Vagueness and Arbitrariness: Merricks on Composition

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In this paper I respond to Trenton Merricks's (2005) paper 'Composition and Vagueness'. I argue that Merricks's paper faces the following difficulty: he claims to provide independent motivation for denying one of the premisses of the Lewis-Sider vagueness argument for unrestricted composition, but the alleged motivation he provides begs the question.

In his recent paper 'Composition and Vagueness', Trenton Merricks argues that the argument against restricted composition based on worries of vagueness is spurious.[1] The argument from vagueness claims that restricted composition inevitably leads to an arbitrary cut-off point between composite and non-composite objects in order to avoid rendering the composition relation vague—an untenable result. Merricks, however, attempts to show that, for various reasons, the cut-off drawn by restricted composition between composites and non-composites need not be arbitrary at all, and thus that the motivations for the argument from vagueness are undermined. In responding to Merricks I will argue that he begs the question against the defender of the argument from vagueness, and thus fails to advance the debate any further. His position, on closer scrutiny, simply amounts to a denial of one of the argument's key assumptions, a dialectical strategy which is not only not what he claims to be espousing, but which is already on offer elsewhere in the literature.

Perhaps the most developed form of the argument from vagueness comes from Theodore Sider (2001), and consequently Merricks spends a great deal of his paper critiquing Sider's specific claims. I will thus focus my response on these passages. Merricks briefly argues that Sider should not be averse to arbitrariness in composition, and then goes on to claim that demarcations between composites and non-composites will not be arbitrary regardless. I will address these criticisms in turn,

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[1] The argument will be called 'the argument from vagueness' for the rest of the paper.

focusing primarily on the second (which comprises the bulk of Merricks's paper).

Merricks describes Sider's thought experiment of a continuum of possible worlds, each with a collection of simples; at the first world in the series, the simples are scattered, and thus if restricted composition is true they determinately do not form a composite object; at the last world in the series, the simples are so closely packed together that they determinately do form a composite object.[2] But the changes in the arrangement of simples from one possible world to the next are so miniscule that, Sider argues, it seems counter-intuitive to suppose that there will be a sharp cut-off in this continuum between those worlds which do not contain any composite objects and those which do. Such a sudden change in, as it were, the fundamental make-up of the worlds looks 'metaphysically arbitrary' and ad hoc. If, however, there is no such sharp cut-off then there is a world in which it is indeterminate whether the simples form a composite object; but that is a world in which it is vague what there is, which, according to Sider, is impossible. These dual considerations of non-vague existence and avoidance of metaphysical arbitrariness thus lead Sider to reject restricted composition.

Based on Sider's aversion to 'metaphysically arbitrary' facts, Merricks attributes to Sider the principle:

(TS)   It is implausible that there is a sharp cut-off in the composition continuum.

But, Merricks argues, Sider has no reason to hold (TS). Sider is committed to the existence of 'joints in nature'—places where natural kinds are sharply demarcated. The tension with (TS) is meant to arise when Merricks attributes to Sider the belief that existence is one of these 'joints in nature'. If existence is such a joint, Merricks argues, then the problem with (TS) appears straightforward:

> At the far left of the continuum is a case of scattered atoms $a_1 \ldots a_n$, composing nothing. At the far right is a case of those same atoms arranged to form an object O. The cast at the left includes only $a_1 \ldots a_n$; the case at the right includes not only $a_1 \ldots a_n$, but also O. Somewhere along the line, in the move from left to right, O is introduced. The difference is not trivial, since as Sider insists, a difference in what exists marks a joint … And so he has at hand the resources to make sense of sharp cut-offs in existence. (Merricks 2005, pp. 626–7)

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[2] See Sider 2001, pp. 123–4, for his presentation of the continuum argument.

Merricks is certainly right that Sider defends the status of existence as a logical 'joint' in nature,[3] but it is hard to see how it follows from this that Sider ought to reject (TS). Merricks seems to think that the presence of the logical joint would render the proposed cut-off non-arbitrary, yet this is in no way entailed by Sider's construal of such 'joints in nature'.

