

Ordinary Parts and Their Complements: Together They Rise, Together They Fall

(*Erkenntnis*, forthcoming)

Abstract:

A recent solution to the Body-Minus problem, which is a problem of material constitution, claims that ordinary proper parts (such as left feet) exist, but the complements of these objects (such as left-foot complements) do not exist. In this paper, I examine a defense of this solution from the worry of arbitrariness and its ineffectiveness against a revised version of the problem that focuses on the head, and I show that this defense fails.

1 Introduction

Consider the Body-Minus problem, which is a problem of material constitution.¹ Suppose that Descartes exists at time t_1 , but shortly after that time his left foot is amputated, and so Descartes is without his left foot at t_2 . His left foot also appears to exist at t_1 , and if it does, then it seems as though we should claim that the left-foot complement, i.e. the rest of his body minus the left foot, exists at t_1 . And we can call that left-foot complement ‘D-minus.’ Being the kind of object that can survive a change in parts, Descartes at t_1 is identical to Descartes at t_2 . It also appears that D-minus survives the amputation, for it has undergone only negligible intrinsic changes; therefore, D-minus at t_1 is identical to D-minus at t_2 . However, Descartes at t_2 and D-minus at t_2 are exactly located in the same spatial region and made up entirely of the same matter. But it is impossible for two distinct material objects to be coinciding in that way (say, because of the extensionality of composition), and hence Descartes at t_2 is identical to D-minus at t_2 . Given the transitivity of identity, we can conclude that Descartes at t_1 is identical to D-minus at t_1 . But that is impossible since D-minus at t_1 is a proper part of Descartes at t_1 , and so they cannot be identical.

Several solutions to this puzzle are well-known. For example, one might embrace mereological essentialism and claim that Descartes cannot survive the loss of his foot, thereby

¹ For a discussion of the problem of material constitution and most of the typical solutions, see Rea (1997).

denying the claim that Descartes at t1 is identical to Descartes at t2. Another response would be to deny that D-minus survives from t1 to t2, say if one embraces a dominant kinds approach. The so-called “standard” solution is to opt for the possibility of exact (material and locational) coincidence, and so one can deny that Descartes at t2 is identical to D-minus at t2. Another solution is to opt for a temporal parts ontology and claim that there is a single, momentary object at t2 that is a proper temporal part of Descartes and of D-minus, both of which are perduring objects. And there are positions that deny one or more of the problematic entities. One could deny the existence of both Descartes and D-minus, or one might deny the existence of D-minus while claiming that Descartes exists. Those who endorse the latter approach often embrace a sparse ontology, where the only material objects that exist are (conscious) organisms and material simples (i.e., objects that lack proper parts). Since D-minus is neither an organism nor a simple, it does not exist. The startling implication is that none of the ordinary proper parts of an organism—the head, the heart, hands, and feet—exist either.

Recently, another solution has been offered to the Body-Minus problem (Carmichael 2020, Jaworski 2016):

(OP) Ordinary proper parts exist, whereas the complements of these objects do not. Under this view, there are left hands and left feet but no left-hand complements and no left-foot complements. This solution allows for the denial of D-minus while avoiding the theoretical cost of eliminating ordinary proper parts. Proponents of this position have tried to show that some of the main worries for it can be dispelled, concluding that (OP) should be considered as seriously as the other typical responses to the Body-Minus problem.²

² Unlike some of the other responses, (OP) does not solve all of the problems related to the co-location of material objects, such as puzzles that do not involve the loss of a proper part.

In this paper, I examine Carmichael's defense of (OP) from the problem of arbitrariness, and I argue that his defense fails to avoid the problem. I then consider his defense of (OP) from a revised version of the Body-Minus problem that focuses on the head, and I show that some of his key assumptions are not adequately supported and that important questions are left unanswered. Without adequate support of such claims and plausible answers to these questions, the revised version involving the head provides us with good reason to reject (OP). So I conclude that Carmichael has not provided us with reasons for taking (OP) seriously.³

2 The Problem of Arbitrariness

Why haven't more philosophers considered or endorsed (OP)? Here is van Inwagen's reason for not regarding such a position as a viable solution to the Body-Minus problem:

[T]here was never any such as Descartes's left leg. We need only one premise to reach this conclusion, namely that if [Descartes's left leg] existed, D-minus did too. And this premise seems quite reasonable, for it would seem wholly arbitrary to accept the existence of [Descartes's left leg] and to deny the existence of D-minus. In more senses than one, [Descartes's left leg] and D-minus stand or fall together. If these things existed, they would be things of the same sort. Each would be an *arbitrary* undetached part of a certain man (van Inwagen 1981, 82).

