

Metametametaphysics and Dialetheism

Suki Finn
 University of Southampton
 suki.finn@soton.ac.uk

This paper reflects on metametaphysics and as such develops a *metametameta*-physical view: that quietist metametaphysics requires dialetheism, and in turn a paraconsistent logic. I demonstrate this using Carnap’s metametaphysical position in his ‘Empiricism, Semantics and Ontology’ (1950) as an example, with regard to how it exhibits self-reference and results in inconsistency. I show how applying Carnap’s position to itself produces a dilemma, both horns of which lead to a contradiction. Such inconsistency commonly arises from meta-theories with global scope, as the ‘meta’ approach aims to transcend the scope of that which it is theorizing about, whilst the global nature will place itself back within the scope of that which it is theorizing about, which together result in the theory referring to itself whilst refuting itself. I argue that any global metametaphysical theory that draws a limit to thought will face self-reference problems leading to contradictory realms. My conclusion is conditional: If we want to meta-philosophize in such a way and treat quietist meta-theories as being true, then we need to be dialetheist and utilize a paraconsistent logic in order to accommodate the contradictions that result from such theorizing.

Introduction

In this paper I explore the consequences of drawing limits, specifically for metametaphysical views like Carnap’s ‘Empiricism, Semantics and Ontology’ (1950). Carnap draws a limit to what is meaningful – he claims that meaningful language must be *internal* to linguistic frameworks, and argues that metaphysics attempts to utilize language *externally* to these frameworks. Thus Carnap regards traditional metaphysics as meaningless, hence being labeled a ‘quietist’ about metaphysics. When we question the status of Carnap’s own position and ask whether he considers his theory itself to be internal or external to linguistic frameworks, he encounters a self-reference problem. I structure this problem in the form of a dilemma, where each horn results in a contradiction. First I describe how meta-theorizing in general may result in self-reference. Second I compare examples from Kant, Wittgenstein, and Verificationism to show how such self-reference results in inconsistency, and third demonstrate how Carnap exhibits a structurally parallel problem. Fourth I explore the internal horn, and fifth the external horn, of Carnap’s dilemma, both resulting in contradictions. Sixth, I follow Priest (2002) in showing contradictions to be typical of theories that draw limits, and argue that this is evidence for the need for dialetheism,

and in turn a paraconsistent logic, in taking such metametaphysical theories to be true.

1 Meta-theorizing

Meta-theories aim to speak *about* a theory or way of theorizing, from above or outside the theory in question. Some metametaphysical positions speak about metaphysics in a negative way and are thus described as anti-metaphysical (or ‘quietist’). Such anti-metaphysical positions may encounter self-reference issues as they are accused of *doing* metaphysics whilst *rejecting* metaphysics, and so appear to be metaphysically *loud* when prescribing being *quiet*. It seems that one cannot do metametaphysics without doing metaphysics, which is a problem if one’s metametaphysical view is anti-metaphysical. As Bradley claimed, the anti-metaphysician is simply “a brother metaphysician with a rival theory.”¹ But why is it that anti-metaphysical views end up doing what they say cannot be done in the very process of saying that it cannot be done? I argue that it is because they fall within the scope of their own argument, so that whatever they reject will end up including themselves. This comes about as a result of these views being general, and having a global scope by talking about a totality.

In order to demonstrate how a theory falls under its global scope I consider a few cases briefly. For example, global relativism: If everything is relative, then the sentence ‘everything is relative’ will be relative too. And global scepticism² If we cannot know anything, then we cannot know ‘we cannot know anything’. And likewise for global quietism: If we should be quiet about X, then we should be quiet *about being quiet* about X. A theory that references itself may also refute itself, as if what the theory says is correct then the theory turns out to be false, or is undermined in some way. So, if we hold that everything is relative then this undermines the absolute truth of relativism itself, and if we hold that we cannot know anything then this undermines our knowledge of scepticism itself, and if we hold that we should be quiet about metaphysics then this undermines the metaphysical significance or assertability of quietism itself. If we make a general statement about relative truth, lack of knowledge, or being quiet, then we must notice that the generalization applies to that very statement otherwise that statement is a counterexample to the generalization.

This phenomenon of self-refutation occurs for inconsistent positions like the Vienna Circle’s Verificationism, Wittgenstein’s *Tractatus*, and Kant’s transcendental doctrine, which I will be comparing to Carnap’s ‘Empiricism, Semantics and Ontology’ in the next section. I will outline how such positions end up in contradiction as a result of their self-reference to show how Carnap’s position suffers the same fate of inconsistency, in order to bring out the similarities in structure between these cases. The common factor among these views is that they aim to spell out a limit, and then place metaphysics outside of this limit. My aim is to show that when metametaphysical theories draw such limits they

¹Bradley (1897) p1

²*Pyrrhonian* may be less problematic than *academic* scepticism. Sinnott-Armstrong (2006) p10.

are inevitably led into contradictions due to their self-reference, so that if one wants to hold such a theory as true, one must endorse dialetheism.

