ON MEREOLOGICAL ESSENTIALISM *

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PROFESSOR CHISHOLM'S PAPER is a powerful and probing effort to harmonize some conflicting philosophical intuitions about parts and wholes; but so far as I understand it (which isn't as far as I'd like) it is not wholly without difficulties.

Chisholm begins by suggesting that our intuitions about parts and wholes apparently conflict. We find ourselves inclined to accept the principle of *Mereological Essentialism*, which Chisholm states as follows:

ME For any whole x, if x has y as one of its parts, then y is a part of x in every possible world in which x exists (581–82).

According to ME, if x has y as a part, then x has essentially the property of having y as a part—although y need not have essentially the property of being part of x. And according to Chisholm ME implies another principle: one we may call "The Principle of Mereological Changelessness":

MC If y is ever a part of x, then y is a part of x at every time x exists (582).

Both ME and MC, Chisholm thinks, have a certain intuitive plausibility. By way of emphasizing this appeal, he gives an example:

Let us picture to ourselves a very simple table, improvised from a stump and a board. Now one might have constructed a very similar table by using the same stump and a different board, or by using the same board and a different stump. But the only way of constructing precisely that table is to use that particular stump and that particular board. It would seem, therefore, that that particular table is necessarily made up of that particular stump and that particular board (583).

^{*} Presented as commentary on Professor Roderick Chisholm's "Parts as Essential to Their Wholes" (*Review of Metaphysics*, vol. 26, pp. 581–603), the 1973 presidential address to The Metaphysical Society of America.

Abelard, Leibniz, McTaggart and Moore, furthermore, are called to attest to the intuitive force of MC.

But from another point of view, Chisholm observes, ME and MC seem to conflict with obvious truths. After dinner I wipe the dining room table, thereby displacing a few molecules from its surface. If we take MC at face value, it implies that the table in my dining room after dinner is a different table from the one that was there before. The one there before dinner had those molecules as parts; the one there after dinner does not; hence according to MC these are different tables. And this seems to run contrary to our intuitions. Chisholm's project, then, is to try to defend ME and MC by showing that their apparent conflict with intuition is merely apparent.

Before examining his defense, we should note that ME as it stands is incompletely stated; no temporal parameters are included. This suggests that Chisholm intends the weakest result of inserting such parameters in a natural way, i.e.,

ME₁ For any time t, world W, and objects x and y, if x has y as a part at t, then if x exists in W, there is a time t^* such that x has y as a part at t^* in W.

According to ME_1 , if y is a part of x, then x has essentially the property having y as a part at some time or other. This principle, however, does not entail MC; there is no inconsistency in the suggestion that an object x has y as a part at t, has essentially the property has y as a part at some time or other, and does not have y as a part at t^* . ME_1 , therefore, is presumably not what Chisholm intends.

A stronger version of ME is

 ME_2 For any time t, world W, and objects x and y, if x has y as a part at t, then if x exists in W, x has y as a part at t in W.

That is, if x has y as a part at t, then x has essentially the property of having y as a part at t. But ME_2 , while stronger than ME_1 , is not strong enough; it too fails to entail MC. Clearly it is consistent to hold both that some object has a part y at t but not at t^* and that it has essentially the property of having y at t.

For a version of ME that yields MC, we must turn to something like

ME₃ For any times t and t^* , any world W and any objects x and y, if x has y as a part at t, then if x exists in W at t^* , x has y as a part at t^* in W.

ME₃ asserts that if x has y as a part, then x has essentially the property: has y as a part at every time x exists. Clearly ME₃ entails MC, since the property MC predicates of each object is said by ME₃ to belong essentially to each object. (Of course there are other principles lurking in the neighborhood. For example, ME₃ does not entail ME₂; the latter but not the former entails that if a thing (or at any rate a thing with parts) exists at a time t, then that thing has essentially the property of existing at t. ME₃ is easily strengthened so as to entail ME₂ and this consequence.)

