Socrates, though its converse is essential to \{Socrates\}. He motivates this claim, I contend, by appealing to the priority thesis. What the minimalist account indicates is that the iterative conception is, in and of itself, not committed to the priority thesis – in short, the Platonic iterative conception doesn’t require there be a genuine metaphysical dependence to characterise the relation between Socrates and \{Socrates\}. At least one understanding of the Platonic iterative conception is perfectly consistent with the claim that Socrates essentially is a member of \{Socrates\}, Fine’s asymmetry be damned. So, only the priority thesis prevents the sparse modalist from claiming that, given the Platonic iterative conception, it is just as plausible to say that Socrates essentially is a member of \{Socrates\} as it is that \{Socrates\} essentially has as a member Socrates. The matter all comes down to the priority thesis, a metaphysical addition to the Platonic iterative conception. Why believe it?

Now, I am aware that there may be readers who are so in the grip of the priority thesis that they are incapable of understanding the iterative conception in any other way. One cannot, of course, argue a conceptually blind person into recognizing a conceptual distinction any more than one can argue a colour blind person into recognizing a colour distinction, but it may help such a reader to reflect on the following:

…we want to say that it is essential to the singleton to have Socrates as a member, but that it is not essential to Socrates to be a member of the singleton. But there is nothing in the ‘logic’ of the situation to justify an asymmetric judgement of relevance...35

While Fine didn’t intend to imply that there is no reason to believe in an essential asymmetry, if there is nothing in the ‘logic’ of the situation which forces us to, why should we?

According to the Platonic iterative conception, the membership relation satisfies both the modal and sparseness criteria and so is essential to Socrates. This seems to be a problem because it is, according to Fine, ‘implausible’. However, the source of the implausibility – the priority thesis – is a questionable metaphysical addition to the iterative conception. Lacking any reason to buy into it, the sparse modalist can simply reject the priority thesis. This in turn undercutts Fine’s plausibility asymmetry, since it is the product of taking literally the merely metaphorical ‘priority and building’ involved in the iterative conception. And, once the asymmetry is undercut, so too is any support for objecting to the claim that Socrates essentially bears the membership relation to \{Socrates\}, exactly as sparse modalism and the Platonic iterative conception entail. At best, this shows that Fine was simply wrong about the relation being unessential to Socrates; at worst, that Fine must offer some support for the priority thesis, in the absence of which, sparse modalism lives on.

This is just one of numerous possible positions, each of which will have different consequences. Some will be incompatible with sparse modalism – for example, you can’t be a sparse modalist, believe in the Platonic iterative conception, and accept the priority thesis. But the mere fact that not every position is compatible with it doesn’t undercut the feasibility of the sparse modal analysis. The membership case can be dealt with. Sparse modalism is at least \textit{prima facie} plausible.

§4. Where to go from here?

What does all of this mean for understanding the notion of essence? According to Fine, essence is a primitive, metaphysical notion, from which metaphysical necessity is derivative — in other words, for Fine, necessity facts are a sub-species of essence facts. Meanwhile, the modalist holds that metaphysical necessity is a (more) primitive metaphysical notion from which essence is derivative, such that essence facts are a sub-species of necessity facts. Interestingly, the primary argument for Fine’s essence-fundamentalist view is his objection to the modal analysis, driven by his counter-example properties. While this clearly undercuts standard modalism, as we’ve now seen, once we introduce a sparseness condition, the resulting sparse modalism appears immune to Fine’s objection. So it looks like there are at least two games in town: Fine’s fundamentalist picture and the sparse modalist’s reductive account. Determining which is preferable will involve carefully weighing up the respective advantages and disadvantages of the two views. I would contend that sparseness and necessity are better primitives than essence, being more established, better understood, less mysterious, and (particularly if we accept Lewis’ laundry list in §1) having more applications; however, that is a debate for another day.

There are also some remaining issues concerning sparse modalism to address. Particularly, as we saw at the end of §1, different sparse property conceptions entail radically different essential property extensions. So one point to be settled is which conception is the best one. This is particularly important since, as it might turn out that the best conception is something like Lewis’s, the objection that sparse modalism entails empty essences for macro-level objects might turn out to have some bite after all. A second issue, noted at the beginning of §3, is that, to properly assess the membership relation issue, we need to know what the right view about the metaphysics of sets is — only once that is settled can we see how sparse modalism truly fares. Finally, it is entirely possible that new counter-examples, specific to sparse modalism, are lurking, just waiting to be discovered (in fact, the Finean about essence could see this paper as a challenge: come up with a counter-example property/relation to this modal account, showing why it is extensionally inadequate). There is, it seems, more work to be done to properly flesh out the sparse modalist story.

Regardless, it seems safe to say that the assimilation of essence to modality is not ‘fundamentally misguided’, despite Fine’s objection to the contrary. Essentialists have options. The notion of essence which is of central importance to the metaphysics of identity can be understood in modal terms — sparse modal terms, but modal terms nonetheless.36

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36 I would like to thank Amanda Cawston, Christian Folde, Benjamin Schnieder, Robert Schwartzkopff, Richard Woodward, and two anonymous referees for comments on a draft of this paper, as well as Arif Ahmed, Tim Button, Fraser Macbride, Penelope Mackie, Hugh Mellor, Tom Stern, Rob Trueman, and audiences at Cambridge University’s Serious Metaphysics Group and Moral Sciences Club, the ‘Reality Making’ conference at Nottingham University, and the Research Unit for Epistemology, Metaphysics, and Philosophy of Cognition at Aarhus University for helpful comments on earlier versions.