

The Theoretical Usefulness of Pluralistic Constitution Theory

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ACADEMIC ABSTRACT

In this paper, I argue that pluralism about material constitution (i.e., holding that the relata of constitution can be non-identical) is a theoretically useful notion. First, I propose a principle whose denial is sufficient and, to my knowledge, necessary for pluralism to be true. Then I formulate three metaphysical antinomies (the problem of material constitution, the problem of change, and the problem of many) in such a way as to reveal that the previous principle is involved in all three. Then I show that the denial of the principle resolves all three of these problems. Finally, I conclude that pluralism is indeed theoretically useful on the basis of the following three points: 1) denying the mentioned principle is sufficient for pluralism to be correct, 2) denying the principle resolves three problems, and 3) by a theoretically useful thesis I mean that if we assume the thesis is true, then multiple problems would be resolved.

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GENERAL AUDIENCE ABSTRACT

There is a debate in philosophy about whether or not objects are identical to what makes them up. This paper argues that if we are to assume objects are not identical to what makes them up then many problems that have been written about in the literature dissipate. Thus, it is useful to believe that objects are not identical to what makes them up.

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1 Introduction

A clay maker makes a piece of clay on Tuesday. An artist buys the clay and creates a statue on Saturday. We say that the statue is made from, or constituted by, the piece of clay. But what is this relation of constitution? Are the statue and the clay identical? Well, the clay was created Tuesday and the statue was created Saturday, this already seems to invoke a difference between the two. Furthermore, once the statue is made it seems like bits of the clay could be replaced with new clay and the statue would remain numerically identical while intuitively the piece of clay constituting the statue would not. What is more, it seems that if the statue and the clay were squished into a ball, the clay would persist, but the statue would not. These considerations seem to support that constitution does not entail identity, but if objects are just material things how can two objects be non-identical while being made up of the exact same matter in the exact same shape at the exact same time and location!? For two objects to be different there must be some characteristic that is different but if the two objects do not differ by the matter they are made up of, what could explain the fact that they have different properties?

This is the debate we shall enter. Monists about constitution argue that constitution entails identity because if there is no difference in the matter making up x and y (which there can't be if x constitutes y), then $x = y$ (i.e., x is identical to y). Pluralists about constitution believe that even if there is no difference in the matter making up x and y , it is still possible that $x \neq y$ (i.e., x is not identical to y). *Note: pluralism about constitution does not immediately necessitate the denial the uniqueness of composition.*¹

¹ This is very important because many monists don't seem to realize this nor sufficiently deal with these versions of pluralism. Some pluralists do not deny uniqueness of composition because they hold a mereological bundle theory for some or all objects, where an object has properties or, for different theorists,

I aim to contribute to this debate by arguing that pluralism is theoretically fruitful, in the sense that it solves multiple problems. I do this by: 1) formulating a principle whose denial is sufficient and, as far as I know, necessary for pluralism to be true, 2) reformulating three long standing antinomies in metaphysics, and 3) showing that the denial of the previously mentioned principle resolves each of these antinomies. This is not a definitive argument that pluralism is correct, instead it is merely an argument that we should add “theoretically useful” to the pros column of pluralism.

1.1 The Principle

The principle is:

EXTENSIONALITY OF MATTER (EM): *If x and y are made out of all and only the same matter at the same time, then $x = y$*

I admit that **EM** is an intuitive principle, however, since **EM**'s denial establishes consistency within three different sets of equally intuitive (if not more intuitive) yet otherwise jointly inconsistent principles, pluralists are justified in denying this principle.²

2 The Synchronic Problem of Material Constitution (PMC)

(1) **Background:** A cat and a portion of matter are made up of the same matter at t_1

(2) **Leibniz's Law Argument:**

tropes as proper parts, (for good examples of this strategy see Paul (2002) and McDaniel (2001)). Other pluralists do not deny uniqueness of composition due to a hylomorphic conception of objects, where objects have both matter and form as proper parts (see, for example, Fine (1999, 2008) and Koslicki (2008 pgs. 176-186)). Less popular ways pluralists don't deny uniqueness of composition is by working with a substrate-attribute model of objects or by claiming objects have abstract parts. It seems to me discussion (especially from the monist) should shift to the possibility (or lack thereof) of parts which don't reduce to matter otherwise many of the monist's objections miss the mark.

