

Koslicki on formal proper parts

KAREN BENNETT

What are motorcycles made of? Presumably the answer is something like ‘wheels, pistons, fuel lines...’ or perhaps ‘metal, leather, plastic...’. Whatever precisely the parts of a motorcycle are, surely they are all material.

Kathrin Koslicki disagrees. She has recently argued that ordinary material objects like motorcycles not only have material proper parts, but also have *formal* proper parts (2008: particularly Ch. 7). On her view, an accurate list of the proper parts of a motorcycle must include something like *motorcycle-hood* in addition to the sorts of things just listed. Although she remains neutral about what exactly such a formal part is (e.g. 175, 254), she is explicit about what it does. The formal part of an object dictates structure; it dictates how the material parts must be arranged. It is ‘a kind of recipe for how to build wholes of that particular kind’ (172). Koslicki claims that this recipe or structure is itself a proper part of every motorcycle. That is what she calls the Neo-Aristotelian Thesis (190).

A strange claim! So let us examine Koslicki’s argument for it. She begins by asking us to consider a case in which an artist shapes a single lump of clay *L*, thereby creating a statue *S*. The argument then proceeds as follows (my reconstruction, based on 176–81):

The argument for the Neo-Aristotelian Thesis:

- (1) It is possible to make an object *S* from a single preexisting material ingredient *L*.
- (2) *L* is a proper part of *S*.
- (3) Weak Supplementation: anything that has a proper part has at least two non-overlapping proper parts.
- (4) *S* has a proper part *Q* that does not overlap *L* (2, 3).
- (5) *S* has no material proper parts other than *L* (1)
- (6) *Q* is a proper part, but not a material proper part, of *S* (4, 5)
- (7) *S* has a formal proper part (6)
- (8) There is nothing special about *S*

Neo-Aristotelian Thesis: all mereologically complex objects have formal proper parts. (6, 7)

Seemingly benign – or at least widely shared – premisses; rather startling conclusion. What shall we say? I say that we should reject (2): *L* is not a proper part of *S*.

But I cannot simply reject (2) out of hand, for Koslicki has an argument for it as well. She correctly points out that (2) follows from (1), the plausible

assumption that the lump survives being shaped into a statue (contra Burke 1994), and the following principle:

Material Ingredients as Proper Parts (MIPP): If the material ingredients from which an object is created persist through the process of creation, they are proper parts of that object at the beginning of its existence.^{1,2}

MIPP is the real problem here. In what follows, I shall claim that the argument Koslicki gives for MIPP actually supports a different principle – a principle that does nothing to justify (2). MIPP is the loose thread that will unravel the entire argument for the Neo-Aristotelian Thesis.

- 1 ‘MIPP’ is my name, not Koslicki’s. Also, she uses the word ‘component’ where I use ‘ingredient’. I prefer ‘ingredient’ because ‘component’ has mereological overtones which would be question-begging in this context.
- 2 There is an alternate route to premiss (2) that fits with some but not all of what Koslicki says. This alternate route relies not on MIPP, but on the weaker

Material Ingredients as Parts (MIP): If the material ingredients from which an object is created persist through the process of creation, they are *parts* of that object (at the beginning of its existence).

MIP is weaker because it invokes parthood where MIPP invokes proper parthood. Unlike its stronger cousin, MIP does not entail premiss (2) in conjunction with premiss (1) and the assumption that the single ingredient can survive the process. However, all we need to add is the claim that L is not identical to S , yielding the following:

(1) It is possible to make an object S from a single pre-existing material ingredient L .

(assumption) L continues to exist when S does.

(MIP) If the material ingredients from which an object is created persist through the process of creation, they are parts of that object (at the beginning of its existence).

So L is part of S .

(Constitution Isn’t Identity) $L \neq S$.

(Definition of Proper Parthood): x is a proper part of $y =_{df} x$ is a part of y and $x \neq y$.

So, (2): L is a proper part of S .

However, my criticism of the argument from MIPP to (2) works just as well here; MIP is no better justified than MIPP.

It is nonetheless interesting to note this alternative. Koslicki treats the claim that L and S are distinct but coincident objects as a needed premiss, and offers the standard modal reasons in its defense (179–80) – even though only the argument from *MIP* to (2) requires it. Neither the overall argument for the neo-Aristotelian thesis nor the argument from *MIPP* to (2) does. Indeed, if Koslicki really did have independent reason to believe MIPP – as she claims, and as I will deny – she has the resources for a novel argument for the existence of distinct coincident objects. This argument not only does not turn on modal or temporal differences, but indeed does not even invoke Leibniz’s Law at all. It simply relies on a fairly standard definition of proper parthood: that x is a proper part of $y =_{df} x$ is a part of y and $x \neq y$. That definition allows $L \neq S$ to be quickly derived from (2).

Koslicki defends MIPP via inference to the best explanation. She claims that it best explains the fact that when a composite object is created, its material ingredients:

- (a) continue to exist and ‘maintain a presence’ in the resulting composite,
- (b) have strikingly similar properties to the resulting composite, and
- (c) wind up spatio-temporally coincident with the resulting composite (176–78).

MIPP suggests that the material ingredients ‘maintain a presence’ in the resulting composite by being proper parts of it, that the composite inherits its properties from the material ingredients via mereological supervenience, and that ‘the spatio-temporal coincidence between wholes and their material [ingredients] can . . . be assimilated to the benign, mereological manifestation of this phenomenon exhibited by, say, a man and his forearm’ (178–79). So, says Koslicki, MIPP is the best explanation of the three phenomena.