And Eric Olson agrees:

³ One worry that Carmichael discusses but that I won't address is based on the co-location of an object and a mass of matter. However, I agree with Carmichael that such co-location is to be rejected (and I also maintain that terms for masses of matter are referentially plural), and hence I agree that this worry does not threaten (OP).

If my hand exists, then “the rest of me but for my hand” exists as well... This is just to say that there is nothing ontologically special about hands: saying that there are hands but no hand-complements would be as arbitrary as saying that there are hands but no feet. Any reasonable ontology of material objects that gives us hands gives us hand-complements as well (Olson 1995, 183).

If D-minus does not exist, then why claim that the whole organism exists? Following van Inwagen, the activities of the particles that compose an organism constitute a life (van Inwagen 1990, 87-90). And Olson avers that the whole organism is the unique thinker or subject of thoughts. Hence, Descartes is metaphysically privileged whereas his proper parts are not. And since all of his proper parts are metaphysically on par, the denial of the existence of any one of them requires the denial of the existence of all the others. As van Inwagen puts it, the proper parts of an organism, such as Descartes’s left-foot and D-minus, “stand or fall together.”

Recently, Carmichael (2020) has tried to show that the proper parts of an organism do not all have the same metaphysical status, and hence there may be reason to permit the existence of some of these proper parts but not the others. In claiming that there is a metaphysical difference between D-minus and Descartes’ left foot, Carmichael proposes two significant differences. First, D-minus has a brain as a proper part whereas Descartes’ left foot does not, and so the continued existence of D-minus at t_2 would involve distinct thinkers (that overlap in such a way as to share the same brain), whereas the continued existence of Descartes’ left foot would not generate distinct, overlapping thinkers. Secondly, only D-minus would exactly coincide with Descartes at t_2 whereas the left foot would only partially coincide with Descartes (in a way that is usually regarded as unproblematic). Given these metaphysical differences, Carmichael claims

that it is not arbitrary to deny the existence of D-minus while maintaining the existence of Descartes' left foot.

Now Carmichael does address a possible objection to his claim that there is a metaphysical difference between ordinary parts and their complements. Consider another candidate proper part of Descartes, viz. the left foot minus the big toe—and we can call this object 'Toeless.' If we amputate the big toe from Descartes' left foot, then Descartes' left foot and Toeless exactly coincide, which Carmichael takes to be impossible, and so the original problem appears to return. However, Carmichael asserts that Toeless is an arbitrary sum; hence, the existence of Toeless implies the existence of a whole host of other arbitrary sums that are proper parts of Descartes' left foot, and these arbitrary sums would have their proper parts essentially (for if such objects could undergo a change in proper parts, then exact material and locational coincidence would be possible). However, Carmichael insists that Descartes' left foot is not an arbitrary object but rather is the sort of object that can gain or lose parts—one can clip the toenails without making the left foot cease to exist—thereby making the left foot metaphysically different than Toeless (and other arbitrary sums).

One objection to this response is to claim that Carmichael is focusing on a metaphysical difference that is irrelevant to whether such objects exist or not. Carmichael anticipates this objection and argues that it “can be easily answered” (2020, 212). Consider objects such as Descartes' left hand and left foot, which are capable of gaining and losing parts—these appendages do not cease to exist when we clip off a piece of the fingernail or toenail. However, objects such as D-minus or Toeless are sums that cannot gain or lose parts. On this basis, Carmichael claims that “[s]urely we should expect the ground of composition to differ in some metaphysically substantial way between objects which cannot gain or lose parts...and those

which can gain and lose parts” (ibid.).⁴ Since they would have different grounds, there is a significant metaphysical difference between D-minus and Descartes’ left foot, which shows that (OP) does not suffer from the arbitrariness worry.

But merely positing different grounds of composition for different kinds of objects does not help the proponent of (OP) avoid the arbitrariness problem. Even if Descartes’ left foot has a different compositional ground than the grounds of composition for objects such as D-minus or Toeless, the grounds of composition have to differ *in the right kind of way*—that is, they have to differ in a way that allows for the desirable objects to be counted as existing and the problematic objects to be counted as not existing. For if it is the case that the different grounds both yield the existence of Descartes’ left-foot and Toeless, then the arbitrariness problem remains.