For Sider, meaning is determined by dual features of use and eligibility—it is not just how we use our words, but also how the world is in and of itself that determines how our words refer. Certain things are simply intrinsically eligible—and clearly so, above all other candidates—as the referents of our words. These features of intrinsic eligibility, then, are the 'joints' as Sider characterizes them.[4]

Sider gives arguments for why he thinks that existence carves out a unique and utterly non-vague joint, which I will not rehearse in detail here.[5] In a nutshell: he thinks that existence cannot be vague, because vagueness in existence would lead to vagueness in the logical quantifiers; but vagueness always admits of precisification, which the quantifiers cannot allow for;[6] so there must be a single, maximal meaning for 'exists'.

But the fact that existence is such a joint in Sider's ontology seems to have no bearing whatsoever on whether or not Sider should endorse (TS). It *does*, of course, prevent him—assuming a linguistic theory of vagueness—from accepting *vague* cases of existence, but that is a separate issue. (TS), however, is simply a metaphysical intuition; one which, admittedly, Sider assumes rather than argues for, but which many find quite compelling. Sider espouses (TS) because he thinks that any sharp cut-off in the continuum would be 'metaphysically arbitrary', and he finds such arbitrariness unacceptable.

The presence of existence as a logical joint does not undermine this intuition, because it has little bearing on how we should treat cut-offs in the composition continuum. It is compatible with a wide variety of theories of composition (both arbitrary and non-arbitrary), and does

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[3] See especially Sider 2003.

[4] See Sider 2001, pp. xxi.

[5] They are unimportant for the present dialectic, since Merricks does not call them into question, though I should register my doubts about them. (See especially Nolan forthcoming.)

[6] His argument applied to the universal quantifier is essentially this: suppose there are two precisifications for the unrestricted universal quantifier; in order to be distinct, one of them must have some object in its extension which the other lacks; but if that is the case, then the more expansive one (i.e. the precisification with the extra object in its extension) is clearly the most natural candidate for the meaning of 'everything'. He puts forward similar considerations for the existential.

not favour any one over the others; it simply entails that there is a unique, non-vague meaning for 'exists' which is 'carved out' by the world. But this is fully compatible with, for example, Ned Markosian's (1998) theory of 'brute composition', as well as with Cian Dorr's (2005) compositional nihilism. Indeed, a theory which claimed that all and only the fusions with odd-numbered members exist as composite objects would still be perfectly compatible with existence as a joint in nature. As long as the theory entails that the world carves out a single, maximal meaning for 'exists'—no matter how arbitrarily the theory claims it does so—then existence can still count as a joint in nature. Thus nothing about the fact that existence is a joint in nature can undermine worries of arbitrariness.

Assuming Sider's arguments against vagueness in existence (which Merricks does not question in his paper), existence as a joint in nature tells us *nothing* about how we ought to treat the apparent soriticality of composition, other than that however we handle it, we had better not get *vague* composition. Sider's endorsement of (TS) is a further claim in his metaphysical methodology based on his resistance to what he deems 'brute' or 'metaphysically arbitrary' compositional facts, and it is the intuition on which he rests the bulk of his argument.

Merricks, however, goes on to argue that he can undermine the motivations for (TS), by showing that the sharp cut-off in the composition continuum required for non-vague restricted composition is in fact *not* arbitrary. He attempts to do so by his 'whistling composites' story, which runs as follows:

> Assume that composition is restricted. Moreover, pretend the following story is true. Necessarily, simples are silent, but composite objects emit a loud whistling noise. (That is right, they whistle.) Their whistling, according to this story, is not reduced to the collective activity of their parts … Instead, whistling is a necessary result of composition itself. The whistling of composites, according to this story, is in some sense 'emergent'. And, finally, let us add that it cannot possibly be vague whether the whistling occurs. (Merricks 2005, p. 628)

Merricks contends, correctly, that if we were to suppose something analogous to the 'whistling' story was in fact the case, then the argument from vagueness would not get off the ground, because the cut-off in the composition continuum would not be arbitrary. There would be an obvious point where the simples in the continuum start forming a composite object—the point where they start to whistle! And though the whistling case is just a place-holding example, Merricks thinks it bears strong analogies to a more serious one—the case of causation.

Like the fictitious 'whistling' property, Merricks thinks unified, 'non-redundant' causal powers are an emergent property that only composite objects have. But since causation—like whistling—can never be vague, then there is a clear demarcation—rather than an arbitrary sharp cut-off—along Sider's continuum. The cut-off comes when 'non-redundant' causal powers emerge. They can emerge only when simples come together to form a composite, and so we have a clear, non-vague distinction between the scattered simples and the simples fused into composite wholes. There is nothing arbitrary about the distinction here—you simply draw the line at the point where non-redundant causation 'emerges' (2005, pp. 631–2).