But this is just wrong. A better explanation is available. There is a different principle that explains everything that MIPP explains, and also covers cases to which MIPP simply doesn’t apply.

To see the cases I have in mind, consider why Koslicki relies on MIPP rather than a related stronger principle:³

MIPP⁺: The material ingredients from which an object is created are proper parts of that object (at the beginning of its existence).

The problem with MIPP⁺ – the problem that MIPP avoids – is that the material ingredients simply do not always survive the process of creation. Consider what happens when you bake a cake. You start with some flour, sugar, oil, a couple of eggs and so forth – those are the ‘material ingredients’ from which the cake is made. Yet no eggs wind up as proper parts of the finished cake. Eggs are proper parts of the contents of my refrigerator, or an Easter basket. They are not proper parts of *cakes* – not, at least, of any cake that I want to eat. Instead, the eggs are destroyed in the process of making the cake. Because there is no time at which both the cake and the eggs exist, they cannot stand in the relation of proper parthood (though they do stand in an interesting relation; see unpublished manuscript for further discussion). Thus we have a counterexample to MIPP⁺: the eggs are material ingredients from which an object is created, but are never proper parts of that object.

That case is mine, not Koslicki’s, but it is sufficiently in line with some of her remarks that it is best only to attribute to her the weaker MIPP. Yet what Koslicki seems to have missed is that such cases do not just falsify MIPP⁺, but also undercut her motivation for MIPP.

3 Koslicki sometimes says something equivalent to MIPP⁺, but various caveats throughout her discussion make it clear that she intends the weaker MIPP. (Again, MIPP and MIPP⁺ are my regimentations, not hers.)

This is because in cases in which the material ingredients are destroyed, two of Koslicki's three phenomena remain in need of explanation. The third phenomenon vanishes: if the material ingredients do not exist when the composite does, they do not become spatio-temporally coincident with it, and there is nothing to be explained. But the first and second phenomena remain. The eggs *do* in a sense 'maintain a presence' in the resulting cake. After all, someone who is vegan or has unfortunate allergies will refuse to eat the cake, citing the (literally false) fact that 'it has eggs in it'. Relatedly, there clearly is a sense in which the resulting object inherits its properties from its material ingredients – even those ingredients that are destroyed in the process of composition. Your cake might not be white and ovoid, but it does have its texture and protein content partially in virtue of properties that the eggs once instantiated.

But MIPP simply doesn't apply here. It remains silent. It says nothing at all about why your cake inherits properties from the eggs, or how it is that the eggs are – sort of – present in the cake. So MIPP is not a very good explanation of Koslicki's three phenomena. And there is a better one available. The better explanation is something like this:

Proper Parts of Material Ingredients as Proper Parts (PMIPP): (Some of? Many of?) the proper parts of the material ingredients from which an object is made are proper parts of that object at the beginning of its existence.⁴

Because PPMIPP covers cases in which the material ingredients no longer exist once the object does, it has broader scope than MIPP, and thus does more explanatory work. It explains the fact that material ingredients 'maintain a presence' in the resulting composite by means of the fact that their *proper parts* become proper parts of the resulting composite. Like MIPP, it explains the fact that composite objects inherit many of their properties from the material ingredients used to create them by means of mereological supervenience. And, like MIPP, it explains the fact that composites sometimes wind up spatio-temporally coincident with their material ingredients as the same 'benign, mereological manifestation of this phenomenon' (179) that Koslicki mentions.

PPMIPP is clearly a better explanation of the three phenomena than MIPP. So by Koslicki's own methodological lights, she should move to PPMIPP rather than MIPP.

But now let us return to the question of why these principles matter in the first place. We were trying to see why we should accept premiss (2) of the argument for the Neo-Aristotelian Thesis: the claim that when a statue *S* is

4 I do not pretend that this is a very precise formulation; the 'some of? many of?' part is intentionally vague. What matters is that it only makes a claim about the *proper parts* of the material ingredients, rather than about the material ingredients themselves.

made from a single lump of clay *L*, *L* becomes a proper part of *S*. MIPP tells us to believe that. PPMIPP does not. It only tells us that *L*'s *proper parts* become proper parts of *S*. Which strikes me as extremely plausible. And which does nothing whatsoever to justify Koslicki's Neo-Aristotelian thesis. If *L* is not a proper part of *S*, the Weak Supplementation principle does not force us to come up with another proper part for *S*.

Thus we need not accept the startling claim that objects have formal proper parts. A mechanic can exhaustively list the parts of a motorcycle after all.⁵

Cornell University
Ithaca, NY 14850
kb383@cornell.edu

References

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5 This article derives from an Author-Meets-Critics session at the 2010 Pacific APA. Thanks to the rest of the panel – Kathrin Koslicki, Ned Markosian and Andrew McGonigal – for discussion.

Sleeping Beauty and direct inference

JOEL PUST

1. Sleeping Beauty (Elga 2000) is informed on Sunday morning that she is to be a subject in a peculiar experiment. She will be put to sleep on Sunday night and awakened on Monday morning. After being told that it is Monday, she will be put back to sleep and, if the toss of a fair coin comes up heads, she will sleep until the end of the experiment on Wednesday. However, if the coin toss comes up tails, she will be administered a drug which erases her memories of Monday and then she will be awakened again on Tuesday. When she awakens during the experiment, with no recollection of a previous awakening, what credence should she have that the coin comes up heads? According to 'halfers,' 1/2, and according to 'thirders', 1/3.

A large group of philosophers, led by John Pollock and writing collectively under the name 'The Oscar Seminar' (Seminar 2008) (hereinafter referred to