We can see this exact problem arise for Carmichael’s own series-style answer to the special composition question that he proposes in (2015). According to his view, the composition of ordinary (or unified) objects is grounded in some underlying event. For example, the composition of an organism by a swarm of particles is grounded in the *life* event. This much is similar to van Inwagen’s view. However, the composition of mereological compounds (or “lump-like” objects) is grounded in the bonding relations that hold among their parts. So objects x_1, \dots, x_n compose some further object just in case either (i) the activities of x_1, \dots, x_n constitute an event that unifies x_1, \dots, x_n or (ii) x_1, \dots, x_n are bonded (Carmichael 2015, 480). So this series-style answer to the special composition question yields the existence of event-based objects (such as organisms) and mereological compounds.

⁴ While some theories of composition do not propose different grounds of composition (e.g., nihilism, universalism, organicism), there are views about material objects different from Carmichael’s that do offer different grounds of composition for different kinds of composite objects, see for example Fine (1999).

But given Carmichael's own answer to the special composition question, whole organisms exist based on the first disjunct, and D-minus and Toeless exist based on the second, for the parts of those latter objects appear to be suitably bonded (e.g., pushing one part of D-minus in some direction ends up pushing the other parts of D-minus in that direction). So merely having different grounds of composition by itself does not resolve the worry. What Carmichael has to show is that the different grounds would, in the case of the Body-Minus problem, rule out the existence of ordinary part-complements while maintaining the existence of ordinary parts. But he has not shown this, and without having done so, he has not demonstrated a relevant metaphysical difference between ordinary proper parts and their complements. So, his attempt to rescue (OP) from the arbitrariness problem fails.⁵

3 A Head-y Problem

There is another problem for (OP) that Carmichael considers but believes can be avoided. Suppose we revise the Body-Minus problem to focus on the head (though we could have also focused on the brain or the cerebrum).⁶ Imagine that Descartes is decapitated, and his decapitated head remains conscious (either for a short while or because the head is placed in a

⁵ Jaworski (2016) appears to be aware of this problem and so offers a distinct way of addressing the arbitrariness problem by appealing to the notion of a *biofunctional part* and privileging the division between biofunctional parts (such as eyes, legs, and hearts) from non-biofunctional parts, where the former are posited in our best empirical descriptions, explanations, and methods (2016, 131). While this solution can be used to avoid the arbitrariness problem, it does not succeed against the decapitation version discussed below, which is why Jaworski solves that problem not by appealing to (OP) but by claiming that the problematic objects (head, brain, etc.) do not survive after the decapitation (ibid., 133-136).

⁶ This version of the Body-minus problem was raised in Burke (1994, 2004).

vat of nutrient fluids and connected to a super computer that keeps it alive and functioning). Some claim that Descartes would survive in this scenario. For under a psychological approach to personal identity, the conscious head post-decapitation can remember the experiences of Descartes prior to the decapitation, and so they are identical. And under a biological approach, biological continuity putatively requires the whole brain (or perhaps just the brain-stem⁷), and therefore Descartes can survive as a head. So post-decapitation, Descartes survives. The head also appears to exist prior to the decapitation, and it appears to survive after the decapitation since it underwent negligible intrinsic changes. Given the rejection of exact coincidence, Descartes post-decapitation is identical to the post-decapitation head. But by the transitivity of identity, Descartes pre-decapitation is identical to the pre-decapitation head. Now the problem is that the strategy employed by the proponent of (OP) to the original Body-Minus problem would here require denying the existence of heads, which is implausible, especially if the proponent of (OP) is willing to accept the existence of feet.⁸

Carmichael responds to this revised version of the problem by claiming that some material objects are event-based, where “such objects depend for their continued existence on the ongoing occurrence of [an] underlying event” (2020, 214). Van Inwagen and Olson should accept this claim since they believe that the persistence of an organism depends on the ongoing occurrence of its life. Now one may be tempted to think that after the decapitation, Descartes

⁷ For worries over this claim, see Tzinman (2016). Olson (2016a) even concedes and claims that the biological approach need not and, perhaps in light of the empirical research, should not accept a brain-stem criterion.

