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Nothing Is Impossible

I will present two arguments for the conclusion that it is impossible for there to be nothing. (The arguments involve various modal inferences. Each argument contains a modal inference that is valid only in S5.) More exactly, the conclusion of each argument is a conditional statement: If it is possible for there to be something, then it is impossible for there to be nothing. Alternatively, if there can be something, there has to be something. Alternatively, it is impossible for there to be nothing – unless it is impossible for there to be something.

Now I concede that we know from observation that there is something, and concede further that it may be validly deduced from that proposition that it is possible for there to be something. But I am a metaphysician, and the metaphysician eschews any empirical aid and disdains argument *a posteriori*. The arguments I present will be entirely *a priori*. If you wish to extend my results by constructing a further argument, an argument whose premises are the common conclusion of my two arguments and the empirical proposition that there is something, and whose conclusion is the proposition that it is impossible for there to be nothing, that is entirely your own affair. For my part, I would dismiss any such project as mere “applied philosophy”.

Students of my work may protest at this point that I am on record as having contended that it is impossible to prove that it is impossible for there to be nothing; that it is impossible to prove this conclusion even by an argument that involves a crude appeal to experience. Indeed, they will remind me, I have contended not only that there cannot be a proof that it is impossible for there to be nothing, but that there is no reasonable prospect of even a good or plausible or interesting argument for this conclusion. I expressed this contention in a paper called “Why Is There Anything at All?”¹ The core of that paper was an argument that purported to show that the probability of there being nothing was 0.² (That conclusion is, of course consistent with the proposition that that it is impossible for there to be nothing, but, I pointed out, does not entail it, owing to the fact that there are possible propositions whose probability is 0.) In the introductory parts of that paper, I maintained that the prospects of an interesting argument for the sheer impos-

1 Van Inwagen (1996).

2 Dustin Crummett has recently convinced me that this argument requires revision. The conclusion of the revised argument would be that the probability of there being nothing is either 0 or infinitesimal.

sibility of there being nothing were dim. The reasoning by which I defended this pessimistic conclusion was essentially this:

An argument for the impossibility of there being nothing would be an argument for the conclusion that there is something in every possible world. There are two ways, and two ways only, in which there might be something in every possible world. There might be – on the one hand – one or more necessary beings, beings that existed in every possible world. But if – on the other – there were no necessary beings, it might nevertheless be that there were contingent beings in every possible world. It is unlikely that there could be a convincing argument for the existence of a necessary being. Such an argument would, it seems, be either some variant on the so-called modal ontological argument or some variant on the cosmological argument. But, for various reasons, it is doubtful whether there could be a convincing argument of either sort. And as for there being no necessary being but, nevertheless, contingent beings in every possible world – well, no one has ever presented even a candidate for an argument for that conclusion.

I expect you have seen the fallacy in my reasoning. Whether you have seen it or not, here it is: If a proposition p is equivalent to the disjunction of the propositions q and r , and if there is no prospect of a convincing argument for q and no prospect of a convincing argument for r , it hardly follows that there is no prospect of a convincing argument for p . There might, for example, be a convincing argument for the conclusion that a certain disputed painting was either by Giorgione or by Titian and no convincing argument for the conclusion that it was by Giorgione (and not Titian) and no convincing argument for the conclusion that it was by Titian (and not Giorgione).

It is just this sort of possibility that is exploited in the arguments I shall present: they are in effect arguments for the conclusion that if it is possible for there to be something, then either there is a necessary being or there are contingent beings in every possible world. You will see that they make extensive use of the inference-form sometimes called disjunctive dilemma. (Each in fact contains a disjunctive dilemma within a disjunctive dilemma.) The materials for these arguments are drawn in large part from the modal ontological argument (in a modest version – a version whose conclusion is only that there is a necessary being, and not the much stronger conclusion that there is a perfect being) and from a certain kind of cosmological argument, the kind based on the principle of sufficient reason. But although my arguments draw on those arguments, their conclusion is much weaker: their conclusion is not that there is a necessary being but rather the conclusion I have announced: that if it is possible for there to be something, it is impossible for there to be nothing.

I now turn to various matters that must be attended to before the arguments can be presented – discussions of some terms and concepts and principles that will figure in them.

1 Preliminary Matters

1.1 A Miscellany of Terms, Concepts, Definitions, and Assumptions

We use ‘thing’ as the most general count-noun: everything is a “thing”; a “thing” is anything that can be the referent of a pronoun. ‘Any thing’ is equivalent to ‘anything’, and ‘some thing’ is equivalent to ‘something’.

A *concrete* thing is a thing that can be an agent or a patient: a concrete thing is a thing that can act on or be acted on by other things. An *abstract* thing is anything that is not concrete.

We do not assume that there are abstract things or even that it is possible for there to be abstract things. We leave it an open question whether abstract things exist (or are even possible). That is to say, the existence of abstract things will be neither explicitly affirmed nor explicitly denied in our arguments. In the course of presenting and evaluating the arguments we shall consider, however, we shall freely “quantify over” abstract things – in most cases, properties or attributes, and among them certain special properties I shall call “kinds”. (Consider this analogous case. Phoebe, lecturing to her introductory physics class, proves that the orbital velocity of a planet equals its escape velocity divided by the square root of 2. The proposition that numbers and other mathematical objects exist is not going to figure – explicitly, at any rate – in her demonstration, but she is certainly going to have to quantify over mathematical objects in the course of presenting that demonstration.)

By ‘There is nothing’ we understand ‘Nothing is concrete’ or ‘Everything is abstract’. By ‘There is something’ we understand ‘Something is concrete’.

Modal terms will be used in their “metaphysical” or ‘unrestricted’ sense – that is, the sense to which restrictions are applied to yield the various restricted modalities. For example, ‘It is physically impossible for there to be a 100,000 kg ball of U-235 that exists for more than a fraction of a second’ means, ‘It is metaphysically impossible – or impossible *tout court*, impossible *simpliciter*, impossible *full stop*, impossible *period* – for the laws of physics to be as they actually are *and* for there to be a 100,000 kg ball of U-235 that exists for more than a fraction of a second’.

It will be assumed that S5 captures the logic of metaphysical or unrestricted modality.

We will use the count-noun ‘being’ as an abbreviation for ‘concrete thing’. And we will use the mass term ‘being’ to denote the property of “being a being” or being a concrete thing.

1.2 Kinds

Our arguments will involve the concept of a “kind of being” or simply a “kind”. In this essay, I use ‘kind’ as a term of art and I do not pretend that it represents the usual notion of a kind (or natural kind) – although it is certainly in some way related to that notion.