Now are these principles intuitively acceptable? ME_{3} , I helieve, is much less plausible than ME₁ and ME₂. Taken as it stands, ME₃ seems to imply that if I get a haircut, then there is a human body (mine) in the barber chair before the barber goes to work, which body no hanger exists after the haircut. I find this hard to believe. Perhaps, as ME₁ and ME₂ suggest, it is essential to my body to have at t or at some time just the hairs it does have at t; it is vastly less plausible to suppose it must have precisely those hairs at every time at which it exists. makes ME₃ less plausible than ME₁ and ME₂, of course, is just that it entails MC; the latter is commonsensically implausible. Chisholm's example of the bipartite table may seem to support MC; but of course there are many other examples that do not. If we think of the stump and board as themselves composed of molecules of wood, let's say, we are disinclined to think that we get a new stump just by knocking off a molecule or two.

But if MC is thus intuitively implausible, what is the source of its attractiveness? Perhaps its generality and simplicity, coupled with the fact that there are some mereological changes an object does not survive. If I replace a tire on my automobile, we think the same automobile persists through the change, acquiring a new part. But if I replace the automobile on my tire, then the whole that contains my tire is not the whole I began with. And of course there are many changes where it is intuitively unclear whether we have to do with a mereological alteration on the part of an enduring object, or the substitution of one object for another. It may then seem tempting, in the interest of simplicity and generality, to endorse MC. The situation is not unlike that in set theory, where some have thought to disarm the Russellian

paradoxes by stoutly insisting that it makes no sense to say of a set either that it is or that it is not a member of itself. In both these cases the remedy seems to me extreme; it seems initially obvious that some sets—e.g., the null set, the unit set of the number seven, the set of automobiles—are not members of themselves; and equally obvious that many objects—human bodies, for example—persist through small mereological changes: for example, haircuts. One would need a powerful argument, I think, to conclude otherwise.

Of course this will come as no surprise to Professor Chisholm; and he sets out, as he says, to see whether the extreme principle of Mereological Essentialism (which I shall take to be ME₃) might not be defended. How does he propose to defend it? By attempting to disarm objections of just the sort I have suggested. It is objected that my automobile has different parts now than it had last week, a state of affairs apparently incompatible with ME₃. Chisholm's attempt to meet this objection and others like it begins with a pair of related distinctions. The first is a distinction between "part" in the "loose and popular" or ordinary sense, and "part" in the "strict and philosophical" sense (S-part); the second is a distinction between primary objects and ordinary objects. He articulates the first distinction in terms of three axioms, which serve as an explanation of the technical term "S-part":

- (A1) If x is an S-part of y and y is an S-part of z, then x is an S-part of z.
- (A2) If x is an S-part of y, then y is not an S-part of x.
- (A3) If x is an S-part of y, then y is such that in every possible world in which y exists x, is an S-part of y.

Although (A3) contains no temporal parameters, what is intended is pretty clearly

A3* If there is a time t such that x is an S-part of y at t, then for any time t^* and possible world W, if y exists at t^* in W, then in W x is an S-part of y at t^* .

The distinction between primary and ordinary objects is not explicitly drawn; but if I understand Chisholm here this distinction can be explained in terms of the distinction between S-parts and ordinary parts. A primary object, as I understand it, is an object that has parts and all of whose parts are S-parts; an ordi-

nary or non-primary object is one that has some parts that are not S-parts.

Chisholm's defense of ME₃ now proceeds as follows. Consider again the objection that ME₃ must be false because my car presently has parts it lacked a week ago. The response is that in the loose and popular sense of "part" my car has indeed undergone such mereological alteration, but in the strict and philosophical sense of "part," it is not true that it now has parts it lacked last week. That is, there is no object that is now an S-part of my car but wasn't last week. And ME₃, Chisholm says (587) is to be taken with "part" construed as "S-part" throughout; that is, as

 ME_{3a} For any times t and t*, any possible world W, and any objects x and y, if x has y as an S-part at t, then if x exists at t* in W, x has y as an S-part at t* in W.

We then see that the suggested objection and others like it are cases of *ignoratio elenchi*.