⁸ Carmichael (forthcoming, 9) does claim that the proponent of (OP) can endorse dualism or an embodied minds view to avoid this problem (i.e., they can claim we are identical to immaterial substances or brains/cerebra), which may avoid this worry. But he rejects these proposals, as do I, and so these considerations will not be further discussed.

exactly coincides with his head, leading to the problem in the revised version. However, Carmichael believes that this is a mistake. Given the event-based grounds for some material objects, he argues that even after decapitation, the head should be regarded as a proper part of Descartes (and so not identical to him). Here is Carmichael's reason for making this claim:

[I]t is very plausible that [Descartes's] continued consciousness requires that [Descartes's] brain would continue to contain the blood cells and electrical current that is involved in its normal functioning. These items would continue to be parts of [Descartes], since they play a key role in the momentary continuation of his life. But they would not be parts of his head: [Descartes's] head intuitively does not lose any parts when the electrical activity in his brain ceases, although plainly enough his life ends, and given that he depends on the ongoing occurrence of the relevant event, he himself ceases to exist at that time. As a result, [Descartes] would not perfectly overlap his head, but would continue to have his head as a *proper* part...If, on the other hand, all [Descartes's] parts that did not overlap his head—including all the blood and electrical current that is required for his continued consciousness—were destroyed, it is plausible that his life would not continue, and that he would not continue to be conscious...And, if [Descartes's] consciousness were extinguished in this way, it is plausible that he would no longer exist, and so he would not become co-located with his head (Carmichael 2020, 215).

According to Carmichael, Descartes is not identical to his head since they do not exactly overlap, for the former has proper parts that the latter lacks. Since they do not exactly coincide, the revised version of the Body-Minus poses no threat to (OP).⁹

But his response is problematic, for it fails to provide adequate reasons for believing that the head does not have blood cells and electrical currents as proper parts. Carmichael asserts that the blood cells and electrical currents are not proper parts of the head, and he claims that the head could survive their destruction (but Descartes could not survive their destruction). But why should we believe that the head would survive such an episode? One might follow Aristotle and suppose that what we would have instead is a head only homonymously; the head-shaped object is not an actual head. In fact, this description fits well with Carmichael's acceptance of corpse creationism—that at death, the original person ceases to exist and a new object, viz. a corpse, comes into existence (Carmichael 2020, fn. 16). If living organisms do not survive death, then it is unclear why Carmichael believes that heads would. And if the head does not survive the loss of functioning, then we have good reason to think that the blood cells and electrical currents are proper parts of the head. To be clear, I am not suggesting that these objects are in fact proper

⁹ Carmichael considers an objection that is based on identifying Descartes with his whole body prior to decapitation. But since the body does not survive as a head, then neither does Descartes, which goes against his response to the decapitation problem. He responds by suggesting that either Descartes and his body are not identical (because they do not exactly overlap) or that Descartes' body is not essentially a body and so can survive as a head. However, the first disjunct is strange since it requires saying that blood cells are proper parts of Descartes but are not proper parts of Descartes' body. But then I no longer know what Carmichael means by 'Descartes' body' since a commonsense notion of a human body seems to include blood cells as proper parts of human bodies. Carmichael's second disjunct is more promising, especially if by 'Descartes' body' Carmichael means a human animal, for some have argued for the view known as *accidental animalism*—where animals are not essentially animals. However, embracing that position appears to imply that animals have strange persistence conditions (Olson 2016b).

parts of the head. Rather, the problem is that Carmichael has not given us adequate reason to prefer his claim that heads lack blood cells and electrical currents as proper parts over the claim that they are proper parts of the head.¹⁰

Thus, if Carmichael is to provide an adequate response to the revised version of the Body-Minus problem, we need to know, at least in principle, how to determine whether some object is a proper part of the head. But as soon as we turn to address that issue, additional questions naturally arise: What exactly are the boundaries of ordinary parts such as heads? How much of the neck does a head include? And where is the cut-off between a head and a neck? Is this cell (pointing to some specific cell near the putative boundary between the head and the neck) a part of the head, the neck, or both? There is an object that includes that cell that is a good candidate for being the head, and there is an object that excludes that cell which also appears to be just as good of a candidate for being the head. The sparse ontologist has a much easier time with these questions—none of these objects exist, and so there is no question about what proper parts they have. But Carmichael will have to say a lot more if he is to avoid the decapitation version of the Body-Minus problem.

I conclude that Carmichael's responses to the arbitrariness worry and the decapitation version of the Body-Minus problem fail. Either one should opt for another defense of (OP) from these worries or look elsewhere to resolve the problem of material constitution.¹¹

¹⁰ Even on the assumption that the head survives after decapitation, Carmichael has offered no strong support for his denial that blood cells are part of the pre-mortem head. I thank an anonymous reviewer for this point.

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