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Carnap's Big Idea

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1.1 Carnap's Insight

In his essay "Empiricism, Semantics, and Ontology" (Carnap, 1956), Carnap articulated an important insight, his Big Idea. I believe this insight is exactly correct, and has a substantial impact for metaphysics in general and ontology in particular. However, Carnap got it all wrong when he explained why the Big Idea is true, and what consequences we should draw from it. Carnap was rightly criticized for the overall theoretical framework in which he defended his Big Idea, and for how this defense is supposed to work. But the Big Idea still is correct, and with its proper defense we still get substantial, although different, consequences for metaphysics. This paper discusses the Big Idea, why Carnap was wrong in his defense of it, how it is properly defended, and what follows from it.

Carnap's insight concerns the questions we ask when we ask questions in ontology. He puts it nicely as follows:

> Are there properties, classes, numbers, propositions? In order to understand more clearly the nature of these and related problems, it is above all necessary to recognize a fundamental distinction between two kinds of questions concerning the existence or reality of entities. (Carnap 1956, 206)

If Carnap were right then this indeed would be significant for a standard way of doing metaphysics. In metaphysics we want to find out what reality is like in a general way. One part of this will be to find out what the things or the stuff are that are part of reality. Another part of metaphysics will be to find out what these things, or this stuff, are like in general ways. Ontology, on this quite standard approach to metaphysics, is the first part of this project, i.e. it is the part of metaphysics that tries to find out what things make up reality. Other parts of metaphysics build on ontology and go beyond it, but ontology is central to it, and Carnap's Big Idea is most directly tied to ontology. Ontology is generally carried out by asking questions about what there is or what exists. If we want to know whether numbers are part of reality then we need to find the answer to the question whether there are any numbers. This last connection between what there is and what is part of reality is made for good reasons. If there are numbers then what else could they be than part of reality? And if numbers are part of reality then, of course, there are numbers. The crucial question for ontology so conceived is thus the question what there is. But if Carnap's insight is correct and we "need to recognize a fundamental distinction between two kinds of questions" here then this will affect ontology at the core. We then need to investigate further about these different kinds, what their difference is, which one, if any, is the right one to ask in the project of ontology, how to answered the right one, and so on.

Although in the above quote Carnap connects the question whether there are numbers to the question concerning the existence and reality of numbers, this connection could be disputed. Maybe whether there are numbers, whether numbers exist, and whether numbers are real are three different questions. But leaving these distinctions aside for the moment, we can state Carnap's insight as follows, and label it as Carnap's Big Idea:

(1) **Carnap's Big Idea:** We need to recognize a fundamental distinction between two kinds of questions we can ask when we ask whether there are Fs.

Carnap's Big Idea, if true, would shed light, one way or another, on some of the most puzzling things about metaphysics and ontology, and Carnap was certainly very much aware of this. There are at least two puzzles for which the Big Idea is clearly relevant, and we should consider them now.

First, it is puzzling how the metaphysical question whether there are numbers, and thus whether reality contains, besides, say, ordinary objects, also further things—mathematical objects like numbers—is connected to mathematical results which imply that there are numbers. Results in number theory generally imply that there are numbers. Euclid's Theorem that there are infinitely many prime numbers implies immediately and obviously that there are infinitely many numbers, and thus that there are numbers. Is the metaphysical question answered by the mathematical result in such a straightforward way? If that were true it certainly wouldn't be as it is intended in the metaphysical projects. There the idea is that we ask a substantial further question that is not a mathematical one, but a distinctly different one. The ontology of numbers is not supposed to be trivial mathematics. But how can that be? One possible answer is tied to Carnap's Big Idea: there are two different questions here. One of them is mathematical and a different one is metaphysical. How that difference is to be drawn, what the metaphysical question comes down to, and how it should be approached, would all depend on how Carnap's Big Idea is worked out. Carnap did it one way, with certain consequences for metaphysics. But I will argue that different and better options are available as well.

Second, Carnap's Big Idea is relevant for the apparently different level of difficulty that is associated with the ontological and ordinary question whether there are numbers. Ontology is not supposed to be trivial, but the question whether there are numbers does seem to be trivial. You can answer it by example: the number one is one of them, the number two is another. There certainly is a prima facie strong plausibility that this answers the question whether there are numbers in some way. That way of asking the question has a trivial affirmative answer, and we don't even need to rely on mathematics to give that answer. We can answer it by example. And we can answer it with trivial arguments, inspired by Frege's example in his (Frege 1884): that Jupiter has four moons implies that the number of moons of Jupiter is four, which implies that there is a number which is the number of moons of Jupiter, and thus that there are numbers. If Carnap's Big Idea is in essence correct then a possibility of understanding this opens up: one question indeed is trivial, while another one is not. Whether or not it comes out this way will depend on how the Big Idea is spelled out, and what the difference between the two questions comes down to. But Carnap's Big Idea gives hope that these generally puzzling features of ontology can be understood somehow.

