Might there be nothing?

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Oliver (1996: 4) calls it a commonsensical belief that there might be nothing

Lewis (1986: 73–74) says it is not possible that there is nothing at all; (Armstrong 1989: 25) says the idea is only "attractive at a relatively shallow level of reflection". Both David Lewis (1986: 73) and David Armstrong (1989: 93) hold it is necessarily false that there might be nothing, even if "nothing" were restricted to contingent existents. Lowe (1996: 118) concurred, while van Inwagen (1996: 99) thought it is "as improbably as everything can be" that there might be nothing but necessary existents. Against this claim, Thomas Baldwin (1996) deployed the following substraction argument, point out is is possible that there are just a finite number of contingent existents none of which necessitates the existence of any other of them, so that, by subsequent 'substraction' and the **S4** axiom, the possibility of there being nothing follows. The premisses are (Baldwin 1996: 232):

B1 There might be a world with a finite domain of 'concrete' objects.
B2 These concrete objects are, each of them, things which might not exist.
B3 The non-existence of any one of these things does not necessitate the existence of any other such thing.

The argument then runs as follows:

1. By (B1), there is a possible world w_3 accessible to the actual world with three objects, x, y and z.
2. By (B2), there is a world w_2 accessible to w_3 in which x does not exist, but y and z do.
3. By (B3), nothing exists in w_2 that does not exist in w_3.
4. By (B2), there is a world w_1 accessible to w_2 in which y does not exist, but z does.
5. By (B3), nothing exists in w_1 that does not exist in w_2.
6. By (B2), there is a world w_0 accessible to w_1 in which z does not exist.
7. By (B3), nothing exists in w_0 that does not exist in w_1.
8. By **S4**, w_o is accessible to the actual world.

In support of (B1), Baldwin (1996: 233) argues that unit-sets of concrete objects are not concrete, on the ground that they satisfy the principle of identity of indiscernibles. They do so, he argues, because "the identity of the member of a unit set is an intrinsic property of the set which also determines its identity" (Baldwin 1996: 233). On the same ground, he argues that spatio-temporal regions do not falsify (B1). In support of (B2), Baldwin (1996: 234-235) argues that there cannot be a concrete object whose existence is necessary. This is in response to van Inwagen:

> "I can say only that it seems to me hopeless to try to devise any argument for the conclusion that it is a necessary truth that there are beings that is not also an argument for the conclusion that there is a necessary being. I simply have no idea of how one might even attempt that." (van Inwagen 1996: 96)

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Rodríguez-Pereyra (1997: 160-161) has criticised (B1) on the ground that *having x as its only member* (the supposedly intrinsic property of $\{x\}$) is relational and no intrinsic properties distinguishes the unit sets of indiscernible members. If it were intrinsic, then *being the only member of* $\{x\}$ would be intrinsic too and distinguish the two (otherwise) indiscernible elements. Rodríguez-Pereyra (1997: 163) argues that (B1) is false, for every spatio-temporal object has an infinite number of spatio-temporal (and hence concrete) parts. Rodríguez-Pereyra (1997: 164) then rephrases the argument for nihilism as:

R1 There might be a world with a finite domain of concrete* (concrete, memberless and topologically maximal) objects.
R2 These concrete objects are, each of them, things which might not exist.
R3 The non-existence of any one of these things does not necessitate the existence of any other such thing.

Against (R1), Lowe (2002: 64) argues that Baldwin's 'concrete' objects can be taken to be mereologically simple and suggests to call all objects "concrete" that are in time,[1] thereby excluding sets and space-time points. He elaborates the argument of Lowe (1996) against (B3):

L1 Some abstract objects, like natural numbers, exist necessarily.
L2 Abstract objects depend for their existence upon there being concrete entities.
L3 Therefore, it is necessary that there are concrete entities.

The two premisses of this argument have been criticised by Rodríguez-Pereyra (2000). Arguing against (L2) Rodríguez-Pereyra (2000: 336) challenges the assertion that "in such a world [where the only non-sets are universals whose instances are only other universals or sets] the sets depend for their existence upon the universals and the universals depend for their existence upon the sets, creating a vicious circle which deprives both universals and sets of the possibility of existence" (Lowe 1998: 254), pointing to cases where Lowe himself allows for weak mutual dependence, e.g. between Socrates and his life (Lowe 1998: 143,153) and between any two natural numbers (Lowe 1998: 160,254). Only identity dependence would make the circle vicious, where x is identity-dependent upon y iff necessarily, which thing of its kind y is metaphysically determines which thing of its kind x is (Lowe 1998: 150). But universals are not identity-dependent upon their instances (Rodríguez-Pereyra 2000: 338). Against (L1), Rodríguez-Pereyra (2000: 339) points out that that assuming that there is no possible world in which there are no mathematical truths (on the grounds that they could not have been false) is begging the question, because the truthbearers themselves are abstract entities (Lowe 1998: 253).

