THE INCOMPATIBILITY OF COMPOSITION AS IDENTITY, PRIORITY PLURALISM, AND IRREFLEXIVE GROUNDING[1]

ANDREW M. BAILEY
University of Notre Dame

Some have it that wholes are, somehow, identical to their parts. This doctrine is as alluring as it is puzzling. But in this paper, I show that the doctrine is incompatible with two widely accepted theses. Something has to go.

Composition as identity, let us say, is the thesis that for any *x*, if *x* is composed of the *y*s, then *x* is identical to the *y*s. This is a radical doctrine; but many have found *something* right about it. A field composed of six plots just *is* those six plots, the thought goes; and if we take that thought seriously, is it not reasonable to say the same about every whole and its parts?[2]

Ontological grounding has been the subject of much recent work in metaphysics.[3] And historically, it has been invoked to do all sorts of philosophical work: Mental states are grounded in physical states. Moral properties are grounded in natural properties. Sets are grounded in their members. Modal properties are grounded in non-modal properties. Dispositions are grounded in categorical properties. Truths are grounded in being. Or so we are told. Here are two principles concerning ontological grounding that many have found plausible:

Priority pluralism, as I shall understand things, is the thesis that wholes are grounded in or ontologically depend on their parts. More precisely: for any *x*, if *x* is composed of the (plural) *y*s, then *x* is grounded in the *y*s.[4] Many have found something in this neighborhood plausible. Thus, Conee and Sider: "Consider a tuna salad sandwich. At any given time, the sandwich derives its existence from the existence of the bread, the tuna salad, and any other ingredients that compose it. Without them, it would be nothing. The sandwich's ingredients do not *cause* it to exist. Rather, they give it existence directly. The sandwich 'ontologically depends' on its ingredients."[5]

The *irreflexivity of grounding* (henceforth, "irreflexivity") is the thesis that no things are grounded in themselves. More precisely: for any *x*s, if there are some

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2. This is *strong* composition as identity. For defense, see Armstrong (1978): 37–39, Baxter (1988a, 1988b), and Bohn (2009). Compare that thesis with the weaker doctrine that composition is *very much like* identity, as in Lewis (1991): 81–87 and Sider (2007).
3. Correia (2008), Rosen (2010), and Schaffer (2009).
4. *x* is composed of the *y*s iff: the ys are all parts of *x*, and every part of *x* overlaps at least one of the *y*s. On this definition, everything is composed of itself, so the "(plural)" proviso is required to give priority pluralism some prima facie plausibility (and consistency with irreflexivity, of which more below).
5. Conee and Sider (2005): 68.

*y*s such that the *x*s are grounded in the *y*s, then the *x*s are not identical to the *y*s.[6] There is something to this doctrine, too. For how could a thing (or some things) be grounded in itself (themselves)? Grounding is often likened unto but distinguished from explanation and causal priority.[7] If that comparison is right, irreflexivity *seems* right. For those relations, too, seem to be irreflexive; would not the same hold for ontological grounding, too? Accordingly, most metaphysicians working on grounding take it to be irreflexive.[8]

Thus, the principles of composition as identity, priority pluralism, and irreflexivity (henceforth, "the principles"). As it turns out, the principles are incompatible. The proof is simple. Suppose something *x* is composed of the (plural) *y*s (Mereological nihilists—who deny that anything has proper parts—will balk at this supposition. But that's fine; they probably have independent reason to accept the conclusion of this paper). Then:

1. *x* is composed of the (plural) *y*s   (assumption)
2. *x* is identical to the *y*s   (1, composition as identity)
3. *x* is grounded in the *y*s   (1, priority pluralism)
4. *x* is not identical to the *y*s   (3, irreflexivity)
5. *x* is identical and not identical to the *y*s   (2, 4)

The principles jointly imply a contradiction. At least one of them is false. The immediate significance of this result is simple: one should not accept all three principles. But more follows, too. I shall draw out the further significance of this result by, for each principle, reflecting on what would follow were it false. In reverse order:

