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Carnap's epistemological critique of metaphysics

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Abstract Many who take a dismissive attitude towards metaphysics trace their view back to Carnap's 'Empiricism, Semantics and Ontology' (1950a). But the reason Carnap takes a dismissive attitude to metaphysics is a matter of controversy. I will argue that no reason is given in 'Empiricism, Semantics and Ontology', and this is because his reason for rejecting metaphysical debates was given in 'Pseudo-Problems in Philosophy' (1928). The argument there assumes verificationism, but I will argue that his argument survives the rejection of verificationism. The root of his argument is the claim that metaphysical statements cannot be *justified*; the point is epistemic, not semantic. I will argue that this remains a powerful challenge to metaphysics that has yet to be adequately answered.

Keywords Carnap · Confirmation · Prior probability

1 Introduction

Metaphysics can induce frustration. Many philosophers would have had the experience, perhaps early in graduate school, of listening to a metaphysics debate and wondering whether anything was really at issue. The feeling of frustration has an esteemed history. One of the central ideas of logical positivism was that there is something wrong with metaphysical debates. Despite the rehabilitation of metaphysics in recent years, the worry that there is still something wrong with metaphysical debates has not gone away. Following Bennett (2009), we'll call this deliberately loose idea

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dismissivism.[1] Many dismissivists trace their view back to Carnap's 'Empiricism, Semantics and Ontology' (1950a). But the reason Carnap takes a dismissive attitude to metaphysics is a matter of controversy. I will suggest that no reason is given in 'Empiricism, Semantics and Ontology', and this is because his reason for rejecting metaphysical debates was given in 'Pseudo-Problems in Philosophy' (1928). The argument there assumes verificationism, which is why Carnap claims that there is no fact of the matter about the answer to metaphysical questions—any candidate answer would be meaningless. But I will argue that his argument survives the rejection of verificationism. The root of his argument is the claim that metaphysical statements cannot be *justified*; the point is epistemic, not semantic, and remains a challenge to metaphysics.

To be clear, I am not a historian and my interests are not primarily historical. I extensively discuss Carnap because I think the best argument against metaphysics can be found in his writings. Think of me as asking, on behalf of those who are suspicious of metaphysics: can an argument against metaphysics be salvaged from the wreckage of verificationism? The thrust of this paper is that it can be; the metaphysics-induced feeling of frustration is appropriate. Furthermore, the Carnapian argument applies to much of philosophy, not just metaphysics.

I'm also coming at the question from this direction because 'Empiricism, Semantics and Ontology' plays a large role in the background of many contemporary criticisms of metaphysics, for example Chalmers (2009), Hirsch (2002, 2005), Price (1997, 2009), Putnam (1987), Sidelle (2002), Thomasson (2007, 2009) and Yablo (2000). If 'Empiricism, Semantics and Ontology' doesn't contain the core of Carnap's argument however, those criticisms are based on shaky foundations. Instead, I think the epistemic arguments of Bennett (2009), Kreigel (2013) and others, rather than expressing a new worry for metaphysics, are returning the debate to the issues that motivated Carnap.

Part 2 argues that 'Empiricism, Semantics and Ontology' is enthymematic. In part 3, I reconstruct Carnap's (1928) epistemological argument and in part 4 I formulate an improved version. I consider interpretational objections in part 5 and philosophical objections in part 6. In part 7 I apply the argument to some metaphysical debates. Part 8 concludes.

2 Linguistic frameworks

Why did Carnap dismiss metaphysics? Here is what he says in a well-known passage:

> If someone wishes to speak in his language about a new kind of entities, he has to introduce a system of new ways of speaking, subject to new rules; we shall call this procedure the construction of a linguistic *framework* for the new entities in question. And now we must distinguish two kinds of questions of existence: first, questions of the existence of certain entities of the new kind *within the framework*; we call them *internal questions*; and second, questions concerning the existence or reality *of the system of entities as a whole*, called *external questions*. (1950a/1991, p. 86, italics original)

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[1] It is important to keep this as a loose idea for now because the best formulation of dismissivism is one of the things at stake in this paper.

Carnap then claims that there is something wrong with external questions:

> From these [internal] questions we must distinguish the external question of the reality of the thing world itself. In contrast to the former questions, this question is raised neither by the man in the street nor by scientists, but only by philosophers. Realists give an affirmative answer, subjective idealists a negative one, and the controversy goes on for centuries without ever being solved. And it cannot be solved because it is framed in a wrong way. (1950a/1991, p. 86)

So the debate between idealists and realists should be dismissed because they are framed in the wrong way. But why are they framed in a wrong way? Carnap continues the passage:

> To be real in the scientific sense means to be an element of the system; hence this concept cannot be meaningfully applied to the system itself. (1950a/1991, p. 86)

But this raises many questions. First, why should we distinguish scientific from non-scientific senses of real? Second, even if we do, why think that to be real in a scientific sense is to be an element of the system? Third, even if it is, why can't the concept be meaningfully applied to the whole system? Fourth, even if it can't, why not invent a new, philosophical, concept that can be meaningfully applied to the whole system? A little later Carnap says:

