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## Pantheism, Mereology and Composition as Identity

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#### Abstract

Mereological pantheism is the view that the pantheist thesis, God is identical with the universe, is characterised by mereological notions and defended with arguments from mereology. In this paper, we shall argue that mereological pantheism is not a tenable theory because of its endorsement of the following three theses. (i) Existence pluralism, i.e. there is a plurality of things. (ii) Things are embedded with certain mereological structures and the mereological structures are presumably characterised by classical extensional mereology. (iii) Composition is a kind of identity. We argue that the three theses are jointly inconsistent. Moreover, if mereological pantheism denies the first assumption, it collapses into theism or atheism. Rejecting the second assumption betrays the name of "mereological pantheism." And if the third assumption is denied, there is a gap between the claim that God is the

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composition of all things in the universe and the claim that God is identical with the universe. Thus, mereological pantheism is not a tenable version of pantheism.

**Keywords:** Pantheism, Mereology, Mereological Pantheism, Existence Pluralism, Composition as Identity.

## Pantheism, Mereology and Composition as Identity

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#### 1. Introduction

Pantheism is the view that God is identical with the universe. Yet, there are many ways in which pantheism can be formulated.<sup>1</sup> Here we shall focus on the mereological version of pantheism – mereological pantheism. Briefly, it says that there is a unique thing such that it is divine and all things are parts of it (cf. Oppy, 1997: 320). Notwithstanding its advantages, such as ontological and ideological simplicity, we argue that mereological pantheism is not a tenable theory. Roughly, the idea is that there are three assumptions found in mereological pantheism: existence pluralism, i.e. there is a plurality of things, classical extension mereology (CEM), and strong composition as identity (S-CAI). Yet, the three theses are jointly inconsistent. The upshot is that mereological pantheism either collapses into theism/atheism or fails to be a mereological version of pantheism.

<sup>&</sup>lt;sup>1</sup> See Steinhart (2004), Leftow (2016) and Pfeifer (2016).

In general, pantheism is not always in conflict with theism. If the universe contains only one entity, then presumably pantheism and theism can both be true. However, they are incompatible once the universe contains a plurality of things. What does it mean to say that there is a plurality of things? If a cat is on a mat, then there are at least two objects. Even a mereological nihilist may be willing to accept that there is a plurality of things, but with the condition that these objects are mereologically simple. Although existence pluralism has been challenged by traditional monists such as Bradley (1893), a contemporary monist (cf. Schaffer, 2010a,b) is happy to accept that there is a plurality of things. We take this assumption made by mereological pantheists to be relatively uncontentious.

Moreover, mereological pantheism also assumes that the universe is embedded with certain mereological structures. There are objects with parts, e.g. a cat has its paws and tail as its parts. Even if mereological nihilism is true, and thus nothing has proper parts, everything will still have itself as a part, albeit an improper one. For this reason, a formal theory of part-whole is required to capture the mereological structure of the world. A plausible option is *classical extensional mereology*, found in Simons (1987) and Cotnoir and Varzi (2021).<sup>2</sup> Yet, it in no way suggests that every part-whole relation in this world can be characterised in terms of CEM. For instance, it might be cogent to suggest that conjunctive properties, e.g. being square and being sapphire, may also have parts, but this part-whole relation is

<sup>&</sup>lt;sup>2</sup> One might find it controversial for a number of reasons. For instance, it might be the case that a nonclassical extensional mereology is preferred, or that there are in fact different part-whole relations which cannot be exhausted by CEM alone. The question whether the best mereological theory is CEM will be left aside since our thesis still holds even if it is not.

presumably not captured by CEM. For the present purpose, the relatively mild position that CEM at least correctly captures one of the mereological structures of this universe would suffice.