We treat “kinds” as properties (attributes, qualities, characteristics, features . . .). By ‘properties’ we understand *universals*, and *platonic* not Aristotelian universals, transcendent rather than immanent universals, universals *ante res*. Properties, being platonic universals, are in no sense *constituents* of the objects that have them, but reside, as they say, in the Platonic Heaven. Consider, for example, a shamrock with four leaves. It is, of course, green. On the present conception of “property”, the relation between the shamrock and the property greenness or viridity is as abstract and bloodless as the relation between its leaves and the number 4. Properties, on this conception, are much like propositions – but where propositions are true or false *simpliciter*, properties are true of false *of things*. Greenness for example, is true of the shamrock but false of the White House. (To say that greenness is true of the shamrock and to say that the shamrock has or instantiates or exemplifies greenness is to say the same thing in different words.) If propositions are what are expressed by closed declarative sentences, properties are what are expressed by declarative sentences in which one variable is free. Properties in this sense are “abundant” rather than “sparse”: a property corresponds to every “precise condition”, to every open sentence in which one variable is free and which is such that it is determinate for every thing whether that thing satisfies that sentence. (With, to be sure, the exception of a few Russellian self-referential monsters.)

To say that a being is *of the kind F* is simply to say that it *has F* (or that it exemplifies or instantiates *F* or that *F* is true of it) – for, kinds are, as I have said, a species of property.

We introduce a convenient abbreviation by example. Instead of writing, e.g., ‘If the property of being a horse is a kind ...’ we write ‘If “horse” is a kind ...’.

Now assume, simply for the sake of having an example to consider, that “horse” (equinity or horsiness or *being a horse* or whatever you want to call it) is indeed a kind. Since “horse” is a *platonic* property, it existed before there were horses and will exist when horses are no more. It exists in all possible worlds, in-

cluding those worlds (the vast majority, presumably) in which there are no horses – *ever*. Thus, a kind, since it is an *universale ante res*, may exist when there is (and if there is never) anything *of* that kind. In fact, it is a plausible thesis that almost all kinds are of that sort – “empty” kinds so to call them.

But if kinds are properties, what properties are they? Perhaps something like a definition is called for. I will propose a definition. (I shall later mention some considerations that suggest that it might need to be revised, and consider some possible revisions.)

A *kind of being* (or simply a kind) is any property that satisfies the following conditions:

- It entails being (or concrescence or concreteness)
- It is an *essential* property – a property that can be had only essentially (impossible properties are thus trivially essential properties)
- In every possible world in which anything has it, the “boundary” between the beings that have it and the things (beings or not) that do not have it marks a real division among things
- It is not a negative or disjunctive property.³

(It may well be a consequence of this definition that all impossible properties are kinds. If the definition does indeed have that consequence, our arguments will not depend on it and it may be ignored, treated as a “don’t care”.)

In the following subsection, we shall consider the concept of explanation. In the next subsection but one (subsection 1.4) we shall consider three principles concerning explanation. The concept “kind” will figure in two of those principles.

1.3 Explanation

We will make use of the idea of the truth of a proposition’s explaining the truth of a proposition – an idea that comprehends both the idea of a proposition’s explaining its own truth and the idea of a proposition’s explaining the truth of another proposition. We express the “explanation relation” on propositions by sentences of the form

The truth of *p* explains (or is an explanation of) the truth of *q*. (We shall sometimes abbreviate this as ‘*p* explains *q*’.)

³ I am not sure whether the final clause in this definition is necessary. I have, as it were, thrown it in for good measure. It will play no essential role in the arguments I shall present. I would define ‘negative property’ and ‘disjunctive property’ in more or less the way Chisholm does. (See, “Properties and States of Affairs Intentionally Considered” in Chisholm (2007), 141–149.)

An explicit definition of the “explanation” relation will not be given (an unwieldy amount of technical apparatus would be needed to set out a definition that satisfied the use-mention scruples that all post-Quinean philosophers should have). A definition would be a careful and precise development of the “general idea” displayed in the following two examples (the first is an example of what may be called a “why it is the case that” explanation, and the second of what may be called a “how it came to pass that” explanation).

The truth of the proposition that the moon pulls harder on one side of the earth than the other explains the truth of the proposition that there are tides.

if and only if

The statement “(Because) the moon pulls harder on one side of the earth than the other” is a correct and informative answer to the question, “Why are there tides?”

The truth of the proposition that the zookeeper left the cage door open explains the truth of the proposition that the lion has escaped from its cage

if and only if

The statement “The zookeeper left the cage door open” is a correct and informative answer to the question, “How did it come to pass that the lion has escaped from its cage” (or, more idiomatically, “The lion has escaped from its cage – how did *that* happen?”)

As these examples show, we do not suppose that if p explains q , then p entails q . A correct answer to the question, “Why are there tides?” need not consist in the assertion of a proposition that entails the proposition that there are tides. The same point applies, *mutatis mutandis* to the question in the second example, the “how did it come to pass that” question. (But, to use a familiar pair of terms, an “explanans” may entail its “explanandum”: “Dr Crippen murdered his wife Cora in 1910” explains “Cora died in 1910” – assuming, of course, that Crippen did indeed murder Cora in 1910.)

And, of course, we not only do not assume, but we positively deny, the general principle that if a true proposition p entails a proposition q , then p explains q . This principle is inconsistent with obviously true thesis that no contingent proposition explains itself, but that is not the only reason to reject it: it can hardly be supposed, for example, that, in general, a conjunction explains both (or either of) its conjuncts.

Note that we use ‘explain’ and ‘explanation’ in their “achievement” senses (we do not use ‘explanation’ in the sense “explanation candidate” or “proposed explanation” – the sense illustrated by ‘The coroner’s explanation of her death later turned out to be wrong’).

Note also that if p is an explanation of q , it does not follow that there cannot be a fuller or more satisfactory explanation of q than p . If, for example, ‘The

zookeeper left the cage door open' is a correct and informative answer to the question 'How did the lion escape from its cage?', that does not prevent 'The zookeeper left the cage door open in order to test her theory that lions are friendly animals who would never harm a human being' from also being a correct and informative answer to that question.

