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Constitution and Composition: Three Approaches to their Relation

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Abstract

Constitution is the relation between something and what it is made of. Composition is the relation between something and its parts. I examine three different approaches to the relation between constitution and composition. One approach, associated with neo-Aristotelians like Mark Johnston and Kathrin Koslicki, identifies constitution with composition. A second, popular with those sympathetic to classical mereology such as Judith Thomson, defines constitution in terms of parthood. A third, advocated strongly by Lynne Baker, takes constitution to be somehow inconsistent with relations of parthood. All of these approaches, I argue, face serious problems. I conclude, tentatively, that constitution and composition have nothing to do with each other.

Call the relation between something and what it is made of 'constitution.' Call the relation between something and its parts 'composition.' What is the relation between constitution and composition? Broadly speaking, three approaches have been apparent in the literature to the relation between constitution and composition, assuming that there is some significant relation between them. First, one might simply identify (or come close to identifying) the relations. This approach has been characteristic of neo-Aristotelian metaphysicians in the vein of Kit Fine (1982, 1999), Mark Johnston (2005, 2006) and Kathrin Koslicki (2008). Secondly, one might think that even though the relations are distinct, one can be defined in terms of the other. In particular, several philosophers have argued that constitution should be defined in terms of composition. (I am not aware of any attempts to define composition in terms of constitution.) This is an approach favored by friends of classical mereology (or variants thereof) and has been pursued by Judith Thomson (1997) and Dean Zimmerman (1995).[1] Thirdly, one might think that the relations are somehow exclusive of each other. This approach has been forcefully taken by Lynne Baker (2000, 2007). These options may not exhaust the logical territory. Perhaps, for example, the relations are distinct but connected by some synthetic principle. But they cover

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1   Zimmerman's version of such a theory is not offered *in propria persona*; nevertheless, I shall continue to refer to it as his theory.

all the major positions on the topic of which I am aware. In this paper, I shall examine some prominent representatives of each of these approaches and suggest that none succeeds in establishing their chosen conception of the relation. Needless to say, in rejecting particular versions of each of the positions, I do not thereby demonstrate that no acceptable versions of them exist. My assessment, therefore, will be a tentative one, that constitution and composition have no significant relation to each other at all. What something is made of, and what its parts are, are two entirely distinct questions.

1. Constitution as Composition

The first view I shall examine is that constitution is the relation an object has to its parts, in other words, that an object is constituted by its parts. Think, for example, of a dry stone wall, a wall made of a number of stones without any mortar or cement. It is not implausible to think that the wall is made up of, and hence constituted by, those items, the stones, that are its parts.

There are, of course, different views about parthood. One much-discussed theory is classical extensional mereology (CEM).[2] Before I turn to look at a theory of parthood on which the constitution-is-composition view is more plausible, let us first look briefly at what the view looks like against the background of CEM. The initial intuition we are exploring is that the wall is constituted by its parts, the stones. On CEM, the stones do form a decomposition of the wall, where a decomposition of O is a set of non-overlapping things such that any part of O overlaps some of them. But so, equally, are the left and right halves of the wall; or the top two rows and the remaining twenty rows of stones. In saying that something is constituted by its parts, the very expression "*its* parts" will be ambiguous. If it is taken to mean the members of a unique (privileged) decomposition of O, (such as the decomposition of the wall into its stones) it will fail of reference since there is no such thing on CEM. There are (possibly infinitely) many decompositions none of which is privileged by the theory. If, on the other hand, "its parts" is taken to mean all those things which feature in any decomposition of O, or the members of any arbitrary decomposition of O, then it will no longer be intuitive to say that an object is constituted by its parts. There is, perhaps, nothing incoherent in saying that the wall is constituted by its stones, its left and right halves, its top two rows and its bottom twenty rows, and so on; but the view has none of the original

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2 There are many formulations of this theory. See Peter Simons (1987) for extensive discussion. I shall assume familiarity with the basic ideas of CEM here.

appeal that attached to the thought that the wall is constituted by its stones.

The idea that something is constituted by its parts really comes into its own when maintained against the backdrop of a richer, more restricted theory of parthood than CEM. Consider Mark Johnston's view (2005, 2006). According to Johnston, objects are associated with principles of unity, principles that lay down certain conditions on the relations of things such that what it is for an object to exist is for those things to be related in the ways specified by its principle of unity.[3] Those things are the objects u-parts. Other, arbitrary divisions of an object yield parts that do not feature in the principle of unity for that object. These Johnston calls d-parts. So, for example, the u-parts of the wall are the stones. What it is for the wall to exist is (more or less) for those stones to be arranged in a certain pattern, specified by the principle of unity for that wall. The top two and the bottom twenty rows are merely d-parts. They are not mentioned by the principle that says what it is for that wall to exist. We can now say that an object is constituted by its u-parts. The principle of unity gives us what CEM did not, a way of distinguishing one decomposition of an object into parts as privileged.

The paradigm example of constitution, in many discussions of the topic, is the case of the statue and a single thing, a piece of clay out of which it is made. Johnston uses the expression "wholly constitutes" to describe the relation of the clay to the statue. How does Johnston's view deal with whole constitution? There is the appearance of a problem here. If whole constitution is a case (albeit a limiting case) of constitution, and the clay wholly constitutes the statue, then it must be a part of the statue and the statue must have no other part than the clay. But together, these claims are inconsistent with a principle that seems plausibly to govern the ordinary notion of parthood:

Complementarity) If x is a part of y, there is a z≠x which is also a part of y.[4]

There are three possible responses to this problem. One could simply accept that whole constitution is not a variety of constitution and hence that the statue is not constituted by the clay. One could deny Complementarity. Or one could

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3   There is an important question of whether principles of unity are associated with kinds or with individuals. I shall be careless of the distinction here since I don't think anything of what I say hangs on it.

4   Johnston argues against taking parthood to be reflexive (a decision I follow in discussing his views). If one disagrees, then Complementarity should be reformulated in terms of proper parthood. Since it is an assumption of this discussion, with which Johnston agrees, that the statue and clay are not identical, if the clay were part of the statue at all, it would be a proper part, so the problem would arise just the same.

find something besides the clay to be a part of the statue and hence satisfy Complementarity. Johnston's response is to deny Complementarity. Another neo-Aristotelian advocate of taking constitution to be (more or less) composition, Kathrin Koslicki, posits something further as part of the statue. I shall argue that both these strategies run into what is ultimately the same problem. But first, let us briefly see why the first response is inadequate.

