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*The Structure of Objects*. KATHRIN KOSLICKI. Oxford: Oxford University Press 2008. xix + 288 p. Cloth \$ 90.00.

Kathrin Koslicki's *The Structure of Objects* is a study of parts and wholes. Koslicki critically discusses, often in great detail, a number of philosophers on this topic, from Plato and Aristotle to David Lewis. Her discussion is interesting not only for its own sake, but also because it prepares the ground for her original theory of composite objects. And it is Koslicki's theory that will be my focus here.

## I

Koslicki's theory consists of two theses. The first thesis is an answer to the "special composition question." That question asks what it takes for some *x*s to compose an object *O*. In one way or another, most recent answers to this question are revisionary. Consider, for example, Koslicki's *bête noire*: "standard mereology." Standard mereology says, among other things, that any existing entities compose an object; thus it implies that your left ear and your neighbor's dog compose an object.

Koslicki wants to defend a non-revisionary answer to the special composition question, an answer that is consistent with the existence of all and only the composite objects endorsed by common sense and by natural science. Her answer is that the *x*s compose an object *O* of kind *K* if and only if the *x*s satisfy the formal constraints dictated by the structure associated with objects of kind *K* (pp. 187-188). And Koslicki's answer is, as she intends, consistent with a commonsensical, scientifically informed, ontology.

But her answer does not deliver such an ontology, at least not on its own. After all, even standard mereologists, who believe in non-commonsensical sums of ears and dogs, can accept her answer. For standard mereologists can claim that *arbitrary sum* is a kind of object whose structure dictates that the parts of any arbitrary sum must satisfy the “formal constraint” of existing.<sup>1</sup> And standard mereologists can add that, for every other kind of object, the parts of any object of that kind must satisfy the further formal constraints dictated by the structure associated with that kind of object. They will certainly say, for example, that the *xs* compose a motorcycle if and only if the *xs* are arranged in a particular way.

So Koslicki’s answer to the special composition question does not rule out standard mereology. So her answer does not constitute an objection to standard mereology, at least not on its own. But Koslicki does have an objection to standard mereology. Here is one version of that objection. Suppose that a motorcycle is composed of certain atoms. Suppose that those atoms existed two hundred years ago, but were widely scattered. According to Koslicki, standard mereology implies that that motorcycle itself existed two hundred years ago, as those scattered atoms. But, Koslicki would object, no entity that is currently a motorcycle existed two hundred years ago, not even as scattered atoms. So standard mereology is false (p. 45).<sup>2</sup>

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<sup>1</sup> Koslicki has a robust notion of *kinds* (pp. 200-234). So she might argue that *arbitrary sum* is not a genuine kind. But to do so is to go beyond her answer to the special composition question. And so that answer, by itself, does not rule out standard mereology. And that is my only point here.

<sup>2</sup> Koslicki sometimes puts this objection in a misleading way: “Standard mereology cannot tell the difference between the motorcycle in running condition and the heap of disassembled parts” (p. 4; see also p. 1). Compare: many of us—including Koslicki—think that a great-grandfather existed years ago, as an infant child; but it would be misleading, at best, to charge that we thereby “cannot tell the difference” between an elderly gentleman and a baby.

Koslicki is right that standard mereology says, among other things, that if the *xs* compose an object *O*, then whenever the *xs* existed, they composed *O* (and so *O* existed then). But standard mereology does not imply that any motorcycle existed two hundred years ago, not even if the atoms that now compose it existed then. At least, *standard* standard mereology does not imply this. For most standard mereologists—such as David Lewis—are perdurantists. And perdurantists say that a motorcycle is composed not of entire atoms, but rather of the *temporal parts* of atoms. They will add that no motorcycle was ever composed of the two-hundred-years-ago temporal parts of any atoms, not even if the atoms now composing a motorcycle existed two hundred years ago. So nothing in perdurantist standard mereology implies that a motorcycle existed two hundred years ago, not even as scattered atoms. So most standard mereologists are untouched by Koslicki’s principal objection to standard mereology.