Whether or not one is inclined to accept the 'emergent' story of causation, it does at least seem (epistemically) possible. If so, however, Merricks argues that the argument from vagueness does not get off the ground. If such a scenario could obtain, then restricted composition could be the case without entailing vagueness *or* arbitrariness in compositional facts.

And, again, Merricks is right—if the defender of the argument from vagueness accepts his story about 'whistling' objects (and the analogies that result), then restricted composition need not be tied to vagueness, and thus the argument fails. But does the defender of the argument from vagueness have any reason to accept 'whistling'-type stories as Merricks as presented them?

Merricks assumes restricted composition for his argument, claiming that 'this begs no questions' (2005, p. 627). And this is quite correct—the key issue at hand is to ascertain what restricted composition implies, so for the sake of argument we assume that it is true. He then goes on, however, to assume that, 'it cannot possibly be vague' whether an object whistles (2005, p. 629). Let us call this:

(VW)   It is never vague whether something whistles.

But (VW), it seems, *does* beg a few questions.

Merricks means to undercut the motivations for the argument from vagueness by his 'whistling' example. The root worry motivating the argument—as illustrated by Sider's continuum example—is that any cut-off point between composites and non-composites will be completely arbitrary; and the only way to avoid such arbitrariness, which he thinks is untenable, is to make composition vague—an even worse result. Vagueness and arbitrariness are thus the Scylla and Charybdis Sider thinks restricted composition cannot navigate between. Merricks's 'whistling' case is meant to show, however, that the cut-off

between the composites and non-composites need not be arbitrary (just draw the line where the whistling begins—that is as plain a criterion as you could hope for), and thus even on a restricted composition story existence facts can be perfectly principled while still being non-vague. If there is an obvious distinction in the continuum to be drawn—that is, between the whistling objects and the non-whistling ones—then the worry of arbitrariness looks unfounded.

It is not clear, however, that 'whistling'-type properties could, in fact, be a way of marking a principled joint between composites and non-composites. As Merricks himself maintains, properties of the 'whistling' variety are 'emergent'. Emergent properties hold only in virtue of certain other base properties. In the case of 'whistling', a collection of simples whistles or fails to whistle solely in virtue of whether or not they form a composite object. Thus it is not in virtue of whistling that objects are composites, but conversely in virtue of being composites that they whistle. It seems, then, that whistling cannot adequately serve to locate the joint between composites and non-composites. The divide has to occur in virtue of something that underwrites the composite/non-composite distinction. Yet whistling seemingly cannot underwrite this distinction, because whistling facts are determined by composition facts, rather than vice versa.

There appears to be no reason, therefore, for the defender of the argument from vagueness to accept (VW). She thinks that composition, if restricted, will be vague, if it is to avoid arbitrariness. Moreover, whistling is a property that 'emerges' from composition; it comes about only as a result of composition obtaining. Thus, if composition is vague then whistling will likewise be vague, and (VW) false. In order to accept (VW), the defender of the argument from vagueness would need some sort of independent motivation to deny her intuitions underlying (TS); that is, independent motivation to think that there could be a non-vague restriction on composition that is not metaphysically arbitrary. But, as argued above, 'whistling'-type properties (since they depend on composition) simply are not the sort of properties that could provide such motivation. So as it stands, the assertion of (VW) merely begs the question against the defender of the argument from vagueness. Whatever force there was behind Sider's original intuition that any sharp cut-off in the composition continuum would be arbitrary (and thus that any composite/non-composite demarcation must instead be vague) would serve as equal motivation to deny the co-satisfiability of Merricks's two key stipulations: that all and only complex objects whistle, and that it can never be vague whether something whistles. Merricks

has therefore done nothing more than deny the basic intuition that Sider takes as a presupposition of his argument.

Merricks might argue here that whistling is not the sort of thing that is subject to vagueness—part of his motivation for (VW)—but this is no point against the defender of the argument from vagueness. She does not think composition is the sort of thing that is subject to vagueness either, which is exactly why she rejects restricted composition. If she thinks that composition would be vague *if it were restricted*, then she will likewise think that those properties dependent on (including those that emerge from) composition would be vague as well—simply giving her more reason to reject restricted composition. Unless the 'whistling' story detracts from her reasons for holding her argument in the first place, as I have argued it does not, then she has no reason to accept (VW).