² As another strike against this principle, I think the intuitiveness of this principle largely comes from the fact that it seems to be entailed by the uniqueness of composition but as footnote 1 shows there are many ways to hold uniqueness of composition and deny **EM**. However, I do admit, it seems like reasonable position to believe that all parts of concrete objects reduce to matter and given this uniqueness of composition would entail **EM**. Thus, I think this is a good place for pluralists and monists to debate.

- a. The cat has the property ‘friendly’ at t_1 [or lacks the property ‘can persist through being scattered’ at t_1]
 - b. The portion of matter lacks the property ‘friendly’ at t_1 [or has the property ‘can persist through being scattered’ at t_1]³
 - c. If x and y do not have all the same properties, where properties are indexed to a time, then $x \neq y$ (Leibniz’s Law + adverbialism⁴)
- (3) **EM**: If x and y are made from the same matter at the same time, then $x = y$

From (1) and (3) we can conclude, “the cat = the portion of matter” yet from the argument in (2) we can conclude, “the cat \neq the portion of matter”; thus, we are faced with a problem. Something has to go, but what? It certainly seems that the cat and portion of matter can differ in properties (e.g., the portion of matter has the property of being thousands of years old whereas the cat lacks this property). Also, Leibniz’s Law which is “if two object do not have all the same properties, then they are not identical” seems exactly right. If x is identical to y , then there is only one object and how can an object both have and not have a property at the same time? If we are convinced of this then we must reject either **Background** or **EM**.

But **Background** is stipulative in the sense that as long as the cat is made up of some matter at t_1 the portion of matter we are referring to is that very portion of matter which makes up the cat. And so as long as that cat is fully constituted (in the neutral sense of the word) by some matter at t_1 then **Background** is true. This reasoning is rather innocent, we are not assuming that the portion of matter is different than the cat; as such this premise can, and should be, accepted even by monists. Eliminativism and perdurantism

³ I take what a “portion of matter” is to be rather intuitive but McKay (2016) puts it well, “a portion of stuff [in this case, matter], in philosophers’ usage, is a thing that has the same persistence conditions that the stuff [matter] has”. A portion of matter persists as long as the matter which makes it up persists (even if the matter which makes it up is scattered) but it does not persist if even a tiny bit of the portion of matter is annihilated (after all, what remains couldn’t be the same *portion of matter*).

⁴ Adverbialism (the indexing of properties to a time) is not needed to make the problem, I included it more to show that it doesn’t solve the problem despite some implications made by Smid (2016).

are the only two theories I know of that deny **Background**. Eliminativism denies **Background** by denying the existence of portions of matter and cats.⁵ But this solution comes at the cost of denying the existence of many things we thought existed. Perdurantism denies **Background** by arguing that the matter which makes up the cat includes future and past matter. They, in effect, deny **Background** by saying “it is not true that the cat and the portion of matter are made up of the same matter at t_1 ⁶ because, even at t_1 , these two objects are made up of all the matter that will ever be or ever was a part of one of their temporal slices” Unfortunately for the perdurantist, this solution doesn’t work for all formulations of **PMC** as can be seen by the formulation below.

PMC*

- (1) **Background***: A cat and a sum of temporal parts are made up of the same matter throughout all of their existences
- (2) **Leibniz’s Law Argument**:
 - a. The cat has the property ‘could have lived longer than 15 years’ (i.e., ‘could have had more temporal parts’)
 - b. The sum of temporal parts lacks the property ‘could have had more temporal parts’⁷
 - c. If x and y do not have all the same properties, then $x \neq y$ (Leibniz’s Law)
- (3) **EM**: If x and y are made from the same matter at the same time⁸, then $x = y$

The denial of **EM** unlike the perdurantist denial of **Background** solves both of these formulations. I am not saying that there are no other ways to solve **PMC** or **PMC*** but the denial of **EM** doesn’t seem too costly a price for their solution and we will soon see that the denial of **EM** will gain us even more theoretical payout.

⁵ This is the strategy of a mereological nihilist (one who does not believe there are any composite objects).

⁶ Their t_1 temporal slices are but, in line with **EM**, these temporal slices are identical.

⁷ Sums are just a collection of parts, so if there is a difference in parts then there is a difference in sums.

⁸ “Same time” can be a duration and in this case, “same time” is the duration of the life of the cat.