2 Inconsistent positions

For Verificationism, the element that is said to be inconsistent is the central Verification Principle.³ This principle states that for a proposition to be meaningful it has to be verifiable, either in practice or in principle, by being empirically testable or logically necessary. By such standards, metaphysics is said to be meaningless, as its statements do not qualify as being verifiable. But say we take this principle as being correct. Given that the principle aims at being meaningful (in order to tell us what it is to be meaningful), the principle can refer to itself and test itself for meaningfulness. Yet when we apply the principle to itself it turns out that the principle does not meet its own criterion: it is not itself empirically testable or logically necessary. Due to the standards set by the Verification Principle, the principle itself fails to meet such standards. If the principle is true then it must be meaningless according to its own specification. But how can something meaningless say meaningfully of itself that it is meaningless? Here derives the inconsistency – in taking the principle to be true and meaningful it turns out meaningless when it refers to itself. In attempting to draw a boundary between the meaningful and meaningless, the very way it is drawn falls on the side of the meaningless, due to that drawing being itself susceptible to its own test for meaningfulness.⁴

Another example of a view attempting to draw a boundary between the meaningful and meaningless is the early Wittgenstein in the *Tractatus*. This runs into similar problems, by placing a limit on what can legitimately be said. Whatever will be on the other side of that limit, Wittgenstein classes as being nonsense. The difficulty is that Wittgenstein goes on to say what exactly is beyond the limits of sense, and seems to do so in a meaningful way, given that his words were not gibberish. As Russell puts it: “Mr. Wittgenstein manages to say a good deal about what cannot be said.”⁵ By giving limits to what makes sense in general, those limits will also apply to what Wittgenstein says. As such, Wittgenstein’s words are susceptible to these limits, and his view can refer to itself. Wittgenstein, aware of this, declares his work nonsense (discussed in section 5.2.). But in doing so, he invalidates his own arguments for declaring it nonsense. Wittgenstein’s words must have sense in order to meaningfully declare of itself that it is nonsense. But nonsense is not meaningful. And so similarly to the Verificationists, then, Wittgenstein’s position is shown to be inconsistent, where the inconsistency is derived from self-reference.

The last example I will briefly describe is from Kant. Kant famously attempts to make a distinction between what we can know about (the phenomena) and what we cannot (the noumena). Given that metaphysics attempts to understand

³See Ayer (1936) p16 for his first formulation of the Verification Principle.

⁴For a thorough evaluation, see Creath (2014). For a Verificationist response, see section 5.

⁵Pears and McGuinness (1961), p. xxi. Again I have oversimplified the situation in order to make the parallel clear between the cases. For a more detailed account see Priest (2002) ch.12.

the noumena, metaphysics is to be rejected. Kant argues that we cannot have knowledge of the noumena due to not being able to make meaningful statements about them, yet in arguing this Kant ends up speaking of the noumena and describing aspects of them, for example, that they cannot be described. And then once again we see an example of the theory being within the bounds of the theory itself, such that Kant's own words about the noumena must be meaningless. But in being meaningless, it invalidates what Kant says about the noumena, and as such is an inconsistent position.⁶

The Vienna Circle's Verificationism, Wittgenstein's *Tractatus*, and Kant's transcendental doctrine, all draw a limit by providing a boundary to legitimate thought. I will show that Carnap's 'Empiricism, Semantics and Ontology' also draws a limit, namely to meaningful language with cognitive content. Carnap draws a limit using his internal/external distinction, with linguistic frameworks providing the boundary.⁷ When language is used internal to frameworks it is meaningful, and when we attempt to use it external to frameworks it is meaningless, so the framework boundary between the internal and external is the limit. This leaves Carnap in a dilemma of whether his own theory is within or without those limits. As Wittgenstein describes: "in order to be able to draw a limit to thought, we should have to find both sides of the limit thinkable."⁸

So when Carnap attempts to draw a limit to meaningful language he is required to transcend that limit in order to place it. He then goes on to use language to describe where that limit is, and in so doing has gone beyond the limit that he placed. To say what cannot be said meaningfully, one says that very thing. As Priest says, "whereof one cannot speak, thereof one has just contradicted oneself."⁹ This is parallel to how Verificationists aim to describe the conditions for meaningful language and in so doing do not meet those conditions. Likewise, when Kant aims to describe that nothing meaningful can be said of noumena, he contradicts himself in saying so in a meaningful manner. And for Wittgenstein (the most self-conscious in going beyond the limits), his approach is similar to Carnap regarding the general idea that there are limits to meaning, and however or wherever such a limit is drawn will result in inconsistency.

This idea of going beyond the limits of thought is described in Priest (2002) who shows how Wittgenstein and Kant (among others, though not including Carnap) end up refuting themselves by referring to themselves. Priest argues that the limits of thought are boundaries beyond which certain conceptual processes cannot go, and so views about limits are subject to contradictions by simultaneously going beyond the boundary, meaning that boundaries are the sites of dialetheias if such views are taken as being true. So those who aim to draw limits are on a road towards dialetheism. Carnap's quietism fits a pattern established by Priest, in similar ways to Wittgenstein's *Tractatus* and Kant's transcendental doctrine, and I use Carnap as a case study to show how this is the case for

⁶Once again, I note the simplification and elimination of necessary details of Kant's situation, and direct readers towards Moore (2012) Ch.5 and Priest (2002) Ch.6 for thorough evaluations.

⁷Carnap (1950) p21. More details on Carnap's position are provided in section 3.