Yet just as Merricks appears to beg the question against Sider, might not Sider equally be charged with begging the question against Merricks? An essential premiss in Sider's argument is that we can construct a continuum of cases for the supervenience base of composition—a premiss which, Merricks claims, most defenders of restricted composition have reason to suspect. Sider does not defend the premiss, he merely assumes it. Yet if, as Merricks argues, the advocate of restricted composition has no reason to accept it, then is it not the case that Sider begged the question just as Merricks has?

Well, not *as much*. Merricks argues that Sider's endorsement of the 'composition continuum' winds up 'stumbling over ... his opponent's agnositicism' (2005, p. 626); because most defenders of restricted composition remain agnostic as to what the exact features of composition are, he claims, they have no reason to suppose that those features can be ordered in a continuous series. This, however, does not seem quite right, methodologically. Generally, we want to say that the burden of proof lies on the person who wants to *restrict* the space of possibilities. It certainly seems that we could have a continuum of cases for the spatio-temporal arrangement of the simples involved in composition[7] (which itself might be enough to motivate the problem), as well as for various other candidates for a supervenience base (e.g. causal relations, if cause is, say, force exerted). Since such continua seem readily available, it looks as though the advocate of restricted composition, if she wants to undermine Sider's position, must offer a positive suggestion for how we are to understand the supervenience base of composition

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[7] It would be quite strange if the laws of metaphysics somehow dictated that a simple simply could not be at a place/time in *any* possible world.

(or, alternatively, why we should think composition does not supervene) that precludes the set-up of a continuum. Agnosticism alone appears insufficient.[8] Nor does Merricks's 'whistling' case do the trick, as previously demonstrated.[9]

Sider's argument, of course, does rely on two unsupported (by argument, that is) intuitions:

(i) the modal intuition that a composition continuum is possible

(ii) the methodological intuition that any sharp cut-off in such a continuum will be arbitrary.

In resisting the argument, either of these intuitions can straightforwardly be denied. Merricks gestures towards a denial of (i) (though he does not develop a positive theory for doing so), but the bulk of his argument concerns disputing (ii). The main point here, however, is that while his argument purports to be engaging in depth with this intuition and undermining motivation for it, this is not the case. Because the defender of the argument from vagueness would have no reason to accept his principle (VW) given Merricks's stipulation that all and only composite things whistle, Merricks's argument is in fact nothing more than a flat-out denial of the second intuition. But of course, we already knew that such a denial was an option in the debate—Ned Markosian made just such a case in his 1998 paper 'Brutal Composition', claiming that the cut-off in Sider's proposed composition continuum could simply be metaphysically 'brute', rather than arbitrary.[10]

Merricks's metaphysically complex 'whistling' story thus is doing no real work in the overall dialectic, since his position ultimately amounts to just a denial of the second intuition (that any sharp cut-off in a composition continuum would be arbitrary), and therefore has not served to advance the debate further—despite the fact that Merricks claims his 'whistling' story will be a 'new way of understanding the question of whether composition is restricted, and thus a new focus for any future debates' (2005, p. 615). There may well be promise in developing a pro-

[8] The contention here, I suppose, is that our *default* position in modal metaphysics should be one of possibility.

[9] That is, 'whistling'-type properties would in no way serve to undercut a composition continuum because whistling facts are determined by composition facts. And, indeed, Merricks seems to think that the 'whistling' story is meant to undermine the arbitrariness in a cut-off in the continuum, not the presence of a continuum itself, since he explicitly supposes that 'whistling' properties and a continuum are compossible (p. 628).

[10] Indeed, Markosian's reply to Sider, using essentially the same method, seems preferable for reasons of simplicity, in that it avoids Merricks's complex metaphysical story about 'whistling'-type properties—a story which in the end seems to be doing very little work, dialectically.

posal to undermine the first intuition (that a composition continuum is possible), but the work there is still to be done.

In conclusion, it seems that Merricks has left the original motivations for the argument from vagueness unchallenged, and thus has not advanced the debate over restricted composition. There are certainly ways of critiquing those motivations, along with the argument itself,[11] but they are not those presented by Merricks.

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[11] See especially see Nolan forthcoming.