If irreflexivity is false: Some contemporary philosophers talk about grounding a lot. Not everyone is enthusiastic; some claim not to understand such grounding talk.[9] If some things could be grounded in themselves (i.e., if irreflexivity is false), then I think there is some reason to cast a lot with the naysayers. If irreflexivity is false, then either grounding is rather *unlike* explanation and causal priority (I'm supposing those relations are irreflexive), or perhaps explanation and causal priority are themselves irreflexive, too. Both of these suggestions are likely to produce in many of us something of a metaphysical vertigo. It would be one thing if there were merely a few peripheral counterexamples to irreflexivity—perhaps a self-grounded god would do the trick. But my results suggest something much more startling. Note that if the other two principles are true, then *all* composite objects are grounded in themselves (plug in any composite object you like for *x* in steps 1–3). In that case, irreflexivity would be *systematically* false. And that is even more puzzling. This is evidence that we have not as clean a grip on ontological grounding and related notions as some contemporary metaphysicians think.

6. Though the variables here are grammatically plural, they needn't plurally refer; there might be exactly one of the *x*s.
7. Lowe (2005), §3.
8. Correia (2008): 1023, Rosen (2010): 115–116, and Schaffer (2009): 364, 376. One dissenting voice is Jenkins (forthcoming).
9. For an expression of this trend in metaphysics and the sentiments of its detractors, see Monads, The 21st Century (2009).

If priority pluralism is false. Priority monism is the thesis, roughly, that the world as a whole is ontologically prior to its proper parts; they are all grounded in it.[10] Priority monism is incompatible with priority pluralism (if grounding is asymmetric, at least); that and the plausibility of priority pluralism constitute one reason to reject priority monism. But that reason is not a good one, if priority pluralism is false. So some metaphysicians have less reason than they might think to dismiss priority monism.

Priority monists also have reason to attend to my results. For suppose priority monism is true; all of the *ys* that (properly) compose *w* (the world) are grounded in *w*. By irreflexivity, the *ys* are not identical to *w*. But then, some composite object (*w*) is not identical to the things that compose it (the *ys*) and so composition as identity is false. Thus, priority monists who endorse irreflexivity have reason to reject composition as identity.

Here is an interesting slogan: "wholes are nothing over and above their parts." Priority pluralism and composition as identity are, plausibly, expansions on this slogan, attempts to give it substance. They deploy two conceptual toolboxes in so doing: *grounding* and *identity*, respectively. My argument shows that if irreflexivity is true, these two expansions of the slogan cannot be both true. But it also suggests that these conceptual toolboxes (that composition as identity and priority pluralism deploy) are themselves in tension; theorists may choose the way of grounding or the way of identity, but it seems that they may not choose both.[11]

If composition as identity is false: Perhaps, the moral to draw from my remarks thus far is just that there is a new argument against composition as identity. Composition as identity is, after all, the most controversial of the principles.

Interestingly, the argument against composition as identity suggested by this paper—an argument taking the disjunction of priority pluralism and priority monism as its first premise and irreflexivity as its second—does not rely on *grammatical* or *purely logical* considerations (unlike, say, the usual complaint that "identity is a one-one relation"). We should *expect* composition as identity to be grammatically or logically revisionary; it is more surprising that it should conflict with principles about ontological grounding or dependence.

Many philosophers already reject composition as identity. It seems that priority pluralists and monists alike have reason to join in this consensus. But there is still a price to pay. For if composition as identity is false, we cannot help ourselves to one alluring entry into mereology. It is sometimes thought that composition as identity—although it may require modifications in the logic of identity and such—is nonetheless faithful to some folk notion of parthood. It has other advantages, too. First, composition as identity promises a clean resolution to certain puzzles concerning part-whole overdetermination. A baseball and its parts shatter the window without problematic overdetermination, for example, since the baseball is identical to its parts.[12] Second,

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10. Priority monism and pluralism are thus not exhaustive. See Schaffer (2010).
11. Thanks to Alex Skiles for discussion on this point.
12. See Wallace (forthcoming) for more on this and related issues.

composition as identity suggests an attractive picture of what parthood might be; for some things to be parts of an item is just for those things to *be* that item. Third, it might even supply an answer to the question of when some things compose another. To put points 2 and 3 slightly differently: composition as identity promises answers to the General and Special Composition Questions.[13] These are intriguing promissory notes; but if composition as identity is false, we cannot cash them. Those interested in these mereological questions had best look elsewhere for help.

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13. But see Cameron (forthcoming) and McDaniel (forthcoming) for cautionary notes about the latter claim.