

Ex Nihilo Omnis Fit

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1 Beings and Nothingness

My title tweaks the well-known supposed platitude *ex nihilo nihil fit*—nothing comes from nothing, and it means that everything comes from nothing. The view was held by (amongst others) the Christian mystic Meister Eckhart (1260-1328) who said (according to my book of quotations) ‘All things were created out of nothingness, and thus their true origin is the “Not”’. Since Eckhart identifies God with nothingness, this is a way of putting the Christian doctrine that God created the world (everything). Well, I think that Eckhart was right—not in supposing that God is nothingness, but in supposing that everything comes from nothingness. In what follows, I’ll explain why.

Of course, there is a question of what, exactly, it means to say that everything comes from nothing: it is hardly transparent. For a start, what is to be made of the *fit*? We will get there in due course; there is a bigger hurdle to be cleared first. What are we to make of the *nihil*? What, exactly, is nothingness? That is a tantalizing question. It is what God, according to more orthodox Christians, created the world out of. It plays a central role in the thought of philosophers such as Hegel, Heidegger, and Sartre. And it is easy enough to explain to a child. It is what is left, so to speak, when you take everything away.

Yet as soon as one starts to think about it, one finds oneself in tangles and paradoxes. If it is what remains when everything is removed, then nothing is, well, nothing. But it *must* be something; after all, maybe you can’t experience it (though some have thought otherwise), but you can certainly talk about it (I have been), and think about it (you are now). So it would

seem to be both something and nothing. The puzzle is ancient, driving, as it does Plato's dialogue the *Sophist*. We first need to address this matter.

2 The Approach to Nothing

Let's start with a bit of clarification. The word 'nothing' can play two roles in English. First, it can be what logicians call a *quantifier*, like *something*, *everything*. These are not nouns, and do not refer to anything: their function is quite different. Quantifier phrases are used to say that something/nothing/everything satisfies some condition or other. Thus, if I ask Mary a question, and then report 'she said nothing', my remark means that she remained silent. As logicians might put it: for no x , did she say x .

But 'nothing' can be a noun too. Thus, if one says (truly) that Heidegger wrote about nothing, one does not mean that for no x did he write about x (which would certainly be false!); one means that he wrote about the thing nothingness. One might say (again truly) that Heidegger and Hegel wrote about nothing, but said quite different things about *it*.

The ambiguity between quantifier and noun is the source of many good jokes and puns. Thus, in *Through the Looking Glass*, the White King asks Alice if she can see a messenger coming down the road. When Alice says that she can see nobody, the King complements her on her eyesight: he can only see real people. Alice is using 'nobody' as a quantifier. The King takes her to be using it as a noun.

The ambiguity can be a source not only of humour, but of much confusion; so to avoid this in what follows, when I use the word as a noun, I will boldface it, thus: **nothing**. Without the boldfacing it is the quantifier.

The next thing that needs to be clarified is this. We are talking about whether **nothing** is something or nothing—that is, whether it is a thing, an object, or not. But what does it mean to say that something is an object, some thing. To say that x is some thing is to say that, for some y , x is y . We might argue about what the 'is' means here—the word is ambiguous both syntactically and semantically in English—but the simplest understanding is that it is the 'is' of identity (as in $2 + 2$ is 4). So to say that x is an object is to say that, for some y , $x = y$.

Now, if x is anything at all, it is self-identical, $x = x$. It follows that for some y , $x = y$. (x itself will do.) Hence, everything is an object—hardly Earth-shattering news. Perhaps more interesting is this. If x is not an object,

then it is not the case that for some y , $x = y$. That is, for no y , $x = y$. In particular, it is not the case that $x = x$ —or as mathematicians write it, $x \neq x$. So things that are not objects are not self-identical.

3 A Closer Look at the Paradox

Given these matters of clarification, we can now look at our paradox more closely. It is constituted by two contradictory statements, to the effect that **nothing** is both something and nothing. That is:

- **nothing** is something: for some y , $y = \mathbf{nothing}$
- **nothing** is nothing (i.e., not something): it is not the case that for some y , $y = \mathbf{nothing}$

The first statement seems unremarkable. As observed, it is a simple fact of logic that everything is something. So **nothing** is something. If you want an extra argument, here is one. If you are thinking about the Eiffel Tower, you are thinking about something. If you are thinking about Sherlock Holmes, you are thinking about something (though it may not exist). Your thoughts are not contentless, and those objects are their contents. But you can think about **nothing**—you are now. So **nothing** is something. It is the content of the thought you are having.

4 What is Nothing?

The exact ground for the other limb of the paradox is less obvious. To see what it is, we need to get clearer about what, exactly, **nothing** is. As I said, it is, what remains after everything is removed. That's fine, but somewhat metaphorical. We can do better than this with the help of mereology—the theory of parts and wholes.