Suppose one denies that whole constitution is a variety of constitution and hence accepts that the clay does not constitute the statue. This strategy faces several objections. For one thing, it rules out as a case of constitution the very case that is usually taken as a paradigm of that relation. Let us put that issue aside, however, and look at two further interrelated problems. First, anyone who starts down this road in an attempt to explain constitution in terms of composition will no doubt now want some understanding of whole constitution. So, at the very least, there is an important component of the underlying metaphysics that remains to be explicated (or to be accepted as primitive). Secondly, if the statue is not constituted by the clay, but it has u-parts, then it is constituted by something other than that which wholly constitutes it. Johnston allows that theoretically, u-parthood relations, and hence constitution, may descend indefinitely. But since the adequacy of his account should not have to rely on that scenario, let us suppose that at some point, we have u-parts of u-parts…. of the statue which themselves have no further u-parts. These entities would seem to stand to some quantity of matter in a relation resembling that between the clay and the statue. If so, two things follow. First, any analysis of the relation of whole constitution, in their case, cannot be in terms of constitution or in terms of u-parthood, since they have no u-parts and hence are not constituted. So that would place restrictions on how the concept of whole constitution could be understood.[5] And relatedly, it would mean that in at least some cases, a full understanding of an object in terms of constitution would have to invoke the relation of whole constitution. So the need for another chapter in the account of constitution would seem all but unavoidable.

Johnston, as I noted, avoids the problem by denying Complementarity. The clay is a solitary u-part of, and hence constitutes all by itself, the statue. Whole constitution is a limiting case of constitution. Let me try and bring out what I think is problematic about this approach. Although part of what Johnston is doing is giving a theory of parthood that is an alternative to CEM, he is also attempting to shed light on, indeed to define, the notion of constitution through his notion of u-parthood. In effect, he starts with a primitive notion

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5   This was pointed out to me by Elijah Chudnoff.

of part and on that basis defines the further notions of u-part and d-part which are restrictions of the more general concept. Now, if something A is constituted by some thing or things, B_1–B_n, any attempt to theorize that relation must take account of the fact that A derives many crucial properties from the properties of the Bs. Most prominently, A's location is a function of the locations of the Bs. It is part of the primitive notion of parthood with which Johnston begins that many of a thing's properties, including its location, are functions of the properties of its parts. Hence, the identification of constitution with a variety of parthood offers a satisfying explanation of this feature of constitution. From a conceptual point of view, constitution is illuminated by the invocation of parthood.

It is, of course, open to one to treat one thing as the only (proper) part of another at a formal level; to deny Complementarity. But this represents an extension of the ordinary notion of parthood and if we wish to consider the theory not just as a formal theory, we need to consider how well we understand this extension. What does it mean to say that the clay is the only (proper) part of the statue? Whereas, in the ordinary case, it is features of the primitive notion of parthood that provide an explanation for the relation of constitution, on Johnston's theory, I suggest that in the extended case, we can make no better sense of the idea of something's having only one proper part than to remind ourselves that that 'part' constitutes the object of which it is a 'part.' It is those features characteristic of constitution that were to be explained by identifying constitution with composition (the determination of properties like location of the constituted by the constituting), that end up enabling us to make sense of the extended theory of parthood on which something can have a single (proper) part. So my worry about Johnston isn't over whether a theory of parthood can reject Complementarity. It is over the direction of conceptual illumination in the resulting attempt to link composition and constitution.

Another version of this problem, I believe, arises with Koslicki's attempt to reconcile her account of constitution-as-composition with cases where something is constituted by a single object. Unlike Johnston, she does not reject Complementarity. So, if the constitution of the statue by the piece of clay is to be explained in terms of the clay's being a u-part of the statue, some other u-part of the statue must be found. Koslicki takes the principle of unity of an object itself to be a u-part of that object. This implies that no object can have one u-part only. Let us call the u-part or -parts of an object that are not its principle of unity its *material parts*. (Material parts need not be material in the sense of physical.) Koslicki then defines constitution as the relation between a thing and its material parts. So, the u-parts of the statue are the clay and its

principle of unity. The clay alone is a material part of the statue; hence it alone constitutes the statue.

Now the question arises for Koslicki, if both the clay and the principle of unity are parts of the statue, why do the properties of the statue derive only from the clay? Why do only material parts determine the properties of the constituted object? Isn't it part of the primitive notion of part that certain of a thing's properties are determined by the properties of its parts? For Koslicki, apparently not. It is important to be careful about how to express this point. Suppose the principle of unity for the statue is that the clay be shaped in a certain way. The principle of unity does, of course, affect the properties of the statue. Indeed, it determines that the statue has a certain shape. But being shaped a certain way is not itself a property of the principle; it is a property the principle requires something else (a piece of clay) to have if there is to be a statue. And the principle does not affect the shape of the resulting statue through being a part of it (as the clay does), but by imposing conditions on the other part of the statue. But the feature of parthood that makes it seem as if it could explain the nature of constitution is precisely that parts contribute their own properties (shape, location, etc.) to the thing of which they are parts; and they contribute them as parts, not as requirements on the other part or parts. So we must ask Koslicki, if the principle of unity of an object is really a part of that object, on what basis do we single out only the material parts to define constitution?

It may be thought that, being abstract, something like a principle of unity just couldn't contribute its own properties to a concrete thing like a statue and hence the question I raise is not a genuine one. There are two responses to this. First, why couldn't it? The principle, allegedly a part of the statue, is not located anywhere, I suppose. Why couldn't we say that the statue is constituted by a variety of things, some of which have locations and some of which don't, and that therefore, the statue is not wholly present at the location of those of its parts that themselves have locations? Secondly, Koslicki's theory is general. It will therefore apply to abstract objects that have material parts (say principles) and a non-material part (the principle of unity of the object). Here we would have a case where all the parts of the object were of the same ontological kind. Why, in that case, should we limit those parts which constitute the object only to its material parts? The answer that is operative in the case of Koslicki, I suggest, is that she is really relying on a prior grasp of the notion of constitution to justify the distinction between material and non-material parts. We can, of course, grasp the difference extensionally, just by indicating that the only non-material part of an object is its principle of unity. But if principle and material

parts are all *parts* in the same sense (which is surely required if the spirit, if not the letter, of Complementarity is not to be violated), the attempt to illuminate constitution in terms of parthood seems to collapse.

The problems for Johnston and Koslicki are thus two sides of the same coin. When the notion of part is enlarged beyond its core, to include single (proper) parts or principles of unity, we end up relying on an understanding of constitution when we use the enlarged conception of part to define constitution; in one case, to see why a single part does contribute its qualities to the object of which it is the only part, in the other to say why some parts (principles of unity) do not. In both cases we arrive at theories that are extensionally adequate. We can non-circularly stipulate what is needed to get the analysis of constitution in terms of composition to come out right. But in both cases we fail fully to shed light on the nature of constitution in terms of composition.