3 The Problem of Change (PC)

- (1) **Background:** The cat and the portion of matter are made up of the same matter at t_1 .
- (2) **Event:** The cat's atoms are scattered at t_2 .
- (3) **Persistence:**
 - a. The cat does not persist from t_1 to t_3 .
 - b. The portion of matter does persist from t_1 to t_3 (since none of the matter is destroyed there is still a portion which is made out of all and only that matter).
- (4) **EM:** If x and y are made out of the same matter at the same time, then $x = y$.
- (5) **Same Effect for Identicals:** If $x = y$, then x and y should be affected in the same way by the same event.

Again, we are led by plausible principles to an antinomy and again **EM** plays a role. If we were happy to give up **EM** due to the last problem, we will be pleased to find that our choice avoided us this problem as well. As for the other principles, as long as we think that objects are not made up of matter from earlier and later times at time t_1 and we accept that there is a portion of matter and a cat, then we should accept **Background**. The only way to deny **Event** is by denying the existence of the cat in the first place or by arguing that the scattering of atoms is logically impossible (which it is not). **Persistence** matches our intuitions; cats don't survive being scattered yet portions of matter do. And **Same Effect for Identicals** seems right because, if there is really only one object how can an object be affected by a cause in a particular way while also not being affected by that cause in that way (e.g., how could knocking a glass on the floor break and not break the glass).⁹

⁹ One may want to object that there was only one thing and it was affected in only one way. There was one thing which was a cat and a portion of matter and it stopped being a cat but continued being a portion of matter. But the problem with this is if we took one atom of the cat and annihilated it, the portion of matter would not persist but the cat would and so what is this thing that is a cat and a portion of matter? It can't be a cat as the portion of matter can persist without the cat persisting nor can it be the portion of matter as the cat can persist without the portion of matter persisting.

Again, there are multiple ways to solve the problem; for example, perdurantists can deny **Background** and believers in the thesis of mereological constancy (x is identical if and only if it has all the same parts [thus x persists as long as there is no destruction of parts]) will deny that there was any object which did not persist. But once again the denial of **EM** resolves a problem which is set up with principles just as plausible as (if not more plausible than) **EM**. And there are not many other principles that you can deny to solve all formulations of **PMC** and the above type of **PC**. In fact, the only other uniform way to solve these problems that I know of is eliminativism, which has the cost of denying the existence of objects we intuitively think exist. Furthermore, these are not the only two problems solved by denying **EM**.

4 The Problem of Many¹⁰

- (1) **Abundance:** Because Tibbles is shedding, she has indefinite parts and as such, there is no unique portion of matter which is the best candidate for being the matter making up Tibbles. Instead there are many non-identical portions of matter that are equally the best candidates.
- (2) **Equality:** If there are many equally best candidates for being the matter making up Tibbles then either:
 - a. every candidate makes up Tibbles or
 - b. no candidate makes up Tibbles or
 - c. it is indefinite which of the candidates makes up Tibbles
- (3) **Solitude:** There exists one and only one cat, Tibbles, on the mat.
- (4) **Concrete:** If Tibbles exists, then she must be made up of at least one portion of matter.
- (5) **Absolute Identity:** Tibbles is identical to one and only one thing and identity is never indeterminate.
- (6) **EM:** If x and y are made out of the same matter, then $x = y$.

¹⁰ This formulation is largely inspired by Jones (2015) though my formulation is a slight variation because the issues we are dealing with are slightly different. I also added options (b) and (c) to Equality since I believe they respect the fact that there is no best candidate, and indeed both of these options have been advocated for that very reason.

This is a rather complex problem, but ultimately, the conjunction of all these principles is inconsistent. The first thing to note is that **Equality** is a conditional whose antecedent is satisfied by **Abundance**. As such we know that if these two premises are true, the consequent of **Equality** must be true. So, from these two premises, we know that either (a), (b), or (c) must be true. However, as will be explained, if all the other principles in The Problem of Many are true then neither (a), (b), nor (c) can be true, on pain of contradiction.

Option (b) cannot be true if all of the other premises are true because it is inconsistent with the conjunction of **Solitude** and **Concrete**. This is because, **Solitude** satisfies the antecedent of **Concrete** and so, given these two premises, we know that at least one portion of matter must make up Tibbles, which contradicts option (b) [no candidate makes up Tibbles] of **Equality**.

