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Reducing Constitution to Composition

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Abstract: I propose that constitution is a case of composition in which, for example, the lump of clay composes the statue. In other words, we can reduce constitution to composition. Composition does all of the work that we want from an account of constitution, and we do not need two separate relations. Along the way, I offer reasons to reject weak supplementation.

Keywords: constitution, composition, weak supplementation, proper parthood, mereology

1 Introduction

The *constitution* relation is often illustrated by a statue and a lump of clay—the statue is constituted by the lump of clay. The *composition* relation is often illustrated by many parts making up a whole—the human-figure statue is composed of it head, torso, and appendages, or at a lower level of decomposition, the statue is composed of clay particles of kaolinite and other minerals.

L. A. Paul has posed the following problem for accounts of constitution. Her question, with background context, is

The composition relation is a relation that holds between parts of a whole. The constitution relation is a relation where one object provides a material basis for another (perhaps simply by being identical to it). Since both relations are basic relations of object-building, that is, mereology builds from parts to wholes and constitution builds from material bases to (at least seemingly) higher level objects, how is an object built using both composition and constitution relations? (2010, 584)

I argue that constitution is a case of composition, and the answer to Paul's questions is that there is only one relation involved—that of composing a

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thing from a part. In other words, we can reduce constitution to composition—composition does all of the work that we want from an account of constitution. I propose that constitution is a case of composition in which, for example, a lump of clay composes a statue. Along the way, I offer a reason to reject weak supplementation, which is the view that any proper part of an object must be supplemented by another proper part to compose the whole.

2 Constitution Defined

We *can* reduce material constitution to a kind of composition because composition provides everything that we want out of constitution. We *should* reduce material constitution to composition because by doing so, we shave redundancy from our stock of relations and get a clearer picture of constitution.

The constitution relation is commonly illustrated by a lump of clay that constitutes a statue. What features does constitution include? The lump takes up the exact space that the statue does. The statue's arm does not constitute the statue—complete overlap is required. At first look, it might seem that the lump of clay *just is* the statue; that is, it might seem that the lump is *identical* to the statue. But the identity relation cannot accommodate how the properties of the lump of clay and the statue diverge: The lump has the property of existing before the statue did. The statue has the property of being able to survive losing a piece, like an Egyptian statue that continues to exist despite losing its nose. In contrast, lumps have their parts necessarily, so that if the statue loses its nose, the original lump of clay is gone and what is left is a numerically distinct, slightly smaller lump of clay. The constitution relation is also understood as non-symmetric: the lump constitutes the statue, but not vice-versa. To summarize, here is a list of what most theorists want a theory of constitution to capture:

- (1) differences in properties between the constituting object (e.g., the lump of clay) and the constituted object (e.g., the statue),
- (2) non-symmetry, such that the lump constitutes the statue, without implying that the statue also constitutes the lump, and
- (3) complete overlap.¹

¹ My account deviates from some accounts of constitution because it does not include the restriction that only mere matter or portions or lumps can constitute another object. E. J. Lowe endorsed this restriction, writing, "... I want to reserve the notion of constitution now in play to *material* constitution, obtaining between something like a *cat* or *statue* on the one hand and a *lump* or *portion of matter*, whether organic or inorganic, on the other" (2013, 137, italics are

I propose defining constitution thus, and develop the view in this paper:

Constitution: An object x constitutes an object y when x composes y in a one-one relation.

If we recognize that constitution is a type of composition, then we can capture all three characteristics listed above, I will argue. The main challenges to this account are a skepticism that the constituting matter is a part of the constituted object, and relatedly, the weak supplementation principle, which implies that a part cannot compose a whole in a one-one relation. In section three below, I argue that constitution is a case of *proper parthood*, which captures the differences in properties between the constituting matter and the constituted thing. I am not the first person to give an account of constitution in which the constituting matter is a proper part of the constituted object. My account differs from existing accounts in that it ties together composition and constitution, so that constitution is nothing more than the variety of composition that involves a single thing composing the whole.²