Finally, the third assumption made by mereological pantheism concerns composition and identity. It claims that God is *identical* with the universe, which is the *composition* of everything. As one can see, these two notions bear intimate relations. For instance, Lewis (1991) says that mereological relations are something special in the sense that they are "strikingly analogous to ordinary identity, the one-one relation that each thing bears to itself and to nothing else."3 It should be noted that, for Lewis, the composition relation is merely *analogous* to the identity relation. It is neither identity in disguise nor another form of identity. This view is sometimes dubbed as Weak Composition as Identity. Some philosopher, e.g. Wallace (2011a), prefers the stronger view: composition is identity, according to which the composition relation is just the identity relation, Strong Composition as Identity (S-CAI). According to S-CAI, for any plurality xx and any one y, if the xx compose y, then the xx are identical with y.<sup>4</sup> Since some plurality xx can be identical with some y according to S-CAI, one notable consequence is that Leibniz's Law holds not only in the cases of one-one, but also in the cases of one-many and many-many. Now, S-CAI is a rather contentious thesis. Although S-CAI is notorious for various reasons, i.e. its apparent failure to comply with Leibniz's Law, its implication to a

<sup>&</sup>lt;sup>3</sup> Lewis (1991: 84).

<sup>&</sup>lt;sup>4</sup> There are yet stronger versions of S-CAI. One of them says that for any plurality xx and any one y, the xx compose y if and only if the xx are identical with y. Our argument automatically applies to these stronger versions of S-CAI as well.

problematic reading of "one of" and counting, and its entailment of mereological essentialism, none of them seems conclusive.<sup>5</sup>

In what follows, we argue that mereological pantheism is not a tenable theory because its assumptions, i.e. existence pluralism, CEM and S-CAI, are jointly inconsistent. If mereological pantheists want to reject existence pluralism, they would thus endorse either existence monism, the view that there is only one thing in the universe, or existence nihilism, the view that nothing is in the universe. Accordingly, it leads to either theism, the view that there is only one God, or atheism, the view that there is no God. On the other hand, if S-CAI is rejected, mereological pantheism can only show that God is composed of everything in the universe, but it fails to show that God is identical with the universe.

In sections 2, we provide a characterisation of mereological pantheism and its relation to existence pluralism, CEM and S-CAI. In section 3, we shall outline the proof of mereological universalism—composition always occurs—from CEM and the proof of mereological nihilism—composition never occurs—from S-CAI. Moreover, we argue that the apparent conflict between mereological universalism and mereological nihilism can be reconciled. And yet, the reconciliation is incompatible with the thesis that there is a plurality of things. Therefore, mereological pantheism is not a tenable version of pantheism. In section 4, we discuss the reasons why S-CAI is needed. In section 5, we wrap things up.

<sup>&</sup>lt;sup>5</sup> An overall sketch of these problems can be found in Wallace (2011a).

#### 2. Pantheism: from a mereological perspective

Pantheism is the view that God is identical with the universe. Despite the simplicity of the thesis, it remains to be a question whether it is an intelligible thesis. Pfeifer (2016) argues that a way to make sense of pantheism is panpsychism, the view that every entity in the universe, including particles if any, has a mental state. Leftow (2016), on the other hand, argues that pantheism is incompatible with the view that the universe consists only of physical entities at its fundamental level and the laws are solely those of physics. Our concern here is with mereological pantheism. Roughly, it is a view that uses mereological notions to characterise pantheism and provides mereological arguments for the identity between God and the universe. A good example of mereological pantheism can be found in Oppy (1997) where he formulates pantheism as consisting of the following two theses:

- (1) **Ontology**: There is a unique thing of which all things are parts.
- (2) **Ideology**: The thing of which all things are parts is divine.<sup>6</sup>

Following Oppy, whether pantheism is tenable breaks down to arguments for and against the above two theses. Yet, there seems to be a gap between the two theses and the claim that God is identical with the universe. Given that there is a unique thing of which all things of the universe are parts, it does not follow that this unique thing is *identical* with the universe, for composition may not be identity. For example, one might think that although

<sup>&</sup>lt;sup>6</sup> Oppy (1997: 320).

Socrates is composed of the particles, it is not the case that Socrates is identical with the composition of the particles. A reason is that neither the particles nor the composition of them can think, but Socrates can. In order to bridge the gap, mereological pantheism shall add a third thesis:

(3) (S-CAI) Strong Composition as Identity: For any *xx* and any one *y*, if the *xx* compose *y*, then the *xx* are identical with *y*.