2. Constitution as Distinct from, but Defined in Terms of, Parthood

I turn now to the second view about the relation of constitution to composition, namely, that although the relations are distinct and a thing is not constituted by the things that compose it, nonetheless, constitution can be defined in terms of parthood. I shall focus my discussion on the views of Judith Thomson (1983 and 1998). Thomson's idea is roughly this. x constitutes y at t just in case x and y have all the same parts at t, but y is more loosely tied to those parts for its identity than is x. Somewhat more precisely, here is a paraphrase of Thomson's official definition (1998, 157):

xconstitutes y at t $=_{df}$
(1)   x and y are parts of each other at t;[6]
(2)   some part of x at t is essential to x, but such that no part of it is essential to y;
(3)   but not vice versa.

Abstracting away from some of the details here, what leads Thomson to this definition is the following picture. A statue is constituted at some time by a portion of clay. Though distinct, the statue and the clay occupy the same space at t. This intimate connection between them is reflected in (1) (for reasons that

6   If everything is a part of itself and parthood is transitive, this is equivalent to: x and y have all the same parts at t.

will emerge below). In an earlier paper (1983), Thomson suggests (1) alone as a definition of constitution (218, n. 11). She sees that this would imply that not only does the clay constitute the statue at t but that the statue constitutes the clay, but adds that she finds this symmetry in constitution "harmless." In the more recent paper, however, she thinks it is clear that constitution is asymmetric. How does the asymmetry of constitution manifest itself? If one thinks of the statue and the portion of clay, it seems that one thing that differentiates them is this. A statue might lose some clay and still be the same statue. However, if some of a portion of clay is destroyed (but not if it merely becomes detached), the original portion ceases to exist. Hence, subportions of the clay are essential to the clay's existence but at least some of them have no parts that are essential to the statue's existence. It is this kind of asymmetry that clause (2) is supposed to ensure. However, (1) and (2) are still insufficient owing to certain bizarre cases and the addition of clause (3) rules out those cases from counting as constitution. Since they will be important below, I will pass over these cases for the time being. Let us turn to an examination of Thomson's definition.

(1) seems, at first sight, to be very implausible. For one thing, how can the clay and the statue be part of each other without being identical? For another, isn't it implausible to think that the clay is *part* of the statue (for all the reasons rehearsed in the previous section)? And even more implausible to think that the statue is *part* of the clay? Although Thomson has the resources to take the immediate sting out of these questions, I think that they point to what are real problems for her account. First, then, we will look at how Thomson deals with the initial worries generated by these questions, starting with the question of why, in a case where x constitutes y at t, (1) does not imply their identity. We must understand (1) against the background of the theory of parts Thomson develops in her 1983 paper. In CEM, if x is part of y and y is part of x, then x is identical to y. But Thomson rejects CEM on the grounds that the only way it can deal with the changeability of the statue over time is by appeal to the theory of temporal parts, which she finds "crazy" (1983, 210). Instead, she accepts what she calls the Cross-Temporal Calculus of Individuals (CCI). CCI is very like CEM in spirit but it recasts its central concepts as temporally relative. According to CCI, the identity of x and y requires mutual parthood at all times that they exist. If the clay constitutes the statue at t, Thomson's definition of constitution requires only that they are mutual parts at t. If the statue loses a finger at some time after t, the statue and the clay will not, at that later time, be mutual parts (though if the finger is not replaced and its clay is not destroyed, presumably the statue will still be a part of the clay); nor will

the clay constitute the statue at that later time.[7] But even if the identity of x and y does not follow from their mutual parthood at a time, why insist on this condition at all? Why think that the clay is part of the statue at t and that, even worse, the statue is part of the clay at t? Are these not highly counter-intuitive claims in their own right?

Thomson does not take the notion of parthood as altogether primitive. With respect to material objects (to which Thomson confines her account of constitution), she asserts that:

> x   is a part of y at t ↔ the space occupied by x at t is part of the space occupied by y at t. (1993, 155)[8]

This account of material object parthood, of course, rests on a notion of parthood for spaces, a notion about which Thomson is fairly relaxed. (She thinks it might come to one set of point's being a subset of another, thus taking the subset relation to underpin material object parthood.) That the statue is constituted by the clay at t implies that the two of them are spatially co-incident at t. Consequently, each is a part of the other at t. Given this definition of parthood for material objects, and the mereology CCI within which it functions, our original reasons for being wary of (1) are dissipated. All that it means to say that the clay and the statue are parts of each other at t is that they are spatially co-incident at t. And to add that they are not identical is to say that at some other time, they are not spatially co-incident (or in a modalized version, that it in some other world they are not spatially co-incident). But in showing why the claim of mutual parthood in cases of constitution is not implausible for the reasons we thought, another problems with it is revealed. If parthood is understood in terms of spatial inclusion, then all (1) contributes to a definition of constitution is that constituting and constituted objects must be co-located at the time of their relation. While it is certainly incumbent on a definition of

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7   Most constitution theorists, including Thomson, think that the statue and the clay would be distinct even if their histories never, in fact, diverge (in Thomson's framework, even if there is no time such that they have different parts at that time) simply because it is possible for them to diverge. Thomson's definition, therefore, must really be cast not in terms of CCI but the modalized extension of it (MCCI) that she indicates at the end of the earlier paper but does not develop there. This would require that for identity, x and y must share their parts (or be parts of each other) not only at all times at which they exist but also at all worlds at which they exist. I shall mostly ignore this complication in what follows since it is not relevant to the objections I raise.

8   It is not altogether clear what the status of this condition is with respect to the notion of parthood. It tells us "what is to count" as one material thing's being part of another. Is there a distinct notion of material parthood of which the principle is a definition?

constitution to entail this result, by itself it tells us nothing about what is going on metaphysically. We know the statue and the clay are co-located. In saying that the statue is constituted by the clay we want some further insight into the situation. So the problem with the definition of constitution Thomson offered in (1983), that is to say (1) alone, is not merely that it makes constitution symmetric but that, taken together with the understanding of parthood in terms of spatial inclusion given in the (1996) paper, it is entirely unexplanatory. It is true that if we took parthood as primitive or defined it in terms other than those of spatial inclusion, it would indeed be interesting to be told, of the statue and the clay, that they were parts of one another at the time of constitution. That would be a substantive claim. But taking parthood in terms of anything other than spatial inclusion makes (1) come out as very implausible. If parthood means something other than spatial inclusion, then surely the clay isn't part of the statue at t and, even more surely, the statue isn't part of the clay. So it looks as if Thomson's account can retain its plausibility only at the cost of being unilluminating.

It might fairly be objected that I have not yet taken into account what (2) and (3) add to (1). What happens when we bring them in? First, we should note that the problem I have been describing is not the problem that (1) alone makes constitution symmetrical. So, to the extent that (2) and (3) are designed merely to secure the right kind of asymmetry, they cannot be expected to bear on the problem I have raised. Furthermore, if the co-location of x and y by itself does nothing to explain what constitution is, how much further illumination of the relation can be added by comparing their relations to some third object—a part of them to which x relates in one way and y another? But aside from these general worries, there are more particular troubles generated by (2) and (3).