Lots of things (in fact, most things) have parts. Countries have states, provinces, or counties; symphonies have movements; I have a head, feet, hands, etc. Moreover, if you take the parts of something and meld them together, you get the thing in question. Logicians call the result a *mereological fusion* or *sum*. Thus, the mereological fusion of my parts is me; the mereological fusion of the four movements of Beethoven's 9th Symphony is the Symphony itself.

Now, take any set of objects, X , and throw away its members, one at a time. When you have removed the last one, what remains is the set with no members, the empty set, \emptyset . So the fusion of its members is the fusion of no things. And that is exactly what **nothing** would seem to be. Hence, we may take **nothing** to be the fusion of the members of the empty set.

It might be objected that the objects in the empty set do not have a fusion. After all, it may be suggested, some bunches of things do not have a fusion. Thus, consider the set containing: New Zealand, Donald Trump, and the Hanging Gardens of Babylon. If these things have a fusion, it is an object with parts of radically different kinds, and spread over space and time. Better to hold that for the members of a set of objects to have a fusion, they cannot be disparate in this way: they must “cohere” in some sense. It is not clear how, exactly, to understand this notion of coherence. However, whatever it means, the objection is irrelevant. Since the empty set has no members, it has no members that fail to cohere with each other! (As logicians might say: all the members of \emptyset cohere with each other because there aren’t any.)

Given all this, we now know not only that **nothing** is something, we know exactly what it is. And we can explain why the second limb of our paradox holds: that **nothing** is nothing. **nothing** is the fusion of things in the empty set, and there are no things in the empty set. You can fuse no things together as many times as you like; you will never get anything! And it’s no good saying that we have got the definition of ‘**nothing**’ wrong. Perhaps nothingness in some other sense is not paradoxical. That doesn’t show that nothingness in this sense is not. It’s just changing the subject!

In other words, the claim that **nothing** is something is genuinely paradoxical. Yet despite this, we seem to be forced to accept this contradictory conclusion.

5 The Principle of Non-Contradiction

That conclusion may jar for some, for a rather obvious reason. It flies in the face of the principle according to which no contradictions are true—the Principle of Non-Contradiction (PNC). So let me say a few brief words about this here.

The PNC was set into orthodoxy in Western philosophy by Aristotle. (Eastern philosophy is another story.) Orthodoxy and truth are, of course,

quite different things. And the relevant question is why one should endorse the Principle. Aristotle's arguments were, frankly, pretty terrible, as most modern scholars now agree. (They are either tortured and opaque, or establish—if anything—something else.) Moreover, the history of Western philosophy since Aristotle has not been very successful in producing better arguments.

If one asks a modern logician why one should suppose the PNC to be true, they are likely to appeal to a principle of inference called *Explosion*—or, to give it its Medieval name, *ex contradictione quodlibet sequitur*: from a contradiction everything follows. According to this, given any contradiction, one can legitimately conclude anything. (It is called Explosion because, according to it, contradictory information explodes, delivering everything.) Clearly, many such conclusions, such as that $1 + 1 = 73$, that you are a frog, and that Donald Trump is Julius Caesar, are crazy. So you can't accept a contradiction.

Since there is absolutely no connection between the premises of an inference by Explosion and these arbitrary consequences, it may come as a surprise to those who have never studied modern logic to learn that the inference is now endorsed by many—maybe most—logicians (though this has not generally been the case in the history of logic). The reason, briefly, is that an inference is valid if it is impossible for the premise to be true and the conclusion to be false. The PNC tells us that it is impossible for a contradiction to be true. So it is impossible for a contradiction to be true *and* an arbitrary conclusion to be false. So the inference is valid (vacuously, as logicians say).

Given this, the ground for the validity of this inference falls if the PNC does. And it is precisely the PNC which is challenged by our paradox about **nothing** (and, incidentally, many other things). To reject the truth of the paradox because of this principle therefore begs the question. Indeed, there are now many well-worked out accounts of validity according to which Explosion is *not* a valid inference. They are called *paraconsistent logics*, and this is not the place to go into them.

6 Ontological Dependence

Having cleaned up the *nihil*, we can now come to the *fit*. It is standard Christian theology that God created everything else at a certain time. Thus,

all creatures depend on the creator because of God's act in time. But again in orthodox Christian theology, God's creatures depend on God in a much more profound sense (called causation *per se*). God maintains the world from moment to moment: in the way that the motion of a locomotive maintains the motion of a carriage that it is pulling. In other words, there is a continued ontological dependence of God's creatures on God. Things are (and continue to be) what they are because of a dependence of this kind on God.

The notion of ontological dependence, or *grounding* as it has come to be called, has been much discussed in recent Western philosophy. This is not the place to go into it. Some simple examples will suffice for our purposes.