The present conception of explanation does not presuppose that there is such a thing as an ultimate or final explanation of any truth, and most particularly of any *contingent* truth. It may be, for example, that the contingent truth "An asteroid with a mass of 3×10^{15} kg with a speed of 20 km/sec struck the Earth about 66 million years ago" has no explanation (although that seems implausible, given our very liberal conception of explanation) and explains the truth of "Dinosaurs were extinct 65 million years ago". It seems correct in that case to say both that the fact that dinosaurs were extinct 65 million years ago has an explanation *and* has no explanation that could in any reasonable sense be called an ultimate explanation of that fact. (Indeed it is hard to see how it could be possible for any contingent truth to have an "ultimate" explanation. But we need not address the question whether a contingent truth can have an ultimate explanation – or, indeed, the question of what an ultimate explanation of a contingent truth would be if there were such a thing.)

We may define a *complete* explanation of p as an explanation of p that entails every explanation of p . It would seem that every proposition that has any explanation must have a complete explanation, but that does not imply that a complete explanation of the truth of any contingent proposition is humanly discoverable or could be expressed in a sentence of finite length. In any case, the concept of a complete explanation will play no part in the arguments we shall consider. This conception of explanation does not imply that if p and q are both explanations of r , then it must be that either p entails q or q entails p (that if a truth has two explanations, one must be an elaboration of or subsume the other): it may be that "Her husband murdered her on her twenty-fifth birthday" and "She ingested arsenic at some point during the twenty-sixth year of her life" are both explanations of "She died at age twenty-five".

It is this conception of explanation that figures in the principles that will be presented in the following subsection.

1.4 Three Principles

The following three principles – principles about explanation – are premises of both arguments:

The Principle of Sufficient Reason (PSR): It is a necessary truth that: If beings of a certain kind exist, then there is an explanation of the existence of beings of that kind.

If, for example, “elephant” is a kind, **PSR** implies that there is an explanation of the existence of elephants. It does not imply that there is an explanation of the existence of any particular elephant. It does not imply that there is an explanation of the fact that elephants have trunks (unless, perhaps it is a necessary truth that – mature, genetically normal, unmaimed – elephants have trunks). **PSR** is therefore a considerably weaker proposition than any other proposition that has ever – to my knowledge – been called ‘the principle of sufficient reason’. And this for two independent reasons: (i) the relation between propositions that I call explanation is a much weaker relation than the relation Leibniz had in mind when he used the phrases *ratio sufficiens* and *raison suffisante*, and (ii) **PSR** does not imply that every true proposition is such that some proposition bears even the relatively weak relation “explanation” to it. (It is in fact doubtful whether such a weak principle as this deserves to be called ‘the Principle of Sufficient Reason’. I retain the term because the above principle plays a role in my arguments that is in a certain sense analogous to the role played by “the principle of sufficient reason” in many versions of the cosmological argument.)

The Principle of the Externality of Explanation (PEE): It is a necessary truth that: If it is contingently true that beings of the kind *F* exist, then any explanation of the existence of beings of that kind must appeal to or involve beings that are not of the kind *F*.

If, for example, “elephant” is a kind, and it is contingently true that there are elephants, then any explanation of the existence of elephants must involve beings that are not elephants: God or (inclusive) the evolutionary precursors of elephants or genes or carbon atoms or supernovae. (Note that **PEE** does not imply that if it is contingently true that beings of kind *F* exist, then there is an explanation of the existence of beings of the kind *F*. For all **PEE** tells us, it may be that “elephant” is a kind, that it is contingently true that elephants exist, and that there is no explanation whatever of their existence. **PEE** tells us only that *if* there is an explanation of the – contingent – existence of beings of the kind “elephant”, it’s going to have to appeal to beings that are not elephants.)

Note that the sentence (in **PEE**) ‘it is a contingent truth that beings of the kind *F* exist’ means ‘it is a contingent truth that beings of the kind *F* exist at some time or other – past, present, or future’ (and not, e.g., ‘it is a contingent truth that beings that of the kind *F* now exist’). Colloquially speaking, **PEE** insists that (given

that “elephant” is a kind) if there is an explanation of the fact that elephants exist *at all*, this explanation must involve beings that are not elephants. **PEE** is consistent with the statement that “Elephants existed in the past, and they have not become extinct” explains “Elephants exist at the present time”.

It is easy to see why **PEE** is at least extremely plausible. An explanation that does *not* appeal to or involve beings that are not of the kind *F* must either appeal to or involve no beings at all, or else must appeal to or involve beings that *are* of the kind *F*. It is hard to see how a proposition that appeals to or involves no beings at all could explain the existence of beings of some given kind. (In Leslie (1979) and Leslie (1989) and in other publications, John Leslie defends a position that has just that consequence: that the *ethical requiredness* of the existence of beings with certain properties – consciousness and rationality, for example – explains the existence of such beings – and therefore of a universe to contain them –, but I have never been able to see how that could possibly be true. Analogous remarks apply to the thesis that the laws of quantum mechanics explain the existence of particles – and therefore of a physical universe –, but I will not develop this analogy here.) And, obviously, for no kind *F*, can an explanation of why there are beings of the kind *F* (“at all”, “in the first place”) appeal to or involve beings that are of the kind *F*. Even if Aristotle had been right about the eternity of species, one could not explain why the world contained elephants (“at all”) by saying that every elephant was produced by other elephants. And not because that statement is false – for all we can say *a priori* it could be true – but for the plain reason that it *presupposes* the existence of things of the kind whose existence is to be explained.

It is, incidentally, necessary that **PEE** refer to kinds (or at least to essential properties). It is certainly possible to explain why there are beings with a certain *property* (a certain accidental property) by appealing only to things that have that property. Consider, for example, a simple world in which two bodies, *A* and *B*, are, owing to their mutual gravitational attraction, eternally revolving in stable orbits about their common center of mass. Both bodies have (at all times) the property “undergoing acceleration”, and an explanation of why there exist beings that have that property need appeal only to beings – *A* and *B* – that have that property. I owe this nice point to Kris McDaniel and Kevin Klement.

Note finally that **PSR** implies that if there is a kind such that there are necessarily beings of that kind, the existence of beings of that kind has an explanation. For example, many people believe that there are necessarily beings of the kind “Divine Being” (most of them believe that there is only one being of that kind, of course), and their belief and **PSR** jointly imply that there is an explanation of the existence of Divine Beings. But that belief, **PSR**, and **PEE** do not together imply that there is an explanation of the existence of Divine Beings that appeals to or involve beings that are not Divine Beings, owing to the fact that ‘There are

Divine Beings' is, if true, not a contingent truth. (If there are necessarily Divine Beings, the explanation of their existence demanded by **PSR** would presumably be simply that it is not possible for there not to be any.)

