

**Philosophy of Mind and Metaphysics**  
**Lecture IV: Substantial Change and Spatiotemporal Coincidence**

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I. PRELIMINARIES

- a. We have in previous lectures been concerned with questions of analysis (“In virtue of what is one thing identical to another?”) and with questions of explanation (“How is it that one and the same thing can change over time?”). Tonight, we’ll be concerned with another puzzle that bears on questions of identity. The puzzle concerns the possibility of *coinciding distinct objects*.

II. THE PUZZLE

- a. Suppose we give a lump of clay to a sculptor, who then sculpts a statue. Later, we flatten that statue in such a way as to make it appear exactly as it did before the sculptor did her work. What should we say of the lump of clay during the time after the sculptor did her work but before flattening? Are the lump of clay and the statue numerically *identical*, or are they numerically *distinct*? In favor of their identity, we might ask this: what could the statue *be* if not the lump of clay (with, perhaps, a certain shape)? Nevertheless, we realize that the statue comes to be only *after* the lump of clay comes to be, and that the statue ceases to be *before* the lump of clay does. So, since something is true of the lump that is not true of the statue, it seems that they’re distinct.

III. SOLUTIONS

a. RELATIVE IDENTITY

i. TERMINOLOGY

1. SORTAL: A sortal is a general term that denotes a certain sort or kind of thing. For example, ‘tiger’, ‘tree’, and ‘statue’ are sortals.

- ii. THE SOLUTION: According to the proponent of relative identity, identity is a relative relation rather than an absolute one. Thus, two objects *a* and *b* cannot be identical *without qualification*; *a* and *b* are identical, if at all, *only relative to a sortal*. (When we say that *a* and *b* are identical, we say only that they are the same *F*, where ‘*F*’ is a sortal.) This leaves room, though, for distinctness (relative to a sortal) – even if *a* and *b* are the same *F*, they might *not* be the same

*G*, where '*G*' is a sortal. On this view, then, we can solve our puzzle by saying that the statue and the lump of clay are the same *lump of clay*, but that they are *not* the same *statue*.

### iii. THE VIEW'S VIRTUES

1. "[I]t explains why we are pulled in two different directions concerning the statue and the lump of [clay], wanting to say both that they are distinct and that they are identical" (pp. 63-4).
2. "[I]t even reconciles, in a way, the two judgements that we feel inclined to make, so that we are not compelled to surrender either in favour of the other: we can retain both judgements, provided that we qualify each in the way that the relativist recommends" (p. 64).

### iv. PROBLEMS WITH THE VIEW

1. If we accept the view, we must abandon the standard version of Leibniz's Law, according to which if something is true of an object *a* but not true of *b*, then *a* cannot be identical to *b*. For, according to the relative identity theorist, *a* and *b* can be identical even though *a* is a statue while *b* is not. Leibniz's Law, however, is considered by many to be "the most fundamental law of identity, without which we effectively lose all real grip on the notion of identity" (p. 64).
2. Accepting the view forces us to accept relative *existence*, according to which *a* exists, if at all, only relative to a sortal. Even after flattening, something exists – namely, the lump of clay – that is the same thing of *some* sort as the statue. "This seems to imply that the statue *does* still exist, albeit only 'as' the lump of [clay] rather than 'as' the statue" (p. 64). Perhaps we are inclined, though, to think that the statue has been destroyed and hence that it no longer exists.

### b. TEMPORAL PARTS

- i. THE SOLUTION: "The temporal-parts theorist can say that, so long as the statue and the lump of [clay] exactly coincide, they have exactly the same temporal parts, even though they may have different temporal parts before or after that period. This allows us to say that, considered as 'four-dimensional' wholes, the statue and the lump of [clay] are indeed numerically distinct objects—and yet that, at any given time during their coincidence, just *one* temporal part of an object exists in the place they occupy, because the temporal part

of the statue which exists at that time is numerically identical with the temporal part of the lump of [clay] which exists at that time” (p. 65).

