

The Statue and the Clay

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1. The problem, familiarly enough, emerges as follows. Suppose I bought a ten pound portion of clay at 9AM. What is a portion of clay? We will return to that question. For the time being, a portion of clay is some clay. It is a quantity of clay. Let us give the name CLAY to it:

CLAY = the ten pound portion of clay I bought at 9AM.

Suppose that at noon, I made a statue of King Alfred the Great out of it, and that I put it on the table at 2PM. Let us give the name ALFRED to the statue:

ALFRED = the statue on the table at 2PM.

How are ALFRED and CLAY related to each other? That is the problem.

Is this supposed to be a hard problem? Why isn't the solution simply that ALFRED is CLAY? If we can say that

Identity Thesis: ALFRED = CLAY

is true, then the problem is solved, easily.

Some people say it is obvious that the Identity Thesis will not do, for the following reason. By hypothesis, they say, I bought CLAY at 9AM, so

(1) CLAY existed at 9AM

is true. But, they say, it is obvious that ALFRED did not come into existence until noon, so

(2) ALFRED did not exist at 9AM

is also true. And they go on to say it is therefore obvious that the Identity Thesis is false. (A similar argument turns on my smashing ALFRED at midnight.)

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If we accept this argument, then we do have a hard problem before us. ALFRED and CLAY plainly stand in some intimate relation to each other—they currently occupy the same place, they currently have the same shape, size, color, texture, smell, and so on and on. In what relation do they stand to each other if not identity? Opponents of the Identity Thesis say we should say that CLAY constitutes ALFRED. But what can “constitutes” mean for these purposes? Opponents of the Identity Thesis have not found it at all easy to say.

Moreover, the Identity Thesis does not merely supply us with a simple solution to our problem: the solution it supplies is attractive in another way too. For let us take a closer look at the fact that ALFRED and CLAY currently have the same shape. ALFRED is blob-shaped on top, then is wider in the middle; the same is true of CLAY. The following is on any view true:

(3) ALFRED is a statue at 2PM

Isn't

(4) CLAY is a statue at 2PM

also true? But if (3) and (4) are both true, and ALFRED is not identical with CLAY, then there are two statues on the table at 2PM, one of which is ALFRED and the other of which is CLAY—both of them, I add, occupying the same place. That certainly sounds false.

Let us stop over (4) for a moment. Wouldn't it be odd to deny it? No doubt CLAY was not a statue at 9AM, but isn't it one at 2PM? What, after all, *is* a statue? Isn't it merely a portion of clay, or stone, or wood, or metal, shaped in a certain way, with a certain intention, by some person? Isn't what I did at noon precisely to make CLAY *become* a statue? Opponents of the Identity Thesis would say “No no, you can't make a portion of clay become a statue, you can only make it come to constitute a statue.” Is there really any good reason to agree?¹

If we disagree—if we instead believe that a statue is merely a portion of clay, or stone, or wood, or metal, shaped in a certain way, with a certain intention, by some person—then we can have the Identity Thesis, and we can therefore have that there is only one statue on the table now, viz., ALFRED, viz., CLAY, and that ALFRED has been in existence as long as CLAY has been, though of course ALFRED, viz., CLAY, did not become a statue until noon.

It might pay to set this idea into a wider context. A great many properties can be called temporary properties, that is, properties that a thing can have at one time and not at another. Here are some examples:

some temporary properties: being a wife, a teenager, a student, ... , being hungry, round, red,

(I divide these into two groups because while those in the first group are commonly called phase- or stage-properties, those in the second are not; all, however,

are temporary.) Suppose that Mary got married at noon. Her marrying did not make a wife come into existence: it merely made her become a wife. Your reaching the age of 20 did not make a teenager go out of existence; it merely made you cease to be a teenager. And so on.

There is a sub-class of temporary properties that are particularly interesting for present purposes, of which the following are examples:

some shape-constrained temporary properties: being a puddle of M, a piece of M, a lump of M, ... , being a heap of M, a mound of M, a stack of M,

“M” here is short for an appropriate mass-noun, such as “clay,” “soup,” “pudding,” “coal,” “wood” and so on. (I divide these too into two groups, for a reason that will emerge later. And I say “appropriate” because while a thing can be a puddle of soup, nothing can be a puddle of clay; and while a thing can be a piece of clay, nothing can be a piece of soup.)

These shape-constrained temporary properties are of interest to us in two ways.