Finally, we have,

The Principle of Existential Implication (PEI): It is a necessary truth that: For any property, if an explanation (sc. of anything) appeals to or involves beings that have that property, then beings with that property exist.⁴

I will make two remarks about the meaning of the phrase 'appeals to or involves' as it occurs in **PEE** and **PEI**. (i) In the sense that phrase has in those principles, an explanation *appeals to or involves* beings that have the property *F* only if their having *F* actually figures in the explanation. The ordinary sense of 'appeals to or involves' certainly permits statements like 'The coroner's explanation of the victim's death appeals to [involves] an exotic poison that it would have been very difficult for the accused to obtain'. But the present sense of 'appeals to or involves' does not permit statements of this sort – or would (in the case used as an example) only in the event that the fact that the poison in question was an exotic one that it would have been very difficult for the accused to obtain actually did somehow figure in the coroner's explanation of the death. (ii) Consider the following explanation of the fact that cavalry charges did not play a significant role in World War II. "Because a militarily effective cavalry charge in that era would have required horses that could not be killed by machine-gun fire." This explanation does not "appeal to or involve" horses that cannot be killed by machine-gun fire.

1.5 A Premise about Kinds

Our two arguments will depend on the premise that "contingent being" is a kind. This premise seems reasonable. The property "being a contingent being" entails being; it is a property that can be had only essentially – provided, at any rate, that the accessibility relation is symmetrical and transitive; the line dividing contingent beings from other things (from abstract things if there are any such, and

⁴ C. Anthony Anderson has argued (in conversation) very convincingly for the conclusion that this principle is analytic. I think he is almost certainly right, given that 'explanation' is, as it is, being used in its achievement sense and given the two remarks about the intended meaning of 'appeals to or involves' that follow in the text.

from necessary beings if there are any such) certainly cuts the world at its joints; it is not a negative or disjunctive property.⁵

2 The Arguments

2.1 The Arguments

The First Argument

I will present this argument in the form of a commentary on a diagram (Figure 1; see the next page) that displays its logical structure.

The argument is a conditional proof: we assume the antecedent of the conditional ‘If it is possible for there to be something, it is impossible for there to be nothing’ and derive the consequent.

Here’s a hint about the structure of the argument. Take a look at that complicated bit of the diagram inside the box where ‘**PSR, PEE, PEI**’ appear in bold-face to the right of a vertical arrow. That’s the core of the argument, the tricky and difficult and likely-to-be-controversial part. The stuff represented in the other parts of the diagram consists mainly in various items of logical bookkeeping.

So: Assume that it is possible for there to be something. If this is so, there are possible worlds (accessible from the actual world) in which beings exist. Let w be any one of these worlds. We have:

In w , beings exist

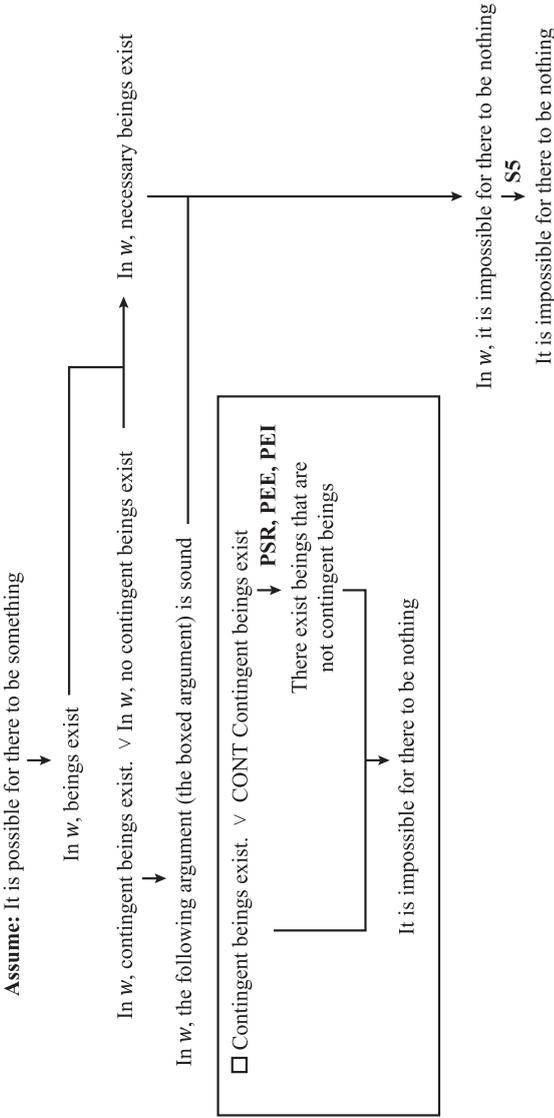
And of course it must be the case that

In w , contingent beings exist. \vee In w , no contingent beings exist.

(This statement does not depend on our assumption that in w beings exist: *every* possible world is such that in that world contingent beings exist or in that world no contingent beings exist.)

⁵ It might be argued that “being a contingent being” was a negative property, owing to the fact that something is a contingent being if and only if it is not a necessary being. First, the premise of this argument is not true if there are abstract things: the number 4 is not a being at all, and hence is neither a contingent nor a necessary being. Secondly, the argument is not valid; if it were, there would be, for almost every property, a parallel sound argument for the conclusion that that property was a negative property: for almost every property F (one of the exceptions would be “being a set that belongs to itself”) there is a property G such that a thing has F if and only if it does not have G .

THE FIRST ARGUMENT



By conditional proof: If it is possible for there to be something, it is impossible for there to be nothing.

Fig. 1. The First Argument

The argument proceeds by disjunctive dilemma, by showing that, inside the scope of our assumption that in w beings exist, ‘In w , it is impossible for there to be nothing’ follows from either of the two disjuncts of this statement.

Assume the second disjunct. Then, since in w beings exist and in w no contingent beings exist, and since every being is either necessary or contingent, in w necessary beings exist (that is, at least one necessary being exists). In the diagram, that proposition is over on the right. The “arrows” indicate the premises from which it is derived.

Now assume the first disjunct: In w , contingent beings exist. If that is so, then the “boxed argument” is sound in w :

Since contingent beings exist, it is either a necessary truth that contingent being exist or it is a contingent truth that contingent beings exist. We proceed once more by disjunctive dilemma. Suppose it is a necessary truth that contingent beings exist. Then it is impossible for there to be nothing.