(2), we noted above, was introduced to ensure asymmetry. Thomson tells us that she thought (1) and (2) would provide an adequate definition of constitution but that certain counter-examples were proposed and that (3) was added to take care of them (1993, 171, n.6). The counter-examples arise from the fact that it seems possible where x and y satisfy (1) that the ordered pair <x,y> might satisfy (2) with respect to one part, while <y,x> might satisfy (2) with respect to a different part. In such a case we would be back with symmetrical constitution. The case Thomson gives of this situation is this (1998, 171, n 9). Let A be the fusion at t of my chair with its left front leg and B be the fusion at t of my chair with its right front leg.[9] A and B occupy the same space at t. But since a

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9 Because of her temporalized mereology, Thomson distinguishes what she calls "all-fusions,"
which exist only when all their parts exist, and "some-fusions," which exist when any of their
parts exist. The distinction is not relevant to my present concerns, but the counter-example

particular leg is not essential to a chair (that is, a given leg could be replaced and the chair continue to exist), the left front leg is essential to A but not B, while the right front leg is essential to B but not A. The addition of (3) allows us to avoid the unwanted implication that A and B constitute each other. It entails that neither constitutes the other which, as Thomson says, seems to be intuitively the right thing to say about the example.

In fact, the case raises two distinct problems. One problem is that it shows that the addition of (2) to (1) does not guarantee asymmetry. This problem is indeed dealt with by the addition of (3) to the definition. But when Thomson says that it is intuitively the right answer that neither A constitutes B nor B, A, she is surely referring not just to the problem of symmetry but to the odd-ness of each of the claims (A constitutes B, B constitutes A) in its own right. It would be a counter-example to her theory that it implied that the fusion of my chair and its left front leg constituted the fusion of my chair and its right front leg even if the converse were not also true. If this is so, however, then the addition of (3) does not save her definition. For let A be, as before, the fusion of my chair with its left front leg and C be simply my chair. Then according to the full definition, including (2) and (3), it turns out that A constitutes C at t. The fusion and the chair occupy the same space at t and hence are parts of each other;[10] the fusion has a part that is essential to it, the chair's left front leg, that is not essential to the chair; and there is no part that is essential to the chair but not to the fusion. But obviously the fusion does not constitute the chair.

I conclude, then, that Thomson's attempt to define constitution in terms of parthood does not succeed.

3.   Constitution as Exclusive of Composition

I turn now to examine Lynne Baker's account of constitution. Her definition of constitution (2007, 161) is as follows:

> (C*)   x constitutes y at t $=_{df}$ There are distinct primary-kind properties F and G and G-favorable circumstances such that:

> we are discussing is actually given in terms of all-fusions, not fusions *simpliciter*. Something like a chair is not, for Thomson, an all-fusion of its parts, since it can change parts over time. So the all-fusion of the chair with one of its legs is distinct from the chair. I have assumed the same for the fusion of the chair and one of its legs.

10   This case, furthermore, shows that there must be something wrong either with Thomson's mereology or her spatial conception of parthood since we have the chair being a proper part of the fusion at t, which is in turn an improper part of the chair at t.

(1) F^*x and G^*y [11]

(2) x and y are spatially coincident at t, and $\forall z$(z is spatially coincident with x at t and $G^*z \rightarrow z=y$)

(3) x is in G-favorable circumstances at t

(4) It is necessary that: $\forall w[(F^*wt$ and w is in G-favorable circumstances at t) $\rightarrow \exists z(G^*zt$ and z is spatially coincident with w at t)]

(5) It is possible that: $\exists t\{$(x exists at t and not $\exists w[G^*wt$ and w is spatially coincident with x at t])$\}$

(6) If x is of one basic kind of stuff, then y is of the same basic kind of stuff

(1) requires that where there is constitution, both relata have primary kinds (this is guaranteed by her claim that all objects have primary kinds) and that they are distinct. Thus, for example, something that is a statue by primary kind cannot constitute a distinct statue. (2) requires that constituting and constituted objects be spatially co-incident at the time of constitution. (3) requires that constitution not be a bare metaphysical fact. When it obtains, it does so in virtue of a variety of conditions that provide the favorable circumstances for an F to constitute a G. For example, a piece of clay may constitute a statue if it is a) made by a sculptor; b) displayed in an art gallery, etc. These, together, are statue-favorable circumstances and it is in virtue of their obtaining that a piece of clay constitutes a distinct object, a statue. These circumstances are not merely necessary; if one puts an F into G-favorable circumstances, then necessarily, there will be a G. They are, thus, sufficient to make an F a G. That is what (4) says. (5) is what specifies that the G-favorable circumstances are necessary. It holds that an F might fail to constitute a G. That will happen, of course, if and only if the F fails to be in the necessary G-favorable circumstances. Finally, (6) makes of constitution an intra-categorical affair. Bodies, for example, cannot constitute souls. (Basic kinds of stuff should not be confused with primary kinds.)

Baker has repeatedly asserted that she takes constitution to have no mereological component at all and it is indeed true that her definition makes no reference to parthood or composition. Her view may therefore be thought to be one on which constitution and composition are simply unrelated notions. I shall argue, however, that certain counter-examples to her definition should

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11   If F is a property, then F^* is the property of having F as a primary kind. The notion of primary kind plays a prominent role in Baker's understanding of constitution. An object's primary kind is a kind to which it belongs necessarily and determines the kinds of changes that it can undergo without ceasing to exist. Baker holds that everything has exactly one primary kind.

be ruled out by the addition to it of a condition that if x constitutes y, it cannot be a part of y. This has the effect of making her view mereological in the weak sense that it excludes the obtaining of certain parthood relations. Having argued for this, I shall go on to raise a problem for Baker's view arising out of this exclusion.

Dean Zimmerman (2002) argues that Baker's definition may provide a necessary condition for constitution but it is not sufficient. It will allow certain cases to count as constitution which, intuitively, should not be so counted. To rule out these troublesome cases, Zimmerman thinks Baker should avail herself of a mereological condition in her definition, namely,

CD)   x and y share at least one complete decomposition.

