

# Composition as Identity Does Not Entail Universalism

Kris McDaniel

Syracuse University

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Composition as Identity is the view that, in some sense, a whole is numerically identical with its parts. Compositional universalism is the view that, whenever there are some things, there is a whole composed of those things. Despite the claims of many philosophers, these views are logically independent. Here, I will show that composition as identity does not entail compositional universalism.<sup>1</sup>

I won't examine here the arguments for the mistaken claim that composition as identity implies universalism; others have done this already, and perhaps they have successfully dismantled them.<sup>2</sup> Instead, I will offer a direct proof that the conclusion is false, which if successful entitles us to conclude that there is something wrong with any argument for it, even if we aren't certain what it is. My strategy is as follows: first, I will introduce three views that are each internally consistent and jointly consistent. (These views are taken to be serious options in the relevant literatures, although this fact is incidental here.) I will then show that these three views jointly entail both composition as identity and the falsity of compositional universalism. It follows then that composition as identity does not entail compositional universalism. (If composition as identity did entail compositional universalism, then the three views would, contrary to fact, be jointly *inconsistent*.)

The first view is *modest pluralism*. According to modest pluralism, there are at least two non-overlapping material objects. Modest pluralism might seem too obvious to need explicit formulation, but since some philosophers do take extremely monistic ontologies seriously, it is worthwhile to state the view outright.<sup>3</sup>

The second view is compositional nihilism.<sup>4</sup> A rough but inaccurate formulation of compositional nihilism is that it is the doctrine that composition never occurs. This formulation tracks some truth, since the compositional nihilist does hold that a plurality of things never compose anything. But it is inaccurate since one way to precisely formulate nihilism is as follows:

Compositional Nihilism: Necessarily, some objects, *the xs* compose *y* just in case there is exactly one of the *xs* and it is identical to *y*.<sup>5</sup>

Trivially, everything composes itself. This way of formulating compositional nihilism highlights this fact.

I distinguish this formulation of compositional nihilism from the view that the parthood predicate is a defective predicate. On this other view, “parthood” is something like a failed natural kind term: we use it with the intention of picking out a metaphysically important relation, but there is nothing out there for it to latch on to. Perhaps this is a *better* formulation of compositional nihilism than the one I adopt here. Nonetheless, since I am interested in the question of consistency rather than truth, I set this view aside. (I don’t deny that this other formulation of compositional nihilism is a consistent formulation; I assume only that the formulation I prefer is a coherent doctrine.)

For similar reasons, I set aside the view that compositional nihilism is a merely contingent truth, and that in general, that which theory of composition is correct can differ from world to world.<sup>6</sup>

Compositional nihilism is widely regarded as a serious contender for being the correct answer to the question of when composition occurs. Clearly, compositional nihilism is an internally consistent view, even though it seems radically at odds with common-sense.<sup>7</sup>

The third view is *property extensionalism*. According to property extensionalism, necessarily equivalent properties and relations are numerically identical. Property extensionalism is a consequence of the doctrine that properties and relations are sets of possible objects or ordered tuples of possible objects, a doctrine defended by David Lewis as well as others.<sup>8</sup> (Of course, one could hold property extensionalism without holding this particular reductive view of properties.) If property extensionalism is true, then the property of being a closed planar figure with three sides is identical with the property of being a closed planar figure with three angles, since “both” properties are necessarily equivalent.

I am not aware of anyone who holds explicitly the conjunction of modest pluralism, compositional nihilism and property extensionalism. But this is irrelevant to my project here: what matters is that the three views are obviously consistent with each other, and so someone could consistently hold all three views. (And, as far as I can tell, the package consisting of them is no odder than its components considered individually.)

Now for the argument. Premise one: compositional nihilism and property extensionalism jointly entail composition as identity. Proof: according to compositional nihilism, the identity relation is *necessarily coextensive* with the composition relation. According to property extensionalism, necessarily coextensive relations are numerically identical. There is no stronger way to formulate composition as identity than as the view that the relation of composition *is numerically identical with* identity! Since compositional nihilism and property extensionalism jointly entail composition as identity, it is trivial that modest pluralism, compositional nihilism and property extensionalism jointly entail composition as identity.

Premise two: modest pluralism, compositional nihilism and property extensionalism are jointly inconsistent with compositional universalism. According to modest pluralism, there are at least two material objects that are mutually disjoint. Suppose the number of such things is  $n$ . If compositional nihilism is true, then there are exactly  $n$  material objects. But if compositional universalism is true, then there must be at least  $2^n + 1$  things – the original  $n$ -numbered objects plus the various fusions of them. Compositional nihilism and compositional universalism cannot both be correct answers to the question of when composition occurs. So modest pluralism, compositional nihilism, and property extensionalism jointly entail that compositional universalism is false, since modest pluralism and compositional nihilism jointly entail that compositional universalism is false.

Modest pluralism, compositional nihilism, and property extensionalism form a consistent package. This package entails both the truth of composition as identity and the falsity of compositional universalism.

Composition as identity does not entail compositional universalism. It seems to me – although I have not shown this – that compositional universalism does not entail composition as identity. If so, these two views are logically independent, and should be treated as such.<sup>9</sup>

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<sup>1</sup> See Trenton Merricks (2005), “Composition and vagueness”, *Mind* 114:615–637, and Ted Sider (2007), “Parthood”, *the Philosophical Review* 116: 51-91. They are not alone in thinking composition as identity entails compositional universalism; for example, Verity Harte (2002, p. 114), *Plato on Parts and Wholes: the Metaphysics of Structure*, Oxford University Press, also asserts this.

<sup>2</sup> For a recent discussion, see Ross Cameron “The Contingency of Composition”, *Philosophical Studies* (forthcoming).

<sup>3</sup> For an interesting defense of extreme monism, see Jonathan Schaffer’s “From Nihilism to Monism”, *Australasian Journal of Philosophy* (forthcoming).

<sup>4</sup> Both the name “compositional nihilism” and interest in the doctrine so-named are due to Peter van Inwagen’s (1990) book *Material Beings*, Ithaca NY: Cornell University Press. See chapter eight for further discussion.

<sup>5</sup> See van Inwagen (1990) pp. 28-29 for a brief discussion on why everything composes itself.

<sup>6</sup> For a defense of this view, see Cameron (forthcoming).

<sup>7</sup> An anonymous referee has suggested to me that Merricks presupposes the falsity of compositional nihilism in his argument. Moreover, Merricks assumes that every plurality of things could compose something. We should be cautious about this latter assumption. Consider the view, defended by Peter van Inwagen (1990), in his book *Material Beings* (Cornell University Press), according to which necessarily, some *xs* compose a *y* if and only if the activity of those *xs* constitutes a life. I have a hard time seeing how the activity of, for example, two electrons could constitute a life. Merricks assumption is contentious, and it does the bulk of the work in the argument.

<sup>8</sup> See David Lewis (1986) *On the Plurality of Worlds*, Basil: Blackwell. Lewis is perhaps the most prominent of property extensionalists.

<sup>9</sup> I wish to thank the anonymous referees who provided me with very useful comments on an earlier draft of the paper. I also wish to thank Jason Turner.