Lowe's). Lowe gave the example of a cat who lost of all of its body except for its head and was somehow kept alive. On Lowe's view, the remaining head is coincident with the cat, and it is a proper part of the cat, but the head does not constitute the cat. Instead, both the head and the cat "are co-constituted by the same lump of matter in these circumstances, but that neither of them constitutes the other" (137). My account allows that the head could constitute the cat in addition to both the head and the cat being constituted by the same lump of matter. Lynne Rudder Baker most famously did not restrict constitution to mere matter: the centerpiece of her constitution theory was that of a human organism constituting a person (2000, 91). For another example, consider Marcel Duchamp's artwork "Fountain," in which he signed his name to a urinal and submitted it for an art exhibit. It is important to the artwork that the object he began with was a urinal, not mere matter, so the urinal seems significant to constituting the artwork. And it seems that the urinal is not identical to the artwork because, for one, the urinal existed before the artwork did. Here is why I favor an account of constitution that does not restrict the role of constituting to matter or lumps or portions. It is hard to find a principled way to restrict what can do the work of constituting. The guiding principle cannot be that constituting matter must be homogenous, for a common case from the literature involves clay, which is not homogenous. The guiding principle might be that the constituting matter must have its parts necessarily, as masses and lumps of matter do. But the reason behind such a principle is obscure. That being said, for those who restrict the work of constituting to mere matter or lumps or portions, they can accept the larger point of this paper—that constitution is a kind of composition. The difference would be that constitution would be a more specific case of composition: one in which what satisfies the composing role both completely overlaps the whole *and plays the role of matter*. (Thank you to an anonymous referee for this point.)

2 In the above definition, I use the common understanding of constitution as a one-one relation, in which one thing constitutes the whole. But for those who think that multiple things can together constitute the whole, for example, that your cells constitute your body, my account can be adapted thus: "An object x (or objects $x, y, z, \dots$) constitutes an object w when x (or $x,$

Composition is non-symmetric, so this approach captures the non-symmetry of constitution. In the literature, constitution is described as *asymmetric* rather than *non-symmetric*. The claim of asymmetry is that if x constitutes y , then y cannot constitute x . The claim of non-symmetry is weaker: if x constitutes y , the non-symmetry claim stays silent on the question of whether y constitutes x . I shift the target to non-symmetry for two reasons. First, the motivation for rejecting symmetric constitution is that we want to make room for an account of how the constituting object makes up the constituted object. The weaker non-symmetric account below does that, and the stronger account is not needed. Secondly, although I cannot think of a case of mutual constitution or mutual composition, neither can I think of a reason why they would be impossible in unusual cases, and there is no reason to rule them out by definition. (For a comprehensive argument against the view that the statue and the lump are parts of one another, see Walters 2019.)

In section four, I discuss reasons to reject weak supplementation. Without the weak supplementation principle, composition can accommodate the complete overlap of, for example, the lump of clay and the statue (the third item on the list above).

Some philosophers would reject this account because they believe that constitution is an identity relation. For the purposes of this paper, I assume that constitution is *not* identity; that debate is for another time and has been well rehearsed in the literature.³

3 Constitution as Proper Parthood and Composition

I argue that constitution is a case of proper parthood, where proper parthood is defined thus:

Proper parthood: x is a *proper part* of y if and only if x is a part of y , and x is not identical to y

$y, z, \dots$) composes w ." This change would not weaken my arguments below. In fact, such an accommodation only makes plainer the shared nature of composition and constitution because it does not siphon off constitution as a relation between a single constituting thing and the object that it constitutes.

³ Philosophers who have argued for statue-lump identity include Mark Heller (1984), George Myro (1986), and David Lewis (1986). Philosophers who have argued that the statue and lump are two coinciding objects include E. J. Lowe (1982a, 1982b), Judith Jarvis Thomson (1983), Peter Simons (1987), Mark Johnston (1992), and Kit Fine (2003).