Thus, the mereological pantheist argument for God's identity with the universe can be understood as making the following inference:

- (4) There is a plurality of things in the universe. (Assumption)
- (5) There is a unique thing of which all things of the universe are parts. (Ontology)
- (6) God is the thing of which all things of the universe are parts.(Ideology)
- (7) For any xx and any one y, if the xx compose y, then the xx are identical with y. (S-CAI)
- (8) Therefore, God is identical with the universe. ((6), (7), (MP))

Let us turn to the premises of the argument. What are the reasons for accepting (4)? First, it seems to be a Moorean fact that there is a plurality of things in the universe. If we accept that there is a cat on a mat, then there are two things, and the number of things is plural. Secondly, if the things in the universe were not plural, then pantheism would collapse into either theism or atheism. Given that God is identical with the universe, God would only be identical with one thing or with nothing, had the plurality of things been

denied. In effect, there would be no substantial difference between pantheism and theism/atheism. Thus, mereological pantheism shall stick to the view that there is a plurality of things.

Premise (5) can be derived from (4) and CEM, where unrestricted composition and uniqueness of composition are found. Premise (6) captures the underlying thought of mereological pantheism. Presumably, a substantial difference between mereological pantheism and other versions of pantheism is that mereological pantheism uses mereological notions to characterise the doctrine. Moreover, if God were not the composition of all things of the universe, there would be some difference between God and the composition of all things of the universe. It is then difficult to see in what sense God can be identical with the universe. Finally, as pointed out above, without premise (7), there is a gap between the claim that God is the thing of which all thing of the universe are parts and the claim that God is identical with the universe. Therefore, none of them seem dispensable.

# 3. CAI, Mereological Universalism and Mereological Nihilism

Mereological pantheism conceived in this way is not a tenable theory, however. The reason is that existence pluralism is incompatible with the combination of CEM and S-CAI. Of course, mereological pantheists are left to decide whether they shall deny existence pluralism, CEM or S-CAI. Yet, by denying that there is a plurality of things, mereological pantheists are then committed to existence monism, the view that there is only one thing in the

universe, or existence nihilism, the view that nothing is in the universe. Given that God is identical with the universe, mereological pantheism collapses into theism or atheism. Moreover, without CEM and S-CAI, mereological pantheism falls short of establishing the conclusion that God is identical with the universe. It only shows that God is composed of all things of the universe. Of course, there seems to be a way such that mereological pantheists may save themselves from the joint inconsistency: denying that the gap between composition and identity needs to be bridged by S-CAI. Now, a rather unconvincing answer is that it is a primitive matter that God is identical with the universe, given that God is the composition of which all things of the universe are parts. If the case only holds for God, some explanation is required. Yet, if the case holds for everything, then this is just S-CAI. A possible answer is to supply some bridge principle weaker than S-CAI. This is the issue to be discussed in section 4.

We shall now explain why existence pluralism, CEM and S-CAI are jointly inconsistent. In CEM, unrestricted composition is taken to be an obvious truism.<sup>7</sup> Thus, it is undeniable that unrestricted composition is true given CEM. Moreover, from the truth of unrestricted composition, mereological universalism follows. For mereological universalism simply says that any plurality of things has a fusion. Expressed in the terms of CEM,

<sup>&</sup>lt;sup>7</sup> Although S-CAI does not imply CEM, Sider (2007) argues that CEM can be derived from Superstrong Composition as Identity (SS-CAI)—the principle which replaces the "if" in S-CAI with "if and only if." Now, given that SS-CAI implies S-CAI and CEM, the conclusion that either existence monism or existence nihilism holds can be proved from SS-CAI alone. However, we find that there is more resistance to SS-CAI, especially to its implication of unrestricted composition. See van Inwagen (1994) and Cameron (2012).

this is just what unrestricted composition says. This constitutes a simple proof from CEM to mereological universalism.