(Recall that a decomposition, or what Zimmerman calls a complete decomposition, of O is a set of things such that any part of O overlaps some of them. It is, intuitively, a comprehensive and non-redundant breakdown into parts at some level.) As Zimmerman notes, the addition of Z would render (6) and the spatial co-incidence requirement in (2) unnecessary.[12]

Counter-examples fall into two sorts. The basic idea of both is to give cases where two things, of the same basic kind of stuff, share a spatial location without sharing a complete decomposition. From such cases, we can build circumstances in which all the other conditions of (C*) are met but where we do not want to allow constitution. The first kind of counter-example has the following form. A, of primary kind F, might somehow generate the existence of B, of primary kind G, (both A and B being of the same basic kind of stuff) in the same location as itself. If the laws by which this generation happens are built into the G-favorable circumstances, then it looks like all the conditions of (C*) are met; yet it does not seem as if A constitutes B. Call these generative cases. A second kind of counter-example is this. A, of primary kind F, and B of primary kind G, may combine in some way into something C, of primary kind H, which is co-located with and of the same basic kind of stuff as A. In that case, A, by being in those circumstances in which it is combined with B, is in H-favorable circumstances and we will have to say that A constitutes C. Call these composite cases.[13] This scenario itself may have two variants. B may

12   In fact, Zimmerman is working with a slightly earlier version of Baker's definition on which (2) contains only the first conjunct and (6) appears in a restricted form.

13   Notice that for every generative case there is a corresponding composite case since where A necessitates the existence of B, there will also come in to existence the mereological sum of A and B. Each of A and B would be said, by Baker's definition, to constitute their composite,

have no spatial location, or it may have the same spatial location as A and C. In generative cases, and in the second variety of composite cases, A will be combined with B in an Aristotelian (i.e. homeomerous) mixture. That is, no part of the region occupied by A and B will be occupied by A alone or B alone.

As an example of the first kind, Zimmerman hypothesizes one ectoplasmic body that, under the right circumstances, generates another ectoplasmic body co-located with it ("a blue ghost producing a red one, as it might be") (298). As an example of the second kind, we can take a variant given by Zimmerman of a case originally raised by Anil Gupta that led to Baker's inclusion of an earlier version of (6) (on which it was required merely that if y is immaterial so is x) (Baker 2000, 43). Suppose an immaterial ectoplasmic body generates a soul. Now consider the composite of immaterial body and soul. Both the body and the composite are immaterial, and the other conditions of Baker's definition may all apply. Yet we are loathe to say that the body constitutes the person.[14] It is clear that CD would rule out both the counter-examples: the blue and red ghosts do not share a complete decomposition; nor do the immaterial body and the composite person.

These examples, of course, are fairly exotic in the hypothetical 'physics' involved. (I shall later present a case which, while possibly metaphysically exotic, is physically anodyne.) The point of the exoticness is to yield cases of entities that are genuinely spatially coincident without sharing a complete decomposition. Once embarked, however, there is no reason to have recourse to ectoplasm. Why not suppose that ordinary matter might be able to generate distinct but co-located quantities of matter of a different primary kind ("a blue jello-blob producing a red one, as it might be")? Or, slightly less exotically, that two physical substances might, as Aristotle thought, produce a homeomerous mixture? Physics, as we know, disallows both these cases; but the invocation of ectoplasm by Zimmerman is really no more than a physics-be-damned flourish.[15]

If these examples are not simply to be ignored, on the grounds of their being too exotic (a move which Baker contemplates), they are troubling for her definition, and her resistance to mereology clearly would make CD an unwelcome amendment to her theory. I shall suggest three things, in the following. First,

the mereological sum, thus providing a composite case (or two composite cases). Since not every composite case must have a corresponding generative case, under a physics that allowed either type of case, composite cases would be more numerous than generative ones.

14   In Gupta's original version, the body was a normal material one; hence the case would violate (6).

15   In fact, the spiritualist notion of ectoplasm was of a *physical* stuff produced by mediums through the pores of their skin. See Bellamy 2003.

there is an alternative amendment to Baker's theory to deal with composite cases which, while mereological in some sense, is a much milder intrusion of mereology into her theory of constitution than is CD and, moreover, is actually something she explicitly accepts. Secondly, there are composite cases that are not ruled out by CD but are ruled out by my suggested amendment. Thirdly, generative cases are harder to understand than the composite cases (in addition to being less numerous, as I noted in a previous footnote) and may be spurious altogether.

Here, then, is my suggested addition to (C*):

(NPP) x is not a proper part of y.

Intuitively, it seems as if the reason A can't constitute C, the composite of A and B, is that it itself is only a part of it. This intuition is elevated into a condition on constitution in NPP. NPP is certainly a milder application of mereology than CD since, although it imports the *notion* of parthood into Baker's definition, it does so only to rule out certain parthood relations and not to require them. And Baker should prefer NPP to CD because she in fact asserts it: "If x constitutes y at t, x is not a part of y at t" (2007, 32). Owing to her reluctance to conceive constitution in terms of mereology she does not make it part of her definition, but nor does it follow from the definition as given. Her reasons for asserting it are therefore not clear. The composite-case counter-examples provide a good argument for including it in the definition.

More substantively, however, there is a counter-example to Baker's theory as amended by CD that is not a counter-example to the theory as amended by NPP. The counter-example is, in fact, very similar to the counter-example I gave against Thomson's theory in the previous section, which is not surprising since Zimmerman's proposal takes Baker's theory in the direction of Thomson's. Take the clay that constitutes a given statue and the mereological fusion of that statue and its clay. The clay and the fusion are distinct and of different primary kinds. (This follows from Baker's account. If the clay constitutes the statue, *they* must be of different primary kinds. And the primary kind of a fusion of things of different kinds K and L is a *sui generis* kind K/L, so the fusion of the statue and clay will be of a different primary kind from either.) They are co-located. If the clay is in statue-clay-fusion-favorable circumstances (i.e. if it constitutes a statue) then necessarily it will be co-located with such a fusion;[16]

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16   Strictly, of course, the statue-clay-fusion favorable conditions must include not only those required for the clay to constitute the statue but also those required for the fusion of the

yet it is possible for the clay to exist and the fusion not to exist, namely, if the clay does not constitute a statue. Finally, the clay and the fusion satisfy CD. If the statue and the clay share a complete decomposition (as they must, on Zimmerman's view, if the clay is to constitute the statue), then the clay shares a complete decomposition with the fusion of statue and clay.[17] And yet, for all that, the clay should not be said to constitute the fusion of statue and clay. NPP successfully blocks that conclusion since the clay is a proper part of the fusion.

The key feature of the example is this. Above, when we wondered about how there could be two co-located things that didn't share any decomposition, we speculated about the exotic physics needed for ectoplasm and homeomerous mixtures. But the clay and fusion are, in a sense, a homeomerous mixture, without the need for any exotic physics. If the clay constitutes the statue, then any sub-portion of clay will be some of the fusion and vice versa. Two distinct things are inextricably mixed in space, without our needing to appeal to any exotic physics. The only potentially exotic features here are in the metaphysics: the constitution relation and the existence of mereological sums. But constitution is assumed for the example by all parties to the debate; and the suitability of CD as an amendment to Baker's account should hardly depend on the denial of mereological sums.