First, the things that acquire and lose these properties are portions of stuff, that is, portions of clay, soup, pudding, coal, wood, and so on. A portion of clay might be scattered in many little pieces around the room; if we collect those pieces and mash them together, we do not make a piece of clay come into existence—rather, we make the portion of clay become a piece of clay, and if the piece is mound-shaped, we also make the portion of clay become a mound of clay. The portion can also lose those properties: it will lose them if we cut it up into little pieces and scatter them around the room again. Second, what fixes whether a portion of an appropriate stuff has one of those properties is its shape. If a portion of clay is, so to speak, gappy, as when it is scattered around the room, it is neither a piece of clay nor a mound of clay. When it is no longer gappy, as when it is mashed together, it is a piece of clay, and if it is mound-shaped, it is also a mound of clay.

Now let us go back to statues. Why shouldn’t we include being a statue among the temporary properties possessed from time to time by portions of stuff? Why shouldn’t we suppose that it is, like being a piece of clay, a property that can be had by a portion of clay at one time and not at another? No doubt shape does not wholly fix whether a portion of clay is a statue: if a portion of clay falls out of a window and in consequence now looks like Queen Victoria, that does not mean it is a statue of Queen Victoria or of anything else. But if a portion of clay is moulded by some person in order to make a statue of Queen Victoria—and does manage to resemble her in some degree—then isn’t *it* (the portion of clay) now a statue of Queen Victoria, and a fortiori a statue?

Why not say the same of all artifact-properties, thus not merely being a statue, but also being a chair, being a car, being a ship, and so on?

??? some further temporary properties: (artifact-properties) being a statue, a chair, a car, a ship,

Doesn't a scattered portion of wood become a chair when you arrange it into a chair? And cease to be a chair when you disarrange it again? In all these cases, shape is relevant, though so too is intention.

If we say that being a statue is a temporary property possessed from time to time by portions of stuff, then we can have that attractive Identity Thesis for ALFRED and CLAY, and analogous theses for all artifacts. And there is no hard problem raised by the statue and the clay.

It is a nice idea, I think. At all events, if we are to be forced to reject it, we must be provided with something stronger than the argument I gave at the outset. And we really should try to be clear about exactly why we have to reject the Identity Thesis (if we do) since what forces us to reject it (if anything does) is what makes CLAY merely constitute ALFRED, and should therefore help us to see what constituting *is*.

2. Alas, there is another, equally familiar, but considerably stronger argument against the Identity Thesis. Suppose that just before 3PM I break off ALFRED's left hand, replace it with a new one, and throw the old one on the floor. CLAY is not wholly on the table at 3PM, for part of it is on the floor then:

(5) CLAY is not wholly on the table at 3PM.

But isn't ALFRED wholly on the table at 3PM? If

(6) ALFRED is wholly on the table at 3PM

is also true, then the Identity Thesis is false.

I will call this a replacement argument. (We will meet more replacement arguments later.) Should we accept it?

Sentence (5), I think, we really do have to accept. In breaking off ALFRED's left hand I was breaking a part of CLAY off from the rest of CLAY, a part, we should note, that is itself a portion of clay. I divided CLAY into two sub-portions of clay, a big one, which I left on the table, and a little one, which I threw on the floor. So the portion of clay we began with—and that I am calling CLAY—is now scattered; it is not wholly on the table now, and (5) is therefore true.

What about (6)? Can't a statue undergo replacement of a part? We certainly think of artifacts generally as capable of undergoing replacements of parts. If a thief snaps the windshield wiper off your car and steals it, or steals a tire or a whole wheel, or a bumper, or a fender, then you might replace the stolen part; and after the replacement, we think that you still have the car you originally had, and that it is still in front of your house, though the part the thief took is long gone across town.

If you get a new windshield wiper for your car, then in one way, of course, your car is not the same: it has a windshield wiper it formerly did not have. Just as if you drive your car through a puddle of mud, then in one way your car is not the

same: it is dirtier than it was. But these changes are changes in it, that is, in the very car you have owned all along. We might say that the car isn't *the same*, for it has changed—but it is *it*, the same car, that has changed.

I think we had better agree, and thus that we had better reject the Identity Thesis. Philosophy should not depart more than it absolutely has to from what we ordinarily think and say, and it seems as plain as day that we do ordinarily think and say that artifacts can and often do undergo replacement of parts.²

There are difficulties in the offing. First, while it is all well and good to say that artifacts can undergo replacement of parts, they cannot undergo replacement of too large a part all at once. If a thief snaps the windshield wiper off your car and you replace the windshield wiper, we do think you have the same car after the replacement. If the thief instead snaps everything else off the windshield wiper, and you replace everything he removed, we do not think you have the same car after the replacement. But how large is too large?