Moreover, Sider (2014) uses the Plural Covering principle to show that S-CAI, along with CEM, entails mereological nihilism.

Plural Covering:  $\forall x \forall y (x < y \rightarrow \exists xx(yFuxx \land x \text{ is one of } xx)).$ 

The principle says that for any x and any y, if x is a part of y, then there is a plurality xx such that y fuses xx and x is one of the xx. With this principle, Sider (2014) then proves the Collapse principle, according to which for any xx and any y, if y fuses xx, then for any x, x is one of the xx if and only if x is a part of y:

Collapse:  $\forall xx \forall y (yFuxx \rightarrow \forall x(x \text{ is one of } xx \leftrightarrow x < y))$ 

Let us first prove the left-to-right direction of the biconditional, namely, for any xx and any y, if y fuses xx, then for any x, x is one of the xx only if x is a part of y. Suppose that y fuses xx and x is one of the xx. By the definition of fusion, x is a part of y.<sup>8</sup> The left-to-right direction is thus established.

Now we shall turn to the right-to-left direction of the biconditional: that is, for any xx and any y, if y fuses xx, then for any x, x is a part of y only if xis one of the xx. Suppose again that y fuses xx and that x is a part of y. By the Plural Covering principle, there is a plurality ww such that y fuses ww and xis one of the ww. Since yFuww and yFuxx, by S-CAI, we get y = ww and y =xx. By Leibniz's Law, we get ww = xx. Since x is one of the ww, by Leibniz's

<sup>&</sup>lt;sup>8</sup> The notion of fusion is defined in a standard way:  $yFuxx =_{df} \forall z(z \text{ is one of } xx \rightarrow z \leq y) \land \forall z (z \leq y \rightarrow \exists w(w \text{ is one of } xx \land Ozw)).$ 

Law, x is one of the xx. Hence, the right-to-left direction of the biconditional in the Collapse principle is established. Therefore, S-CAI, with Plural Covering, entails the Collapse principle.

Finally, there are various lines of reasoning from the Collapse principle to mereological nihilism, and here we shall offer an argument adapted from Loss (2018).<sup>9</sup> Let us begin with a principle called *Strong Company*.

Strong Company: 
$$\forall x \forall y (x \ll y \rightarrow \exists z (z \ll y \land \neg z < x))$$

The principle says that for any x and y, if x is a proper part of y, then there is some z such that z is a proper part of y and z is not a part of x. Consider a stick which is a proper part of a broom. The Strong Company principle says that there is another thing, e.g. the brush, which is a proper part of the broom and is not a proper part of the stick. The Strong Company principle is weaker than the Weak Supplementation principle, which says that if x is a proper part of y, then there is some z such that z is a proper part of y and x is disjoint with z.

Now, suppose x is a proper part of y and let y be the fusion of the plurality xx of things that are either x or y. Given Collapse, every part of y is identical with one of the xx. Therefore, every part of y is identical with either x or y. Suppose that there is a z which is a proper part of y. It follows that z is identical with either x or y. From the definition of proper parthood, z is not identical with y, and thus z must be identical with x. However, z is then a part of x. The result is in conflict with Strong Company. Thus, there is no z such that z is a proper part of y and z is a part of x. Therefore, there is no x that is a

<sup>&</sup>lt;sup>9</sup> Another way of achieving the same conclusion can be found in Calosi (2016). Also, Sider (2014) argues that given the principle, there are fewer pluralities than one might expect, i.e. there are no humans or tables. The result might itself suggest that mereological nihilism is true.

proper part of *y*. Generalizing the result, nothing has proper parts, and thus mereological nihilism is true.

The Weak Company principle, which is used by Loss (2018) to prove mereological nihilism, is weaker than the Strong Company principle.<sup>10</sup> Therefore, it is an elementary logic point that anything that can be proved from the Weak Company principle can be proved from the Strong Company principle or the Weak Supplementation principle. In this sense, there is nothing new in saying that one can derive mereological nihilism from the Collapse principle and the Strong Company principle. However, we do not beg to differ from previous arguments. Here we merely demonstrate how one can prove mereological nihilism by using the Strong Company principle.