Suppose, then, that it is a contingent truth that contingent beings exist. Since contingent beings exist, and since “contingent being” is a kind, **PSR** implies that there is an explanation of the existence of contingent beings. (Remember that **PSR** states that it is a *necessary* truth that if beings of a certain kind exist, then there is an explanation of the existence of beings of that kind; **PSR** therefore implies that the conditional ‘If beings of a certain kind exist, there is an explanation of the existence of beings of that kind’ is true in w . The same point applies, *mutatis mutandis*, to **PEE** and **PEI**.) We are now assuming that it is contingently true that there are beings of the kind “contingent being”. And, by **PEE**, any explanation of the fact that there are beings of that kind must appeal to or involve beings that are not of that kind. Hence, there is an explanation of something (sc. of the existence of contingent beings) that appeals to or involves beings that are not contingent beings. And it then follows by **PEI** that beings that are not of the kind “contingent being” exist. That is to say, necessary beings exist, from which it follows that it is impossible for there to be nothing.

So, whether it is a necessary truth that contingent beings exist or a contingent truth that contingent beings exist, it is impossible for there to be nothing.

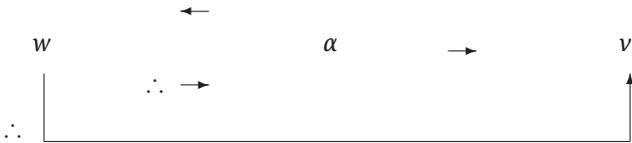
This argument, represented in the diagram as the boxed argument, is therefore sound in w if contingent beings exist in w – which of course implies that if contingent beings exist in w , it is, in w , impossible for there to be nothing.

We have already seen that if no contingent beings exist in w , then necessary beings exist in w . And if necessary beings exist in w , then it is, in w , impossible for there to be nothing.

So we have our disjunctive dilemma: whether contingent beings exist in w or no contingent beings exist in w , it is, in w , impossible for there to be nothing. (See

how the “inferential lines” on the right-hand side of the diagram lead to ‘In w , it is impossible for there to be nothing’ on the lower right-hand side.)

And if, in w , it is impossible for there to be nothing, then, by S5, it is impossible for there to be nothing (impossible without qualification, impossible *simpliciter*, impossible *tout court*, impossible *full stop*, impossible *period*). For if it is possible simpliciter for there to be nothing, then there is a world v accessible from the actual world α in which there is nothing. Since w is accessible from α , α is, by symmetry, accessible from w , and, by transitivity, v is accessible from w .



And if v is accessible from w , it is possible in w for there to be nothing, contrary to what has been shown.

We have therefore deduced ‘It is impossible for there to be nothing’ from ‘It is possible for there to be something’, and hence have established ‘If it is possible for there to be something, it is impossible for there to be nothing’ by conditional proof.

The Second Argument

The Second Argument is presented in the form of a commentary on Figure 2. It begins as the first did. We assume that it is possible for there to be something. It follows that, for some possible world w (accessible from the actual world):

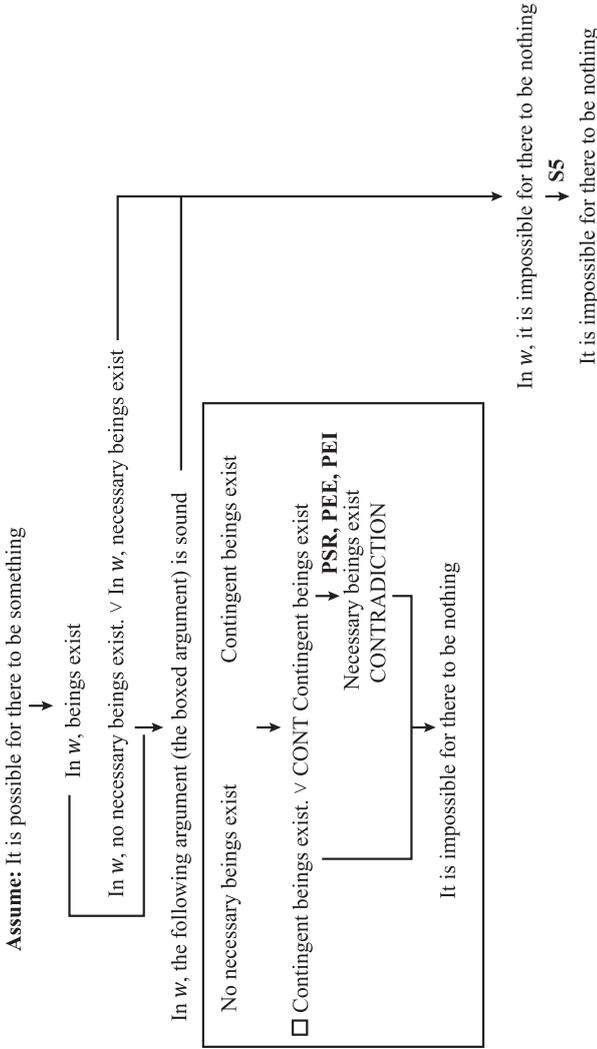
In w , beings exist.

Again, our argument proceeds by disjunctive dilemma. But we apply disjunctive dilemma to a different disjunction from the one we applied it to in the first argument; we apply disjunctive dilemma to

In w , no necessary beings exist. \vee In w , necessary beings exist.

As with the First Argument, we show that, inside the scope of our assumption that in w beings exist, ‘In w , it is impossible for there to be nothing’ follows from each of the two disjuncts of a true disjunction – the disjuncts in the present case being ‘in w , no necessary beings exist’ and ‘in w , necessary beings exist’.

THE SECOND ARGUMENT



By conditional proof: If it is possible for there to be something, it is impossible for there to be nothing.

Fig. 2. The Second Argument

Assume the first disjunct: assume that in w no necessary beings exist. Then (given our assumption that in w , beings exist), the following argument, the argument that is boxed in the diagram, is sound in w .

No necessary beings exist.

But beings exist.

So contingent beings exist.

Now if contingent beings exist, it is either necessarily true that contingent beings exist or it is contingently true that contingent beings exist.

Assume that it is contingently true that contingent beings exist. It follows, by the same reasoning that we employed in the First Argument, that beings exist that are not contingent beings – that is to say, it follows that necessary beings exist, which contradicts the premise ‘No necessary beings exist’. It is therefore *not* contingently true that contingent beings exist.

If it is not contingently true that contingent beings exist, then, since contingent beings do exist, it is necessarily true that contingent beings exist. And, therefore, it is impossible for there to be nothing.

Therefore, given that beings exist in w and that no necessary beings exist in w , this argument, the boxed argument, is sound in w – and, therefore, (given that beings exist in w) if no necessary beings exist in w , it is, in w , impossible for there to be nothing.

But if necessary beings exist in w , it is also impossible in w for there to be nothing.

Therefore, by disjunctive dilemma, it is, in w , impossible for there to be nothing.