> …[T]he thesis of the reality of the thing world…cannot be formulated in the thing language or, *it seems*, in any other theoretical language. (1950a/1991, p. 87, Italics added)

And this gets to the heart of the matter. Carnap's dismissivism seems to rest on the semantic claim that the thesis of the reality of the world cannot be formulated. But *why can't the thesis of the reality of the thing world be formulated?*

Dismissivists have tended to assume that 'Empiricism, Semantics and Ontology' provides an argument, but when we look there is little to be found. Hirsch (2009) is commendably blunt: 'I do not understand Carnap's explanation of why ontological issues reduce to linguistic choices.' (2009, p. 231).[2] I think the reason is that no explanation is given in 'Empiricism, Semantics and Ontology'. In fact Carnap is explicit that his only aim in that paper is to explain how one can quantify over abstract objects without giving up one's empiricist scruples.[3] Yet Carnap seems to have an argument in mind.

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[2] Sidelle agrees: 'I have not really found—verificationism aside—a real argument in Carnap.' (2016, p. 79)

[3] He is explicit about this from the first sentence, and especially at the end of his introductory section: 'The nature and implications of the acceptance of a language referring to abstract entities will first be discussed in general; it will be shown that using such a language does not imply embracing a Platonic ontology but is perfectly compatible with empiricism and strictly scientific thinking…It is hoped that the clarification of the issue will be useful to those who would like to accept abstract entities in their work in mathematics, physics, semantics, or any other field; it may help them to overcome nominalistic scruples.' This also answers Eklund's (2013, p. 237) question of why Carnap (1950a) doesn't discuss nominalistic languages—nominalistic languages do not conflict with nominalistic scruples.

I think Carnap has in mind the argument given in his (1928). In fact the relevant argument is given in the final 5 pages of his 1928 monograph, an argument which, I think, remains a powerful challenge to metaphysics.

3 Pseudo-problems in philosophy

In this section I will reconstruct and update Carnap's argument for dismissivism. Carnap (1928) first defends the following principle:

> A statement p is said to have "factual content", if experiences which would support p or the contradictory of p are at least conceivable. (p. 327)

We can simplify this principle as follows,[4] and, for obvious reasons, call it *Verificationism*:

> *Verificationism* If sentence S has factual content then evidence which would support S or −S is conceivable

Carnap then applies Verificationism to the realism controversy using the following story:

> Two geographers, a realist and an idealist, who are sent out in order to find out if a mountain that is supposed to be somewhere in Africa is only legendary or if it really exists, will come to the same (positive or negative) result.
> …
> There is disagreement between the two scientists only when they no longer speak as geographers but as philosophers, when they give a philosophical interpretation of the empirical results about which they agree. Then the realist says: "this mountain, which the two of us have found, not only has the ascertained geographical properties, but is, in addition, also real"… The idealist on the other hand says: "on the contrary, the mountain itself is not real, only our (or in the case of the "solipsist" variety of idealism: "only my") perceptions and conscious processes are real"… These two theses which are here in opposition to one another go beyond experience [i.e. evidence] and have no factual content. Neither of the disputants suggests that his thesis should be tested through some joint decisive experiment, nor does any one of them give an indication of the design of an experiment through which his thesis could be supported.
> Our example can easily be generalized. What is true for the mountain is true for the external world in general. Since we consider only factual content as the criterion for the meaningfulness of statements, *neither the thesis of realism that*

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[4] Four minor changes have been made. First, the direction of the conditional has been reversed. The direction from factual content to conceivable experiences is the one supported by the argument Carnap gives which we'll come to below. (Carnap almost certainly endorsed the bi-conditional.) Second, 'statement' has been changed to the less ambiguous 'sentence'. Third, 'factual content' no longer appears in quotes. Fourth, 'experiences' has been replaced with 'evidence'. This is to fit better with modern terminology, and to avoid any connotations of certainty, or immunity to doubt—Carnap seems to use 'experience' and 'evidence' interchangeably. The key point is that evidence is a posteriori. As long as this is kept in mind, feel free to replace 'evidence' with 'experience' or 'observation'.

the external world is real, nor that of idealism that the external world is not real can be considered scientifically meaningful, pp. 333–334. [Italics original]

The two key claims are, first, that for any sentence S that expresses a metaphysical hypothesis (realism, idealism, etc…), S (and −S) go beyond evidence and, second, it follows that there is no conceivable evidence that would support S or −S. Letting S express a metaphysical hypothesis, we can put these two claims into the following principle:

2. It is not the case that evidence which would support S or −S is conceivable.

Combining this with Verificationism produces the following argument.

Carnapian Argument
1. If sentence S has factual content then evidence which would support S or −S is conceivable (Verificationism).
2. It is not the case that evidence which would support S or −S is conceivable.
3. Therefore, S does not have factual content.

This is my reconstruction of Carnap's argument for dismissivism. We can finally state Carnap's version of dismissivism: metaphysical sentences have no factual content.