## II

As we have seen, the first thesis of Koslicki’s theory—her answer to the special composition question—involves structure. So does the second thesis. Let the K-structure dictate the formal constraints that parts must satisfy in order to compose an object of kind K. Her second thesis says that if an object is a member of kind K, then that object has the K-structure *as a part*. I think that this is the most exciting claim of the book. It is so exciting that it may strike some contemporary metaphysicians as beyond the pale.<sup>3</sup> But

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<sup>3</sup> This is exciting. Of course, this would not be exciting if *having a structure as a part* were the same thing as *having a structure*. (For it is not exciting that a member of kind K has a K-structure.) So in order to appreciate Koslicki’s second thesis, we must see that *having a structure as a part* is one thing, and *having a structure* is something else.

Koslicki shows that Plato and Aristotle endorsed claims more or less like her second thesis (chs. 5 and 6). This pedigree makes her second thesis worth taking seriously, as do Koslicki's interesting arguments for that thesis.

Koslicki's first argument (pp. 180-181) begins with some familiar claims about a statue and a lump of clay. These claims are: the statue and the lump are in the same place at the same time; but the statue is not identical with the lump; instead, the statue is constituted by the lump. From these familiar claims, Koslicki infers that the lump is a part of the statue. Because the statue is not identical with the lump, she even infers that the lump is a *proper* part of the statue.

Enter the Weak Supplementation Principle (WSP): if  $x$  is a proper part of  $y$ , then there is some  $z$  that is a proper part of  $y$ , and which shares no parts with  $x$ . Given that the lump is a proper part of the statue, WSP tells us that the statue has a proper part that shares no part with the lump. But the statue and the lump have all the same material parts.<sup>4</sup> So, given WSP, the statue must have a non-material part, which the lump lacks. That extra part, says Koslicki, is the statue's *structure*. Thus her first argument for the claim that an object has its structure as a part.

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Here is one way to see this. Suppose, for *reductio*, that *having a structure* is the same thing as *having that structure as a part*; a cell in my finger has a certain structure; therefore (given our assumption for *reductio*) that cell has that structure as a part; that cell is a part of me, and so its parts are my parts; so that cell's structure is a part of me; and so (given our assumption for *reductio*) I have the same structure as that cell. RAA.

<sup>4</sup> More carefully, they have the same material parts *at some level of decomposition*. For example, they presumably have all the same molecules as parts. But the statue may have some material parts that the lump lacks. For example, the statue may have a head as a part, but the lump not. (The lump may have a head-shaped lump as a part.) Even so, the statue's head will share some parts—such as certain molecules—with the lump (and with the lump's head-shaped part). In what follows, I shall sometimes say that the statue and the lump “have the same material parts”; this is shorthand for saying that they have the same material parts at some level of decomposition.

WSP is essential to Koslicki's first argument. But Koslicki does not argue for WSP.<sup>5</sup> Nor is WSP obviously true. In fact, here is a counterexample to WSP. Suppose that the statue is constituted by (but not identical with) the lump. And suppose, further, that this implies that the lump is a proper part of the statue. Finally, add that each of the statue's parts shares some part or other with the lump. All of this together implies that WSP is false.

This "counterexample" to WSP should seem familiar. It is, of course, the example that drives Koslicki's first argument for the statue's having its structure as a part. So Koslicki cannot resist this counterexample by denying (as others might) that the lump is a proper part of the statue. I think that she must resist by saying something like: "WSP is more plausible than is the claim that each of the statue's parts shares some part or other with the lump." For what it is worth, I would judge the plausibilities differently.

And I have a more serious objection. This objection begins with a big object of kind K. Suppose that that object is constituted by a numerically distinct object of kind K\*. Suppose that this implies that that K\*-object is a proper part of the big K-object. Let us add that the K\*-object has a part that is itself of kind K, a small K-object. Suppose that the small K-object has the K-structure as a part. By the transitivity of parthood, the K\*-object has the K-structure as a part. WSP tells us that the big K-object must have a part that shares no parts with the K\*-object. That part cannot be the K-structure itself, since—as we have just seen—the K\*-object has the K-structure as a part. But—so Koslicki's first argument seems to imply—that part is the K-structure. Contradiction.