To evaluate Carnap's Big Idea we should first look at why Carnap thought it was true, and what consequences he drew from it for metaphysics. I will argue that on Carnap's own account, Carnap's Big Idea is incorrect. That is, the background picture in the philosophy of language that Carnap took to establish his Big Idea not only does not establish it, it makes the Big Idea come out false. After that I will outline why Carnap's Big Idea is nonetheless correct and what this means for metaphysics.

1.2 Carnap's Approach to Ontology

In 1947 Rudolf Carnap published a book on the semantics of various languages called *Meaning and Necessity*. This book, as well as earlier work in semantics by him and others, was a break from the tradition of the logical positivists, of which Carnap was one, to deal with language purely syntactically. The logical positivists were anti-metaphysical philosophers. They held that the grand traditional metaphysical notions like being, truth, and reality, where highly suspicious, the source of confusion and pretentious nonsense, as they took earlier metaphysical philosophies to be. Instead the logical positivists took ideas from the development of formal logic and developed artificial languages to be used by the sciences. These artificial languages where characterized syntactically, with rules of inference, a grammar, and so on. Semantic considerations were considered with great suspicion by logical positivists. After all, they employ such notions as meaning, truth, and reference. And they employ talk about such suspicious entities as properties, extensions, propositions, and other things that do not easily seem to fit into the material world. Carnap, following Tarski in (Tarski 1983), however, realized that a truth predicate for a language can be defined in a language that is slightly stronger in an innocent mathematical sense, and thus can't really be seen as adding dubious metaphysical baggage. Similarly, an at least extensionally adequate notion of reference can simply be defined in a language that is stronger in a metaphysically innocent way. But the issue with meanings, extensions, propositions, and the like is thereby not resolved. These are not just notions suspicious to positivists, they are things that don't seem to be part of the material world, and thus seem to be empirically problematic. So, how can an empiricist and scientific philosopher like Carnap take recourse to them in the semantic study of language? In 1950 Carnap offered his answer to these objections to his semantic work in his article "Empiricism, semantics, and ontology".[1] And his answer is closely connected to his Big Idea.

Carnap's Big Idea (1) is the idea that there are two kinds of questions about what there is, and he held this for a particular reason, which is relevant for what he thought the significance of the Big Idea is. The two kinds of questions he labeled *internal* and *external* questions. To understand the difference for Carnap between internal and external questions about what there is it is important to have his picture of how we come to use a particular language in view. According to Carnap we have a choice in using one language over another when we describe the world of experiences, i.e. what we experience in perception. We have certain sensations, and these sensations can be described in different ways, using different languages, or, as he calls them, frameworks. These languages ideally should be perfectly precise languages, and the relevant non-logical expressions should be tied to experiences in the proper way, and there should be clear inferential connections between expressions in that language. But which language we use in describing experience is up to us: whichever we find most suitable. When we try to understand the world, and propose theories about it, we thus have to do two things: first adopt a language or framework in which to describe the world, and second propose hypotheses about the world stated in that language. Experience can confirm or disconfirm the hypotheses stated in the language, but which language or framework we use is up to us. If things go badly we give up a hypothesis, but if things go really badly, we might give up the framework altogether and move to another one.

Thus when we have a certain language or framework adopted to describe the world as we experience it then we can use this language to make statement and ask questions. "Are there numbers?" is one such question. It is a question formulated in a language that involves number talk, and such number talk should be tied to experiences in the proper way. In particular, some languages will have the feature that certain sentences in them will be true no matter what experiences we may have, for example because these sentences follow from no premises. This will result from how the meanings of the words in these languages are related to experiences, or how certain expressions inferentially relate to others. Some sentences with certain words, i.e. some sentences in a certain language, will be true no matter what. To illustrate this, take the 'numbers language', which contains the natural number words, amongst others. In this language, by stipulation, certain inferential connections between sentences obtain, certain inferential connections between sentences in the numbers language and other parts of our language obtain, and certain sentences are true 'by virtue of meaning', i.e. they are analytic. These connections allow one to conclude

(2) $6 < 7 < 8$

[1] This article first appeared in the *Revue Internationale de Philosophie*, and was reprinted as one of several appendices in the second, 1956, edition of *Meaning and Necessity*. Since the latter is much more accessible it is customary to refer to this reprinting of the article, and so will I: (Carnap 1956).

which is analytic, or

(3) The number of my hands is two.

which follows, given the inferential connections that number words are tied to in the numbers language, form the empirically established

(4) I have two hands.

From (2) I can infer

(5) There is a number between 6 and 8.

and from either (2) or (3) it follows that

(6) There are numbers.

Given that one is talking the number language, with words 'number' and '6' and '8' in them, then sentences (5) and (6) are guaranteed to be true. In particular, (6) follows from an analytical truth as well as from a trivial empirical truth.

Similarly, the question

(7) Are there numbers?

is one stated in the number language. It is guaranteed to have an affirmative answer in the same language, namely (6), or 'Yes' for short. This is the question that the meaning of the words in the sentence (7) determine. It is what Carnap calls the *internal question*, and this question is the one that has 'Yes' guaranteed as its answer.