What about this defense of ME_{3a}? We must ask first of all how we are to understand A1, A2, and A3. On page 591 we read "In formulating the principle of mereological essentialism, we used the expression 'S-part'. . . . We proposed three axioms to explicate 'S-part'." A_{1x}-A₃, therefore, apparently constitute a partial or implicit definition of that phrase. They tell us something about how that phrase will be used. What they tell us, I suggest, is that this phrase will be used to express a two-place relation that is transitive, asymmetric, and such that if x bears it to y, then x bears it to y at every time in every world in which y exists. And this partially fixes the meaning of the phrase. Partially fixes it, because several relations display these three properties: greater than and less than among numbers for example. You may complain that if x is greater than y, then being greater than y is essential to x and being such that x is greater than it is essential to y, adding that if x is an S-part of y, then having x as an S-part is essential to y, but it needn't be the case that being an S-part of y is essential to x. Very well, take instead the relation of proper set inclusion among sets of contingent objects. It is easily shown that if S is properly included in S^* , then properly including S will be essential to S^* ; but under these conditions it needn't be the case that being properly included by S^* will be essential to x. And there are plenty of other relations that resemble S-parthood in that they satisfy A_1 - A_3 .

Now of course there must be some property that distinguishes the S-part relation from these others. Perhaps this property is the property a relation R has iff x bears R to y, then x is a part of y. But in any event there is some such property distinguishing the S-part relation from others that satisfy A_1 - A_3 : call that property, whatever it is, "P." Then we may offer the following explicit definition of the S-part relation:

SP R is the S-part relation if and only if R is transitive, asymmetric, has P, and is such that if x ever bears it to y, then x bears it to y at any time in any world in which y exists.

Now the objector, you recall, complained that ME_3 falsely implies that

(1) Anything which is a part of my car at any time is a part of it at every time at which it exists.

Chisholm's response is that "part" in (1) is to be taken in the sense of "S-part," in which case the proposition it expresses is clearly true. And indeed it is; it is too clearly true. For using our explicit definition of "S-part," we see that this proposition is

- (2) If z bears to my car the relation R that is transitive, asymmetric, has P, and is such that if x bears it to y, then x bears it to y at every time in every world in which y exists, then in the actual world z bears R to my car at every time at which my car exists.
- (1) is true, but entirely too obvious to require defense; (1) is truth of logic. And what about ME_3 itself? We have already learned that it is to be understood as the proposition expressed by the result of replacing "part," throughout our initial statement of it, by "S-part," i.e., as ME_{3a} . Using our explicit definition, we see that ME_{3a} is short for
 - ME_{3a}* For any times t and t*, any world W and any objects x and y, if x bears to y the relation R that is transitive, asymmetric, has P, and such that for any z and μ , if z bears it to μ at t, then z bears it to μ at any time in any world where μ exists, then if y exists at t* in W, x bears R to y at t* in W.

Clearly there is no disputing ME_{3a}^* ; even the extreme mereological inessentialist will warmly embrace it. But there is also no point in defending it, since it is an utterly incontestable truth of logic.

So I don't think we should look upon Chisholm's paper as an attempt to defend ME₃ thus understood; so taken, the paper

would display an utterly unChisholmian insubstantiality. But how then *should* we look upon it? Not merely, I suggest, as the claim that there *are* primary objects, or objects that have only strict parts. The answer, I suggest, lies in the neighborhood of Chisholm's definition D7:

(D7) x has y as a part at t = def. something that constitutes y at t is an S-part of something that constitutes x at t (592),

understanding "constitution" in accordance with Chisholm's D4:

D4 x constitutes y at t = def. There is a certain place such that x occupies that place at t and y occupies that place at t (588).

The main philosophical contention of the paper is that whenever x is a part of y, then there are objects z and w such that z constitutes x and w constitutes y and z is an S-part of w; z and w, furthermore, will be primary objects. Unlike A_1 - A_3 , this "definition" is not to be taken as an explanation of the use of a technical term, but as a substantive statement about parts and wholes. Take, for example "The history of a very simple table" that Chisholm presents:

Mon AB | On Monday it came into being when a certain thing A Tue BC | was joined with a certain other thing B. On Tuesday Wed CD | A was detached from B and C was joined to B, these things occurring in such a way that B remained throughout as a part of a table. And on Wednesday B was detached from C and D was joined with C, these things occurring in such a way that C remained throughout as a part of a table. Let us suppose that no other separating or joining occurred (587).