But neither options (a) nor (c) can be true if all of the other premises are true because option (a), **Absolute Identity**, and **EM** are logically inconsistent and option (c), **Absolute Identity**, and **EM** are logically inconsistent. This is because, if **EM** was true, then Tibbles would be identical to whatever portion(s) of matter that make(s) it up. And, as such, **EM** entails that any candidate for making up Tibbles is a candidate for being identical to Tibbles, including the candidates mentioned in (a) and (c). Thus, using **EM**, we can infer (a*)[below] from option (a) and option (c*)[below] from option (c):

(a*) all the candidates are identical to Tibbles

(c*) it is indeterminate which candidate is identical to Tibbles

(a*) implies that Tibbles is identical to each candidate, but since these candidates are not identical to each other this contradicts **Absolute Identity**. (c*) says that it is

indeterminate which candidate Tibbles is identical to and so (c*) also contradicts **Absolute Identity**.

Thus, once again, we have jointly inconsistent principles and one must be given up. We have seen that **EM**'s denial restores consistency to two previously mentioned sets of otherwise plausible principles and it looks like its denial will restore consistency to this set of principles as well. However, you might think, as Lewis (1993) suggests, that denying **EM** will only push The Problem of Many back a step from "The Paradox of 1001 cats" (a specific version of The Problem of Many) to "The Paradox of 1001 cat-constitutors". But I will argue that this critique does not hold.

The virtue of the solutions available if we deny **EM** is that taking option (a)[all the candidates make up Tibbles] of **Equality** does not entail (a*) [all the candidates are identical to Tibbles] and taking option (c) [it is indeterminate what candidate makes up Tibbles] does not entail (c*)[it is indeterminate what candidate is identical to Tibbles]. We can see the benefits in this by comparing an (a*) solution to an (a) solution that rejects (a*) as well as by comparing a (c*) solution to a (c) solution that rejects (c*).

Geach (1980)¹¹ adopted option (a*), and as such denied **Absolute Identity**. For Geach, x (one of the portions of matter) $\neq y$ (a different one of the portions of matter), yet $x = z$ (Tibbles) and $y = z$.¹² This has the unfortunate consequence that identity is not completely transitive. This is because transitivity entails "if $x = z$ and $z = y$, then $x = y$ ", but, for Geach, this conditional does not hold in all contexts¹³. This also violates the

¹¹ Along with Unger (1980) this is considered one of the first two works to propose The Problem of Many.

¹² This is a simplified version of Geach, since he writes about non-identical portions of feline tissue being identical to a cat instead of portions of matter. And, in a reply to Lowe (1982), Geach even says that feline tissues survive some change in parts. However, what I will say still applies *mutatis mutandis*.

¹³ Though he could claim transitivity holds within the same kind.

substitutivity principle (i.e., that co-referential terms can be substituted without harm to truth value in extensional contexts) because you cannot substitute x for z in the sentence, “ z is identical to y ” despite the fact that $x = z$ ¹⁴. Furthermore, Weatherson (2015) has a compelling argument that Geach’s proposal violates Leibniz’s Law (it would take us too afield to rehash it here but for those interested see Weatherson (2015)). And, for the same reasoning, used in Weatherson’s argument Geach’s proposal would be inconsistent with the mereological principle of the extensionality of parts ($x = y$ if and only if x and y have all the same parts) which seems to me more likely, *iff* parts are indexed to a time, than **EM**.

On the other hand, if we deny **EM** and accept option (a) we say that the cat is multiply constituted but, due to the denial of **EM**, we need not further say that the cat is identical to many non-identical things nor that there are many cats. It is one cat that is made up of many different portions of matter, however, the cat is identical to none of the individual portions of matter. This does not deny **Absolute Identity**, Leibniz’s Law, the transitivity of identity, and the substitutivity of co-referential terms in extensional contexts, as Geach’s strategy does, nor does it deny that there is one and only one cat, unlike the strategies of Unger (1980) and Lewis (1993). As such multiple constitution is one of the more appealing strategies. The details of this approach can get more complicated than I have space for in this paper, however, Jones (2015) has a proposed a wonderful version of this strategy to which I direct any curious reader.