⁸Found in Pears and McGuinness (trans.) (1961) introduction.

⁹Priest (2002) p233

other metametaphysical views too, due to such views being global and meta-theoretical. I limit my argument to encompass only *negative* metametaphysics that are sceptical about metaphysics. This is because some metametaphysical views do not draw limits, and so my target is limited to those that do, as it is the drawing of the limit that causes the inconsistency.

Given that little attention has been paid to how Carnap experiences this self-referential phenomenon in a parallel way to Verificationism, Wittgenstein, and Kant, I take it as an important contribution to describe this overseen difficulty, especially as Carnap's views are currently popular.¹⁰ Yet despite the importance of Carnap's metaontological contribution, it is widely assumed that his critique of ontology failed following Quine's criticism concerning Carnap's dependence on the analytic/synthetic distinction. Quine is historically considered to be the reviver of ontology, arguing against Carnap who states that ontology cannot be done. Quine and Carnap are thus seen as rivals, and their dispute has largely influenced and provided groundwork for the practice of modern ontology. But recently the traditional evaluation of their dispute and viability of ontological debates have come into question, contributing to the thriving discussion of metametaphysics.¹¹ It is this sort of metametaphysical engagement that I argue requires dialetheism if taken as true, using Carnap's quietism as an example. Anyone attracted to such views thus ought to be aware of their inconsistency.

3 Limits in 'Empiricism, Semantics, and Ontology'

Carnap outlines his quietism in 'Empiricism, Semantics and Ontology' (hereon 'ESO') with his theory of linguistic frameworks. These frameworks are systems that provide cognitive meaning and usage rules for language. Carnap claims that in order to talk about entities of a certain kind we must first construct and adopt a framework for that particular entity. We choose to adopt frameworks for their practicality, where the "efficiency, fruitfulness, and simplicity of the use of the thing language may be among the decisive factors."¹² Once a framework is adopted, the language internal to it may be used to describe the world according to its rules. Carnap then differentiates between modes of utilizing language in relation to these frameworks. For example, in Carnap's 'system of members'¹³, one can ask about numbers in the following two ways:

Internal (hereon 'IQ'): "Is there a prime number greater than a hundred?"

External (hereon 'EQ'): "Are there numbers?"¹⁴

To use language internally to the framework is to speak about how things are "based on the rules for the new expressions"¹⁵, whereas externally is independent

¹⁰See Eklund (2011), Thomasson (2015), Hirsch (2011), and Price (2011), for example.

¹¹See Yablo (1998) for a reflection on the Quine-Carnap dispute, see Quine (1951a/b) for his objection to Carnap, and see Chalmers et al (eds.) (2009) for papers on metametaphysics.

¹²Carnap (1950) p23

¹³Carnap (1950) p24

¹⁴Carnap (1950) p24

¹⁵Carnap (1950) p24

of the framework, “prior to the acceptance of the new framework”¹⁶. Carnap claims that “the concept of reality occurring in these internal questions is an empirical scientific non-metaphysical concept”¹⁷, yet in external questioning we ask whether entities “have a certain metaphysical characteristic called reality”¹⁸. Metaphysical questions tend to ask about reality in a way that is independent of how we may use language, and as such the external mode is the mode traditionally utilized in metaphysics. So the IQ is asking, according to the rules for being a prime in the number framework, whether there is a number above a hundred that satisfies that definition, and the EQ is asking, regardless of the rules in the number framework, whether numbers like primes really exist. For Carnap, the only way of using language meaningfully with cognitive content is internally to these frameworks, since these frameworks are precisely where terms get their meaning, and thus the EQ so construed is meaningless as it attempts to utilize language externally to the framework from whence it gets its meaning. From this, Carnap “feel[s] compelled to regard the external question as a pseudo-question”¹⁹, and therefore reframes and salvages the EQ as “not a theoretical question but rather the practical question whether or not to accept those linguistic forms”²⁰.

Given the reason that EQ’s are rendered as meaningless pseudo-questions (by using language externally to where it gets its meaning), we may generalize Carnap’s doctrine of meaninglessness to be about *all* language usage rather than just about existence questions. It is not just the questioning that needs to be internal, but also the answering of such questions, as only “once we have accepted the thing language with its framework for things, we can raise *and answer* internal questions”²¹ (emphasis mine). Carnap does not limit his theory of frameworks to just existence questions, but rather it applies whenever “someone wishes to speak in his language about a new kind of entities.”²² Furthermore, this treatment applies to all *types* of entities, as demonstrated by Carnap systematically applying it to the frameworks for ‘the world of things’, ‘the spatio-temporal coordinate system for physics’, and the system of ‘members’, ‘propositions’, ‘thing properties’, ‘integers and rational numbers’, and ‘real numbers’. Hence we may take Carnap to argue that *all* language usage has to be internal to a framework in order to have cognitive content, which demonstrates that ESO has global scope by applying to all statements. We may summarize this result from ESO as: ‘all external statements are meaningless’ (name this proposition <ESO>). Carnap does not exactly state <ESO>, which I have simplified for brevity, yet he repeatedly states in ESO that “an alleged [external] statement is a pseudo-statement without cognitive content.”²³

Now is <ESO> itself internal or external to frameworks? Is Carnap utilizing language internally or externally in ESO? I present this as a dilemma, each horn

¹⁶Carnap (1950) p24

¹⁷Carnap (1950) p22

¹⁸Carnap (1950) p24

¹⁹Carnap (1950) p33

²⁰Carnap (1950) p32

²¹Carnap (1950) p22

²²Carnap (1950) p21

²³Carnap (1950) p29

ending in contradiction, shown in sections 4-5. I take these contradictions to demonstrate Carnap's ESO to be inconsistent, and conclude conditionally that *if* one takes ESO to be *true*, *then* one must embrace the contradictions that arise from it in dialetheist fashion. If ESO is true, then $\langle \text{ESO} \rangle$ itself is a dialetheia.