Is this interpretation of Carnap controversial? Some will say no—it is widely agreed that Carnap's verificationism played a role in his critique of metaphysics. Even if this reconstruction is uncontroversial, I will use it to argue that the appeal to verificationism is not essential.

But some will think this is a controversial reconstruction of Carnap, as it is incompatible with two widely held theses about Carnap's critique of metaphysics. First, some hold that there is a close connection between Carnap's critique of metaphysics and either the internal/external distinction or the analytic/synthetic distinction (or both).[5] But the *Carnapian Argument* doesn't rely on the analytic/synthetic or the internal/external distinction.[6]

Second, the quote above shows that Carnap allows that external questions could be acceptable if there is possible evidence that might settle them; this suggests that

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[5] E.g. Quine (1951a, b).

[6] The terminology of 'internal' and 'external' can be used to mark many different distinctions e.g. (i) use versus mention (ii) metaphysical versus non-metaphysical (iii) subset of entities versus whole system of entities (iv) within a language versus not within a language (v) grammatical versus ungrammatical (vi) cognitive versus pragmatic. Thus I think the internal/external terminology is best avoided. Reasons for the confusion can be traced to Carnap (1950a), in ways that do not seem to have been noticed. He says in the first quote above: 'first, questions of the existence of certain entities of the new kind within the framework; we call them internal questions; and second, questions concerning the existence or reality of the system of entities as a whole, called external questions.' In the first clause, it is unclear whether it is the entities that are within the framework or the questions. That is, we could parse the sentence as 'questions of the [existence of certain entities of the new kind within the framework]' or as '[questions of the existence of certain entities of the new kind] within the framework. Also, internal and external questions are defined in such a way that they are compatible—a question could be within the framework and about the reality of the system of entities as a whole. There are two distinctions to keep track of: (a) between questions that are within the framework and questions that are not within the framework (b) between questions about the reality of the system of entities as a whole and questions not about the reality of the system of entities as a whole.

interpretations of Carnap on which external questions are *ungrammatical* are mistaken.[7]

4 Updating Carnap's argument

Is the argument convincing? Not as stated, but I will argue that both premises can be improved.

Premise 1 would certainly be rejected by contemporary philosophers, as verificationism has long been rejected,[8] and such Carnapian arguments are usually dismissed on the grounds that they presuppose verificationism.

But we can now see the key point: verificationism is a dispensable part of the argument. At the heart of Carnap's argument is a claim about *justification*. I think this is what Carnap was really getting at, but, more importantly, it improves the argument. If we go back to Carnap's example of the two geographers, the root of the unease about the dispute between realism and idealism is that 'these two theses…go beyond experience [evidence]', and disputes that go beyond evidence are problematic because it is unclear how we can have *justification* to believe one side over the other. So I suggest we replace:

1. If sentence S has factual content then evidence which would support S or −S is conceivable (Verificationism)

with:

1'. If we can have justification for S then evidence which would support S over −S is conceivable.[9]

Let's move on to premise 2:

2. It is not the case that evidence which would support S or −S is conceivable.

At this point we need to say something about the concept of support. Fortunately, there is wide agreement that the best analysis of the concept of support (confirmation) is the Bayesian probability raising account that, where P expresses an agent's degree of belief,

$$E \text{ supports } S \text{ iff } P(E|S) > P(E| - S)^{[10, 11]}$$

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[7] E.g. Price (2009).

[8] Russell (1947) and Magidor (2009).

[9] S and T are restricted to non-tautologies. Carnap thought that tautologies had no factual content, and so had no need to restrict his argument in this way. But I will remain neutral on whether tautologies have factual content, and whether we can have justification to believe them. Thanks to Daniel Nolan for raising this issue.

[10] The agent's background beliefs are contained in the credence function P and will be left implicit. These will be relevant to the inequality and account for confirmation holism (see below).

[11] Salmon (1975). Salmon actually discusses $P(S|E) > P(S)$, but this is equivalent to the inequality in the text assuming that $0 < P(S) < 1$. The only Bayesian tenets we need are that beliefs should not violate the axioms of probability.

(Whether P can stand for *rational* belief will be a key issue later.) So premise 2 says that for any conceivable evidence E, P(E|S) = P(E| − S). We can think of premise 2 as saying that S is immune to evidence. But now we face a problem.

Which sentences are immune to evidence? Plausibly, none, due to confirmation holism. That is, given the right background information, any sentence can confirm any other sentence. For example, take a paradigm sentence that looks immune to evidence: '19 angels can dance on the head of a pin'. And suppose our background information includes 'if I see a red flash then 19 angels can dance on the head of a pin'. Now '19 angels can dance on the head of a pin' is not immune to evidence. This is a toy example, but the point should be clear—given the right background information, for any sentence, there is some evidence that would confirm it[12,13]. Thus, few, if any, candidates for S satisfy premise 2.

I think this objection can be answered. The key is to notice, first, that in many metaphysical debates a sentence is contrasted, not with its negation, but with an *alternative*.[14] And second, the alternatives are usually intended to predict all the same evidence. For example, consider the debate between the realist and the idealist above:

H1 = The mountain is real (and goes beyond our perceptions)
H2 = Only our perceptions are real.

