

THE ONTOLOGICAL PROBLEM. Carnap begins by presenting the ontological problem: certain areas of discourse contain a commitment to abstract entities. In mathematics, we encounter sets and numbers. In physics, numbers again, and mathematical objects generally, and then space-time coordinates. The existence of these entities presents a difficulty for an empiricist, since these entities appear to be not available for observation. In mathematics there is an escape route: we can think of mathematics as a game of symbols. This is the view of *formalism*. However, a similar approach to physics does not seem plausible. Moreover, there is an analogous problem in semantics where there is an apparent commitment to propositions. 20

Example 1 (Numbers). ‘There is exactly one even number between three and five.’ This sentence entails the existence of one even number. And since this sentence is true, there *is* one even number. But where is it? Can it be observed?

Example 2 (Propositions). See Carnap’s own examples (b)–(d). 26

Carnap claims there is a possible resolution of this problem that would satisfy empiricist intuitions and ‘scientific thinking’. 21

INTERNAL AND EXTERNAL QUESTIONS. The ontological problem was not solved, and no ‘progress’ was made toward its resolution, according to Carnap, because the way these questions asked so far was bad. Prior to asking any such question we must first lay down a semantic *framework*. On the face of it, this framework is a regimented, at least semi-formalised, first-order language equipped with variables, constants, predicates, quantifiers. In this language we can formulate statements of existence using the available first-order quantifiers. Then we can formulate an *internal question* about the existence of entities in the domain of those quantifiers, or about the entities that the singular terms of that language refer to. The question will be resolved either by empirical or analytic means. 21

How do we determine which thing is real, then? Carnap’s answer is far from trivial. To show that x is real we must ‘fit’ into the framework. That is, the adoption of x as real depends on adopting other entities in the framework as real. 22

Remark 3. In so many words Carnap here outlines the idea of ontological holism. We accept entities not individually, one by one, but together as a collection characterised by some property of internal harmony.

Yet clearly the philosophers were not asking these questions. They queried the existence of the world ‘itself’. They wanted thus to ask an *external* question of existence prior to laying down of any particular framework. This can mean that they wanted to know whether the whole talk about numbers, things, or propositions is legitimate. But the legitimacy of the framework is not a cognitive issue that can be resolved with the yes/no answers. It is rather a matter of decision—to use or not to use the given framework. Thus external questions are meaningless, or at least so far have not been shown to be meaningful. 22

FOUR KINDS OF QUESTIONS. The sketch just given sits pretty well with the text and its general tone. But it is possible that further useful distinctions can be made, though perhaps they were not emphasised by Carnap himself.

Consider the category of internal questions first. We decide whether an even number between three and five exists by tracing the steps of an arithmetical proof. Conducting such a proof was of course enabled by the prior adoption of an arithmetic framework (say, Peano arithmetic). But then we can also ask questions whether numbers exist in general. You may think that this question is external, but it needn’t be. Once you have established the existence of at least one number, you can infer an *internal* answer to the question whether there are numbers at all. Thus we can distinguish between general and particular internal questions.

Consider now external questions. These are the questions purportedly asked by a traditional metaphysician about numbers and things. Yet they cannot be taken at face value, or literally. To make sense of them we need a paraphrase. In that paraphrase, Carnap seems to suggest, they will become questions about the frameworks themselves. But then there are two ways to perform this

paraphrase: we can take them as questions about the practical usefulness of a framework, or else they can be questions about its theoretical legitimacy. The practical question is totally kosher. It requires an answer that would allude to the *usefulness* of the framework, its pragmatic virtues. What is not kosher is to expect an answer committing us to the rightness or wrongness of any given framework. Those theoretical external questions are the questions, according to all evidence, asked by a traditional metaphysician.

CARNAP'S REASONS. Most of the discussion about Carnap's proposal focussed on later critique by Quine. Before turning to it, however, we have to try to see what actual reasons Carnap gives in defence of his ideas.

One argument may be called the 'criterion argument': in order to formulate a question about the existence of a particular entity we must first formulate the criterion of identity for that entity. We must say, for example, what falls under the predicate 'colour' or the predicate 'property'. (Notice that this criterion would serve at the same time as a criterion of application for lower-order expressions.)

Another argument is the 'category mistake argument': while we can ascribe reality to the elements a framework purports to talk about, we cannot ascribe reality to the framework itself.

Then perhaps there is the 'pragmatic fallacy argument': traditional ontologists inferred existence of entities, mistakenly, from the pragmatic decisions to use certain frameworks and from the practical usefulness of those frameworks.

YSB