4 Horn 1 – Internal

If $\langle \text{ESO} \rangle$ is correct and meaningful, then $\langle \text{ESO} \rangle$ must be internal to some framework. But if $\langle \text{ESO} \rangle$ were made internal to a framework then Carnap's message in ESO seems to lose its power. This is because $\langle \text{ESO} \rangle$'s truth will then be relative to the particular rules of the framework to which it is internal to. Another framework could be created for talking about frameworks, within which $\langle \text{ESO} \rangle$ is false. This entails that $\langle \text{ESO} \rangle$, if internal to a framework, may not be true in all frameworks, as other frameworks may have rules that regard $\langle \text{ESO} \rangle$ as false, or just do not say anything about $\langle \text{ESO} \rangle$ at all. If $\langle \text{ESO} \rangle$ is only relatively true, it seems that it is also not universally true, as it may only be true relative to *some* frameworks and not all of them (yet $\langle \text{ESO} \rangle$ was meant to describe *all* of them). Moreover, frameworks according to which $\langle \text{ESO} \rangle$ is relatively true are frameworks that are adopted for being *useful*, rather than *true*. So Carnap's position is reduced to being usefully adopted as relatively true – a much weaker conclusion than what he proposes in ESO where $\langle \text{ESO} \rangle$ is globally asserted in a way that seems like it is put forward as universally true about *all* language. Interpreting $\langle \text{ESO} \rangle$ as internal in this way therefore seems to misrepresent Carnap in ESO, as he meant that for *all* frameworks it is the case that language usage external to them is meaningless, not just for *some* of them. Taking $\langle \text{ESO} \rangle$ as internal to only some frameworks thus crucially denies the global scope of ESO, and in order to retain such scope $\langle \text{ESO} \rangle$ needs to be internal to an all-encompassing *global framework* so that it is true universally. Such a global framework would need to say of itself that language external to it is meaningless. I discuss this global framework next.

4.1 A global framework

In order to retain the global scope of ESO whilst treating $\langle \text{ESO} \rangle$ as internal, the framework that $\langle \text{ESO} \rangle$ is internal to must be a framework with global scope. This global framework is an all-encompassing framework that is the framework containing and describing all other frameworks.²⁴ It is therefore a higher-order framework that is utilized for talking about frameworks themselves. This global framework would be fully semantically closed, as it would have the capability of talking about itself from within itself, making true claims about the truth of its own claims from within itself. $\langle \text{ESO} \rangle$ gets its meaning and cognitive content from within a framework, and it is this and the relative truth of $\langle \text{ESO} \rangle$ that we are interested in deriving from the framework which requires the framework

²⁴This global framework is similar to Eklund's maximalism (2009 p153), in so far as it is a maximal theory, however what it is to 'exist' is different on the two approaches.

to speak of semantics. $\langle \text{ESO} \rangle$ states that external propositions are meaningless, and thus it is invoking the semantic notion of meaning. Furthermore, being internal to a framework is equivalent to being true in a framework and so, for $\langle \text{ESO} \rangle$ to talk meaningfully about meaning within a framework, the framework must contain its own ‘truth’ (and ‘meaningful’) predicate and hence be considered as being semantically closed. Tarski²⁵ considers such semantically closed languages to be inconsistent as they contain their own truth predicate and can talk about sentences of themselves in the same language, which give rise to the Liar Paradox. If this global framework likewise encountered a Liar-like paradox it would indeed result in contradiction. I discuss responses to this in section 4.2, but now I will show how the global framework encounters a different paradox: Russell’s Paradox.

A global framework can be considered a ‘framework-of-all-frameworks’, which is much like the ‘set-of-all-sets’. An analogue of Russell’s Paradox will derive a contradiction from the global framework as such: If you can talk within this global framework about all frameworks then it is possible for a framework to talk about itself. This is because, as a framework of all frameworks, it includes itself in its global scope over all frameworks. Since it is a framework that talks about frameworks, it therefore talks about itself. Plausibly, there will be some frameworks that this global framework ranges over which do not talk about themselves – we can talk about these frameworks in a sub-framework F of our global framework. F will not be empty, as there will be frameworks that do not talk of themselves that we can speak of from within other frameworks. F thus talks about all and only frameworks that do not talk about themselves. The paradoxical question is: does F talk about itself? If F talks about itself then F does *not* talk about itself. This is due to the definition of F ’s scope disqualifying F from its scope – if F talks about itself then it is not one of those frameworks that fall under its scope. However, if F does not talk about itself then F does talk about itself. This is due to the definition of F ’s scope including F in its scope – if F does not talk about itself then it qualifies to be one of those frameworks that F talks about. So we have a paradoxical situation involving F , where a global framework containing $\langle \text{ESO} \rangle$ derives a contradiction.²⁶