The realist and the idealist will both set up their hypotheses so that they predict the same evidence.[15] H1 and H2 are *empirically equivalent* i.e. they predict exactly the same evidence, so for any E, P(E|H1) = P(E|H2). If follows that no conceivable evidence supports H1 over H2. Given a debate that has been carefully circumscribed in this way, the point about confirmation holism will have no force. We can grant that any sentence *can* be confirmed by any other (given particular background beliefs), but no evidence *will* support realism over idealism or vice versa (given that they predict exactly the same evidence). To put it another way, for any two theories, if conceivable evidence E confirms one over the other, the two theories cannot be realism and idealism.

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[12] This is famously part of Quine's (1951a) attack on logical positivism.

[13] Van Fraassen faces complications here. He claims (1980, p. 12) that science does not aim to show that theories are true, but he does seem to allow that science can show that they are false (1998, p. 215). It's not obvious how this asymmetry is to be explained; see also Hájek (1998), Monton (1998). My suggestion is that when the issue is S versus −S, science can confirm or refute S. When the issue is S versus (a well-chosen) T, science can neither confirm nor refute S.

[14] Sober (1990) calls a similar position 'contrastive empiricism'. My position differs from Sober's in two main respects. First, he thinks that hypotheses *cannot* be compared with their negation; they must be *contrasted* with an alternative. I don't endorse this claim. I use S and T (rather than −S), only because S and T are more often empirically equivalent. Second, the reason Sober thinks that claims cannot be compared with their negation is his denial of rationality constraints on priors. I don't rule out rationality constraints on priors.

[15] For a more scientific example, compare Putnam's (1983, pp. 42–43):
H1 = Space–time consists of points
H2 = Space–time consists of extended space–time neighbourhoods.

Applying this to premise 2, the improved version says that the target sentences are empirically equivalent. So we replace:

2. It is not the case that evidence which would support S or −S is conceivable

with:

2C. It is not the case that evidence which would support S over T is conceivable.

In many cases, metaphysicians engaged in a debate intend that their competing hypotheses should be empirically equivalent. However, if hypotheses are *not* empirically equivalent then 2C will not apply, and the range of debates for which evidence is relevant is highly contentious. For example, consider the debate about whether numbers exist. If there could be *evidence* confirming that there is a prime number between 4 and 6 (e.g. a proof that 5 is not divisible by 2, 3 or 4), then 2C will not apply. Similarly, if finding a best theory of the world that quantifies over numbers would be evidence for the existence of numbers, then 2C will not apply.[16,17] So the epistemological argument we are developing *deflates* debates that can *not* be resolved by evidence and *vindicates* debates that *can* be resolved by evidence; whether a debate is scientific, philosophical or metaphysical does not come into it. We'll come back to this in Sect. 6, where the upshot will be that whether our argument applies will have to be assessed on a case-by-case basis, varying with the topic, and even with the philosopher.

One final modification. In order for 2C to fit the first premise, we have to compare S with T in the first premise too. So we replace

1′. If we can have justification for S then evidence which would support S over −S is conceivable.

with

1C. If we can have justification for S over T then evidence which would support S over T is conceivable.[18]

Putting these together, we arrive at the challenge to contemporary metaphysics.

Epistemological Argument

1C. If we can have justification for S over T then evidence which would support S over T is conceivable.
2C. It is not the case that evidence which would justify S over T is conceivable.
3C. Therefore we cannot have justification for S over T.

This argument is not semantic, but epistemic. Instead of saying that metaphysical theses can't be stated, it says that we can have no justification to believe them. The result

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[16] Quine (1948), Field (1980).

[17] Alternatively, if we grant that there are analytic sentences, we could hold that it is analytic that numbers exist. But I want to remain neutral on the analytic/synthetic distinction.

[18] The phrase 'justification for S over T' is a bit awkward but just means that in a rational credence function, $P_E(S) > P_E(T)$, where E is (possibly empty) background evidence. We might more naturally talk about justification to believe S over T, but this might be misinterpreted as referring to traditional all-or-nothing belief, or as requiring a high posterior.

is almost as devastating for metaphysics. If we can have no justification to believe a metaphysical hypothesis, there is no point trying to have a rational metaphysical debate—so there is no point doing metaphysics.[19]

To recap, Carnap's argument ran:
Verificationism + Metaphysics can't be justified = Metaphysics has no content

Once we reject verificationism, the conclusion that metaphysics has no content can't be defended. But the heart of the argument, that metaphysics can't be justified, remains.

To reject the Epistemological Argument we'd have to argue either that some metaphysical theses can be justified by the evidence (thus rejecting 2C) or that we can have non-evidential justification for some metaphysical hypothesis (thus rejecting 1C). I'll come back to this in part 6.