But Carnap doesn't think things end here. There is also another question that philosophers aim to ask with the same words, which Carnap calls the *external question*. After all, the internal question is trivial, and the answer 'Yes' is guaranteed. The question the philosophers aim to ask is not supposed to be trivial. But what is this other, external, question? Here there is potential for confusion about what Carnap's view is, and some parts of his view can be understood in different ways. In particular, Carnap holds that the external questions do not have "any cognitive content" (Carnap 1956, 209) and it is important to see why he thinks that.

It is not true, according to Carnap, that the sentence (7) has more than one reading, that is, that there is more than one way the sentence can be properly understood. Instead there is something else that philosophers aim to do with uttering that sentence, that is, something other than to ask the internal question. To make this clear, let us distinguish the *question sentence* from the *question act*. The question sentence is just a sentence in question form, i.e. an interrogative sentence, in a particular language, for example, the numbers language in case of (7). The question act is something someone is doing, or trying to do, with an utterance of a question sentence. Normally a speaker will utter a question sentence and perform an act that is closely tied to the meaning of the question sentence uttered. But that doesn't have to be so. So, normally when I utter

(8) Where is my sandwich?

I am performing a certain act, which is more or less just trying to get some information about the location of my sandwich. Let's call *asking a standard question* the act that is performed by asking a question whose content corresponds to the content of the particular occurrence of the question sentence. In short, *a standard question* is a question act performed by the utterance of an interrogative sentence where the content of the act is the content of the interrogative sentence. If a question sentence has more then one reading then there is more than one standard question that can be asked with an utterance of that sentence. To illustrate, when one asks

(9) Did she hit a man with a wooden leg?

one can ask a standard question by asking about her weapon or by asking about the disability status of her victim. Normally when one utters a question sentence one asks a standard question with it. But one could also perform a different kind of act: maybe a completely different speech act, maybe trying to insult someone, or accuse someone, or something different altogether. When one utters "When is this going to be over?" twenty minutes into a performance of a Wagner opera one generally does not simply try to get information about how long the opera is. What one is doing in such cases depends on all kinds of subtle things, the speaker's intentions, context, and so on, which do not matter to us here in detail. But the distinction between the question sentence, the question act, and asking a standard question, is crucial to understand Carnap's distinction between internal and external questions, as he envisioned it.

Keeping these distinctions in mind we can thus say that what philosophers are doing when they utter (7) can be one of several things, including at least the following.

First, they might simply ask the one and only standard question that, according to Carnap, can be asked with this interrogative sentence. But this doesn't make sense of philosophical activity, since that question, in the case of (7), is completely trivial. And if that were the question, the answer would be immediately clear: Yes, of course there are numbers.

Second, they might aim to perform a different question act than asking the standard question. This non-standard question is supposed to have a different content, one that the philosophers might hope to describe as 'Are numbers real?' or 'Do numbers exist?' However, these sentences, too, have only one reading, and the standard question asked with them is equally trivial. The role that words like 'exists' or 'real' have in the language of which they are part equally allows us to trivially infer that numbers exist and are real. Similarly for more complex candidates for what the content of the external question might be: 'Is number talk true?' or 'Does the number language correspond to reality?' These question sentences express a trivial standard question, and philosophy can't be trying to answer them. For all of them the rules of the number language (augmented with the rules for 'exists', 'true', etc.) settle the answer: Yes, of course.

Third the philosopher could aim to ask a different question, one not at all related to the content of the question sentence, in fact, one that is not a factual question, but a practical question. It is a question about which language one should choose in describing the world/our experiences. This practical question is one that can be meaningfully asked, for example, it is the standard question corresponding to the following question sentence:

(10) Should we describe the world in terms of number talk?

This question is meaningful, in the intuitive sense of the word, and it is a charitable way for Carnap to characterize philosophers who insist on asking questions like (7) even though the standard question asked with that sentence is trivial. However, this question can still be seen as lacking cognitive content in a technical sense, since it is a normative question, a question about what we should do. This technical sense of cognitive content relies on a distinction between facts and values, and holds that only statements about facts have cognitive content, while statements about value do not. Such a view is these days generally called non-cognitivism about the normative or evaluative, and it is naturally associated with positivists like Carnap. It is natural to interpret Carnap as holding that external questions lack cognitive content in this sense: they are meaningful questions, but not questions of fact, but rather questions of value, about what we should do.

This last point is worthy of a bit more elaboration. Carnap holds that the external question has no cognitive content, and thus is 'meaningless' in a technical, but not ordinary, sense. This is so not because the sentence uttered in attempts to ask the external question is a meaningless sentence. To the contrary: the sentence uttered in attempts to ask the external question is a perfectly meaningful one. But the one and only standard question that can be asked with this sentence is not the intended question. It simply leads to an act of asking a trivial question. The external question has no cognitive content, since the question act performed with its utterance is to ask a non-standard question, and that question is not a question of fact, but one about what should be done. Both parts of this are important to keep in mind. The latter simply relies on a distinction between factual claims, which have cognitive content, and claims of value, or normative claims, which do not. This is simply what having cognitive content comes down to, on this technical use of the term. And the use of 'meaningless' employed in this content is simply the same as having no cognitive content in this sense. Thus external questions are meaningless and devoid of cognitive content, even though on the intuitive notion of being meaningful they are perfectly meaningful questions about what to do. When asking an external question we utter a perfectly meaningful interrogative sentence in the performance of a question act that asks a question about what to do. The sentence uttered to ask this question is the same sentence used to ask the internal question, but the question acts are different in these cases. The internal question asks the standard question associated with the question sentence uttered. The external question asks a non-standard question, which is a question about what to do, and as such has no cognitive content given this version of a fact-value distinction.