Now if option (c) [it is indefinite which candidate(s) make(s) up Tibbles] interests us, but we don’t deny **EM**, then we will be stuck with (c*) [it is indefinite which

¹⁴ If we were to substitute x for z in the true sentence “ z is identical to y ”, we would get the false sentence, “ x is identical to y ” despite the fact that $x = z$.

candidate(s) is identical to Tibbles] ¹⁵. This solution will need to deny **Absolute Identity** since it entails that identity is indeterminate but postulating that identity can be indeterminate has problems. For one, it runs into the famous reductio first proposed by Evans (1978) and more recently reconstructed by Simon (2014). For another, it just seems wrong that identity is indeterminate, for this implies that it is indeterminate what that thing is. Now it may be indeterminate what matter makes up an object and that is not so unintuitive but this a different claim. We can only get this more plausible claim of indeterminacy when we reject **EM** (because only the denial of **EM** will stop indeterminacy in the constitution relation from contaminating the identity relation ¹⁶).

By denying **EM** we can accept option (c) yet reject option (c*), such a theory would claim that it is indeterminate what matter makes up the cat but deny that it is indeterminate what is identical to the cat. Indeterminate identity entails that it is indeterminate whether the cat is identical to x portion of matter (which has all of its parts determinately) or y portion of matter (which also has all of its parts determinately). Whereas this theory merely says that indeterminate whether x portion of matter or y portion of matter is the portion of all and only the matter that makes up Tibbles. It would not be the case that Tibbles is indeterminately identical to any portion of matter that makes it up, in fact it would determinately false that Tibbles was identical to any of those portions. And this seems exactly right. Our intuition tells us that it is not that it is indeterminate what *is* the cat instead it is merely that it is indeterminate what *makes up* the cat. To summarize by accepting (c) but rejecting (c*) one claims that it is not

¹⁵ Parsons (1987) can, perhaps, be viewed as a theory in this vein, or at least as a defense of indeterminate identity.

¹⁶ This is beneficial because identity is such an important philosophical notion as well as such a powerful relation in logic; learning that $x = y$ allows for many different inferences.

indeterminate what is identical to the cat but instead it is indeterminate what makes up, or constitutes, the cat. This avenue seems very promising but it is only possible if we deny **EM**. Because only by denying **EM** can we accept (c) and deny (c*).^{17, 18}

While this subject deserves more space than it has been given here, it seems hard to deny the fact that denying **EM** provides two different legitimate, and plausible, solutions to The Problem of Many. And when you couple this fact with the fact that denying **EM** solves The Problem of Material Constitution (including versions that perdurantism doesn't solve) and The Problem of Change, denying **EM** seems to be a theoretical move that can offer a good amount of pay out. Contrary to what Smid (2016) has claimed, there does seem to be good reason to “buy” [pluralistic] constitution at the “Metaphysics Hardware Store”.

5 Some Objections Considered

Why not just say that the statue is the clay so-shaped?

My response to this is as follows: this can mean one of two things, 1) the statue is composed both of clay and the property shaped-such-and-such-way or 2) there is no object that isn't the clay but instead the things we are calling a 'statue' is just piece of clay with such and such shape. I am sympathetic to option (1) but the thing is, if option (1) is what is meant, then pluralists about material constitution are vindicated, at least by my lights, because all

¹⁷ While one can see Lowe (1995) for an example of a philosopher using indeterminacy in the constitution relation as a way to solve The Problem of Many, I don't believe he took enough advantage of the theoretical distinction of placing indeterminacy in the constitution relation as opposed to within the identity relation.

¹⁸ Personally, I am most fond of option (c). I think it is a promising solution to the Problem of Many. I should note, that perhaps the reader may start to feel, like Gibbard (1975), that the constituted object has started to take on a “ghostly air”. If someone feels this way, then they are probably wondering, “is there a pluralistic conception of objects that is materialistically respectable and that explains what exactly this constituted object is”. To which the answer is yes, for examples see McDaniel 2001 and Paul 2002.

they need is that there exist objects that aren't identical to the matter that constitutes them. It may be that some objects are composed both of matter and some property/properties and that the object is identical to this composite, but if this were the case pluralism, not monism, would be correct. I am not so sympathetic to option (2) because I find it quite compelling to think there was an object that is no more when someone crushes a statue back into a ball of clay. It seems wrong to say that all that happened was that the clay lost some property. The issue becomes more pronounced when it is carried over to the issues I care more about, people usually die without any of the matter making them up being annihilated but it seems wrong to describe the death of someone I know just as matter losing a particular property. To me it seems there was an entity, a person, that is no more. Perhaps, a good way to put my position is as follows; I am against the reduction of certain objects to just matter, however, that doesn't mean I am against the reduction of certain objects to matter with certain properties, so long as this is understood as not entailing that the object is identical to just the matter.