Proper parthood is contrasted with *improper parthood*, in which a thing is said to be a part of itself; for example, the lump is an improper part of the lump. I first show that the constituting object or matter is a part simpliciter of the constituted object. Once that is done, the non-identity of the two (e.g., the non-identity of the lump and the statue) establishes *proper* parthood. (Recall that we are assuming for this paper that constitution is not identity.) My argument takes the following form:

1. If the constituting object or matter satisfies the analysis of ‘part’ in regards to the constituted object, then the constituting object or matter is a part of the constituted object. (Example: If the lump of clay satisfies the analysis of ‘part’ in regards to the statue, then the lump is a part of the statue.)
2. The constituting object or matter satisfies the analysis of ‘part’ in regards to the constituted object. (Example: The lump of clay satisfies the analysis of a ‘part’ in regards to the statue.)
3. Therefore, constituting object or matter is a part of the constituted object. (Example: Therefore, the lump of clay is a part of the statue.)

Premise (1) is uncontroversial, for the analysis of ‘part’ includes sufficient conditions for parthood. I focus my attention on premise (2), which is the controversial premise. Lynne Rudder Baker, for example, held that constitution should be understood in terms of relations among kinds of things rather than in terms of parts and wholes (2000, 179–185, esp. 182). (See also Evnine 2011.) After establishing parthood, we can use proper parthood to build composition, and composition to build constitution.

There are two main, competing analyses of ‘part’. On either definition, the constituting matter qualifies as a part of the object that it constitutes. The first definition of ‘part’ is based on overlap. The competing definition defines ‘part’ in terms of the overlap criterion plus a ‘making up’ condition. Let us consider the two analyses of ‘part’ in turn and the resulting models of constitution. A third possibility is that ‘part’ is a primitive. At the end of Section 4, I give another argument that the constituting matter is a part of the constituted object, and this argument applies even if ‘part’ is a primitive.

3.1 Parthood as Overlap

In 1940 Henry Leonard and Nelson Goodman published what became for decades the standard axioms of part–whole relations. Their definition of ‘part’ remains customary:

Parthood as Overlap: If and only if everything that overlaps x also overlaps y , then x is a part of y .⁴

In this definition, *overlap* is taken as a primitive. If instead *part* is taken as a primitive, then ‘overlap’ is defined thus: x overlaps y if and only if x and y have a part in common. This definition of ‘part’ should be accepted or rejected on its own merits, not because Leonard and Goodman’s definitions and postulates are sacrosanct.⁵ Leonard and Goodman included in their mereology some contentious propositions, but you can accept this definition of ‘part’ without accepting their whole system.

On this definition of ‘part’ in terms of the overlap criterion, the lump is clearly a part of the statue. Anything that overlaps the lump of clay also overlaps the statue. This generalizes for any constituting matter and the object it constitutes. Anything that overlaps constituting matter will overlap the object that is constituted, so the constituting matter is a part of the constituted object. Using the overlap-based definition of ‘part’, the statue is also a part of the lump of clay because anything that overlaps the statue overlaps the lump. Thus, on this definition of ‘part’, parthood is symmetric in the case of complete overlap.

Composition is not symmetric, however. If we accept this definition of ‘part’, then we layer an asymmetric or a non-symmetric feature on top of parthood to establish composition. We often talk interchangeably of some things ‘composing’ an object and some things ‘making up’ an object. This idea of ‘making up’ can provide the non-symmetry needed for composition. Below I provide an account of ‘making up’, but for now, consider these examples, which highlight our common, working knowledge of ‘making up’: the blocks make up the tower, but the tower does not make up the blocks. The flowers make up the bouquet, but the flowers are not made up of the bouquet. Once we have a non-symmetric account of composition, we can secure an account of constitution. Recall my proposed

⁴ Leonard and Goodman presented their definition in terms of discreteness, but their definition is logically equivalent to what has become the more common definition based on overlap. The definition in terms of overlap is easier to parse and more expedient in this discussion. For the historically curious, Leonard and Goodman’s original definition reads: x is a part of $y = \text{df.}$ If z is discrete from y , then z is discrete from x . Discreteness is expressed in terms of overlap thus: x is discrete from y if x and y do not overlap. See especially pp. 46–47.