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<sup>5</sup> Koslicki takes WSP to be "partially constitutive of the meaning of 'is a proper part of'" (p. 180). But I think that the meaning of 'is a proper part of' is entirely constituted by: (a) is a part of; and (b) is not identical with.

The contradiction just generated has two sources. The first source is the reasoning found in Koslicki's first argument for the claim that an object has its structure as a part. Obviously, Koslicki cannot reject this first source. The second source is my example that begins with a big K-object. So Koslicki must object to something or other in my example.

Koslicki herself—in the course of considering an objection different from the one I am raising here—discusses an example of just this sort: A big statue constituted by a heap of trash, a heap which includes, among other items, a little statue (p. 256). Koslicki does not object to this example by denying that statues exist, or by denying that constitution is a relation that holds between distinct entities. Nor should she. After all, either denial would undermine the reasoning in her first argument.

Nor do I think that she should deny that heaps of trash exist (even though she entertains this denial on pp. 258-259). This is partly because eliminating heaps of trash alone would be a mere stopgap measure; we could come up with a less trashy example along these same lines.<sup>6</sup> Moreover, her central arguments require that statues made of clay are constituted by something—and why should statues made of trash be any different? Finally, she insists that a theory of parts and wholes should not lead to a revisionary account of what kinds of entities exist (p. 171). To eliminate heaps of trash only because they create trouble for her theory of parts and wholes would make her the very sort of revisionary mereologist she sets out to oppose.

Koslicki could deny that the big statue's structure is numerically identical with the small statue's structure. For she could deny that structures are universals. And then she could endorse trope theory. This would allow her to say that the big statute has a part—

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<sup>6</sup> Here is just one: a large ice cube constituted by a mass of (frozen) water composed of smaller ice cubes.

namely, the trope that is that big statue's structure—that the heap of trash does not have. She can say this even though the heap of a trash has, as a part, the trope that is the little statue's structure. And she can say this even though the two statues have the same structure, since on trope theory their having the same structure implies only that the structure of one is exactly similar to the structure of the other.<sup>7</sup>

Embracing trope theory seems to me the best way for Koslicki to object to the example that, I argued above, leads to contradiction when combined with her reasoning. But this embrace is not without costs for Koslicki, not even if trope theory is free. For trope theorists say that all of an object's properties are parts of that object. So they say that an object's structure—assume its structure is a property—is itself a part of that object. (Koslicki is open to the idea that a structure is a property; see p. 254.) So they agree with Koslicki's claim that an object's structure is a part of that object. Thus her claim turns out to be just one predictable upshot of trope theory, as opposed to a new account of the nature of objects, or a bold hypothesis about how an object's structure differs from its other properties. In this way, I think that trope theory makes Koslicki's claim less exciting than it originally seemed to be.

### III

The statue and the lump are supposed to differ in persistence conditions.

Presumably, their differing in this way must be grounded by their differing in some other

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<sup>7</sup> Koslicki entertains trope theory, and raises objections to it (pp. 257-258). She also entertains the idea that the big statue and the little statue do not have the same structure at all (pp. 257-258). But this latter idea is inconsistent with her view that members of the same kind have the same structure, at least given her assumption (in the central arguments for her theory) that *statue* is a genuine kind.

way. But it seems that there is no other way in which they differ. After all, the statue and the lump have the same material parts and are in the same environment. This is the “grounding problem” for coincident objects.

Koslicki’s second argument for the claim that an object has its structure as a part is that that claim solves the grounding problem. For suppose that claim is true. Then the statue differs from the lump by having a part—its structure—that the lump does not have. And that difference, says Koslicki, can ground their difference in persistence conditions (pp. 181-183).

Suppose one says that the statue’s differing in persistence conditions from the lump is grounded by the statue’s, but not the lump’s, being a member of the kind *statue*. Arguably, this “solution” merely moves the bubble to a new place under the rug. For we are now left wondering what grounds the postulated difference in kind membership. And it looks like nothing can. For the statue and the lump have the same material parts and are in the same environment.