Before moving on I'll briefly compare three recent works by Karen Bennett, Ted Sider and Uriah Kriegel that make related points.[20] Bennett (2009) suggests a similar epistemic conclusion, but for different reasons. She suggests that often 'there is little justification' (p. 42) for opposing metaphysical hypotheses. Her reasoning is that as most metaphysicians want to minimize the difference between their own view and their opponent's, the resulting views end up so similar that arguments against one view rebound against the other view.[21] She seems to grant that we do have non-evidential justification, but thinks this justification often ends up being weak. In my terms, Bennett denies 1C, but offers a different path to 3C (or perhaps a weaker version of 3C).

Sider (2011) notes a similar challenge in passing:

One complaint [about metaphysical disputes, and in Sider's example about extended simples] is purely epistemic. It admits that the dispute is substantive, but claims that the considerations offered by the enthusiasts [metaphysicians] are inadequate to resolve it. We do not know whether there exist extended simples, it is alleged, and the enthusiasts [metaphysicians] arguments aren't helping. (p. 80)

Although Sider quickly dismisses three other complaints (p. 82) there is no quick dismissal of this one.[22]

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[19] Wilson (2011) is the closest forerunner I have found as an interpretation of Carnap. See also Biggs and Wilson (2016).

[20] See also Merricks (2001), p. 9, Ladyman and Ross (2007), Maclaurin and Dyke (2012), Donaldson, (2015). Van Fraassen's (1980) influential defence of empiricism also coheres with this approach; he claims we should be *agnostic* about unobservable entities, which is an epistemological claim.

[21] Here's one of Bennett's examples: 'One of van Inwagen's main arguments for nihilism is the conjunction of the claim that (a) all of the nonextreme answers to the Special Composition Question are unacceptably arbitrary, with the claim that (b) the extreme answer 'always' is not acceptable for other reasons (1990, pp. 74–80). Nihilism is the only remaining option. However, the nihilist is actually threatened with arbitrariness just as much as the believer is. The nihilist does indeed have a straightforward answer to the…question 'when, if ever, do some things compose an F?'…[T]he nihilist will say 'never'. But there is a question closely analogous to the second of those two, to which the nihilist does *not* have a straightforward answer—namely, 'when, if ever, are some things arranged Fwise?', p. 66

[22] This is not to say that Sider has no answer. He answers it using the same methodological principles about theory choice as science, a Quinean strategy he endorses in ch. 2. He is explicit in his (2013): 'Nihilism is an ideologically simpler theory, and so is more likely to be true' p. 239. This is a specific version of the

Kreigel (2013) provides the most detailed discussion of this epistemic challenge, and his discussion is in the same spirit as my own. In my terms, he defends 1C and 2C, but ends up suggesting that there must be some way to avoid 3C. I will briefly suggest a way in part 6, which discusses objections to the Epistemological Argument. But in the intervening part I will discuss objections to this interpretation of Carnap.

5 Objections: interpretational issues

Consider two prongs of attack to my interpretation of Carnap. First, is there textual evidence to support it? Second, is there textual evidence against it?

Is there textual evidence to support this interpretation that Carnap's argument against metaphysics was given in 1928? This reconstruction is supported by the brief comments Carnap makes in 'Empiricism, Semantics and Ontology'. When mentioning his rejection of 'both the thesis of the reality of the external world and the thesis of its irreality as pseudo-statements' (1950a/1991, p. 91) he cites his 1928 monograph. Furthermore, towards the end of 'Empiricism, Semantics and Ontology' he says, regarding the 'problematic' external questions:

> I cannot think of any possible *evidence* that would be regarded as relevant by both philosophers, and therefore, if actually found, would decide the controversy or at least make one of the opposite theses more probable than the other…Therefore I feel compelled to regard the external question as a pseudo-question, until both parties to the controversy offer a common interpretation of the question as a cognitive question; this would involve an indication of possible evidence regarded as relevant by both sides. Italics added. (1950a/1991, p. 96)

Notice that Carnap does *not* say that these external questions are meaningless, or ungrammatical. All he says is that both parties need to agree about what *evidence* would be relevant to the question. This epistemic point is in perfect agreement with his earlier 1928 monograph.

And in his intellectual autobiography Carnap explicitly refers back to his 1928 monograph:

> Grünbaum regards phenomenalism as a "profound error"; we are entirely in agreement with him in this rejection, but we should prefer to say "pseudo-statement" instead of "error". Furthermore, Grünbaum says that he does not know of any refutation or even an adequate treatment of the arguments for realism. If "realism" is understood as preference for the reistic language over the phenomenal language, then I am also a realist.
> *However, if "realism" is understood, in the customary sense, as an ontological thesis, then the arguments against it were given in my monograph [1928]; I do not know of any refutation or even a thorough critical discussion of my arguments.* (1963, p. 870) Italics added

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Footnote 22 continued

strategy I defend. I claim only that there is non-evidential justification for metaphysical sentences; I don't claim that the same principles operate as in science, nor that different ones do.

This is a remarkable passage. Writing in his old age, Carnap refers back to an argument he gave some 45 years earlier in order to defend one of the most important theses in his philosophy.

And in a detailed discussion of the development of Carnap's thought, Lutz (2017) notes the similarity of the criteria of empirical significance defended in 1928 and 1963 and concludes: 'It seems, then, that Carnap's philosophical position has changed very little, although decades of technical work lie between these two statements of empiricism.'