⁵ The postulates of mereology include the uniqueness of composition and the weak supplementation principle. If either of those is true, then a single part cannot be as big as the whole object. But each of these postulates is metaphysically loaded, and I think, false. As Maureen Donnelly has shown, such postulates are unsuitable for supporting “claims about the structure and arrangement of objects in the world” (2011, 225).

definition of constitution: An object x constitutes an object y when x composes y in a one-one relation.

3.2 Parthood as Overlap + Making Up

The competing definition of ‘part’ builds in the non-symmetric function of ‘making up’. The overlap definition of ‘part’ has the problem of being at odds with an intuitive notion of parthood. While the overlap criterion seems necessary for material parthood, it may not be sufficient. Frederick Doepke (1997: 16) gave the following example: “Consider you and the collection of atoms of which you are now composed. Appealing to intuition, I suggest that your heart is a part of you but not a part of this collection of atoms.”⁶ Daniel Korman gives this example (2016, 146): “Fred is part of the conga line. Fred’s spleen is a part of Fred.” But it is false, Korman holds, to conclude that “Fred’s spleen is part of the conga line.” If these cases are correct, then the overlap criterion is not sufficient for parthood. In the case of the statue and lump, the statue’s head is a part of the statue but *not* a part of the lump of clay, even though anything that overlaps the head also overlaps the lump of clay.

If the overlap criterion is not sufficient for parthood, we could define ‘part’ as follows:

Parthood with Making Up: x is a part of y if and only if (1) x helps make up y and (2) everything that overlaps x also overlaps y .

‘Making up’ is a notion that is hard to define, but easy to recognize when you see it. In Doepke’s heart example, we recognize that the heart helps make up the body, but the heart does not help make up the collection of atoms. If we break down a collection of atoms into the parts that make it up, we will find atoms, neutrons, protons, and electrons, but no heart. The non-symmetric definition of ‘part’ captures this fact that the heart is not a part of the collection of atoms. More generally, it expresses the idea that parthood is not symmetric.⁷

If we use this definition of ‘part’, the lump is again a part of the statue. First, the lump makes up the statue. Secondly, the lump meets the overlap criterion for parthood. The statue needs to be made of some matter, and for now, the lump is

⁶ Lynne Rudder Baker (2000: 51, 181) makes a similar intuitive appeal to a different conclusion: the statue’s nose is a part of the lump only *derivatively*, by which she means that the lump has the nose as a part only in virtue of constituting a statue, though the statue has the nose as a part autonomously of its relationship to the lump.

⁷ The exception is cases of composition by *improper* part, when, by convention, a thing is said to be a part of itself.

that matter. The statue, in contrast, is not a part of the lump because the statue does not make up the lump (see, e.g., Baker 2002: 33; Simons 1987: 165).

One complaint about this non-symmetric definition of ‘part’ is that it is unclear what ‘makes up’ means. I cannot offer necessary and sufficient conditions for ‘making up’, but below I specify some of what the nature of ‘making up’ does and does not involve. A series of definitions must end somewhere, and ‘making up’ is a good place to stop. One reason for this is because we have a good intuitive sense of ‘making up’, as illustrated by the above examples. In contrast, people are torn between what counts as parthood, whether it is mere overlap or it includes a type of making up. If parthood involves making up, it is usually easy to pick out which things do the making up and which thing is being made up. The clay makes up the statue, and the statue does not make up the clay.

Here is one thing that is *not* meant when we say that the lump of clay makes up the statue: A natural first thought is that the statue inherits properties from the lump, but the lump does not inherit properties from the statue. This cannot work, though, because the lump inherits a variety of properties from the statue, including the properties of *being placed in a museum* and *being human-shaped*.