And, as we have seen, if it is impossible in w for there to be nothing, then, given S5, it is impossible *simpliciter* for there to be nothing.

And, finally, by conditional proof, if it is possible for there to be something, it is impossible for there to be nothing.

2.2 A Possible Objection to the Arguments

The “possible objection” I wish to consider is best presented by considering a third argument for our conditional conclusion – an argument that is considerably simpler than the First and the Second arguments. The relative simplicity of the Third Argument (for so I shall call it) is due to the fact that it has as a premise not the thesis that “contingent being” is a kind but that “being” itself, “being” *tout court*, the property of being a concrete object, is a kind. And it does seem that “being” satisfies the conditions laid down in my definition of ‘kind’: Being certainly entails being – certainly entails itself; it is an essential property, for no concrete thing

is possibly an abstract thing; the line that divides concrete things from abstract things (if there are any such) certainly cuts reality at the joints; it is not a negative or disjunctive property.

That is what the relative simplicity of the Third Argument is due to. What this simplicity mostly consists in, formally speaking, is the fact that, while it makes use of disjunctive dilemma, it does not contain a disjunctive dilemma inside a disjunctive dilemma.

As I did when I presented the First and Second Arguments, I will present the Third Argument in the form of a commentary on a diagrammatic representation of the argument.

The Third Argument

Assume that it is possible for there to be something – and, therefore, that, for some possible world w (accessible from the actual world):

In w , beings exist.

This assumption entails that the following argument, the boxed argument, is sound in w .

It is either necessarily true that beings exist or contingently true that beings exist.

Assume that it is contingently true that beings exist.

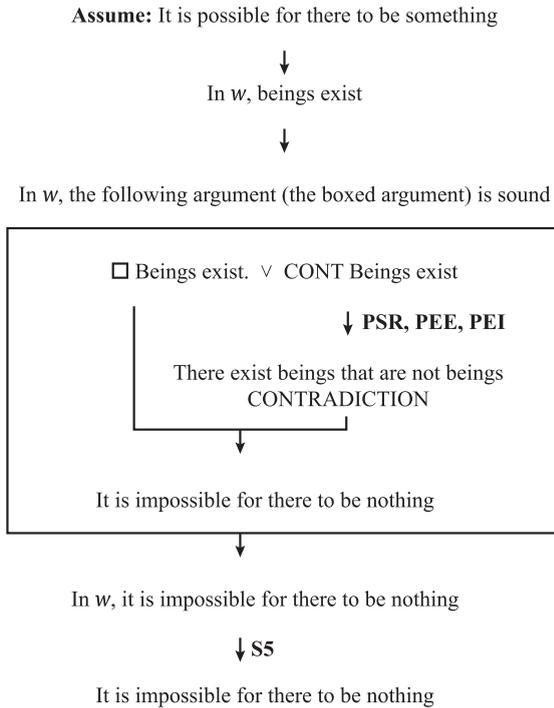
“Being” is a kind and beings of that kind – i.e., beings – exist. There is, therefore, by **PSR**, an explanation of the existence of beings. Since it is, as we are assuming, contingently true that there are beings of that kind – the kind “being”, – then, by **PEE**, any explanation of the fact beings of the kind “being” exist must appeal to or involve beings that are not of that kind. Hence, there is an explanation of something (sc. of the existence of beings) that appeals to or involves beings that are not beings. And, therefore, by **PEI**, beings that are not beings exist. But that is a contradiction, and it was the assumption that it was contingently true that beings exist that led to this contradiction – and, therefore, it is not contingently true that beings exist. Since beings exist and it is not contingently true that beings exist, it is necessarily true that beings exist – and hence it is impossible for there to be nothing.

Since that argument is sound in w , it is, in w , impossible for there to be nothing.

Therefore, by **S5**, it is impossible – simpliciter, without qualification – for there to be nothing. And, by conditional proof:

If it is possible for there to be something, it is impossible for there to be nothing.

THE THIRD ARGUMENT



By conditional proof: If it is possible for there to be something, it is impossible for there to be nothing.

Fig. 3. The Third Argument

This argument may make one suspicious my employment of **PSR** in any argument for the conclusion that it is impossible for there to be nothing if it is possible for there to be something. **PSR** is, as I have remarked, a much weaker principle than any of the principles that Leibniz and later philosophers who have used the phrase have referred to as ‘the principle of sufficient reason’. And that is all to the good, for those principles have been much too strong to be at all plausible. (Leibniz’s version, for example, implies that all truths are necessary truths – not perhaps in Leibniz’s idiosyncratic sense of ‘necessary truth’, but in the sense ‘necessary truth’ has in present-day philosophy. Or so, at any rate, I have tried to show elsewhere.)

But perhaps even my version of **PSR** – with its liberal notion of explanation, and its restriction of the class of truths that have explanations in this liberal sense to those truths whose content is the assertion of the existence of beings of some specified kind – is too strong. If not so strong that it demonstrably has consequences that most present-day philosophers would consider absurd, at any rate so strong that its role in the First and Second arguments might be thought to render them question-begging.

Why might even my weak principle be too strong to be legitimately employed as a premise in an argument that concerns the possibility of there being nothing at all?

Well, my statement of **PSR** contains the word ‘kind’, and that word is supposed, therein, to have the sense provided by my earlier definition of ‘kind’. It may be that **PSR** is an objectionably strong principle owing to the fact that its constituent term ‘kind’ has the sense my definition has provided. For, given that sense of ‘kind’, **PSR** implies that if anything at all exists, then that fact – that anything at all exists, that *something* exists – has an explanation. And it is certainly hard to see what that explanation could be if it were not simply that there *not* being anything at all, there being nothing, was an impossible state of affairs. And that suggests that employing **PSR** in a proof of the conditional ‘If it is possible for there to be something, it is impossible for there to be nothing’ begs the question (whatever exactly that widely deplored logical fallacy may be) or comes perilously close to begging the question.

What might I say in response to this suspicion raised by the Third Argument, this suspicion that **PSR** is such a strong principle that to employ it any argument for the common conclusion of the three arguments is to beg the question?

I’ll try this. Either **PSR** has this feature or it doesn’t. If it doesn’t, fine: then – or so I would assume – there’s nothing wrong with the Third Argument, and I am in a position to offer not two but three arguments for my conditional conclusion. But if **PSR** does have this feature, then, if I am to save the First and Second arguments, I must abandon **PSR** in favor of some still weaker principle that can do the work it does in those two arguments. And that work is: To ensure that if, in a given world *w*, contingent beings exist, then there is, in *w*, an explanation of the existence of contingent beings.