This is structurally similar to Russell’s Paradox, where the set of all sets is taken to be a member of itself, and then we consider the subset of those sets that are not members of themselves and question whether that subset is a member of itself. One might take the lesson of this to be to rid of the set of all sets, and instead have an infinite hierarchy of sets that is never completed, thus avoiding the totality of sets entirely. This ends up in a regress (section 4.2) that instead of a framework to encompass all frameworks, we have a hierarchy of meta-frameworks to encompass lower level frameworks at every level of the hierarchy. This may avoid the paradox that results from the global framework; however as we will see this is unsatisfactory for Carnap since it denies the global scope of ESO. Thus Carnap cannot respond to Russell’s Paradox by denying the

²⁵Tarski (1944)

²⁶I thank Mary Leng for articulating the problem in this way.

totality²⁷ and so must embrace the paradoxical global framework. But before explaining why more fully, I first discuss the hierarchy option.

4.2 A hierarchy of meta-languages

Tarski²⁸ puts forward his ‘convention T’ or ‘T schema’ as an adequacy criterion on any theory of truth. For a theory to count as a genuine theory of *truth*, it should imply all sentences of the form: ‘snow is white’ (x) is true iff snow is white (p). The ‘p’ replaces any sentence of the language to which ‘true’ refers to, and ‘x’ stands for the name of the sentence. The predicate ‘is true’, when applied to sentences of a language L, cannot be considered part of the language L, on pain of contradiction. Instead we have a proliferation of truth predicates ‘is true in L’, one for each language L, where each truth predicate belongs to a different language L* whose role is to talk about sentences of L. Tarski calls these languages the ‘object language’, which is the language talked *about*, and the ‘meta-language’, which is the language we talk *within* in order to talk about the object language. So, the meta-language is used to assert truth for the object language. ‘Object’ and ‘meta’ are relative and can apply at higher levels, which will involve embarking on a regress. One can say what is true of the object language in the meta-language, and to say whether that is true they resort to a higher-order meta-language for that language (becoming the object language).

The Carnapian could use a similar meta-linguistic trick in legitimizing its own regress of higher-order frameworks. On this picture, there would not be just one <ESO>, rather there will be stratified ones internal to a framework at each level of the hierarchy. To question the truth or usefulness of a framework will have to be formulated in a language from a higher-order framework, and its truth or usefulness will be relative to that higher-order framework. In utilizing Tarski’s theory, the Carnapian could construe the framework *in question* as the object language, and the framework doing the *questioning* as the meta-language. Tarski relativized truth, which we can likewise propose for the Carnapian.²⁹ But furthermore for the Carnapian, meaning also becomes relativized as the frameworks will not contain their own ‘meaningful’ predicate. This allows for the meta-framework to talk about the meaningfulness of a sentence in the object-framework, in order to put forward any of the stratified <ESO> sentences without paradox. This retains Carnap’s quietism by not stating anything genuinely external (as any attempt will be to just shift up to a higher meta-language and be internal to that higher-order framework), and will also retain ESO’s rejection of absoluteness. The question of whether Carnap’s ESO is really correct will be just as nonsensical as asking if Tarski’s T schema is really true. The point is that such ‘really’ statements are meaningless as they attempt ascent into an absolute realm. To

²⁷I discuss the option of denying totalities as a response to the contradictions that arise from them in section 6, following Priest (2002) in ultimately arguing that doing so is implausible.

²⁸Tarski (1944)

²⁹Interestingly, Armour-Garb and Beall (2005) argue that if you are a deflationist about truth, then you better be a dialetheist. They claim the marriage between deflationism and dialetheism is a natural one, which corresponds with my results where we end up with dialetheism after considering deflationary views of ontology. Thanks to Francesco Berto for pointing me to this.

demand absolute truth from the Carnapian is to beg the question against them as that is precisely something that they deny.³⁰

In this hierarchy, $\langle \text{ESO} \rangle$ is never fully stated, or at least there is no one statement of the theory from ESO, as it would be expressed by an infinite series of relative statements at each order in the hierarchy. It may be begging the question against the position to demand that it say something absolutely true, yet it is not begging the question to demand that the position allows itself to say what it purports to do. It seems contradictory that $\langle \text{ESO} \rangle$ would become unstateable aside from an infinite chain of relative statements, and it further seems unfaithful to Carnap's position that $\langle \text{ESO} \rangle$ be internal to such a regressive picture when it was intended and put forward as a singular global statement in ESO. Furthermore a *vertical* regress of the meta-language hierarchy where $\langle \text{ESO} \rangle$ is true relative to a higher-order framework does not account for the *horizontal* global truth of $\langle \text{ESO} \rangle$ in all of the potential hierarchies. $\langle \text{ESO} \rangle$ needs to have *horizontally* global scope *across* all frameworks for all types of entity, not just to be true *vertically up* through all of the meta-languages of one hierarchy. In order to ensure that $\langle \text{ESO} \rangle$ is true in *every* framework to preserve its global scope, I will now move on to treating $\langle \text{ESO} \rangle$ as a schema.