Do "portions of matter" as you have described really exist?

There are a good many references to a portion of matter so it will be good to get clear on what is a portion of matter. What I mean by a portion of matter is just any division of matter. As such, I would find it very strange for there to be no portions of matter, this to me would entail that no matter exists. Portions of matter don't even require there be fundamental particles, I choose the term to remain as neutral as possible. Two portions of matter are identical iff there is absolutely no difference in the matter making up the portions. To deny that there are no such things as portions of matter or sums comes at some costs. For one, one of the axioms of classical mereology entail that there are sums and for

another, it becomes very hard to answer the question “when does composition occur” in such a way as to rule out portions of matter from existing. Further, to me it just seems like there are portions of matter. By a ‘portion of matter’ I don’t mean some weird object postulated in an esoteric theory, I just mean a division of matter. Certainly, there are many ways to mathematically divide matter and so, for me, this entails that there are many portions of matter, each corresponding to one of these mathematical divisions.

6 Concluding Remarks^{19, 20}

We found that denying **EM** was sufficient for there to be non-identical entities related through constitution and we found that the denial of **EM** restores consistence within each of three sets of plausible principles. From this we concluded that pluralism about constitution resolves at least three long standing and famous problems.

This cannot be used as a definitive argument that pluralism is correct, as we have merely shown that it resolves some problems, however, the fact that accepting pluralism (via denying **EM**) resolves three metaphysical problems is taken as virtue for the theory. And all I am aiming to do in this paper is to argue that pluralism has the theoretical virtue of being useful (in the sense that it solves multiple problems). Furthermore, it is rare for

¹⁹ Further support for the idea that pluralism about constitution is a theoretically useful notion comes from the large amount of research done by philosophers using this relation to solve various problems or explain certain phenomenon, including ones not mentioned in this paper. (*In what follows I will use “constitution” in a way that implies pluralism and non-identity of the relata*). For example, Pereboom (2011) argues the microphysical constitutes the psychological. Zangwill (2012) suggests that, since in a constitution relation the objects share many of their causal powers, the constitution relation could be useful in addressing the problem of mental causation. Jones (2013) argues that constitution relations hold between events (e.g., the event ‘the stabbing of Caesar’ constitutes, but is not identical to, the event ‘the killing of Caesar’). Baker (2000) argues that constitution accounts for personal identity. And Baker (2002) states that constitution explains how some effects, such as a stop sign causing people to stop or a battle flag rallying troops, cannot be causally reduced to only the object’s constituent parts.

²⁰ I would like to thank Kelly Trogon, Ted Parent, Lydia Patton, and James Klagge for their insightful and helpful comments throughout this project and Christy Agrawal for both pushing me and being patient.

there to be such a uniform solution to all three of these problems, the only other theory that can do this, that I know of, is eliminativism (which has some powerful drawbacks). Thus, I consider the fact that pluralism resolves all of these problems to be very appealing.

Recognizing how widely popular and fruitful pluralism is heightens the importance of flushing out the different pluralistic accounts, and so, this is one of the areas we should turn our attention to. What are the advantages and disadvantages of the various accounts of pluralism, such as the ones found in McDaniel (2001), Paul (2002), Baker (2007), or Koslicki (2008)? Other questions that lurk in the background include: Can objects have different parts if one constitutes the other? What sort of conception of objects is correct? And, what does it mean to be an object?

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Appendix

I believe that this is especially good timing for such a piece as there was a recent article published in *Erkenntnis* (Smid (2016)) in which it was argued that positing the existence of the relation of material constitution is ad hoc. I have included this appendix in order to point out what I believe to be mistakes in Smid's critique.

