

COULD THERE BE NOTHING?

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1. Thomas Baldwin [3] and Gonzalo Rodriguez-Pereyra [5] have elaborated and defended a folklore piece of reasoning to the conclusion that there might be nothing (the nihilist hypothesis). The reasoning goes like this (in David Armstrong's words): "The first premiss is that the world is exclusively a world of contingent beings. But any contingent being might not have existed. So could it not have been the case that the totality of contingent beings failed to exist? There might have been nothing at all." [1, p. 24]

Armstrong, is quick to point out that the argument involves a risky transition of the form: from "for everyone it is possible that ..." infer "it is possible that everyone ...". Each kangaroo may desert the mob; however, it is not possible all roos desert the mob. But then: Each of the joeys may be taken from the pouch; hence, all of the joeys may be taken from the pouch. Are possible worlds more like mobs or more like pouches?

Both David Lewis and David Armstrong have clearly stated that they take the first view: possible worlds are more like mobs, not like pouches. Lewis: "There isn't any world where there is nothing at all" [4, p. 73] Armstrong: "It is not logically possible for there to be nothing at all" [1, p. 24].¹ Both philosophers present this view as a consequence of their respective theories of possibilia. So if nihilism is true, are these theories false?

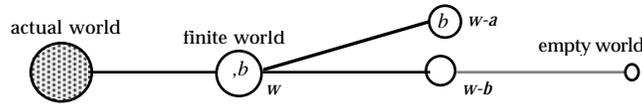
2. According to the subtraction argument, there is an operation on possible worlds, subtraction, which preserves the property of being a possible world and whose natural limit is the empty world. In more detail the argument is presented in [3] as follows. The premisses are:

- (A1) There might be a world with a finite domain of 'concrete' objects.
- (A2) These concrete objects are, each of them, things which might not exist.
- (A3) The non-existence of any one of these things does not necessitate the existence of any other such thing.

¹ But see section 4 below.

By (A1) we may proceed to a possible world with a finite domain of concrete objects. Call this world w and suppose, for the sake of simplicity that w contains just two concrete objects, a and b . By (A2) each of these two objects may not exist. Again for the sake of simplicity we may assume that a and b are both ways independent: neither does the existence of a require the existence of b nor does the nonexistence of b require that a not exist, and vice versa. It follows that there is a possible world $w - a$, accessible from w , which contains b but not a . Moreover, (A3) guarantees that there is nothing else that replaces a in $w - a$; so $w - a$ is a smaller world than w . (And similarly for the world $w - b$.)

Baldwin now invites us to iterate the reasoning. “By (A2) the nonexistence of [b in $w - a$] is possible, so there is a world w_{nil} just like $w - a$ whose domain lacks b ; and since, by (A3), the non-existence of b does not require the existence of anything else, w_{nil} is a world in which there is no concrete object at all” [3, 232]. Assuming that accessibility is transitive, w_{nil} is a possibility from the perspective of our world. The argument is depicted below, the dotted line representing the last subtraction step.



The left part of picture also shows that in its most natural reading the argument is invalid. (A1) is made true by the finite world w which is accessible from the actual world. (A2) and (A3) are made true by $w - a$ and $w - b$, both accessible from w . Yet nothing forces us to complete the picture as shown on the right (the dotted line connecting to the empty world). What has gone wrong?

3. Call a world “minimal” just in case it would take but one step of subtraction to remove all concrete objects from it. In our case, w is not minimal but both $w - a$ and $w - b$ are.

It appears natural to read the demonstrative “these” in (A2) as referring back to the concrete inhabitants of the finite world postulated in (A1). If so, then the second premiss stands within the scope of the existential quantifier introduced in (A1) (“There might be a world ...”). But then (A2) would only licence to infer that subtracting one object from *that* world results in a possible world. Call *that* world w and suppose that w happens not to be minimal (as in the picture above). Then the argument shows at most that for each object x in w , $w - x$ is a possible world. But since w is not minimal, $w - x$ is not empty. Here the argument stops—the nihilist conclusion remains inaccessible.

Perhaps “these” in (A2) is meant to refer to the category of concrete objects spoken of in (A1) without tying them to any particular world. Then (A2) would be outside the scope of the existential quantifier of (A1) and could indeed be put to the intended use, i.e. to iterating the subtraction argument till nothing is left. But what does (A2) say under this read-

ing? Answer: the domain of possible worlds is unrestrictedly closed under subtraction—in particular, removing the last inhabitant from a possible world still leaves a possible world. That may be true—but only if subtraction need not be proper, in which case (A3) would be false. If proper subtraction is at issue—so that (A3) would have to be true—, then (A2) boldly asserts that subtracting from a minimal world yields a value, viz. the empty world. Thus read the argument to the nihilist conclusion is valid but plainly question-begging.² In any case, the argument remains ineffective against the denial of nihilism.³

4. How strongly are Lewis and Armstrong with their respective theories of possibilities committed to denying that an empty world is possible? For Lewis possible worlds are sums of spatio-temporally related parts. According to the mereology he favours, there is no null sum—nothing that remains when something is taken away from itself, nothing that may be added without making any difference. But the decision against the null object is independent of the rest of the theory. The null object could be embraced without scathing that part of mereology to do with non-null objects only.⁴ Thus, although Lewis—like most other philosophers thinking about parts and wholes—believes that careful consideration of the question swings against postulating an empty thing, he can afford an open mind on this issue.

For Armstrong possibilities result from suitably recombining the elements of actual states of affairs. What about the “empty recombination”, the empty collection of states of affairs? In [1, pp. 63f.] Armstrong insisted that the combinatorial theory of possibility “cannot countenance the empty world. For the empty world is not a construction from our given elements.” But more recently Armstrong has come to the conclusion that, as with Lewis’ theory, nothing much hinges on how the limiting case of the empty construction is treated. He now declares the issue to be a “minor” one: “it would not be a hanging matter to go either way on this” [2, p. 170]. Whether minor or not, the subtraction argument provides no reason for going this rather than that way.

² Baldwin notes that a skeptic about the empty world may deny (A3). He defends (A3) by maintaining that “the abstract conception of a possibility does appear to permit a possibility which is not a possibility of, or for, anything—namely the possibility that there be nothing at all.” [3, 236] This is clearly just a statement of the nihilist hypothesis under scrutiny.

³ Rodriguez-Pereyra [5] varies Baldwin’s argument by paying close attention to the concreteness condition in (A1) and by repairing what he takes to be shortcomings of that premise. The structure of the argument remains the same; hence, what I said about the argument presented in [3] pertains to the argument in [5] as well.

⁴ A Boolean algebra with summation everywhere defined is a conservative extension of a Boolean algebra with summation only a partial function. Of course, Stanisław Leśniewski, the modern founder of mereology, would have protested at the idea that mereology is just a partial Boolean algebra. I understand that he believed himself in the possession of an argument to the effect that admitting the null-element trivialises the theory.

References

- [1] Armstrong, D.M., *A Combinatorial Theory of Possibility*, Cambridge (University Press), 1989.
- [2] Armstrong, D.M., *A World of States of Affairs*, Cambridge (University Press), 1997.
- [3] Baldwin, T., There might be nothing, *Analysis* 56 (1996), 231–238.
- [4] Lewis, D.K., *On the Plurality of Worlds*, Oxford (Blackwell), 1986.
- [5] Rodriguez-Pereyra, G., There might be nothing: the subtraction argument improved, *Analysis* 57 (1997), 159–166.

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