4.3 A global sentence

$\langle \text{ESO} \rangle$ could be true globally by being schematic for instances that are true individually in every framework. Rather than having a global framework or a hierarchy of higher-order frameworks, there are simply a multitude of individual frameworks, and in each and every one of these frameworks that framework's version of $\langle \text{ESO} \rangle$ comes out as true. This makes ESO global in a slightly different, weaker sense, by having a sentence form that has instances that are true in all frameworks.³¹ $\langle \text{ESO} \rangle$ is true in every framework by treating frameworks as languages, and we generate $\langle \text{ESO} \rangle$ axiomatically in all languages that have a predicate for being meaningful and a predicate for being a language. Here, $\langle \text{ESO} \rangle$ is global and universally true in an internal way.³²

The problem with this option is that ESO says *one* thing *about all* frameworks, rather than many, one for each framework, as discussed in section 3. The totality of all the stratified $\langle \text{ESO} \rangle$ sentences shows us that $\langle \text{ESO} \rangle$ is true in every framework. In acknowledging that in every framework we have got this framework relative $\langle \text{ESO} \rangle$ sentence, we should be able to say that $\langle \text{ESO} \rangle$ is

³⁰Benningson (1999) makes a similar claim: "The most remarkable feature of many anti-relativist arguments is their brevity; they often consist of little more than announcing that to assert global relativism is implicitly to claim absolute truth for one's assertion, resulting in immediate self-contradiction. Certainly, the relativist is claiming truth for her assertion. But the absolutist begs the question by assuming that truth simpliciter equals absolute truth - precisely what the relativist should be understood to be denying." (p215). This touches on issues dealt with in other places in the literature that I have no space to cover here, for example, indefinite extensibility, absolute generality, and universal quantification: see Rayo and Uzquiano (2006).

³¹Hales (2006) defends global scale relativism in a similar way - that it is true relative to all perspectives, so globally true in relativistically kosher way.

³²I thank Tom Stoneham for this suggestion.

true in all of them. We would want to say that this is what all of the individual <ESO> sentences have in common, but we cannot do that without appeal to a global framework. There is *one* thing that is true for all of the <ESO> sentences, but we cannot assert this thing as it would state something true of all frameworks, requiring a global framework. If we take all the individual <ESO> sentences, and quantify over them, then that quantificational sentence must belong to some framework, but it cannot belong to any of the individual frameworks and so it has to belong to a global framework. Crucially then, the Carnapian must quantify over all of the levels in order to even state this hierarchical solution. We thus do not escape the totalisation problem that we saw with the global framework as we still talk about the totality of all of the frameworks – the framework of all frameworks – which leads to contradiction.

An interesting parallel can be made here with regard to axioms and an axiom schema. Arguably, we only believe individual instances of a schema because we believe the generalisations from which they follow. Once we have accepted all the individual instances, much like we accept all the individual <ESO>s, we ought to accept the general schema, much like we ought to accept the global <ESO>. Take the debate between Hilbert (as a first-order logician) who does not assert the general claim even when he asserts the instances, and Kreisel and Shapiro (as second-order logicians) who argue that we have to accept the generalization with its instances.³³ When working in first-order logic, we can only accept every instance of an induction schema but not the generalization (due to the limitations in the language of first-order logic), whereas in second-order logic, we can also accept the global general claim. Shapiro describes this:

Suppose, for example, that someone is asked why he believes that each instance of the completeness scheme of first-order real analysis is true of the real numbers. It is, of course, out of the question to give a separate justification for each of the axioms. Nor can one claim that the scheme characterizes the real numbers since, as we have seen, no first-order axiomatization can characterize any infinite structure. Kreisel argued that the reason mathematicians believe the instances of the axiom scheme is that each instance follows from the single second-order completeness *axiom*.³⁴

This second-order axiom is the generalization, the global statement, and it is required or entailed by the totality of individual instances. From our individual <ESO>s in every framework, we get one global <ESO>. If we are willing to accept all the individual statements then presumably this is because we are already committed to the global statement. In acknowledging that the global statement is acceptable (by accepting the individual instances), we must accept the paradoxical global framework and the contradiction that follows. Therefore we cannot escape the totality and the contradiction when we take <ESO> as internal. So now I will move on to discussing the external horn of the dilemma.

³³Shapiro (2005) p776, Kreisel (1967), Hilbert (1928). Thanks to Mary Leng for this example.

³⁴Shapiro (2005) p776

5 Horn 2 – External

5.1 Verificationist's recommendation

Given that Carnap seemed to put forward his theory in ESO as describing what all frameworks are like, then it seems that $\langle \text{ESO} \rangle$ must be framework independent, and as such external. In order to capture the point that $\langle \text{ESO} \rangle$ is making, it needs to be true not relative to only some frameworks. However, if $\langle \text{ESO} \rangle$ is itself external, and if $\langle \text{ESO} \rangle$ is correct, then $\langle \text{ESO} \rangle$ becomes meaningless, and is involved in a contradictory situation when $\langle \text{ESO} \rangle$ directly self-refers and self-refutes. This is similar to how Verificationism encounters self-reference regarding their Verification Principle, as described in section 2. Due to the standards set in $\langle \text{ESO} \rangle$, $\langle \text{ESO} \rangle$ itself fails to meet such standards. That is because if $\langle \text{ESO} \rangle$ is external then it must be meaningless *according to $\langle \text{ESO} \rangle$ itself*. This is parallel to how the Verification Principle said of itself that it would be meaningless, by its own standards for meaningfulness.