- ii. **THE VIEW’S VIRTUES:** “This account, like the relativist one, both explains and to some extent justifies our inclination to say that the statue and the lump of [clay] both are and are not identical with one another during the time of [their] coincidence. As temporally extended wholes they are *not* identical” (p. 65; my italics), but during the time of their coincidence, they can certainly *seem* identical—and not only because they have exactly the same (non-dispositional) material properties, but also because, according to the temporal parts theorist, they have exactly the same temporal parts.
- iii. **PROBLEMS WITH THE VIEW:** Imagine a case in which the statue and the lump both *come* to be at precisely the same time and *cease* to be at precisely the same time. In such a case, we might nevertheless want to say that the statue is *distinct* from the lump. Unfortunately, however, the temporal parts theorist lacks the resources for saying this. For, in such a case, the statue and the lump are exactly the same four-dimensional wholes, and so must be numerically *identical*.

c. **RADICAL SOLUTIONS**

i. **DENY THAT THERE IS ANY SUCH THING AS A STATUE**

- 1. **THE SOLUTION:** “[W]e could deny that there are really any such things as ‘statues’, conceived as constituting a distinctive kind of persisting object. We could hold instead that, although a lump of [clay] may become ‘statue-shaped’ for a certain period of time, this does not amount to the creation of any new substantial individual distinct from the lump itself” (p. 67).

ii. **DENY THAT THERE IS ANY SUCH THING AS A LUMP OF CLAY**

- 1. **THE SOLUTION:** “[W]e could deny that there are really any such things as ‘lumps of [clay]’, holding instead that, although a number of [clay] particles may become united together for a certain period of time, this does not ordinarily amount to the creation of any new substantial individual in addition to the many [clay] particles themselves—but that when an intelligent agent deliberately imposes a specific form upon the particles, they then begin to compose a new substantial particular, such as a statue” (p. 67).

2. **PROBLEMS WITH THE FIRST TWO RADICAL SOLUTIONS:** If we are willing to accept either of the first two radical solutions, then why shouldn't we be willing "to combine them, denying the existence of *both* statues *and* lumps of [clay] and accepting only the existence of [clay] particles" (p. 67)? "But," continues Lowe, "it is easy to see where this train of thought is likely to lead, namely, to the view that, in reality, the only persisting objects that exist are simple or non-composite ones, the most likely candidates being the so-called elementary particles of physics" (p. 67). And we don't want that.

iii. **FIRST A LUMP, THEN A STATUE, THEN A LUMP AGAIN**

1. **THE SOLUTION:** "[W]hen the lump of [clay] is formed into the statue, bringing the latter into existence, the lump of [clay] itself ceases to exist" (p. 68). Then, when the statue is flattened, the statue ceases to exist and the lump of clay once again comes to be.

2. **THIS SOLUTION'S VIRTUES**

a. It allows us to deny that numerically distinct objects can exactly coincide.

b. It requires us to adopt neither the theory of relative identity nor the doctrine of temporal parts.

3. **PROBLEMS WITH THIS SOLUTION:** It violates the commonsense principle that we cannot destroy a lump of clay simply by imposing a certain shape upon it.

d. **SPATIOTEMPORAL COINCIDENCE**

i. **TERMINOLOGY**

1. **MODAL PROPERTIES:** A modal property of an object is a property that object has in virtue of what *could* happen to it.

2. **HISTORICAL PROPERTIES:** An historical property of an object is a property that object has in virtue of what *has* happened to it in the past.

ii. **THE SOLUTION:** The statue and the lump of clay are numerically distinct persisting objects, and they exactly coincide (at least for a certain period of time). The statue and the lump differ in their

modal and historical properties. Thus, given Leibniz's Law, the statue and the lump are numerically *distinct*. This makes perfect sense, at least to Lowe, since the objects' possession of historical and modal properties "is not determined solely by what is the case at the times at which they possess them, nor are these properties grounded in the properties and relations of material particles composing the statue and the lump" (p. 71).

iii. THE VIEW'S VIRTUES

1. We need not deny Leibniz's Law.
2. It requires us to adopt neither the theory of relative identity nor the doctrine of temporal parts.

iv. PROBLEMS WITH THE VIEW: How will the view explain our judging the statue to be identical to the lump?