NPP, however, clearly does not rule out the generative cases. Since CD does, it might be thought we will have to weigh up whose counter-examples are more disturbing and choose between CD and NPP accordingly. But let us look more closely at the generative case discussed briefly above, the blue ghost generating the red ghost. The key concept in this and similar cases is the notion of generation. So this is the concept we must explore to assess the example. Take some clay that is in statue-favorable circumstances (it is shaped by a sculptor with certain intentions, etc.). In virtue of the clay's being put in these circumstances, a statue comes into existence, constituted by the clay. Does the clay generate the statue? If it does, then why should the fact that in the ghost case we have generation of one object by another rule out the existence of a constitution relation

statue and the clay to exist. If the fusion is of the kind theorized by CEM or something like Thomson's CCI, however, this is merely the existence of the statue and the clay.

17   Zimmerman may not be all that averse to this consequence so he, at any rate, may not be moved by this case. A variation on it, in which we consider not the clay and the fusion but the statue and the fusion, would not meet some of Baker's other conditions, but would provide a case of things that did share a complete decomposition; and it seems to me even more counter-intuitive to think of the fusion as constituted by the statue than to think of it as constituted by the clay. The definition of constitution given by Zimmerman (1995, 73), based on the idea of sharing a complete decomposition, would, I think, have to treat the fusion as constituted by the statue.

between them? If it does not, and if that is why we think there is constitution in the statue case but not in the ghost case, what precisely is the difference? What is involved in generation that is not involved in the statue case? It is hard to speculate about this without knowing more about ectoplasmic physics, but let us see how far we can get anyway.

One might think that generation is a process in which one thing produces a genuinely new real entity whereas a constituted object is really nothing over and above what constitutes it. But this won't do dialectically speaking. One might have the view that when some clay is molded etc., nothing new comes into existence. There is, to adapt van Inwagen's phrase, just some clay arranged statue-wise. But this would be to attack any robust theory of constitution according to which it is a relation between two distinct objects. Anyone who rejects this is going to reject Baker's theory on much more fundamental grounds.

Is the difference that in the statue case, the existence of the new object, the statue, is not owing to natural processes or laws? It is, as it were, convention that makes a piece of clay constitute a new object, a statue, when it is in certain conditions. By contrast, the ghost case is supposed to be one in which the coming into existence of the new entity, the ghost, is owing to natural processes or laws governing ectoplasm. This won't do for Baker, since she clearly thinks that in many genuine cases of constitution, the existence of the constituted object is owing to natural laws and processes. It is nature, not convention, in virtue of which some biological material in the right circumstances constitutes an organism; and at least partly nature in virtue of which some water constitutes an ice sculpture. Perhaps, then, the difference is that a constituted object is supposed to have no causal properties that are not had in virtue of the constituting object. A case of generation is one where the new object has causal powers all its own. Baker thinks that constituted objects do have various causal properties that are independent of the causal properties of the constituting object. For example, a statue might cause someone to appreciate baroque art or cause a riot where the constituting clay would not.[18] But suppose we stipulate that all new causal properties in the case of constitution are intentional and depend on the recognition of a 'new' object by a mind. In that case, we might say that with generation, we get objects that have new causal properties that are completely non-intentional whereas with constitution we do not. If this is what is meant, though, the example becomes highly questionable. We don't know, without

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18   I am simplifying Baker's theory here. She holds that there is a downward transfer of properties from constituted to constituting object as well as the more familiar transfer in the opposite direction. But all that is needed to make the point is that some causal properties are had by the constituted object non-derivatively; not that the constituting object fails to have them.

learning of the ectoplasmic physics, how ectoplasmic objects are structured. Are they 'atomic'? Do they have internal structure? Whatever the answers, though, the generated and generating objects must, to satisfy clause (2) of the definition, be entirely spatially coincident. So whatever the disposition in space of the generating object is, the generated object must share it exactly. Where, then, will the generated object get its independent non-intentional causal powers from? Perhaps it is not impossible that there is some answer to this question, but it is hard to know what verdict to render about it without a much clearer conception of all this.

We should also ask the following. Is the generation of the ghost out of some matter or *ex nihilo*?[19] If it is from some matter, there are two choices: either that matter is the ghost that is doing the generating or something else. If the former, then it is really hard to see why the case is not one of constitution since it is natural to say that if x is the matter of y, then x constitutes y. Suppose, then, the matter is something else, M. So the situation is this. When the generated ghost exists, it exists wherever M is, since M is its matter. But it does not exist unless the generating ghost is in just that place as well. So we have two distinct things, the generating ghost and M, which are such that when they are homeo-merously mixed, there is a third thing, the generated ghost, present where both the generating ghost and M are. Apart from the claim that M is the matter of the ghost (whose import has yet to be fully cashed out), we seem now to have turned a generative case into a compound case. But now the case would be ruled out from counting as one of constitution by NPP. Finally, there is the possibility that the generation of the ghost is *ex nihilo*: it has no matter from which it comes to be. In that case, it seems to me the metaphysics underlying the counter-example is so bizarre that we are entitled not to hold an account of constitution hostage to a proper presentation of it. I conclude that such cases as this are not adequate counter-examples to the supplementation of Baker's account with NPP, rather than with CD.[20]

19 In one sense, of course, it is from the generating ghost. But *ex nihilo* creation is not usually thought to be incompatible with the existence of a something that acts as a cause. Otherwise, the very idea of God's creating the world *ex nihilo* would be incoherent.

20 Zimmerman gives a couple of other counter-examples to Baker that do not get ruled out by NPP but do get taken care of by CD, namely Sider's Ghosts and Jekyll and Hyde. I will not discuss them here. I note merely (for those familiar with the case) that in the case of Sider's Ghosts, the conclusion that each of the quantities of ectoplasm constitutes each of the ghosts is ruled out by the second half of Baker's (2), which has been added since the version of her definition that Zimmerman discusses. The problem remains that while the 'constituting' objects are co-located, it will follow from the new version of (2) that neither constitutes either of the 'constituted' objects. One may also wonder whether the addition in (2) renders Baker's definition somewhat *ad hoc*.

Besides doing better than CD with respect to the counter-examples we have looked at, I suggest that NPP is better able than CD to explain why we do not have constitution in compound cases. Baker's definition precludes self-constitution (by (1) together with the requirement that F and G be distinct), and hence does imply that if x constitutes y then x is not an improper part of y. In the relevant counter-examples, we have three co-located things, A, B, and C, such that C is a compound of A and B and such that A and C allegedly satisfy the definition of constitution. (For example, suppose some oil and vinegar are in a homeomerous mixture of salad dressing. The oil—or the vinegar—would satisfy the unamended definition of constitution with respect to the salad dressing.) When something is a part of a composite of which both elements are co-located, it may (as with the oil and salad dressing) or may not (as with the clay and the fusion of clay and statue) be disqualified from constituting the composite by the presence of the *other* member of the composite (the vinegar and the statue respectively). But it is *always* disqualified from constituting the composite by its inability to constitute itself.[21] In considering why x cannot constitute the composite of x and y, CD focuses on how the presence of y in the composite makes this impossible. Typically, y will contribute parts to the composite that make it impossible for it to share a complete decomposition with x. (Hence CD and NPP will be equivalent in all such cases.) But as the example of the fusion of the statue and the clay shows, this will not always be the case. The fusion *does* share a complete decomposition with the clay. By contrast, NPP focuses on the presence of x itself in the composite. Besides being insured against the fusion counter-example that defeats CD, therefore, NPP disallows the counter-examples on the basis of something, the prohibition on self-constitution, that is already part of Baker's unamended definition.