Some Verificationists respond to this problem by saying that their Principle is not in fact asserted as a proposition, but rather merely as a recommendation, and as such it is not held to the same standards as it prescribed for propositions.³⁵ The Carnapian can make a parallel move to the Verificationists stating that $\langle \text{ESO} \rangle$ is not a sentence to be asserted and so need not meet the conditions for meaningful sentences. So, there are just some ideas that are inexpressible in a language, and perhaps $\langle \text{ESO} \rangle$ is one of those things. More likely, Carnap may have thought that his whole theory in ESO as a theory is not an assertable statement since it is not a matter of theoretical questioning, and as such would be rendered (in the same way as other external statements) as simply the pragmatic choosing and acceptance of ESO. To be reduced to an external statement about practicality is to concede that $\langle \text{ESO} \rangle$ is not up for truth evaluation, as the theory ESO is non-cognitive in an external way.

Carnap could simply adopt a non-cognitivist attitude towards $\langle \text{ESO} \rangle$, and suggest that we should accept it because it is useful. Carnap would then have to put forward ESO only as *practical* to do so, in that there are other theories that one may adopt but ESO should be chosen on pragmatic grounds for its usefulness (rather than truth), much like the Verificationist method of treating their principle as a recommendation. The concession here would be that ESO is a merely pragmatic theory. This is in line with a Verificationist response.³⁶

The statement of a philosophical thesis sometimes represents not an assertion but a suggestion. Any dispute about the truth or falsehood of such a thesis is quite mistaken, a mere empty battle of words; we can at most discuss the utility of the proposal or investigate its consequences.

However, ESO claimed to tell us what meaningful language *is*, not how it is *useful* to conceive of language, as it was meant to show metaphysical statements to be pseudo-statements rather than it be helpful to describe them in that way.

³⁵I recognise that not all Verificationists experience the problem this way. See Creath (2014).

³⁶Carnap (1934a) p299

The problem with this Verificationist strategy for Carnap, apart from being seen as bad company,³⁷ is that it appears to be in tension with what Carnap put forward in ESO. Carnap intended <ESO> to be *true*, asserting <ESO>, rather than merely recommending it.³⁸ In this sense Carnap ends up in contradiction with himself regarding the assertion and non-assertion of <ESO>. In trying to prevent <ESO> from being both meaningful and meaningless (which arises when we take <ESO> as being external and correct), <ESO> becomes both assertable and non-assertable (by being claimed to be un-asserted but is also asserted by Carnap). And so in trying to escape one contradiction, Carnap ends up in another.³⁹ I thus now move on to the related Wittgensteinian response.

5.2 Wittgenstein's non-assertion

Wittgenstein (of the *Tractatus*) holds that we only 'show' the syntax of language as it cannot be 'said', so there is a similarity between Wittgenstein's 'showing' with the option of 'non-assertion' and the Verificationist's 'recommendation'. This makes these options on horn 2 closely related, resulting in similar contradictions. They prescribe to not assert (say) the theory but rather to do something less than assertion (to show or recommend) to avoid self-reference. Wittgenstein resorts to showing as he conceded that any saying, including his own, is meaningless, as described in section 2. But Carnap rejects this move:

Wittgenstein's second negative thesis states that the logic of science ('philosophy') cannot be formulated... According to this, the investigations of the logic of science contain no sentences, but merely more or less vague explanations which the reader must subsequently recognise as pseudo-sentences and abandon. Such an interpretation of the logic of science is certainly very unsatisfactory.⁴⁰

Wittgenstein has represented with especial emphasis the thesis of the meaningfulness of metaphysical propositions and of the identity of philosophy and the logic of science; especially through him has the Vienna Circle been developed on this point. How now does Wittgenstein dispose of the objection that his own propositions are also meaningless? He doesn't at all; he agrees with it! He is of the opinion that the non-metaphysical philosophy also has no propositions; it operates with words, the meaningfulness of which in the end it itself must recognise... We shall try in the following to give in place of this radically negative answer a positive answer to the

³⁷Burgess explains Carnap's (negative) association with Verificationism probably contributed to the dismissal of ESO: "I suspect the reason Carnap's presentation of the [quietist] case failed to convince was largely that he was too much identified with the infamous 'empiricist criterion of meaningfulness' [Verificationism], which certainly has by now been consigned, if not to the rubbish bin, then at least to archives, where it may be studied by historians of philosophy, but where it no longer influences current philosophical debate." (2004 p34)

³⁸Carnap (1950) asserts repeatedly, for example, that "the external statement... is devoid of cognitive content" (p26), rather than recommending that we treat external statements that way.

³⁹This is described by Priest as the 'persistence of contradiction' (2002 p229).