Onto the second prong—is this interpretation compatible with Carnap's other writings? A worry is that the received wisdom is that Carnap underwent a radical shift in his views in 1935, marking the transition from the syntactic period to the semantic period. However, there is little agreement on exactly what this shift amounted to. Carnap's own understanding (1963) is that he adopted Tarski's theory of truth, allowing him to talk about semantic notions such as truth and reference. If so, this won't be in conflict with his 1928 argument, which is epistemological. Recent discussions of Carnap's shift have downplayed its significance (Creath 1999; Tuboly ms). I can't see any reason to think that this shift would stop him from relying on his 1928 argument in later work.

Are other works of Carnap problematic for my interpretation? A referee suggests that Carnap offers numerous arguments against metaphysics between 1928 and 1950. But somewhat surprisingly this is not the case. The most relevant discussions are (1934a) "The Rejection of Metaphysics" and (1934b) "On the Character of Philosophic Problems". His 1934a is in the same spirit as his 1928, but goes into considerably less detail. His 1934b is more significant. In a key passage, he claims that content can be reduced to syntax:

> For what…do we want to know when we ask concerning the content…of a proposition S? We wish to know what S conveys to us; what we experience through S. p. 12

This passage clearly presupposes verificationism (non-verificationists can hold that the content of a proposition goes beyond our experiences). But notice that Carnap is explicit once again that at root he is interested in the relation between the sentence and the *experiences* that would confirm it. So we can still get off the boat before the verificationism and make an epistemological point: 'what do we want to know when we ask concerning whether we have *justification* for a proposition S? We wish to know…what we experience through S'. More naturally put, we wish to know what experiences are predicted by S. Thus, all justification is through experience.[23]

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[23] Some philosophers (most explicitly Hylton 1982, but compare Ricketts 1982) have taken the dispute between Quine and Carnap to involve a methodological dispute about how we should decide between incompatible theories that agree with our evidence. If a methodological dispute is understood as a dispute about whether we can have justification that goes beyond evidence, then my interpretation coheres with theirs. Thanks to Vera Flocke for emphasizing this.

6 Objections: philosophical issues

Let's move on to the philosophical objections. How might metaphysical debates avoid the argument? We would have to deny either 1C or 2C.

Start with 2C, which says that no conceivable evidence would justify S over T. It might be argued that there *is* conceivable evidence that would favour some metaphysical hypotheses over others. There are two moving parts here—the specific metaphysical debate at issue, and our conception of evidence.

Regarding the first moving part, many philosophical debates are not intended to disagree about the evidence; think of Carnap's example of realism versus idealism, the Special Composition Question,[24] the debate between endurantists and perdurantists,[25] or whether the whole universe is prior to its parts.[26] Suppose a confirmation holist points out that there are possible background beliefs that would allow evidence to favour realism over idealism, such as 'if you see a red flash then realism is true'. How should the realist and idealist respond? Presumably they should respond that such a background belief could not be justified by any conceivable evidence. And this would follow from realism and idealism being empirically equivalent i.e. P(red flash|realism) = P(red flash|idealism).

But in some debates it is more plausible that one side can cite some evidence in support—for example, some think that our experience of the passage of time supports a 'moving now' theory of time.[27] Or perhaps common sense gives us evidence.[28] I'm inclined to think that evidence is rarely relevant to metaphysics. And in fact I think that evidence is rarely relevant to *any* area of philosophy (thus I am on Bennett's (2016) side in her debate with Hofweber (2016)). This would make 2C widely applicable in philosophy, but others will disagree. (I'll continue to talk only about metaphysical hypotheses.)

The extent to which evidence could favour competing metaphysical hypotheses depends on the other moving part—our conception of evidence. For example, if the evidence of agents in a physical world is different from the evidence of agents in a mental world, then our evidence might favour physicalism over Berkeleyean idealism.[29] Relatedly, some hold that we have *intuitions* that count as evidence and favour some metaphysical hypotheses over others.[30] More generally, the more expansive our concept of evidence, the easier it is for evidence to justify metaphysical hypotheses. Indeed, part of the motivation for developing an expansive concept of evidence is to make metaphysical debates tractable. So whether the Epistemological Argument described above applies to a debate depends on contentious issues regarding the nature of evidence and whether the competing theories are empirically equivalent.

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[24] van Inwagen (1990).

[25] Hawley (2015).

[26] Schaffer (2010). Koslicki (2016) makes a similar point in relation to Carnap. See Huemer (2009) and Benovsky (2016) for a detailed discussion of various cases.

[27] Thanks to Al Wilson for this example. See Prosser (2011), Benovsky (2013, 2016).

[28] Korman (2015).

[29] E.g. Williamson (2000), Campbell (2002) and other versions of disjunctivism.

[30] E.g. Bealer (1998) and Chudnoff (2011).

I am inclined to accept a narrow notion of evidence[31] that would make 2C widely applicable in philosophy; again, others will disagree.