In the light of the foregoing discussion, I submit that despite the apparent absence of mereological concepts from Baker's definition, it should, when amended to deal with counter-examples of the kind we have been examining, be seen as a view on which constitution is exclusive of composition. This, however, raises a whole further set of concerns for Baker's approach to constitution. Baker faces the converse of the problem that afflicted Johnston's view. Where he was able to deal well with the wall and the stones that are its parts and that, in some sense constitute it, problems arose for his account over the statue and the clay, since the clay is not a part of the statue. In Baker's case, her account (plus NPP) works well for the statue and the clay; but what is she to say about the

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21   Zimmerman is prepared, as Baker—I think rightly—is not, to treat identity as a limiting case of constitution.

wall and the stones? In some sense, the stones do constitute the wall; and yet they are parts of it. Baker's response to this problem is to invoke the aggregate of the stones. The wall is constituted, in her opinion, by the aggregate of the stones, and that aggregate, of course, is not a part of the wall; indeed cannot be, if we accept NPP.[22]

Before I discuss a problem consequent on Baker's use of aggregates, we should address the question of how important they are for her. After all, they do not appear in the definition of constitution. Maybe all cases of constitution will turn out to be like the statue and clay case, in which case our single constituting object will be the quantity of clay and we will not have to resort to aggregates at all. That is not Baker's view, however. She does think that cases like the stones and the wall ought to be accounted for in constitution terms. Indeed, in order to integrate her theory with the atomic theory of matter, she thinks the quantity of clay is itself constituted by the aggregate of its atoms. According to her, all cases of material object constitution (possibly excepting some at a basic ontological level, if there is such) will in fact involve constitution by aggregates. Thus, even if Baker's *definition* of constitution is independent of considerations of composition and parthood, its applicability to anything like the cases she wants to account for is not.

Unfortunately, the notion of constitution by aggregates turns out to be problematic and the problem concerns how to integrate the notion of parthood that relates an aggregate to its parts with the notion of parthood that relates a constituted object, such as a table, to its parts (its legs and top). Following Baker, I will distinguish these relations by referring to the first as mereological parthood (which I will abbreviate to m-parthood) and the second as parthood *simpliciter*. Take a table which is constituted by the aggregate of its four legs and its top. The top itself, besides being an m-part of the constituting aggregate, is a part, but not an m-part, of the table. Baker defines the notion of parthood that the top bears to the table thus:

(P)   x is a part of y at t $=_{df}$ there is a z, distinct from x, such that x is an m-part of z and z constitutes y. (Paraphrase of Baker 2007, 187)

So the top is a part of the table because it is an m-part of something—the aggregate of legs and top—that constitutes the table.

22   Baker is agnostic about what mereological theory describes these aggregates but if they are not the aggregates of CEM, the difference makes no difference in the following discussion. Specifically, Baker thinks an aggregate exists just in case its parts do and is uniquely determined by its parts.

Now consider the top itself. It is spatially co-incident with an aggregate of atoms to which it is not identical. According to Baker, the top itself is constituted by that aggregate of atoms. Since Baker is agnostic about whether there is constitution all the way down, or whether there is a fundamental level of things that are not constituted, let just suppose that atoms themselves are not constituted and that there is nothing in between the top and the atoms that constitute it (and the same for the legs). "In general," Baker tells us, "an object with parts is constituted by the sum of all the sums that constitute the parts of that object" (2007, 190).[23] So the table is constituted by the sum of the sums of atoms that constitute the top and the legs. But the sum of the sums of atoms that constitute the top and legs (assuming the table has no other parts) is just the sum of all the atoms in the table. It follows, then, that the sum of legs and top is identical to the sum of atoms in the table. And that can only be true if each of the legs and top is identical to the sum of some of the atoms that constitute the table. Or to put the same point slightly differently, applying P to the top and table, we have it that the top is part of the table just in case it is an m-part of the sum of all the atoms in the table. But anything that is a mereological part of a sum of atoms must itself be just a sum of atoms. So the top must be a sum of atoms, which contradicts the claim that it is constituted by a sum of atoms. Baker's attempt to integrate parthood and m-parthood thus leads to contradiction.

I cannot here explore all the possible ways by which one might attempt to circumvent this problem. It is possible that some solution might be found. But the origin of the problem is clear. It arises from trying to take a theory of constitution that is hostile to mereological relations and allow it to deal with cases where a single object (such as an aggregate) might be posited to constitute something to which it is not identical only because of the parts it has. The use of aggregates smuggles back in the parthood relation with potentially disastrous consequences for the overall theory.

4. Concluding Remarks

Let me finish up by making some general remarks about the preceding case studies. The theories we have been looking at all fall within a distinct class of constitution views. They all presuppose that the objects involved in cases of

23   "by the sum" is a correction of "by the sums" that appears in her text.

constitution are three-dimensional (and hence that constitution is relative to a time); that constitution is not identity and is, in fact, asymmetric; and that where there is constitution there can be two (or more) co-located objects. It will, therefore, be a condition of adequacy for a definition of constitution that it imply, if x is constituted by a single thing y, that x and y have the same spatial location; or that if x is constituted by several things, the locations of those things will take in the whole of, but no more than, x's location.

We have seen two ways in which this condition of adequacy has been met. In the case of Baker, who sees herself as giving a definition of constitution that is free of any reliance on mereology, the condition is simply built into the definition (her condition (2)). Doing things this way opens up a range of possible counter-examples if we suppose that distinct things can be co-located without sharing parts. The question for Baker was whether the further conditions in her definition would be sufficient to rule out certain counter-intuitive consequences of her account (e.g. that the oil constitutes the Aristotelian salad dressing). Dean Zimmerman argued that they would not and that the only recourse was to 'go' mereological and rule out these troublesome cases by a requirement that constituted and constituting objects must share their parts at some level of decomposition. I suggested Baker could withstand that by adding a lighter condition that an object cannot be constituted by a proper part of itself (something she already accepts though it is not part of her definition).