The pragmatic and practical dimension of Carnap's view should be seen as a charitable interpretation of what meaningful activity the philosophers are nonetheless engaged in when they ask question without cognitive content. Carnap proposes that the best way we can make sense of what philosophers are doing, charitably, is to think of them as asking a practical question, as opposed to a trivial theoretical question. There is no domain of facts that metaphysics and ontology are trying to uncover, since the factual questions in the neighborhood of the questions asked in these disciplines are trivial or confused in some way. Still, there is something in the neighborhood of all this which can be done and which is fruitful. It is asking practical questions, ones about what to do. Even if the factual questions are trivial here, there are good questions left, and they might not have a trivial answer. But ontology as a theoretical discipline has to be rejected. What metaphysicians where trying to do is pointless: they where hoping to ask a substantial question of fact, but the only available content for that question is a trivial one: the internal question. Practical questions remain, but ontology, the metaphysical discipline that hopes to ask questions of fact, has to go.[2]

This is how I think Carnap should be understood. There are many things that can be criticized about Carnap's view, but I will only briefly mention a few here. First, Carnap overstated the freedom we have in choosing a language. Human languages are highly structured as a result of our biological setup. And this is not just true for the syntax of language, but likely also for various general semantic categories. We are born with a general setup for our language, and even after that it is basically impossible to drift away from it.[3] Second, the close connection between meaning and experience Carnap relied on is a mistake. Carnap's theory of meaning is too closely tied to a certain verificationist picture in the philosophy of science, and mistakenly ties languages to scientific theories as described in that picture. Third, Carnap's use of analyticity is problematic. Not that one can't make sense of an analytic–synthetic distinction, but it isn't clear that one can make sense of one that allows one to do what Carnap wants it to do. We won't focus on those familiar points in the following, but we will instead look at what Carnap did with Carnap's Big Idea. I think that on Carnap's own view his Big Idea goes sour, but one can do better.

1.3 How Are There Two Questions?

Carnap holds that we need to recognize the difference between two kinds of questions about what there is, or about the existence or reality of certain things: internal and external questions. But in what sense are there two questions on Carnap's account? It seems that there are a number of candidates for distinguishing two questions, but on

[2] See also Robert Kraut's contribution to this volume, for more on Carnap and non-cognitivism/expressivism.

[3] For a detailed study of this issue when it comes to semantics, see von Fintel and Matthewson (2008). For syntax, this is, of course, Chomsky's big idea.

each of them the number of questions we get is not two, it is either more than two or less than two. We should look at some candidates for in what sense there are two questions.

First, for Carnap there is only one standard question 'Are there numbers?' or 'Are there Fs?' more generally. The question sentence 'Are there numbers?' has, for him, only one reading. On that reading it often gives us a trivial question, in particular when we ask about very general things like numbers or objects. This standard question is the one and only internal question. There is no external question with the same status, for example, a question that is the standard question on a different reading of the question sentence. When it comes to standard questions, in the sense defined in the section above, there is only one, not two.

Second, when we ask how many questions can be asked with 'Are there numbers?' the answer should not be just two, but many more. There is only one standard question, but there are many question acts that can be performed with an utterance of this sentence, that is, many non-standard questions can be asked with such an utterance. Carnap focuses on two of these question acts: the standard question (which is a trivial question) and the practical question whether we should describe the world in terms of the numbers language. Although the standard question has a distinguished status among all question acts that can be performed with an utterance of this interrogative sentence, the question act Carnap labeled 'the external question' does not have such a distinguished status. Let's grant that one can perform this question act by uttering that sentence, since there is a reasonably loose connection between the content of the sentence uttered and the content of the act performed in uttering it. But not only can we use 'Are there numbers?' to ask what we should do, we can use it in many different ways as well. I might ask if there are not just letters available to decorate our mailbox with stickers, but also numbers. Or I might ask whether a certain document includes detailed numerical information, or many, many more. Even when it comes to questions about what we should do, there are other options than simply to ask whether we should employ the numbers language in the description of the world. It would be strange to focus on two questions here in principle, since many non-standard questions can be ask with this sentence. Maybe only two are in fact, or prominently, or commonly asked? This is our next option to consider.