Suppose I were to weaken **PSR** by weakening my definition of ‘kind’ – by weakening it in such a way that “being” is not a kind, and “contingent being” is, so to speak, still a kind. There are various ways in which this might be done. I give one example, just to show that it can be done. Perhaps there are more interesting “weaker” principles that could perform the same function.

Let us say that the conditions I have specified define not ‘kind’ but ‘weak-sense kind’. And let us say that a set of two or more properties is a *partition* of

a property F if none of its members is equivalent (i.e. necessarily extensionally equivalent) to F , its members are all logical contraries of one another, and F is equivalent to the disjunction of its members.

Say that a partition of a property is *kindly* if all its members are weak-sense kinds. Then:

A property F is a kind (without qualification) if F is a member of a kindly partition of a weak-sense kind.

It follows that all kinds are weak-sense kinds, but not all weak-sense kinds are kinds – for (at least if being is a possible property) “being” is a weak-sense kind but not a kind. (For there is no kindly partition of any weak-sense kind such that being is one member of that partition.) “Contingent being”, however, is a kind, since the weak-sense kind “being” can be kindly partitioned into “necessary being” and “contingent being”.

That is one way to do it. However we do it, we shall have to have to replace **PSR** with some principle that entails that in any world in which contingent beings exist, there is, in that world, an explanation of the existence of contingent beings. No principle we employ can be more plausible than that thesis. How plausible is that thesis? And can any modified versions of the First and Second arguments be said to beg the question if they employ a premise that entails that thesis?

In brief, what is there to be said for the thesis that in any world in which contingent beings exist, there is, in that world, an explanation of the existence of contingent beings?

Well, we certainly take it for granted that the existence of things of any of the kinds we consider in everyday life has an explanation. Consider our old friend the elephant. We all take it for granted – do we not? – that the existence of beings of the kind “elephant” has an explanation (that is, that the truth of ‘The world contains beings of the kind “elephant”’ has an explanation) – even if the explanation is nothing more interesting than ‘Elephants came into existence owing to the chance interplay of the effects of certain biological and environment factors among the members of various species ancestral to elephants – factors such as mutation, genetic recombination, and environmental selection pressure’. (Note that this counts as an explanation in our very liberal sense of ‘explanation’.)

Now, leaving the elephants, move up the ladder of kinds – “up” meaning ‘in the direction of increasing abstraction’: proboscidea, placental mammals, mammals, amniota, vertebrates, animals, living things, material things, physical things, concrete things Is there a place where we can draw a line and say, “For all the kinds in our ladder of increasing abstraction that are lower than this line, the existence of beings of those kinds has an explanation, but the existence of beings of any of the kinds that occurs above the line has no explanation – or at

any rate, there's no reason to suppose that it does"? Or might one say that at a certain point in the ladder of abstraction, the general terms that figure in our verbal representation of the line simply cease to represent kinds – perhaps because at a certain level of generality, there cease to be any real lines of division in the world, that at that level of abstraction there is no longer any such thing as cutting reality at the joints?

Well, perhaps so. Who can say with any hope of certainty? This is metaphysics, after all. Perhaps, like Kant's dove, we metaphysicians, feeling the resistance of the air to our intellectual wings, have got it into our heads that these wings can take us into airless space – indeed that they will do their job better when they no longer have to work against the resistance of the air.

Perhaps. But I do think that the idea that “contingent being” is one of the kinds whose existence – given that they do indeed exist – necessarily has an explanation is a not wholly implausible idea.

3 “The Mystery of Existence”

In the remainder of this essay, I'm going to pretend that the conclusion of my arguments was that it is impossible for there to be nothing and not, as it in fact was, a conditional proposition of which that proposition is the consequent. This pretense has no better excuse than that it makes it possible for me to replace some very complicated sentences in the sequel with considerably simpler sentences.

However plausible anyone may find the First and Second arguments, no one should regard them as *proofs* of the impossibility of there being nothing. Philosophy has no proofs to offer, only arguments. But suppose I *had* proved that it was impossible for there to be nothing. What would be the significance of such a proof? In particular, what would its significance be in relation to the so-called mystery of existence? Such a proof would have some relevance to the “mystery of existence”, wouldn't it? For – surely? – the proof would have some relevance to the question, “Why is there anything at all?” And not one but two books devoted to that question have borne the title *The Mystery of Existence*.⁶ (One was a systematic book by Milton K. Munitz, published in the sixties.⁷ The other is a recently published

⁶ I rather suspect that Tyron Goldschmidt, ed., *The Puzzle of Existence: Why Is There Something Rather Than Nothing?* (Goldschmidt (2013)) would have been called *The Mystery of Existence* if it had not been for the book cited in note 8.

⁷ Munitz (1965).

anthology edited by John Leslie and Robert Lawrence Kuhn.⁸) The remainder of this essay is a sort of meditation on this question.

I begin my meditation by asking whether it is possible for a contingent truth to explain a necessary truth. It seems to me that it is at least not obviously false that a contingent truth might explain a necessary truth. For might it not be that there is a proposition that is true in every possible world and also has the following property: there is some world *w* in which its truth is explained by a proposition that, while it is of course true in *w*, is false in various other worlds?

Here is a very simple argument for the conclusion that that this is in fact the case – that it is in fact the case that there is a necessary proposition whose truth is explained by a contingent proposition. This simple argument is, as simple arguments so often are, wholly unpersuasive, but I think it can be elaborated so as to yield an argument for the conclusion that *for all we know* a contingent proposition can explain a necessary proposition – an argument that is at least not *wholly* unpersuasive.

The simple but wholly unpersuasive argument

Consider the proposition that either there are elephants or there are not. This is a necessarily true proposition, and its truth is explained by the contingently true proposition that there are elephants – and so it will be in any world in which there are elephants. (And, of course, in worlds in which there are *no* elephants, *that* contingent truth will explain the truth of the proposition that either there are elephants or there are not.)

I call this argument wholly unpersuasive because the statement that the truth of the proposition that there are elephants explains the truth of the disjunction of that proposition with its negation seems implausible – in fact, wholly implausible. Explaining the truth of the disjunctive proposition – surely? – if it's anyone's business is the business of logicians or philosophers of logic or metaphysicians; it is certainly not the business of zoologists.

But more elaborate cases of disjunction, cases involving some metaphysical components, can provide arguments for at least the epistemic possibility of a contingent proposition's explaining a necessary proposition. Consider, for example, the following metaphysical fable:

⁸ Leslie and Kuhn (2013).