The other views we looked at meet the co-location condition of adequacy through the notion of parthood, on the assumption that something is where its parts are. This seems to be a stronger requirement than Baker's mere requirement of spatial co-location, and hence, potentially, to lighten the load of the remaining conditions in the definition (perhaps to nothing, in the case of Johnston). In Thomson's case, that appearance is misleading since she exhausts the notion of material parthood in terms of spatial inclusion. Her requirement that constituted and constituting objects share their parts (including each other) thus comes to no more than Baker's condition that they be co-located. Consequently, she is vulnerable to the same kinds of objections, based on the notion of perfect mixture, that plagued Baker—and this despite her affirming the very thing that Zimmerman urged Baker to accept to avoid his counter-examples. (Zimmerman, I suspect, takes parthood for material objects not to be exhausted by spatial inclusion and hence is not subject to the objections common to Baker and Thomson.) For if one thinks about it, the example I urged against Thomson's definition, that it would take a fusion of a chair and its left front leg to constitute the chair, depends on the chair's and the fusion's being in a state of perfect mixture. This consequence was not barred by the

further conditions she imposed on constitution.

Johnston's theory meets the requirement of co-location for constituted objects with parts and avoids all the problems stemming from odd fusions and perfect mixtures. This is because his conception of the relevant kind of parts, u-parts, has built into it an appeal to principles that say what it is for an object with such parts to exist. Johnston's theory, however, ran into trouble when it came to cases in which we think an object is constituted by a single object or, to put the same point differently, where the constituted object has no u-parts. We can extend the idea of principles that say what it is for an object to exist by reference to some other object's satisfying some principle or condition, but without the notion of parthood, nothing excludes cases from satisfying the extended theory in which the 'constituting' object is not located where the constituted object is (or more likely, where the constituted object is not located anywhere at all, being abstract). Johnston treats the single constituting object as a part of the constituted object; but I argued that while this may provide an extensionally adequate definition of constitution in terms of parthood, or composition, it is conceptually inadequate in so far as the only way to grasp what it is for an object to have a single (proper) part is by appeal to the notion of constitution.

I do not take myself to have refuted, decisively, the three approaches examined. Each of them may be able to make further changes, preserving its original spirit, but overcoming the various objections I have raised. Furthermore, each is just one specimen of a particular approach to the question of how composition and constitution are related. Nonetheless, I think this survey provides grounds for skepticism about establishing any relation between composition and constitution. My provisional conclusion, therefore, is that what it is for something to have some other things as parts, and what it is for something to be made out of something (or some things) are distinct issues.

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References

Baker, Lynne. 2000. *Persons and Bodies: A Constitution View*. Cambridge: Cambridge University Press.

Baker, Lynne. 2007. *The Metaphysics of Everyday Life*. Cambridge: Cambridge University Press.

Bellamy, Robin. 2003. *Ectoplasm*. http://psican.org/alpha/index.php?/20080823108/Ghosts-Hauntings/Ectoplasm.html. Accessed May 1, 2010.

Fine, Kit. 1982. Acts, Events and Things. In *Language and Ontology: Proceedings of the 6ᵗʰ International Wittgenstein Symposium*, 97–105. Vienna: Hölder-Pichler-Tempsky.

Fine, Kit. 1999. Things and Their Parts. *Midwest Studies in Philosophy* 23: 61–74.

Johnston, Mark. 2005. Constitution. In *The Oxford Handbook of Contemporary Philosophy*, edited by F. Jackson and M. Smith, 636–77. Oxford: Oxford University Press.

Johnston, Mark. 2006. Hylomorphism. *Journal of Philosophy* 103: 652–98.

Koslicki, Kathrin. 2008. *The Structure of Objects*. New York: Oxford University Press.

Simons, Peter. 1987. *Parts: A Study in Ontology*. Oxford: Oxford University Press.

Thomson, Judith Jarvis. 1983. Parthood and Identity Across Time. *Journal of Philosophy* 80: 201–20.

Thomson, Judith Jarvis. 1997. The Statue and the Clay. *Noûs* 32: 149–73.

Zimmerman, Dean. 1995. Theories of Masses and Problems of Constitution. *Philosophical Review* 104: 53–110.

Zimmerman, Dean. 2002. The Constitution of Persons by Bodies: A Critique of Lynne Rudder Baker's Theory of Material Constitution. *Philosophical Topics* 30: 295–338.

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Borderlines in a Globalized World. New Perspectives in a Sociology of the World System. Gerhard Preyer, Mathias Bös (eds.). Kluwer 2002.

Neuer Mensch und kollektive Identität in der Kommunikationsgesellschaft. Hrsg. von Gerhard Preyer. VS Verlag für Sozialwissenschaft 2009.

Philosophy of Education in the Era of Globalization. Edited by Yvonne Raley and Gerhard Preyer. Routledge 2010.

Gesellschaft im Umbruch I. Politische Soziologie im Zeitalter der Globalisierung. Jakob Schissler und Gerhard Preyer. Verlag Humanities Online 2002.

Lebenswelt—System—Gesellschaft. Konstruktionsprobleme der „Theorie des kommunikativen Handelns" von Jürgen Habermas. Gerhard Preyer. Verlag Humanities Online 2000.

Strukturelle Evolution und das Weltsystem: Theorien, Sozialstruktur und evolutionäre Entwicklungen. Gerhard Preyer (Hrsg.). Suhrkamp Verlag 1998.

System der Rechte, demokratischer Rechtsstaat und Diskurstheorie des Rechts nach Jürgen Habermas. Hrsg. von Werner Krawietz / Gerhard Preyer. Sonderheft der Zeitschrift Rechtstheorie 3 1996.

Philosophy

Contextualism in Philosophy. Knowledge, Meaning an Truth. Gerhard Preyer, Georg Peter (eds.). Oxford University Press 2005.

Concepts of Meaning. Framing an Integrated Theory of Linguistic Behavior. Gerhard Preyer, Georg Peter, Maria Ulkan (eds.). Kluwer 2003. Rep. Springer Verlag, Wien.

Analytische Ästhetik. Eine Untersuchung zu Nelson Goodman und zur lit. Parodie. Georg Peter. ONTOS-Verlag 2002.

Logical Form and Language. Gerhard Preyer, Georg Peter (eds.). Oxford University Press 2002.

Donald Davidson's Philosophy. From Radical Interpretation to Radical Contextualism. Gerhard Preyer. Verlag Humanities Online, dt. 2001, engl. 2006.

The Contextualization of Rationality. Gerhard Preyer, Georg Peter (eds.). Mentis 2000.

Reality and Humean Supervenience. Essays on the Philosophy of David Lewis. Gerhard Preyer, Frank Siebelt (eds.). Rowman & Littelfield 2001.

Intention—Bedeutung—Kommunikation. Kognitive und handlungstheoretische Grundlagen der Sprachtheorie. Gerhard Preyer, Maria Ulkan, Alexander Ulfig (Hrsg.). Westdeutscher Verlag 1997, Humanities Online 2001.