Third, when we wonder what acts are in fact performed with utterances of 'are there numbers?' things look even worse for Carnap. Here it is first doubtful that many people utter that sentence and thereby perform the act of asking the standard question. That certainly seems unlikely outside of philosophical debates at least. But even worse, it is doubtful that inside or outside of philosophical debates anyone ever uses that sentence to ask the external question as Carnap conceives of it. Even nominalists don't hold that we should stop describing the world in terms of number talk. As a practical question it is undisputed that number talk is useful and great. No one in fact questions the usefulness of number talk, no matter how nominalistic their inclinations. Whatever question other than the standard question philosophers are in fact asking when they continue to ask whether there are numbers is thus not the question whether it is useful to describe the world in the numbers language. That is not a controversial issue. If there is a real controversy about whether there are numbers it is not that one. On a charitable interpretation of the dispute that appears to be a real dispute to many philosophers about whether there are numbers, it is not a dispute about a practical question, in particular the question of the usefulness of number talk.

All this leads me to conclude that whatever was correct about Carnap's Big Idea, it is not what Carnap made of it. If there really are two questions then it isn't the two questions that Carnap thought they were. If Carnap's Big Idea is correct then it must be something else that is going on. But Carnap's Big Idea does seem to be onto something. On the one hand we philosophers all agree that there are infinitely many prime numbers, and thus that there are infinitely many numbers. But on the other hand we want to continue to ask whether or not reality contains such things as numbers, which we also are naturally inclined to ask by asking whether numbers exist, or alternatively, whether there are numbers. This appears to be incoherent, unless, of course, Carnap's Big Idea is correct, and we are indeed asking two different things here when we are asking whether there are numbers. Is there a better way to understand this difference and to defend Carnap's Big Idea?

It might be tempting to simply assert that there is a difference in question about what there is, one being a metaphysical question, the other being a non-metaphysical one, without saying more about what this difference comes down to.[4] But this would be unsatisfactory for a variety of reasons. First, it is not clear whether there really are two ways of asking these questions. Sure, it would make more sense of metaphysics as we think of it if there are two ways, but we can't assume that metaphysics makes sense as it is in fact practiced. What metaphysics is supposed to do, and what questions it is supposed to ask is part of the issue that is under discussion here. Second, taking such a distinction as unexplained and as being metaphysical vs. non-metaphysical makes it unclear why we should think that we have these two questions available to be asked in languages like ours. It is hard to believe that the metaphysical-non-metaphysical distinction is somehow built into our language. If it doesn't come from somewhere else, why would it be there in the first place? But if it does come from somewhere else, if we can understand why there are two questions here for reasons not simply tied to a primitive distinction, and if these two questions do help us understand what is going on in metaphysics as a consequence, then we could hope to make real progress. We could then hope to understand how the questions we ask in ontology differ from and are similar to the questions we ask in mathematics and elsewhere, and why what seemed puzzling about the metaphysical questions nonetheless makes sense. To do this we need to see how Carnap's Big Idea is vindicated in a language like ours.

[4] See, for example, Chalmers (2009), where such a distinction is taken for granted.

1.4 A Non-Carnapian Defense of Carnap's Big Idea

In this section I will argue that there are two questions about what there is since the question sentence 'Are there numbers?' has two different readings. There are thus two standard questions that can be asked with this sentence. These two standard questions correspond, on the one hand, to the trivial question, which is easily answered in mathematics or by example, and, on the other hand, to the substantial question, which is asked in metaphysics. But the reason why there are two standard questions, and why this sentence has two readings, is not tied to metaphysics, but to two functions that quantifiers have in ordinary communication. These two readings correspond to two different needs we have in communication that we use quantifiers to fill.

One thing we do with quantifiers in ordinary communication is to make a claim about all the things in the world, whatever they may be. This is what we do when we say things like

(11) Something is making a weird noise.

Here we simply claim that among all the things there are, there is one, which is making a weird noise. This reading is the one standardly associated with quantifiers. In this use we make a claim about the domain of all objects, and we can thus call it the domain conditions reading. This, however, is not the only reading of quantifiers. Quantifiers are polysemous, they can make more than one contribution to the truth conditions of a sentence in which they occur, and these different readings are not unrelated. On a second reading quantifiers are used for their inferential role, and this we can thus call their inferential role reading. On this reading we want the quantifier to inferentially relate to other sentences in our own language. A good example of this need for quantifiers comes from when we attempt to communicate partial information, that is, when we communicate information that is less complete than it could be in a particular way. To illustrate, suppose you learn about Dick Cheney that he greatly admires Iago from Shakespeare's *Othello*. This is useful information about what Cheney is like. But when you try to communicate it to others you can't remember who that was again whom Cheney admires. All you remember is that whoever it was, that person is great at intrigue. That information is still pretty good, and you can communicate it by uttering

(12) There is someone whom Cheney greatly admires who is very good at intrigue.