Do we have any reason to accept the Strong Company principle? Given that the Weak Supplementation principle is stronger than the Strong Company principle, once the former is accepted, we have a good reason to embrace the latter. The Weak Supplementation principle, being a significant principle of CEM, is presumably sitting at the core in any genuine conception of parthood. Thus, we do have some preliminary reason to accept the Strong Company principle.

A brief recap: From CEM, we can have mereological universalism, and from S-CAI, it follows mereological nihilism. Thus, if one holds CEM and S-CAI, then one is committed to the result that both mereological

<sup>&</sup>lt;sup>10</sup> Proof: Suppose that Strong Company is true and thus for any x and y, if x is a proper part of y, then there is a z such that z is a proper part of y and z is not a part of x. Given that z is not a part of x, it follows that z cannot be identical with x. Thus, Weak Company is proved. Yet, from Weak Company, we cannot get Strong Company. From the fact that z is not identical with x, it does not follow that z is not part of x. For example, my hand is not identical with me, but it is plausibly a part of me.

universalism and mereological nihilism are true. This might seem paradoxical at first glance. Consider the Special Composition Question from van Inwagen (1990), "under what conditions do some objects compose something?" The generous answer is that composition always occurs, and there is no restriction set on the condition of composition. A less generous answer is to specify some of the conditions where composition occurs, while the austere answer is that composition never occurs. The generous answer is heard from mereological universalists, and the austere answer is found in the mouth of mereological nihilists. Yet, how can one consistently hold the generous and the austere answers at the same time? In fact, we think that one can, although this is an offer which mereological pantheists must refuse.

The answer is this: the number of the things that exist must be less than 2 in order for both mereological universalism and mereological nihilism to be true. If the number of things is either 1 or 0, then both theories are trivially true. Thus, mereological universalism and mereological nihilism are not inconsistent by themselves. The inconsistency arises once there is a plurality of things. However, pantheists require the number of things that exist must be plural. Otherwise, there is no substantial difference between pantheism and theism/ atheism. Therefore, it follows that mereological pantheism is not a tenable theory.

#### 4. Why S-CAI?

A natural response from mereological pantheists is to establish the identity between God and the universe without S-CAI. Presumably, there are

several possible ways which may achieve this goal.<sup>11</sup> Firstly, if "Universe" is defined as "the unique thing of which all things are parts", then "universe" and "God" are co-referential terms. Pantheism is thereby the view which affirms the existence and divinity of a unique being. Yet, it is questionable whether this approach faithfully captures mereological pantheism. Precisely, it trivialises **Ideology**, which says that the thing of which all things are parts is divine. For if "Universe" and "God" are co-referential terms, the unique thing of which all things are parts is not only the universe but God as well. **Ideology** then turns out to be dispensable. Moreover, if God is defined as such, then mereological pantheism is somewhat equivalent to the view that there is a thing composed of all things in the universe, which is a consequence of mereological universalism. Obviously, this is controversial enough to be put aside for the moment.

Secondly, it seems possible to argue for the God-universe identity without S-CAI from a Spinozistic argument. According to Spinoza, God is self-caused which means that the essence involves existence.<sup>12</sup> Moreover, God is a being on which everything in the universe depends. Suppose that there are only twenty human beings exist in the universe. This fact by itself is insufficient to show the human nature in general, according to Spinoza. In order to do so, it is necessary to show that why no more or no less human beings exist. Spinoza concludes that this explanation must be outside of each human being, for the definition of human being does not involve the number

<sup>&</sup>lt;sup>11</sup> We thank an anonymous referee for the following three suggestions.