This bubble-moving “solution” can be made to look a lot like Koslicki’s solution. For suppose that the fundamental difference (which grounds every other difference) between the statue and the lump is that the statue exemplifies *being a statue*, but the lump does not. And suppose that trope theory is true, and that, as a result, an object has a property if and only if that object has that property as a part. Then the fundamental difference between the statue and the lump is that the statue has, but the lump lacks, an abstract part: *being a statue*. This looks like Koslicki’s solution, assuming that a structure is a type of property. (Indeed, this *is* Koslicki’s solution if her overall approach

incorporates trope theory—recall the closing of the previous section.) And this makes me conclude that Koslicki’s solution is but a bubble mover.

Here is another route to that same conclusion. Consider the lump’s material parts. They are numerically identical with the statue’s material parts. And so, given the indiscernibility of identicals, the lump’s material parts are interrelated exactly like the statue’s material parts are interrelated; and so the lump’s parts satisfy all the same formal constraints that the statue’s parts satisfy. All of this leaves us wondering what explains why the statue has the relevant structure as a part, but the lump does not. More to the point, it seems that nothing could explain this difference. And so it looks like Koslicki’s solution to the grounding problem merely exchanges one objectionable brute difference for another.<sup>8</sup>

If the lump has the statue’s structure as a part, then both of Koslicki’s arguments for the claim that an object has its structure as a part fail. So Koslicki must say that the lump does not have the statue’s structure as a part. And so Koslicki must deny that an object’s having a certain structure as a part supervenes on how that object’s material parts are interrelated. But even setting the grounding problem aside, I find this denial implausible. At least, if I were defending Koslicki’s claim that an object has its structure as a part, I would insist that its having that structure as a part supervenes on how that object’s material parts are interrelated. Put otherwise, I would insist that an object’s having that structure as a part supervenes on that object’s structure.

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<sup>8</sup> Standard mereologists say that if there are some *x*s and a structure *S*, then—simply as a result of the unrestricted nature of composition—there is an object composed of just the *x*s, and another composed of just the *x*s and *S*. So, they will say, there is no need to explain why the latter object has *S* as a part, but the former does not, and so nothing objectionable about lacking such an explanation. Koslicki is no standard mereologist. She denies that composition is unrestricted. And so she should expect there to be an explanation of why one thing (like a statue) has another thing (like a structure) as a part.

## IV

Suppose that a structure is a property. In particular, suppose that the structure associated with the kind *statue* is the property of *being structured like a statue*. Now suppose that a lump—in virtue of how its material parts are interrelated—exemplifies that property. Add that there is therefore the “event,” or the Armstrongian “state of affairs,” of that lump’s exemplifying that property. According to the lore on events, that event has two principal parts. Its principal parts are the lump, and the property of *being structured like a statue*. (The event’s other parts are all parts of these two principal parts.)

Dwell upon the event of the lump’s exemplifying *being structured like a statue*. You will come to see that that event seems to be exactly like a statue, at least given Koslicki’s account of statues. That is, Koslicki’s account seems to be aptly described as the claim that a statue is an event, an event whose principal parts are a lump and the property of *being structured like a statue*.<sup>9</sup>

Some philosophers deny that numerically distinct statues and lumps can occupy the same place at the same time. But these philosophers do not deny that a lump can be in the same place at the same time as the event of that lump’s exemplifying *being structured like a statue*. Moreover, no one even raises an eyebrow at the claim that that lump’s persistence conditions differ from those of that event. Nor are we likely to object to the claim that that event has the property of *being structured like a statue* as a part, but that

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<sup>9</sup> Koslicki’s view also seems to imply that the lump is an event. More generally, her view seems to imply that all material objects are events, except for unstructured objects at the bottom of the compositional hierarchy. Koslicki is explicitly agnostic about whether there are unstructured objects (pp. 186-188).

that lump does not—and this despite our knowing that the material parts of that lump are (identical with and so) interrelated exactly like those of that event.

So suppose that Koslicki's statue really is an event. Then some of my objections above might not indicate real problems for her account of statues and other objects. Or perhaps, instead, those objections indicate problems not just for her account, but also for the claim that there are events. I do not know which it is.

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