To be able to do this we want from the quantifier in (12) that it has a certain inferential role. The instance (12) with 'Iago' instead of the quantifier is supposed to imply it, and this inference is supposed to be not just with 'Iago', but with any other instance as well. That is to say,

(13) Cheney admires Iago, and Iago is very good at intrigue.

is supposed to imply (12), and so for any other instance. In particular, it is not supposed to matter, for your purposes, whether or not the world contains such an Iago, whether Iago is real or fictional in this case. All that matters is that the inference according to the schema 'F(t) thus something is F' is valid. The inferential role reading of the quantifiers thus has to make different contributions to the truth conditions of a sentence than the domain conditions reading. I have spelled out the motivations for why we should think there are these readings, how they differ in truth conditions, how they can be understood for quantifiers more generally, and some other related things, in a series of papers including (Hofweber 2000), (Hofweber 2005b), and in particular Chapter 3 of (Hofweber 2016). On this view of quantification, quantifiers are polysemous in that sentences in which they occur have different, but closely related, readings. These readings correspond to different functions that quantifiers have in ordinary communication, and lead to different truth conditions. Suppose this is indeed true. We can then see how it vindicates Carnap's Big Idea.

Suppose that quantifiers in general are polysemous and have a domain conditions reading and an inferential role reading. Then the sentence

(14) There are numbers.

will have two readings, one tied to the inferential role of the quantifier, the other to the domain conditions reading.[5] Similarly, the question

(15) Are there numbers?

will have two corresponding readings. One of those is trivial. On the inferential role reading (14) is immediately implied by 'Two is a number', just using the inferential behavior of the quantifier. Thus the question (15) can indeed be trivially answered by example on that reading. On the inferential reading of the question (15) it is indeed answered by

(16) Of course there are numbers: two is one, three is another.

However, on the domain conditions reading the question is not trivial. Here an example alone would not do, since more is required than just an instance. What we would need to know is that the instance is a referential or denoting expression, i.e. that it has at least that semantic function, and furthermore that it succeeds in carrying out that function. Similarly, when we ask

(17) Is there someone Cheney admires?

using the quantifier in the domain conditions reading, the answer 'Iago' is not good enough unless Iago is part of the world, one of the things that reality contains. Whether Iago qualifies for that is controversial, and 'Iago' only answers the domain conditions version of the question if that debate goes one way. The inferential role reading of the

[5] This sentence is generally believed to be a quantificational sentence. On reflection it is not so clear whether this is correct, but it turns out to be correct after all. This is discussed in more detail in Chapter 3 of Hofweber (2016).

general questions about what there is can usually be answered trivially by example, while the domain conditions reading cannot.

The inferential role reading of a quantified statement relates it inferentially to other sentences in one's own language. Its truth conditions thus concern the internal relations among sentences in a language. What is sufficient for a quantified statement like 'Something is F' to be true on the inferential reading is thus that there is a true instance 'F(t)' in one's own language. In contrast, on the domain conditions reading, 'Something is F' is true just in case there is a language external object which is F.[6] Because of this I find it natural to call the inferential reading the *internal reading* and the domain conditions reading the *external reading*. And just as on Carnap's account, the internal reading for general questions like 'Are there numbers?' is usually trivial, while the external reading is not trivial.[7] But this is almost where the similarities end.

Contrary to Carnap, on the outlined alternative understanding of why there are two questions, both questions have exactly the same status. It is not that one is endowed with cognitive value while the other is not. To the contrary, both are purely factual questions of the same kind. They are simply based on two different readings of an expression that occurs in them. The domain conditions and the inferential reading give two different truth conditions of the same sentence, but are not different in status otherwise. Both have cognitive content, both are equally descriptive, factive, etc.

On this account we can also distinguish internal from external questions about what there is. But now these two questions are simply the two standard questions asked with utterances of the sentence 'Are there Fs?' on its internal, inferential role reading and its external, domain conditions reading, respectively. Since the sentence has two, and as far as I can tell only two, readings, there are two, and only two, standard questions that can be asked with it. This way of understanding the difference between internal and external questions leads to there being a clear sense in which there are two questions, not one or many more. But what matters, of course, is not just how many questions there are, but what follows from all this for ontology, metaphysics, and philosophy.

1.5 Carnap's Big Idea and the Ambitions of Metaphysics

Carnap held that metaphysics is to be rejected as part of inquiry, that is, part of the project of finding out what reality is like, or what facts obtain. For the case of ontology this rejection was closely tied to his Big Idea. Ontology, the metaphysical discipline, can't be charitably understood as trying to ask the internal question about what there is, since that question, on his understanding of it, was completely trivial for many of

[6] On the relationship between these two readings of quantifiers and the objectual vs. substitutional interpretation of quantifiers, see Hofweber (2000) and especially Chapter 3 of Hofweber (2016).

[7] For a discussion of various ways to defend a distinction between internal and external questions, see also Section 8.1 of Matti Eklund's essay in this collection (Eklund 2015).

the heavily debated cases. Thus some other question must be intended as the question asked in ontology. However, there is no other plausible candidate for a question of fact that is being asked with an utterance of the question sentence used in the internal question. The only charitable way of understanding ontology is thus for it not to ask questions of fact, but questions about what to do. The latter questions are not part of inquiry, however, and so neither is ontology on the most compelling way of understanding it. The questions asked in ontology, according to Carnap, are to be rejected in one sense, but to be embraced in another. They are to be rejected as being part of inquiry and as a discipline that asks questions of fact, since the external question ask about what to do, not what is the case. But the external question is a perfectly good practical question. The practical question is not to be rejected, but to be asked and taken seriously. But it doesn't deserve the name of 'ontology' as it is commonly understood, that is, as being part of inquiry. Carnap's version of a distinction between internal and external questions is thus anti-metaphysical in its upshot. There is no question of fact for ontology to answer, and since that is what ontology hoped to do, it is based on a mistake. But things look quite differently on the other version of an internal–external distinction outlined and endorsed above.