I propose the following account of ‘making up’ as a basis for non-symmetric constitution. In the absence of the statue, the lump of clay can be used to make the statue (to bring it into existence), but in the absence of the lump of clay, the statue (e.g., a marble statue or a bronze statue) cannot be used to make the lump of clay. This is what it means to say that lumps of clay are the kind of things that can be used to make statues, but statues are not the kind of things that can be used to make lumps of clay. We can generalize from the case of the lump of clay and the statue to give an account that is more specific about the nature of making up:

x* helps make up *y = df. Anything that overlaps *x* also overlaps *y*; and in the absence of *y*, *x* is matter or a thing that can be used to help form an instance of the *y*-kind into existence.

For example, consider a gold necklace. Anything that overlaps the gold, overlaps the necklace, and in the absence of the necklace, the gold can be used to form a necklace into existence. The necklace is not a part of the gold, however, because in the absence of the gold (e.g., a plastic necklace), a necklace could not be used to help form gold into existence.

Let me clarify the idea of ‘helping form into existence’ by saying what it does not include. It does not include, for example, sand as something that can be used to help form a glass bottle. Even though sand can be turned into glass, and glass can be used to form a bottle, sand is not a part of a bottle on my account. The idea of *helping to form* is not intended to include things that would no longer exist by the time the composed object comes into existence.

Here are some other examples of parthood with making up. Ink is a part of a pen. The ink meets the overlap criterion, and in the absence of a pen, ink could be used to help create a pen. Paper is a part of a book. In the absence of a book, you could use paper to help form a book. But a book is not a part of paper: in the absence of paper, a book, such as an electronic book, could not be used to form paper.

To return to the main point of this section, if we define parthood with the overlap criterion plus a non-symmetric ‘making up’ requirement, then if x constitutes y , then x is a part of y . The lump meets the overlap criterion and helps make up the statue, so it is a part of the statue. The lump also composes the statue; this second definition of ‘part’ captures the non-symmetry of composition and the ‘making up’ feature.

We can now see how constitution is a type of composition. Recall my proposed definition of ‘constitution’: An object x constitutes an object y when x composes y in a one-one relation. Those who accept this second definition of ‘part’, which builds non-symmetry into parthood, can alternately define constitution in terms of proper parthood instead of composition: An object x constitutes an object y when x is a proper part of y that fully overlaps y .

Composition can deliver the first and second of the three features of constitution laid out in section two above. The first feature was a difference in properties between the constituting object and the constituted object. A proper part, recall, is not identical to the thing of which it is a part. Because they are not identical, they will have some difference in properties, per the contrapositive of Leibniz’s identity of indiscernibles, which says that if x is not identical to y , then x has some difference in properties with y . This fulfills the first feature of constitution.

Composition also fulfills the second feature of constitution, non-symmetry. Composition is routinely non-symmetric: your torso, appendages, and head compose your body, but this does not imply that your body composes your torso, appendages, and head. On the first definition of ‘part’ discussed above, the non-symmetry of ‘making up’ is layered on top of parthood to generate composition. On the second definition of ‘part’, non-symmetry is built into parthood and inherited by composition.

In the next section, I argue that composition can accommodate the third feature of constitution: complete overlap.

4 The Weak-Supplementation Objection

The third feature of constitution listed above is complete overlap. Although proper parts do not typically completely overlap the whole, a proper part can completely

overlap the whole. I argue in this section that the weak supplementation principle, which says otherwise, is misguided. Because complete overlap is consistent with proper parthood, but not entailed by it, my analysis of constitution specifies that the constituting matter composes the constituted object in a one-one relation. Thus, constitution is a species of composition, not identical to composition.⁸

The weak supplementation principle expresses a natural objection to my view that constituting matter is a proper part of what it constitutes. The weak supplementation principle holds that if part *x* is a proper part of object *o*, then object *o* has a proper part *y* that does not overlap part *x*. If weak supplementation is true, then the lump cannot be a proper part of the statue because there is no remaining proper part that does not overlap the lump. The weak supplementation principle holds significant sway in contemporary metaphysics. For example, it is key to motivating Kathrin Koslicki's neo-hylemorphism (2008, Chapter VII, especially pp. 167–168, 179–183). Others who endorse it include Peter Simons (1987, 26–28), Theodore Sider (2007, 69–70), and Patrick Toner, who argues that Thomas Aquinas also endorsed it (2009, 455–462). Weak supplementation is included in what is called 'classical mereology'.