Smid (2016) writes “[m]aterial constitution is introduced to make sense of the idea that two objects can coincide (for example, by sharing all their proper parts) yet be non-identical” and he believes that since material constitution is introduced to solve this one problem, positing the existence of the material constitution relation is ad hoc²¹. Those familiar with the literature, no matter their side, will be frustrated with Smid's misunderstanding of constitution; it is simply false that material constitution was introduced to explain why two objects can coincide! The relation of material constitution is pretheoretically assumed, it is thought of as a regimentation of the “made out of” and/or the “made from” relation(s). Most of the debates are merely about the features of this relation that is pre-theoretically assumed. This is an importantly different story than the one Smid has told in which he, mistakenly, thinks constitution is posited after the fact to explain the coincidence of non-identical objects. This wrong just in nature of the fact that

²¹ Smid has two other reasons for thinking that positing material constitution is ad hoc but they are also seriously mistaken. Since it would take us too far afield, I shall not summarize and then critique them. But I will say two things, his arguments rest upon a mistaken notion that if problems are set up in a superficially similar way that a theory would need to deny the analogous premise in each problem, but if there is not similar support for the two “analogous” premises then it is not ad hoc for a theory to deny one and accept the other. Furthermore, he deals with strawman/incomplete accounts of constitution; much of his “ad hoc” complaint comes down to “it is ad hoc to postulate constitution in x case but not y case” and of course the question “when does x constitute y ” is a very good and very difficult question but if it is not answered then a constitution theory is incomplete as opposed to ad hoc. And, unfortunately for Smid, there are several contemporary accounts of “when constitution occurs” (such as Paul (2002) [an article Smid ironically cites as being on his side when it is not], Baker (2007) and Koslicki (2008)).

there is a debate whether the relata of constitution are identical or not! This can be seen in the following quotes:

“Many ordinary things are made up of, or are constituted by, material things ... Exactly what this relation of material constitution is, however, has been the subject of vigorous debate.” – (Baker 1997, pg. 599)

“Consider a statue made of a piece of clay ... Clay materially constitutes Statue. What is this relation? A standard way to ask this question is to ask whether Clay is strictly identical to Statue ... The more general way to ask the question is to ask what it means for an object to materially constitute another. Is constitution simply identity? If not, what are the features of this relation?” – (Paul 2010, pg. 579)

“Statues are made out of clay, houses are made out of bricks, and humans are made out of organs ... My primary concern will be the sense in which one object is made out of many particles. Let us regiment this by saying that objects are constituted by (many) particles.” – (Jones 2015, pg. 218)²²

“What is the relationship between a clay statue and the lump of clay from which it is formed? We might say that the lump *constitutes* the statue, but what is this relation of *material constitution*?” – (Wasserman 2015) (SEP entry on material constitution)

Judging by the rest of the article, Smid’s (2016) must have meant that positing that the relata of constitution can be non-identical (i.e., pluralism) is ad hoc. And this makes much more sense. But if this is so then it is wrong to object that the only reason to postulate pluralism is spatial coincidence. After all, the relata being spatial coincident is a reason *not* to postulate pluralism! Spatial coincidence is one of the reasons why we might want to endorse monism. Instead, we should examine what reasons we have for thinking that the relata are non-identical.²³

²² Often constitution is considered a one to one relation but Jones (2015) offers some compelling reasons to think otherwise.

²³ Smid may have meant that once we accept the non-identity of the clay and the statue the only reason to think there is this relation of constitution between the two is spatial coincidence. But as I mentioned before this gets the order of explanation wrong. We start off with the assumption that the statue is constituted by the clay. After all, this is just a regimentation of saying that the statue is made from the piece of clay. And then, after this assumption, we debate whether or not the two are identical. It is not that we start with non-identity and then posit constitution, instead we start with constitution and then posit non-identity. Thus,

His ad hoc objection should be restated as follows: 1) if positing that the relata of constitution are non-identical (i.e., pluralism) solves only one problem, then pluralism is ad hoc AND 2) positing pluralism solves only one problem. Even though I am not convinced of the truth of (1), this restatement is a much better objection. However, even this objection doesn't work because, as I have shown in this paper, positing pluralism resolves at least three famous metaphysical antinomies.

only the non-identity postulation can be ad hoc (since pre-theoretical starting assumption are never ad hoc [even if they can be wrong]). Furthermore, the relata of the constitution relation are unlike other non-identical objects in more ways than just their spatial coincidence (e.g., they materially coincide, they share much, if not all, of their causal profile, and they share many of their properties) and thus even if we started by thinking the statue and the clay were non-identical there would be plenty of things explained by saying the relation of constitution occurs between them (but we don't and so this point is void).