A second difficulty is generated by series of replacements of small parts. Some people think that an artifact can undergo replacement of all its small parts, if they are replaced one by one, slowly enough. Can that be right?

(i) Suppose I bought a car in 1977. The car didn't work very well, but I loved it. So I replaced its parts, slowly, small part by small part. In the end, the car I now have has no small parts that were parts of it when I bought it. Can it really be that the car I now have is the car I bought in 1977? That seems intuitively wrong. It seems intuitively worse when we discover that my neighbor has been collecting the small parts I discarded, and has now fitted them all together just as they were fitted together in 1977. For many of us now undergo a gestalt shift: surely, we feel, it is my neighbor, not me, who has the car I bought in 1977. (I here up-date the problem of the Ship of Theseus.)

Moreover, (ii) suppose the car I bought in 1977 was a 1977 Chevrolet. Suppose the parts I replaced its parts with were those of a 1947 Buick I happened to have owned as well. And suppose that I slowly replaced all of the parts of the Chevrolet with all of the parts of the Buick. Has my 1977 Chevrolet become a 1947 Buick? (Why didn't I instead just move the Buick, part by part, into the space formerly occupied by the Chevrolet? Can it have been my intentions that made the difference?)

These difficulties are serious. Ordinary thought about artifacts supplies no answer to the question how large a part is too large, or to the question whether there is a point in a series of replacements of small parts at which the result is not the artifact we began with, and if so, what marks it. On the other hand, we cannot simply declare that there is vagueness here, since identity is not vague, or so I throughout assume.

Some philosophers therefore conclude that artifacts cannot undergo replacement of any part, and others that there are no artifacts at all. These responses strike me as *weird*. But I am not even going to try to produce a better one. I will simply suppose—with ordinary thought—that artifacts can undergo replacement of a small part, leaving open how small is small, and what happens when (or

would happen if) a replacement of a small part is (or if it were) part of a series of such replacements.

In particular, I will suppose that ALFRED remained wholly on the table after replacement of his left hand. CLAY, however, did not. Then how *are* ALFRED and CLAY related to each other? We can call the relation “constituting” if we like; we now have to say what constituting is.

3. We are committed to supposing that one thing can constitute another at one time and not at another. CLAY, we are supposing, constitutes ALFRED at 2PM. But CLAY does not constitute ALFRED at 3PM, for part of CLAY is on the floor at 3PM. I drew attention to temporary properties in section 1; so it looks as if the two-place relation ‘*x* constitutes *y*’ is, analogously, a temporary relation. For a variety of reasons, it will be simpler for us to aim at analyzing, not the two-place relation ‘*x* constitutes *y*’, but instead the three-place relation ‘*x* constitutes *y* at *t*’. We lose nothing in doing so, for we can go back and forth at will: CLAY, for example, has the two-place relation ‘*x* constitutes *y*’ to ALFRED at 2PM if and only if CLAY has the three-place relation ‘*x* constitutes *y* at *t*’ to ALFRED and 2PM. (This three-place relation is plainly not a temporary relation: *it* is had at all times if at any time, and so cannot be acquired and lost.)

Very well: what is the three-place constituting-relation? It can, I suggest, be analyzed wholly in terms of parthood with the help of a few modal operators.

We need to fix three ideas about parthood before proceeding. First, we are supposing that one material object can be part of another at one time and not at another—ALFRED’s left hand, for example, is part of ALFRED at 2PM but not at 3PM. So we are supposing that the two-place relation ‘*x* is part of *y*’ is a temporary relation. But as in the case of constituting, it will be simpler for us to focus, not on the two-place relation ‘*x* is part of *y*’, but instead on the three-place relation ‘*x* is part of *y* at *t*’. As before, we lose nothing in doing so: ALFRED’s left hand, for example, has the two-place relation ‘*x* is part of *y*’ to ALFRED at 2PM if and only if ALFRED’s left hand has the three-place relation ‘*x* is part of *y* at *t*’ to ALFRED and 2PM. (And this three-place relation too is plainly not a temporary relation: it too is had at all times if at any time.)

Second, I will follow two conventions governing the word “part” that are common in the literature on parts and wholes. I will call them housekeeping conventions. The first is that the word “parts” is throughout not restricted to what are often called “proper parts”. For example, we are to suppose that ALFRED has among his parts at 2PM: his head, his hands, his feet, *and* himself. More generally, we are to suppose that

- (i) x exists at $t \rightarrow x$ is part of x at t .

The second housekeeping convention is that parthood entails existence. For example, ALFRED’s left hand is part of ALFRED at 1PM only if both exist at 1PM. More generally,

- (ii) x is part of y at $t \rightarrow x$ and y both exist at t .³