<sup>&</sup>lt;sup>12</sup> See Spinoza (2018), Definition 1 and Proposition 16, Corollary 2.

twenty.<sup>13</sup> Generalising the result to everything in the universe except God, it follows that its existence must be explained by God. Now, if things in the universe are in some sense derivative of God, one could claim that everything exists is a part of God and God could be understood as the composition of everything. If this attempt were successful, it would seem possible for mereological pantheists to explain the identity between God and the universe without S-CAI. However, a problem with this Spinozistic argument is that according to Spinoza, God is indivisible<sup>14</sup>, and a thing which is indivisible does not have any part. From the claim that everything is a part of God and God is indivisible, we are then driven back to theism rather than pantheism. Of course, what we are showing here is that this Spinozistic argument does not stand in favour of mereological pantheism, and we leave open the possibility of other Spinozistic arguments.

Thirdly, mereological pantheists may acknowledge the intimacy of composition and identity while rejecting S-CAI. That is, although it seems natural to suggest that a whole is nothing over and above its parts, this by itself does not entail S-CAI. Perhaps composition is merely *analogous* to identity. In particular, a mereological pantheist might accept a version of *composition as identity* (CAI) while rejecting the additional assumptions for deriving Collapse. As we shall see later, one of the crucial assumptions for deriving Collapse is the Indiscernibility of Identicals (II). Yet, there are objections to II in the context of CAI.<sup>15</sup> If II fails to hold, then mereological pantheists may endorse a weaker version of CAI while rejecting S-CAI. In

<sup>&</sup>lt;sup>13</sup> For a more detailed argument, see Spinoza (2018), Proposition 8, Scholium 2.

<sup>&</sup>lt;sup>14</sup> See Spinoza (2018), Proposition 13.

<sup>&</sup>lt;sup>15</sup> See Sider (2014: 212) and Lowe (2000: 17).

what follows, we shall unpack the motivation for the endorsement of *composition as identity* (CAI) and then proceed to arguments favouring S-CAI over weaker versions.

Let us first consider the following argument by Baxter (1988a: 579):

Suppose a man owned some land which he divides into six parcels. [...] He sells off the six parcels while retaining ownership of the whole. That way he gets some cash while hanging on to his land. Suppose the six buyers of the parcels argue that they jointly own the whole and the original owner now owns nothing. Their argument seems right. But it suggests that the whole was not a seventh thing.

This case illuminates the idea that a whole is nothing over and above its parts, or, to put it differently, they are in some sense identical.

According to Wallace (2011a), endorsing CAI can avoid the problem of co-location of parts and wholes. Given that the whole and its parts must occupy the same spatial region, if a whole and its parts are not identical, then it follows that distinct objects can occupy the same spatial region, which is an unwelcome consequence. To be more specific, consider a broom which is composed of the stick and the brush. Clearly, the stick and the brush, when taken collectively, occupy a certain region R if the broom does, and *vice versa*. Now, if the broom is not identical with the broomstick and the brush taken collectively, then the two distinct objects, the broom and the plurality of the stick and the brush, overlap in R. Yet, it seems sensible to say that no distinct objects can occupy the same region (at the same time). To avoid this

consequence, the most direct way is to hold that a whole is identical with its parts taken collectively.

Furthermore, Wallace (2011a) suggests that accepting CAI can also evade the problem of overdetermination, raised by Merricks (2001). To see this, suppose that a composite object y is composed of a plurality xx, and that y causes something to happen. If CAI is false, then it seems intuitive to say that the effect is determined by both y and the plurality xx. This consequence is controversial because it allows for cases of overdetermination: namely, an effect can be (completely) determined by multiple causes. A straightforward way to resolve this problem is to endorse CAI, for if the whole and its parts are the same, then it is mistaken to say that both the whole and its parts, as two separate factors, determine the effect to happen. To illustrate this, let us consider a basketball composed of a right half and a left half, and suppose the basketball causes a window to break. If the basketball is not identical with the right half and the left half, then it seems intuitive to say that the right half and the left half taken collectively cause the window to break as well. It follows that an effect can be determined by multiple causes, which is a debatable consequence. Yet, if CAI is true, the problem can be resolved. For if the basketball and the plurality of the right half and the left half are the same, then it is mistaken to say that both the basketball and the plurality, as two separate factors, determine the shattering of the window.