Let's move on to 1C, which says that if we can have justification for S over T then evidence which would support S over T is conceivable. To reject this premise is to hold that we *can* have justification for S over T even when there is no conceivable evidence either way.

At this point we need to distinguish *epistemic* justification from *pragmatic* justification. Epistemic justification is connected to evidence and truth; pragmatic justification is based on usefulness, the type of justification you have for believing in God on the grounds that God rewards believers. Carnap suggests in 'Empiricism, Semantics and Ontology' that we can have pragmatic (but not epistemic) justification for S over T.[32] But mere pragmatic justification is not very satisfying. Moreover, how could we know which theory will be most useful if we have not established that there is an external world, or that the future will resemble the past? The rest of the paper will be concerned with only epistemic justification.

I want to sketch how we could have *epistemic* justification for S over T. As no conceivable evidence can provide epistemic justification, we need priori considerations favouring S over T. I think this is the best place to block the argument and defend metaphysics. Furthermore, this approach can be supported by Carnap's later work. So in the next section I will run through how some a priori justifications might be applied to some well-known debates. The aim is to bring out the assumptions the metaphysician needs, and explain why dismissivists may find the resulting debate frustrating.

7 Applications

1C says that if we can have justification for S over T then evidence which would support S over T is conceivable. We deny 1C if we hold that we can have justification for S over T independently of evidence. Such justification works on the prior. This concept of a prior is familiar from Bayeisan epistemology, where the prior is often written as $P(S)$[33] and the posterior as $P(S|E)$. So, what determines which hypotheses have the highest prior? A natural answer is to appeal to the theoretical virtues, for example, simplicity, scope, unification and fruitfulness (Kuhn 1977). So the metaphysician has to tell a story about what these virtues are exactly, and how they are balanced against each other. Skipping part of this debate, let's suppose that simplicity has been identified as the sole basic theoretical virtue.

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[31] See Wedgwood (2002) and Hedden (2015).

[32] 'The acceptance or rejection of abstract linguistic forms, just as the acceptance or rejection of any other linguistic forms in any branch of science, will finally be decided by their efficiency as instruments, the ratio of the results achieved to the amount and complexity of the efforts required.' (Carnap 1950a/1991, p. 95) Quine, rejecting the analytic/synthetic distinction, extends this to all hypotheses: 'Carnap maintains that ontological questions…are questions not of fact but of choosing a convenient scheme or framework for science; and with this I agree only if the same be conceded for every scientific hypothesis.' (1951b, p. 72)

[33] Some hold that there must be a place for background knowledge, in which case the background knowledge is empty here.

I think metaphysical debates can often be understood as a search for the simplest theory that explains the data. Consider two examples. First, the debate between Platonists (there are universals) and nominalists (there are no universals) often turns on whether the nominalist can account for all the data e.g. the truth of the sentence 'there are undiscovered properties'.[34] The shared implicit assumption is that if the nominalist can account for the data, then the nominalist wins. Why? Because the nominalist's theory is simpler, positing one type of fundamental thing (objects) rather than two (properties and objects/substrata).[35]

Second, consider the debate between physicalists and dualists in the philosophy of mind. This debate often turns on whether the physicalist can account for all the data e.g. that Mary learns something when she sees colour for the first time (Jackson 1986). The shared implicit assumption is that if the physicalist can account for the data, then the physicalist wins. Why? Because the physicalist's theory is simpler, positing one type of fundamental thing (the physical) rather than two (the physical and the mental).[36]

Even granting that we should prefer simpler theories, the metaphysician still has more to do. There is a distinction between ontological (things in the world) and ideological (concepts needed to describe the world) simplicity; and ontological simplicity then divides into quantitative (number of things) and qualitative (number of types of thing) simplicity.[37]

Consider the debate about the foundations of modality.

On what we'll call the Lewisian hypothesis, facts about modality are based on facts about concrete worlds, and are best stated by quantifying over these worlds.[38]
On what we'll call the Priorian hypothesis, facts about modality are primitive, and are best stated using primitive operators such as *possibly*.[39]

The disagreement between Lewisian and Priorian views is plausibly rooted in disagreement about how to weigh up these different types of simplicity.

The Lewisian hypothesis scores well on qualitative ontological simplicity and ideological simplicity. The qualitative ontological cost of the Lewisian hypothesis is zero, as it posits only types of thing that we already take to exist, namely concrete worlds. The Lewisian hypothesis is also ideologically simple, as we don't need primitive modal concepts. The cost comes in quantitative ontological complexity, as the hypothesis posits a possibly infinite number of concrete worlds.

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[34] Armstrong (1980).

[35] The bundle theory also posits only one type of thing—properties (see Paul 2017).

[36] See Huemer (2009) for a detailed discussion, and opposition. Appeals to simplicity are increasingly explicit,e.g. in arguments for mereological nihilism (Sider 2013; Brenner 2015), presentism (Tallant 2013), external world realism (Vogel 1990; Huemer 2016) and necessitism (Williamson 2013). See also Biggs (2011) and Biggs and Wilson (2016, 2017).

[37] Perhaps ideological simplicity also divides into quantitative and qualitative (Cowling 2013), but I'll set this aside.

