Bundle theories of material objects (in their most popular form) claim that objects are *identical* to bundles of properties. I am interested here in the bundle of universals theory of material objects, i.e., the theory that claims that objects are bundles of (immanent) universals. The most plausible analysis of the 'bundling' relation, I take it, is given in terms of the well-known part-whole relation of classical mereology. A bundle of some universals is, on this view, the mereological *fusion* of these universals. And so the bundle theory in which I am interested claims that objects are identical to fusions of universals.

The bundle of universals theory of objects allows us to understand some theses often expressed in connection with the instantiation of universals. For instance, it offers an understanding of the immanent realist's claim that universals are *in* the objects that instantiate them, while offering an analysis of the instantiation relation. Universals are *in* the objects that instantiate them to the extent that they are *parts* of the objects—the latter *are* just fusions of universals. And an object *instantiates* a universal P just in case P is a *part* of the fusion of the object's universals (i.e., of the object).

But the theory faces a problem noted in another context by David Lewis (Lewis 1986). A statue is the mereological fusion of the universals that it, as we would ordinarily say, instantiates. Suppose that the statue's head is red, while the rest of the statue is grey. The bundle theory entails that the universal *redness* is a part of the head (the fusion of *its* properties). Since the statue is not red, *redness* is not a part of the fusion of the statue's properties. Or so we would like the theory to claim. Yet it apparently follows from the bundle theory that *redness* is a part of the fusion of the statue's properties. For the head is a part of the statue, and *redness* is a part of the fusion of the head's properties. From the transitivity of the part-whole relation it follows that *redness* is a part of the fusion of the statue's properties. So, the instantiation principle above says that *redness* is one of the universals the statue instantiates. But that is not correct. The statue is not red. How can an advocate of the bundle theory respond to Lewis's problem?

A version of the bundle theory developed by L.A. Paul (Paul 2002, 2006) takes two kinds of part-whole relation as mereological primitives. It thus avoids the problem. One kind of part-whole relation is the *property-part-whole* relation that holds between an object and its universals; the other kind is *the spatiotemporal part-whole* relation that holds between the object and its spatiotemporal parts. Because the statue's head is a *spatiotemporal* part of the statue, while *redness* is a *property* part of the head, one cannot appeal to the transitivity of parthood in order to conclude that *redness* is a *property* part of the statue. The statue is the *property* fusion of *its* universals, not of the ones of its spatiotemporal parts.

In this talk, I argue that there is no need to resort to two kinds of part-whole relation in order to solve Lewis's problem. One needs only a ternary part-whole relation as a primitive, i.e., one that holds between objects (or fusions of universals), universals, and *regions of space*. I further argue that the resulting version of the bundle theory commits one to an uncontroversial version of Leibniz's Indiscernability of Identicals, and not to a more controversial one (as is often thought). The bundle theory can therefore accommodate the intuitions of those who would like to recognize the possible existence of distinct indiscernibles.

The solution to Lewis's problem requires nothing more than a ternary part-whole relation. With the latter relation, we can slightly modify the instantiation principle mentioned above so that an object instantiates a universal P just in case P is a part of the object (or fusion of universals) at *the region at which the latter is located*. Suppose that the statue's head is located at the region r_1 of space, and that the statue itself is located at another region r_2—r_1 is a proper part of r_2. The head is the fusion *h* at r_1 of its properties, while the statue is the fusion *s* at r_2 of *its* properties. From the facts that *redness* is a part of *h* at r_1, and that *h* is a part of *s* at r_1, one can conclude that *redness* is a part of *s only* at r_1 (and *not* at r_2). So, although *redness* is a part of the statue at r_1, it is not a part of it at r_2. It does *not* follow from the modified instantiation principle that the statue instantiates *redness*, for *redness* would have to be part of *s* at r_2 for that to be so. Lewis's problem is solved.

My version of the bundle theory entails an uncontroversial version of Leibniz's Indiscernability of Identicals. Leibniz's principle states that objects with the same properties—universals in our case—are identical; there are no distinct indiscernibles. The theory I defend entails only that objects with the same universals *at the same regions* are identical. Accepting the possibility of distinct indiscernibles is no motivation to accept that (distinct) indiscernibles could be located at the *same* region of space. The bundle theory can make sense of there being two indiscernible objects (as in (Black 1952))—provided, that is, that they are not located at the exact same region of space.

References

Black, M. (1952). "The Identity of Indiscernibles," *Mind, 61*(242), 153-164.
Lewis, D. (1986). *On the plurality of worlds*. Oxford, UK ; New York, USA: B. Blackwell.
Paul, L. A. (2002). "Logical Parts," *Noûs, 36*(4), 578-596.
Paul, L. A. (2006). "Coincidence as Overlap," *Noûs, 40*(4), 623-659.