The weak supplementation principle has an initial, intuitive appeal, perhaps based on the fact that paradigm cases of parthood are ones in which the part is smaller than the whole.⁹ But the weak supplementation principle should be rejected by those who think that constitution is not identity because it creates an unprincipled discontinuity in the functional role that parthood plays. Consider a case in which a human-figure statue is composed of clay, except for one of its fingernails, which is composed of moldable plastic. The clay is a proper part of the statue, as is the moldable plastic. The clay is a part of the statue because, roughly, it meets the overlap criterion in relation to the statue and is a material used to make up the statue. Imagine that the moldable plastic is removed, so that the clay alone is the material that makes up the statue. (Cf. Lowe 2013, Section 3, pp. 135–137, for this approach to rejecting weak supplementation.) Weak supplementation says

⁸ It is sometimes assumed that composition is necessarily a many-one relation, such that a single thing could not stand in the composition relation to an object. Karen Bennett (2011) pointed out that other natural relations, such as *carries*, or *is equinumerous with*, can be many-one or one-one. One person could carry a chair, or two people could carry a chair, or three people could. One is equinumerous with one, two is equinumerous with two, and so on. It should be no surprise if composition falls into line with other natural relations (Bennett 2011, 98).

⁹ Patrick Toner motivates weak supplementation by an appeal to the grounding problem: "It might help to see why I find objects with only one proper part so perplexing if we think about the Indiscernibility Problem (a.k.a. the Grounding Problem)." He asks, What grounds the difference between the lump and the statue "when there's nothing there over and above the one part?" (2009, 457–458). For a proposed solution to the grounding problem, see Sutton (2012).

that the clay is now disqualified from parthood based on an extrinsic fact: the fact that the fingernail that did not overlap the clay has been removed. But notice that the clay has not *stopped* serving its previous role for the whole: it still satisfies the overlap criterion and helps make up the statue. It is doing more of the same work as before and certainly not less. It is not abdicating the work it was doing before, so it should not lose its part status. For readers who are interested in a more detailed discussion of this type of reasoning against weak supplementation, see Guillon (2021).

The fact that the clay continues serving the same role after the fingernail is removed is one reason against weak supplementation. Another reason is that weak supplementation would force an unnatural discontinuity into the spectrum of building relations. At the beginning of this paper, I set aside the theory that constitution is an identity relation, and though I think that theory is mistaken, it is useful to consider how constitution-as-identity theorists have understood constitution's relation to parthood. David Lewis, who advocated constitution as identity, saw parthood on a continuum with identity (1991, 82). Those who think that constitution is identity have an explanation for why the clay is not a *proper* part (though it remains a part simpliciter): the clay has reached one end of the continuum of parthood and now is identical to the statue. It is a mereological upgrade, if you will. The clay remains a part of the statue, namely an *improper* part, which is a part that is identical to the whole.

For those of us who think that constitution is *not* identity, we can also recognize that the clay has not abdicated its role as a part. The constituting matter still satisfies the overlap criterion and makes up the whole. But unlike the constitution-as-identity theorist, we do not think the constituting matter has reached the status of improper part. If, contrary to my suggestion, we accepted weak supplementation and held that the clay is no longer a proper part, then we would be left holding a strange discontinuity: constitution *behaves* like a parthood relation and is sandwiched between two parthood relations (proper parthood and improper parthood), but constitution would be outside of the continuum of parthood and identity.