[38] Lewis (1986).

[39] Prior (1957). Thanks to John Divers for discussion.

The Priorian hypothesis scores well on qualitative and quantitiative ontological simplicity. The ontological cost of the Priorian hypothesis is zero, as it posits no new entities, nor types of entity. The cost comes in ideological complexity, as the hypothesis posits primitive modal concepts.

Granting that this is part of what goes on in metaphysical debates, we can now account for the frustration of the dismissivist. In fact there are four different ways someone might get frustrated with these debates.

The first comes merely from the fact that the disagreement in these metaphysical debates is of an unusual kind—it is based on disagreement about the prior. Most disagreements are based on disagreement about the evidence, with the prior tucked away in the background. Arguments normally proceed by each side presenting evidence; being faced with a disagreement that cannot be resolved by evidence is a disconcerting experience that might induce the feeling that something has gone wrong.

This kind of frustration is not a challenge to metaphysics however. The mere fact that the disagreement is unusual is no threat, in itself, to the standing of the debate. But this could be developed into the next source of frustration.

A second source of frustration will come from those who think that there is no fact of the matter about what our priors ought to be. For example, a central strain of Bayesianism, subjective Bayesianiam, holds that there are no rationality constraints on priors. As long as the agent's credences obey the rules of probability (and update by conditionalization), that agent is rational.[40] Anyone who has subjectivist intuitions is going to find metaphysical debates baffling, as they think there is no fact of the matter about rational priors, so no rational debate to be had. Subjectivists ask: why should we expect the world to be simple? Metaphysicians are making an implicit assumption that the subjectivist rejects.[41]

A third source of frustration comes if we grant that we should prefer simpler theories, but deny that there is any fact of the matter about how these different types of simplicity should be traded off. That is, one can grant that we should prefer the simpler theory when there is a clear verdict about which theory is simpler, but deny that we should prefer, say, ontological over ideological simplicity.

A fourth source of frustration comes even if we grant that there are rational constraints on priors of *scientific* hypotheses. It doesn't follow that there are rational constraints on priors for *metaphysical* hypotheses. The metaphysician has to argue that there are constraints on priors for the whole range of debates she engages in. So even objective Bayesians can get off the boat at this final step and hold that metaphysical debates are pointless, because neither side can justify their answer.[42]

The burden on the metaphysician can now be sharply put. Firstly, they have to argue that it makes sense to argue about rational priors. Secondly, they have to defend the

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[40] I share Sider's surprise: 'Fascinatingly, this descendent of Hume's notorious attitude toward induction is not uncommon in contemporary formal epistemology. Is this because the field draws the formally inclined, and the problem of constraining priors has proved formally intractable?' Sider (2011, p. 37).

[41] Compare Magnus and Callender (2004).

[42] Bennett (2009), Huemer (2009), Shalkowski (2010), Kreigel (2013) and Willard (2014) all seem sympathetic to this objection. See Brenner (2016) for some responses.

objective Bayesian position that there are rational constraints on priors that (thirdly) give precise judgments based on various types of simplicity. Fourthly, they have to argue that these constraints apply to philosophy. Ironically, the *locus classicus* of objective Bayesianism is often taken to be Carnap's (1950b) 'Logical Foundations of Probability' (see also Maher 2006).[43] So the metaphysician trying to discharge the burden of making their subject respectable can take solace from the fact that they can draw on some parts of Carnap's own work. The extent to which they can do so remains an open question.

8 Conclusion

I have argued that Carnap's rejection of metaphysics stems from his view that all justification is based on evidence; the received wisdom that Carnap's argument relies on his verificationism is based on a misunderstanding. But this isn't only a historical point. I have argued that an updated version of the epistemological argument given in 1928 remains a powerful challenge to metaphysics, and one that has not been answered. The recent *epistemological* problems for metaphysics raised by Bennett (2009), Kreigel (2013) and others are a return to the core of the traditional challenge. One answer to this challenge turns on whether there are constraints on priors. And the feeling that there are not goes some way to explaining the frustration that metaphysical debates often induce. To allay this frustration, the metaphysician has to argue that there are rational constraints on priors for metaphysical hypotheses. And it is not obvious how this is to be done.

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[43] Of course, things are not so straightforward. In 'Logical Foundations of Probability' Carnap only defended constraints that were relative to a language, and were much weaker than that needed by the contemporary objective Bayesian. Nevertheless, the considerations Carnap offers for his constraints can be co-opted by the objective Bayesian. Furthermore Carnap seems to have changed his mind about inductive probability. Salmon (1967) says: 'Carnap's views on the traditional problem of justification of induction have undergone considerable change. At one time he endorsed the attempt to provide a pragmatic justification along the lines suggested by Reichenbach (1940) and Carnap (1947). Later, in Logical Foundations of Probability, he proposed what appeared to be an inductive justification (§4IF). More recently, he has rested the justification upon inductive intuition (1963, p. 978)', p. 735. The Kantian terminology of 'intuition' is jarringly discordant with the rest of Carnap's writings.

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