As I understand Chisholm, he holds that there are a number of tables present in this situation. There is the ordinary object "our table" which persists through the three days, undergoing mereological alteration. In accordance with D7, however, there are several primary objects present. On Monday, A is a part of our table; here there are primary objects x and y such that x constitutes A, y constitutes B, and x is an S-part of y. This primary object y is not identical, of course, with our table, since the latter but not the former persists over the three days and undergoes mereological alteration. y, furthermore, is presumably a table; so on Monday there are two tables present, one a primary and the other an ordinary object. And of course the same goes for Tuesday and Wednesday.

It is here, of course, that philosophical disagreement can fruitfully arise; and here the defender of common sense will demur. He will hold that often a thing x has y as a part when there are no things w and z that meet the further conditions mentioned. He will deny that in all cases where y is a part of x, there are a z and w meeting these conditions. Looking at Chisholm's original example of the table series he will deny that on Monday there are two tables there. He will hold that there is just one table on Monday: our table, which on Monday has A and B as parts and on Tuesday has B and C as parts. Or (since the change from Monday to Tuesday is pretty substantial, mereologically speaking) he may hold that on Monday there is just one table present: AB; which table is replaced on Tuesday by BC. In both cases, however, he will deny that there is more than one table present on Monday, or, for that matter, on Tuesday or Wednesday.

Chisholm's paper, so far as I understand it, seems to occupy an uncomfortable halfway house between the common sense view according to which an object may undergo mereological alteration even if there are no primary objects in the neighborhood, and the position of what I shall call the Genuinely Committed Mereological Essentialist. The latter, I suggest, should agree with the defender of common sense that in general there are not two objects occupying the same space—a primary and an ordinary. His position should be instead, I suggest, that all objects are primary, and that wherever x is a part of y, x is a strict part of y. This, after all, is what the principle of Mereological Essentialism as originally stated says. Why concede that there are objects for which it does not hold?

But how will the Genuinely Committed Mereological Essentialist deal with cases where we say, and say with entire accuracy, such things as that my automobile now has a part that it lacked yesterday? Here we seem to be speaking of a specific object, my automobile, and saying of it that it has a part today it lacked yesterday. How should he deal with this? Not, I suggest, by holding that there are at least *two* automobiles lurking in the neighborhood, one of them a primary object and the other an ordinary object. He must find another way.

Consider an analogous situation. We say

(3) The President of the United States is now Gerald Ford and formerly was Richard Nixon.

It could be claimed that at present there must be at least two objects, each a president of the United States: there is Gerald Ford, and there is the entity denoted by "the president of the United States." These must be distinct, since the latter, unlike the former, was formerly Richard Nixon. Here the proper reply is that in asserting (3) we are not in fact referring to a specific object x—an object denoted by "the President of the United States," as it happens—and asserting that x is now Ford but was formerly Nixon. Contrary to initial appearance, our discourse here is $de\ dicto$, not $de\ re$. The truth is the proposition

- (4) The President of the United States is Gerald Ford is *now* true, while the proposition
- (5) The President of the United States is Richard Nixon was true; and in asserting (3) we assert this de dicto truth in a mildly misleading fashion.

Similarly, then, for the Genuinely Committed Mereological Essentialist; he should hold, I suggest, that when I assert

- (6) My car now has y as a part but yesterday it didn't, I only appear to be predicating of some object the property of having undergone mereological alteration. The burden of my remark is not such a piece of de re falsehood, but is instead something like the de dicto truth that
 - (7) my ear has y as a part

is true now but was false yesterday. And here "my car" denotes a primary object. Yesterday that phrase also denoted a primary object, but a different primary object. "My car" thus resembles "now," which denotes different times at different times. In this fashion the mereological essentialist can explain discourse ostensibly about objects that persist through mereological change in terms of discourse about primary objects.

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