Suppose that something, *s*, is the shadow of a tree. It depends for being what it is on the thing of which it is a shadow, *t*, being a tree. If *t* had not been a tree, *s* would not have been the shadow of a tree. The reverse is not the case. If *s* ceased to be the shadow of a tree—if, for example, the sun goes in—*t* would still be a tree.

Similarly, *m* being a molecule of water (H_2O) depends on the fact that it contains an atom of oxygen, *a*. Had *m* not had an atom of oxygen, it would not have been a molecule of water. Again, the reverse is not the case. Had *m* not been a molecule of water, it does not follow that it would not have contained *a*. *m* could have been a molecule of alcohol (C_2H_5OH).

Next, some things are what they are in virtue of being *distinct from* other things. Thus, *s* being the spouse of some person, *p*, depends on being distinct from *p*: if *s* were the same (person) as *p*, *s* would not be the spouse of *p*. The reverse does not hold. If *s* were not the spouse of *p*, it does not follow that *s* would be the same person as *p*.

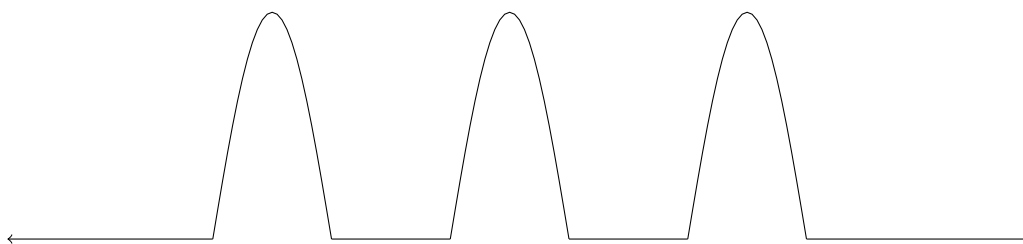
Or again, *h* being a hill depends on being distinct from the surrounding plane, *p*. If *h* were the same (height) as *p* then *h* would not be a hill. As usual, the reverse does not hold. If *h* were not the same height as *p*, it does not follow that *h* would be a hill: it might be a ravine.

7 Nothing and the Ground of Reality

We are now in a position to see in exactly what sense **nothing** is the ground of reality. An object, *g*, being something, that is, being an object, depends on its being distinct from **nothing**. For by our paradoxical fact about **nothing**, we know that **nothing** is not an object. So if *g* were the same (in ontological status) as **nothing**, it would not be an object. And the dependence does

not go the other way. If g were not an object, it would not follow that it is identical with **nothing**—at least for all we have seen so far: there may be non-objects other than **nothing**.

Indeed, one may say that what it is to be an object is to “stand out” against the background of nothingness, in just the way that a hill is what it is because it stands out against the background of the surrounding plain. One could picture it thus:



The peaks might represent hills standing out against the surrounding plane; or they might represent objects standing out against the background of **nothing**. Hence, **nothing** is the ground of reality, in the sense that every object depends for being what it is (an object) on its relationship to **nothing**.

Indeed, if there were no **nothing**, there could be no objects at all. For if **nothing** were not something, there would be nothing for any object, g , to be distinct from; so g could not be an object, something. In this sense, Eckhart got it right. Heidegger, too, got it right when he said in ‘What is Metaphysics?’—and in his own distinctive way:

Nothing is neither an object nor any being at all. **Nothing** comes forward neither for itself nor next to beings, to which it would, as it were, adhere. For human existence **nothing** makes possible the openedness of beings as such. **Nothing** does not merely serve as the counterconcept of beings; rather it originally belongs to their essential unfoldings as such.

(I have translated Heidegger’s ‘das Nichts’ as ‘**nothing**’. Translators often translate it as ‘the nothing’; but this is hardly even grammatical in English, whilst using the definite article with abstract nouns is standard German grammar.)

8 The Paradoxical Ground of Reality

Of course, Eckhart was a mystic; and there are mystical strands in Heidegger too; but there is nothing mystical about how *we* got to our conclusion. It was straight logic! Nor is there any reason to identify **nothing** with God, as Eckhart does. **Nothing** is certainly a strange object, but that hardly means that one should worship it!

One way in which **nothing** is strange, as we have seen, is that it is paradoxical. It is both an object and not an object. And since it is the ground of all objects, it is the ground of itself as well. Moreover, to be an object, as we have seen, it must be distinct from **nothing**. But we should have expected this. As we have already seen, if x is not an object, $x \neq x$. So **nothing** \neq **nothing**: **nothing** is distinct from itself—even though it is identical with itself as well!

Eckhart (and Heidegger) were, then, right—*ex nihil omnis fit*. **Nothing** is the ground of reality, that on which all objects depend for their very objecthood. Moreover, this ground, this *nihil*, is indeed a strange (non-) object. At the ground of reality lies paradox.