The goddess Ungit is a necessary being and the only one. Ungit has (essentially) the power to create beings *ex nihilo* and, like the Christian God, she has (and has essentially) free will in the matter of whether she exercises that power: in some possible worlds she freely chooses to create beings *ex nihilo* (and hence does) and in some she freely chooses not to (and hence does not). It is, moreover, metaphysically necessary that every being she creates be of – let us call it – Kind A, and the only way for a being of Kind A to exist is for it to be created by Ungit. It is also metaphysically necessary that if (and only if) she chooses not to create any beings, beings of another (inferior) sort, beings of Kind B, will *emanate* from her – as beings do from the neo-Platonic One. (She has no choice about the truth of this conditional, any more than you have a choice about whether your body gives off heat if you’re alive; it’s a consequence of her essence.) The only way for a being of Kind B to exist is for it to emanate from Ungit. Every being in every possible world is either Ungit or of Kind A or of Kind B. Beings of Kind A and Kind B are, as I have said, very different kinds of being, but the beings of both kinds are, unlike Ungit herself, contingent beings. (Their contingency is not an additional supposition; it’s a consequence of what has already been said.)

It follows from this story that it is a necessary truth that there are contingent beings. But it does not seem obviously wrong to say that in some worlds the contingent truth “Ungit creates beings of Kind A” explains the truth of “Contingent beings exist”. It does not seem wholly implausible to say that in a world in which Ungit has created beings of Kind A, the statement “Because Ungit created beings of Kind A” is a correct answer to the question, “How did it come to pass that contingent beings exist?” And, of course, the same holds, *mutatis mutandis*, for the worlds in which she chooses not to create: it is plausible to suppose that in such worlds, “Because Ungit chose not to create any beings, and, in consequence, beings of Kind B emanated from her” is a correct answer to the question, “How did it come to pass that contingent beings exist?”

If it is indeed the case that a contingent truth can explain a necessary truth (I do not claim to have shown that this is the case, or even that it is metaphysically possible), this implies that a proof of the impossibility of there being nothing, should such a proof exist, would not resolve the question whether existence is a mystery. Or, at any rate, it has that implication in respect of any proof of the impossibility of there being nothing that is as, well, as *abstract*, as my two arguments.

I’ll try to explain why I say this by telling another story – a story that is every bit as fanciful as the fable of Ungit, though its fancies are of another sort. The story presupposes that a contingent truth can explain a necessary truth.

The fanciful story

In every possible world there is something, and in every possible world there is an explanation of why there is something. That is,

In every world w there is something, and there is a proposition that is, in w , a good and informative answer to the question, “Why is there something – and not, rather, nothing?”

Let us suppose, however, that the answer to that question *differs* from world to world; that is, although there is, for every world, a proposition whose truth in that world explains why there is something rather than nothing, it is not the same proposition in every world. (It seems to me that this would entail that any proposition that in any world explains why there is something rather than nothing is a contingent proposition. It seems to me that if a necessary truth were an explanation of why there was something rather than nothing in any world, it would be an explanation of why there was something rather than nothing in every world.)

And let us suppose, just to have a number before us, that (given the correct principle of individuation for propositions, whatever it may be) there are exactly 510 propositions that have that property – that is, 510 propositions that satisfy the following condition:

For some world w , x is, in w , a good and informative answer to the question, “Why is there something – and not, rather, nothing?”

Let S be the set of these propositions. We further suppose,

1. There is at least one answer – at least one good and informative answer – to the question, “Why are *those* propositions – the 510 members of S – *all* the possible answers to the question, ‘Why is there something – and not, rather, nothing?’ ” (For every member of S , there is a good and informative answer to the question why that proposition is an answer to the question, “Why is there something – and not, rather, nothing?” in *some* possible world. For every proposition that is not a member of S , there is a good and informative answer to the question why that proposition is not an answer to the question, “Why is there something – and not, rather, nothing?” in *any* possible world.)
2. For every proposition p and every world w , if p is, in w , a good and informative answer to the question, “Why is there something – and not, rather, nothing?”, there is in w , no explanation of the truth of p . In every possible world, in other words, the truth of any proposition that is in that world an answer to the question, “Why is there something – and not, rather, nothing?” is, as they say, a brute fact – and a brute *contingent* fact.

3. No human being – or any other finite creature – could possibly grasp or understand any member of *S* – including, of course, those members of *S* that are in the actual world correct answers to the question, “Why is there something – and not, rather, nothing?” And, *a fortiori*, no human being (or other finite creature) could possibly understand any answer to the question “Why are *those* propositions – the 510 members of *S* – all the possible answers to the question, ‘Why is there something – and not, rather, nothing?’”

I ask you to consider this story. I ask you to consider it because, if it were true, it would be – at any rate, this seems evident to me – correct to speak of “the mystery of existence”. That is, the truth of this story would be a sufficient condition for the truth of the thesis that “existence is a mystery”. No doubt there are weaker sets of conditions that would also be sufficient for the truth of this thesis.

Notice, however, that the story is consistent with the existence of a proof that it is impossible for there to be nothing – even the existence of a proof that human beings can understand.

But that bald statement requires qualification, for, of course, the story may be impossible – no doubt it *is* impossible – and therefore inconsistent with everything, even itself. Now if the story is possible, then, since it logically implies the impossibility of there being nothing, it will be consistent with any sound argument for the impossibility of there being nothing. One should also note that, for all we know, if sound arguments for the impossibility of there being nothing exist, none of infinitely many such arguments to be found in the Platonic heaven has the right features to count as a *proof*; or, if the Platonic heaven does contain such proofs, it may be that none of them is humanly accessible. It may therefore be that nothing is consistent with the existence of a proof of the impossibility of there being nothing or that nothing is consistent with the existence of a humanly accessible proof of that proposition.

Let us say, therefore, that the story is *logically* consistent with the existence of a proof of the impossibility of there being nothing: one cannot logically deduce from the story that there is no proof of the impossibility of there being nothing.

And notice that every step in both the First Argument and the Second Argument is logically consistent with everything said in the story. If someone were unwise enough to suppose that those two arguments were *proofs* of the impossibility of there being nothing, this would provide that person with no reason to suppose that the fanciful and elaborate story I have just told was false. The lesson is that a proof of the impossibility of there being nothing (at least a proof that is as abstract as my two arguments) can do nothing to allay anyone’s conviction that existence – the fact that there is something, and not, rather, nothing – is a mystery. I’m not

saying that this fact should – or should not – be regarded as a mystery. I’m saying only that my arguments, however interesting or valuable or metaphysically penetrating someone may take them to be – are simply irrelevant to the question whether existence is a mystery.

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