Consider again the case of the clay statue with a plastic fingernail. At the beginning of the case, the clay is a part of the statue and helps make up the statue. If weak supplementation were true, then once the plastic fingernail was removed, then the clay would no longer be a part of the statue. Instead, the clay would either (1) no longer make up the statue at all but merely be colocated with the statue or (2) continue to make up the statue without being a part of it. Neither option is palatable: (1) The first option is unpalatable because, once again, the clay has not stopped doing anything in relation to the statue. The only change is on the part of the fingernail. Consequently, we have no reason to think that the

lump of clay no longer makes up the statue. The behavior of the fingernail has no bearing on the work that the clay does for the statue. (Again, see Guillon 2021 for a similar and detailed approach to rejecting weak supplementation.) (2) The second option was that, if weak supplementation were true, once the plastic fingernail is removed, the lump continues to make up the statue without being a part. This second option is unpalatable because it creates an unnatural discontinuity in parthood relations as follows. We have a spectrum of making up relations: partial composition (such as the lump of clay before the plastic fingernail is removed), the constitution relation (such as the lump of clay fully making up the statue once the fingernail is removed), and the identity relation, in which the statue is identical to the statue. Among these three relations, partial composition is the weakest bond, constitution is in the middle, and identity is the strongest. If constitution were not a parthood relation, then there would be an unmotivated discontinuity such that the weaker and strongest relations are parthood relations, but the middle one is not. It is mysterious why constitution would step outside of the parthood spectrum.¹⁰

On the other hand, if we recognize that the clay is a part of the statue, as I urge in this paper, we can place constitution on the continuum with partial composition and identity. When the clay composes the whole in a one-one relation, that matter qualifies as both *composing* matter and *constituting* matter. With this approach, we avoid a mystery about why a relation that does everything a parthood relation does neither qualifies as parthood nor sits on a continuum with partial composition and identity.

Once the weak supplementation principle is set aside, we ought to understand the constituting matter or thing as a proper part of the constituted object because the constituting matter satisfies the analysis for proper parthood, on either of the two mainstream accounts of proper parthood, as I showed above.

The above argument against weak supplementation shows that the constituting matter is a proper part of the whole, even if ‘part’ is taken as a primitive.

10 There are other reasons for rejecting weak supplementation (or at least not accepting it). Donald Smith (2009) and Maureen Donnelly (2011) have independently argued that we should not include weak supplementation as an axiom of mereology. Both authors point out that the weak supplementation principle is largely motivated by intuitive appeal, but the intuitive appeal is lost when we consider non-paradigmatic cases of composition. Smith points to a possible case of a wall that is composed of a single brick that time travels and is located at various places in the wall. The brick is a proper part of the wall even though there is no part that does not overlap the single brick. Donnelly points to cases of “objects with co-extensive parts” (231), such as co-located objects like the lump and statue. If we allow co-location, Donnelly claims, then weak supplementation is no longer intuitively true. Weak supplementation should be set aside in the absence of a good reason to accept it, and there is not a good reason to accept it.

Recall that at the beginning of the case, the lump of clay is clearly a proper part of the statue, as is the plastic fingernail. If parthood is primitive, then some candidate cases of parthood will be murky: is a swallowed coin a part of your body? But the lump of clay is not one of the murky cases. Even if ‘part’ is a primitive, there is wide agreement about some characteristics of parthood: (1) parthood must involve overlap—nothing can be a part of an object but be completely disjoint from the object, and (2) the material from which a thing is made is a part of that thing. When the plastic part is removed, once again, we can see that the lump of clay has not abdicated any of its work in relation to the statue. So whether parthood is primitive or not, the lump of clay remains a proper (non-identical) part of the statue.

5 Conclusions

A constituting object is a part of the object that it constitutes, on either of the two mainstream definitions of ‘part’ and also if ‘part’ is taken as a primitive. Furthermore, the composition relation captures the three functions that we want out of the constitution relation. Composition entails (1) differences in properties between the two objects and (2) non-symmetry. Composition allows for cases of (3) complete overlap. For these reasons, we do not need to posit the constitution relation as a relation distinct from composition. Constitution can be reduced to composition involving a one-one relation. We might retain the name ‘constitution’ to pick out cases of a single part composing a whole, but the usefulness of such a label should not deceive us into thinking that a separate relation is warranted. By recognizing that constitution is just a kind of composition, we can get a clearer understanding of constitution, and we can accomplish the same theoretical work with one fewer relation than before.

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