If internal and external questions are just the standard questions asked with utterances of the same sentence on two different readings along the lines specified above, then both of them are questions of fact. One of them will be trivial for general cases like the ones traditionally asked in ontology: Are there numbers, objects, properties, etc.? These questions can all be answered affirmatively by example. But all this leaves the answer to the second, external reading of the same question open. The question whether there are numbers, on the external reading, is not trivial, and it is not at all clear what the answer is. It also isn't clear whether this question is the right question to be asked in ontology, as it is traditionally understood, since it isn't clear whether this question should be addressed in metaphysics, as opposed to, say, mathematics. It is a candidate for being the question asked in ontology, but is it the right candidate? It certainly is a natural candidate, since it asks whether among all the things there are numbers, that is, whether numbers are part of the domain of things. But whether this question should be seen as philosophical or metaphysical is a further issue. Thus whether it can be seen as being addressed in a project remotely like what ontology and metaphysics was intended to be is so far left open.

Take the question 'Are there numbers?' on the domain conditions, or external reading as an example. It is not trivially answered with 'Sure, since two is a numbers,' since on the external reading of the quantifier it is only true if a number is part of the language-independent domain of all objects. This does not follow simply because two is a number. It could be, somehow, that 'two' in that sentence does not pick out nor aim to pick out an object. Maybe 'two' in that sentence does something else semantically, while the sentence 'two is a number' is still true. This is a coherent possibility, and if it obtains then the inference from 'two is a number' to 'there are numbers' is invalid on the external reading of the quantified sentence.

Even though the external question 'Are there numbers?' is not trivial, it remains open by all this whether it is nonetheless answered in other ways than by example, and maybe even answered quite trivially. For example, is an answer to it immediately implied by Euclid's Theorem that there are infinitely many prime numbers? It certainly would be if Euclid's Theorem were true not just on its internal reading, but also on its external reading. The quantifier 'infinitely many' has an internal and an external reading just like other quantifiers. Euclid's Theorem is certainly shown to be true in mathematics, but on which reading is it established there? Clearly at least on the internal reading, or so is not too hard to see. But is it established on the external reading as well? That will depend on how quantifiers are used in mathematics, which is connected to how number words are used in mathematics. If number words are nothing like names for objects, if they are not referring or denoting expressions at all, then quantifiers would be badly matched with them if they would be used in their external reading in mathematics. Non-referential number words are more congenial with quantifiers over numbers used in their inferential reading. On the other hand, if number words are names for objects then this is congenial with the use of quantifiers over numbers on their external, domain conditions, reading. Referential number words are congenial with external quantifiers, non-referential number words with internal quantifiers. These two pairs form two coherent options of how our number talk might work.

This does not just apply to talk about numbers, but, *mutatis mutandis*, to talk about properties, objects, events, and so on as well. Non-referential singular terms go with internal quantifiers; referential singular terms go with external quantifiers. If for a particular domain the singular terms are non-referential and quantifiers are in general used in their inferential reading then we can say that *internalism* about that domain is true. On the other hand, if the singular terms are referential and quantifiers are used on their external reading then *externalism* is true. Which one is true for a particular domain is a substantial and difficult question. And it is in principle also possible that neither one is true, and that the domain of discourse does not exhibit a certain amount of coherence. Whether internalism or externalism is true for a domain is crucial for metaphysics. Here is why.

Suppose externalism is true for talk about numbers. Then Euclid's Theorem implies an answer to the external question whether there are numbers. Since quantifiers in mathematics, by externalism, are used externally, Euclid's Theorem involves an external quantifier over numbers. And it thus immediately implies that there are numbers in the external reading. The question whether there are numbers is thus answered in mathematics in both the internal as well as the external reading. There is then no further metaphysical question left to be asked. Whatever questions there were, they are all answered outside of philosophy, in this case in mathematics.

But if, on the other hand, internalism is true about talk about numbers then Euclid's Theorem only implies an answer to the internal question about whether there are numbers. The external question whether there are numbers will be left open by what is established in mathematics. This further, external question is a great candidate for the question that has frequently been asked in ontology, i.e. does the world contain besides objects like tables and chairs also other things: numbers? This question is not answered by example, and if internalism is correct, it also is not answered in mathematics. It is a further question that goes beyond what is established this way, and it is a prime candidate for the question we ask in ontology. Thus if internalism is true then things are just as many originally thought they were: when we do ontology, the discipline, which is part of metaphysics, we should try to find out whether there are numbers. This is not something that is found out in mathematics, or answered by example, but a question that goes beyond all that. If internalism is true about talk about numbers then the external question whether there are numbers is one that can be seen as properly belonging to ontology and metaphysics. The upshot now is that the distinction between internal and external questions drawn this way is not at all anti-metaphysical. To the contrary, it has the potential to show that some questions about what there is properly belong to ontology, understood as a part of metaphysics. What needs to be the case for this to obtain is that internalism is true for the corresponding domain of discourse.