It is worth noting that CAI has at least two versions: weak composition as identity (W-CAI) and strong composition as identity (S-CAI). Lewis (1991), as a W-CAI theorist, says that composition is merely a kind of identity understood in the broad sense. In particular, identity in this broad sense need not obey the *indiscernibility of identicals*, which can be formulated as follows, where  $\alpha$  and  $\beta$  signify any unrestricted, singular or plural, variables and " $\varphi \alpha$ " abbreviates " $\alpha$  is/are  $\varphi$ ":

Indiscernibility of Identicals (II):  $\forall \alpha \forall \beta \forall \varphi (\alpha = \beta \rightarrow (\varphi \alpha \leftrightarrow \varphi \beta)).$ 

II says that two things, if identical, have all the properties in common. Notice that the variables in II are unrestricted, so that it concerns not only one-one identity, but one-many and many-many identities as well. Although W-CAI theorists may accept II restricted to cases of one-one (that is, if a single object is identical with another single object, then they have all the properties in common), they reject the general form of II because the one-many form of II is false. In other words, a W-CAI theorist says that for an object and a plurality of things, the fact that they have all properties in common does not follow from that they are identical. Specifically, according to W-CAI, a broom is (loosely) identical with a stick and a brush taken collectively but the former and the latter do not share all of their properties. Yet, S-CAI theorists, such as Wallace (2011a,b), accept II, suggesting that one-many identity also guarantees their having the same set of properties. Thus construed, S-CAI suggests that not only is the broom identical with the plurality of the stick and the brush, but it also maintains that the former has every property possessed by the latter, and vice versa.<sup>16</sup>

In short, the main difference between W-CAI and S-CAI is that the former conceives composition as a kind of loose identity, but the latter treats

<sup>&</sup>lt;sup>16</sup> In what follows, we ignore the version of CAI according to which wholes are identical with their parts taken *individually*. For more details on this version of CAI, see Baxter (1988b).

composition to be strict identity. Particularly, W-CAI rejects, but S-CAI accepts, II.

However, there are at least three reasons favouring S-CAI over W-CAI (see Cotnoir (2014); Hawley (2014); Spencer (2013); Varzi (2014)). Firstly, W-CAI theorists may treat composition as a kind of identity which does not obey II, but they fail to give a clear definition of it. In particular, composition in this sense is merely analogous to identity. The notion is still too obscure to help us understand the notion of composition even if W-CAI is true. Secondly, S-CAI can solve problems which cannot be solved by W-CAI. We have shown that S-CAI is preferable since it avoids the problems of co-location and overdetermination. But if composition is merely analogous to identity, then wholes and their parts are not *literally* the same. In this sense, W-CAI is compatible with the possibility that two distinct things, i.e. a whole and its parts taken together, occupy the same region, and the possibility of overdetermination. Lastly, even granted that W-CAI has the same explanatory power as S-CAI and can both solve the same problem, S-CAI is still preferable to W-CAI because the former is ontologically parsimonious than the latter. In other words, since S-CAI maintains, while W-CAI does not, that wholes and their parts are literally the same, it reduces unnecessary entities in their ontology. These three reasons, though they are not sufficient for providing a full defence of S-CAI, give us some good reasons and motivations for its endorsement.

### 5. Conclusion

We have presented an argument which shows that mereological pantheism is untenable due to its commitment to existence pluralism, CEM, and S-CAI. As argued above, existence pluralism, CEM, and S-CAI form an inconsistent triad. Our argument starts from CEM and S-CAI, from which we can derive both mereological universalism and mereological nihilism. The potential conflict between the two theses can be dismissed only if existence monism or existence nihilism is accepted. That is, the conjunction of CEM and S-CAI entails existence monism or existence nihilism. In this sense, mereological pantheism is a disguise of either theism, the view that there is only one God, or atheism, the view that there is no God. Neither seems to be a viable option for mereological pantheists. Moreover, if mereological pantheism abandons S-CAI, it does not have any good reason to say that God is identical with the universe. Therefore, mereological pantheists need to find better arguments.<sup>17</sup>

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