In defense of (L2), Lowe (2002: 68) argues that the world in which only sets and universals exist is impossible because sets strongly depend upon their members and universals generically depend upon their instances (x generically depends upon entities of type T iff necessarily, if x exists then at least one T exists). Because universals do not have ontological priority over the particulars exemplifying them, we cannot non-circularly describe their existence- and identity-conditions in such a world (Lowe 2002: 69–71).

Against (R3), Paseau (2002) argued that it allows for two readings:

R3-1 The non-existence of any one of these things does not necessitate the existence of any given other such thing.
R3-2 The non-existence of any one of these things does not necessitate that there is even one of these things.

[1] Lowe (2002: 66) calls sets and properties 'abstract' because "time and place [...] enter into the[ir] existence- and identity-conditions".

He then points out that on neither reading the conclusion follows: in a model where

$$\langle \{x\}, \{y\}, \{o\}, \{x,y\}, \{x,o\}, \{y,o\}, \{x,y,o\} \rangle$$

represent the seven possible worlds, the premisses are true of x and y but there is no empty world.

In reply to Paseau (2002), Rodríguez-Pereyra (2002: 172) argues that on a third reading of (R3), the argument is valid:

R3-3 The non-existence of any one of these things does not necessitate the existence of any other concrete* thing.

Against Lowe (2002) Rodríguez-Pereyra (2002: 173-174) argues that a mereologically simple concrete object could not be extended in space and time. Rodríguez-Pereyra (2002: 175) grants Lowe that in a world where only universals and sets exist, the existence- and identity-conditions of the former could not be non-circularily specified. But, first, why should this be taken to show that such a world is impossible? And, second, why should we be required to specify these conditions 'in' that world? It should suffice if we can specify them non-circularly in other worlds.

Coggins (2003) explores the consequences of nihilism for the theory of modality: if there might be nothing, she argues, a 'container view' of possible worlds has to be accepted, according to which possible worlds do not themselves qualify as concrete (or concrete*) objects and space-time is absolute. On other 'ersatzist' accounts, the substraction argument no longer goes through because its notion of 'concrete' is non-vacuous only if haecceities (intrinsic properties held uniquely by a single object) are excluded. Ersatzers need haecceities "to explain modal facts without reference to merely possible objects", allowing their haecceities to be actual (Coggins 2003: 359).

Paseau (2006) argues that (R3-3) comes to the same than (R3-2) which he formalises as:

R3-3* $\forall x_i \neg\exists o \forall w (\neg(x_i \text{ exists in } w) \to (o \text{ exists in } w))$

The principle needed to make the argument valid, Paseau (2006) argues, would be the following:

R3-4 $\forall w \forall x_i (x_i \text{ exists in } w) \to (\exists w_1 \neg(x_i \text{ exists in } w_1) \to w_2 \forall y((y \text{ exists in } w_2 \leftrightarrow y \neq x_i) \wedge y \text{ exists in } w))$

He paraphrases (R3-4) as follows: if x_i is a concrete* entity in w, then there is a world w_2 which contains all the entities in w apart from x_1: "we can substract a contingent concretum* from any world containing it. But why, Paseau (2006) asks, should we privilege this principle over the weaker one that we can substract a contingent concretum* from any world containing at least two concreta*? The weaker principle allows for an exception – does this allowance have to be justified?

Gonzalo's reply to Paseau:

R1' There might be a world with a finite domain of concrete* (concrete, memberless and topologically maximal) objects.
R2' These concrete objects are, each of them, things which might not exist.
R3' For every contingent concrete* object x in any possible world w, there is a possible world w^* that contains all the entities of w except x.

Let us call a world in which every object can be substracted a world having the substraction property. Paseau accepts that many concrete worlds have the substraction property but denies that one-concretum*-worlds have it. (P1) does not rule out cases of due intellectual caution because intellectual caution is due when and only when there is a reason to do so.

DN:

R3" For every contingent concrete* object x in any possible world w, there is a possible world w^* that contains all the concrete* entities of w except x.

A legitimate exception: 0 for *having a predecessor*.

Why there might be nothing: because otherwise there would be necessary connections between distinct existents.

dogmatic agnosticism: ignorance about what possibilities there are gives us reason not to have it decided by a theory about what possibilities are (cf Lewis' distinction in the review of Armstrong's combinatorialism).

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