Whether internalism or externalism is true about domain of discourse is a complex and substantial question. It requires a close investigation into what we do when we talk a certain way. And to settle this is a largely empirical question. I have given it my best in other work to try to answer this question for a few cases. There I had to conclude that externalism is true for talk about ordinary objects, but internalism is true for talk about natural numbers, properties, and propositions. For many other cases I do not know the answer, in particular for events. I have given my reasons for these views in a series of papers,[8] and the arguments are presented in more detail in Hofweber (2016). I won't attempt to explain here why things turned out the way they did for these different cases. What matters now is mostly what significance Carnap's Big Idea has for metaphysics and ontology. And here there is quite some significance, but it is different than what Carnap had in mind.

Carnap's way to defend Carnap's Big Idea turns it against metaphysics, but the present way of defending it does not. In fact, it is a way to defend metaphysics against the most serious charge that it is a confused project. This charge is not that the questions are meaningless, but to the contrary, that the questions are meaningful but already, and often trivially, answered. In a sense, Carnap was also concerned with this challenge, since he clearly doesn't think that one could reasonable take the metaphysician to ask the trivial internal question, since that is already answered, and so trivial that everyone should know the answer. But even leaving aside whether or not Carnap was correct that there is a sense of the question 'Are there numbers?' on which it is trivially answered in the affirmative (I agree with him on this), the issue remains whether that question is answered, trivially or not, in other parts of inquiry. Thus even if Carnap is wrong, and the question whether there are numbers is not trivially answered in any

[8] See, in particular, Hofweber (2005a) and (2006).

sense, it certainly seems to be answered in mathematics. Thus there seems to be no work left for ontology or metaphysics to do given what has been done in mathematics. It is this worry, the worry that metaphysics has no domain, no area of inquiry that is its own, that seems to deprive it of its place in inquiry. If metaphysics merely tries to answer questions that have already been answered in other parts of inquiry, parts that are highly trustworthy, then there is nothing left to do. Metaphysics would have to go, not because its question can't be asked, but because they have already been answered. But this would not be so if internalism were correct about a domain of discourse. If internalism is true then the external question is not answered by what we have shown to be true in that domain. The external question is perfectly meaningful and factual, but it is still open. Metaphysics can try to tackle it, and for questions about what there is, ontology would be the part of metaphysics to do so.

How the project of ontology so understood is to be carried out, what we can hope to do here, and how things will turn out for individual cases are all question that are left open by what has been discussed here.[9] What is crucial for this chapter is that Carnap's Big Idea is the key ingredient in how this will go. We need to distinguish two kinds of questions we can ask when we ask whether there are properties, classes, numbers, or propositions, or anything else. This was Carnap's important insight, and I believe it is the key to ontology, to why ontology can be part of metaphysics, and with it to many questions in metaphysics. Metaphysics turns out OK, although different than expected, and we should thank Carnap for it.[10]

References

Carnap, R. (1956). Empiricism, semantics, and ontology. In *Meaning and Necessity*. University of Chicago Press, 2nd edition.

Chalmers, D. (2009). "Ontological anti-realism," in Chalmers, D., Manley, D., and Wasserman, R. (eds.), *Metametaphysics*. Oxford University Press.

Frege, G. (1884). *Die Grundlagen der Arithmetik: eine logisch mathematische Untersuchung _ ber den Begriff der Zahl*. W. Koebner, Breslau.

Hofweber, T. (2000). "Quantification and non-existent objects," iIn Everett, A. and Hofweber, T. (eds.), *Empty Names, Fiction, and the Puzzles of Non-Existence*, pp. 249–73. CSLI Publications.

Hofweber, T. (2005a). "Number determiners, numbers, and arithmetic," *The Philosophical Review* 114(2): 179–225.

Hofweber, T. (2005b). "A puzzle about ontology," *Nous* 39: 256–83.

Hofweber, T. (2006). "Inexpressible properties and propositions," in Zimmerman, D. (ed.), *Oxford Studies in Metaphysics*, Volume 2, pp. 155–206. Oxford University Press.

9 But see Hofweber (2016) for how I think it will turn out.

10 This chapter benefited from my attending Robert Kraut's graduate seminar on Carnap at Stanford in the late 90s, and from discussing Carnap with the participants of two of my own graduate seminars at Michigan and UNC. Thanks also to an anonymous referee for a number of good suggestions.

Hofweber, T. (2016). *Ontology and the Ambitions of Metaphysics*. Oxford University Press, Oxford, UK.

Tarski, A. (1983). "The concept of truth in formalized languages, " in *Logic, Semantics, Metamathematics*. Hackett.

von Fintel, K. and Matthewson, L. (2008). "Universals in semantics," *Linguistic Review* 25: 139–201.