⁴⁰Carnap (1934a) p283

question of the character of the propositions of the logic of science and thereby of philosophy.⁴¹

So from these quotes it seems we cannot take the option of treating <ESO> as meaningless as a plausible option for Carnap since he rejects it as being very unsatisfactory in Wittgenstein's case. Part of Carnap's positive answer in place of this was simply the other Wittgensteinian move of 'showing' and not 'saying' the theory, rather than further stating it is meaningless. It is not meaningless if it is reframed as the non-cognitive suggestion of adopting the theory in ESO, so there is no need to take the extra step of treating it as meaningless. The strategy, then, is to take <ESO> as external, but to reframe it in the same way as external statements are reframed, and to pose them as the pragmatic issue as to whether to adopt the framework. <ESO> continues not to be asserted as it is not a theoretical matter fit for assertion, but this is not because <ESO> is conceded as meaningless in the Wittgensteinian way. <ESO> is meaningful but only on the pragmatic grounds that the theory in ESO is useful. Yet this leads to contradiction, since Carnap *does* assert <ESO> in a way to suggest that he takes it to be true and not just helpful, so to claim that the theory is beyond the limits of assertion is to lead Carnap once more back to contradiction, in the same way that we saw that he did on the Verificationist proposal in section 5.1.

Contradictions have occurred on both horns of the dilemma, via an analogy of Russell's Paradox, or by asserting whilst also not asserting; thus inconsistency is a consequence of ESO which, if taken as being true, requires dialetheism.

6 Dialetheia or Reductio?

I have shown that Carnap's theory in ESO results in contradiction. The question then arises as to whether we should take this to be a *true* contradiction (a dialetheia), or a *reductio ad absurdum* of his position. Notice that <ESO> does not say of itself that it is true, and so independent reasons would have to be put forward in order to take <ESO> as true so as to class it as a dialetheia.⁴²

Self-reference may result in self-refutation, but sometimes also self-validation, instantly creating a dialetheia (as in the case of the Liar sentence). But another way to make a dialetheia is for it to be validated by other means. On Priest's model, for example, when a theory is inconsistent, in order to transform the presence of a contradiction from a *reductio* of the theory into motivation for dialetheism, one is required to show the theoretical virtues of the view make it the best of the relevant options. To show the contradiction to be a dialetheia (rather than to show the theory to be false) one must give independent reasons to hold on to that theory despite its inconsistency. As Priest (1998) describes:

⁴¹Carnap (1934b) p7-8. The positive answer is to create a logical syntax of the language of science. I do not have the space to fully assess this option but recognise that it is worthy of exploration to determine whether or not Carnap can use it to escape the inconsistency in ESO.

⁴²Thanks to an anonymous reviewer for pointing this out. The Liar says of itself that it is true if it is false, and it is false if it is true. ESO on the other hand is only false conditional on it being true, but whether it is true or not is questionable. Thus ESO is *inconsistent*, not *paradoxical*.

There are criteria for rationality other than consistency, and that some of these are even more powerful than consistency. . . . There are many features of belief that are rational virtues, such as simplicity, problem-solving ability, non-adhocness, fruitfulness, and, let us grant, consistency. However, these criteria are all independent, and may even be orthogonal, pulling in opposite directions. Now what should one do if, for a certain belief, all the criteria pull towards acceptance, except consistency—which pulls the other way? It may be silly to be a democrat about this, and simply count the number of criteria on each side; but it seems natural to suppose that the combined force of the other criteria may trump inconsistency. In such a case, then, it is rational to have an inconsistent belief.⁴³

So Carnap’s ESO may be inconsistent but worth holding due to its theoretical virtues, as we may have good reasons to believe ESO. It is beyond the scope of this paper to give an account of these virtues; yet it is worth noting that ESO is having a renaissance.⁴⁴ There are even ways to interpret ESO such that it is trivially true.⁴⁵

ESO fits the structure of self-referential positions described by Priest and as such should receive similar dialethic treatment.⁴⁶ For Priest, inconsistent views about limits of thought each instantiate the ‘Inclosure Schema’.⁴⁷ This Schema generates the contradictions that arise at the limits by creating totalising sets of properties and breaking out of totalities with a ‘diagonaliser’. Priest describes the diagonalisation process as such: Given a list of objects of a certain kind we have a construction which defines a new object of this kind by systematically destroying the possibility of its identity with each object on the list. The new object may be said to ‘diagonalise out’ of the list.⁴⁸ The nature of a diagonaliser thus gives it the power to transcend totalities. Once given a totality we can then use that totality and the diagonaliser to define a new element, which can be shown by the diagonalisation process to be both in (a state called Closure) and not in (a state called Transcendence) that totality, resulting in a contradiction.

The problematic element in these structures is the totality. Whenever there is a totality, there will always be something that is both included and not included in that totality. Given that global theories wish to theorize about a totality, they will encounter a diagonalised object that destroys that totality, and be left in contradiction. For Carnap, his problematic totality was the framework of all frameworks, or the set of all meaningful sentences. On the external horn,

⁴³Priest (1998) p420

⁴⁴See Thomasson (2015), Hirsch (2011), and Price (2011), for examples of its virtues, including being the most prominent form of deflationism and the basis for Neo-Fregean mathematics.

⁴⁵Eklund (2011) p7, for example, argues that “the Carnapian thesis described by Soames (2009) threatens to be true but trivial.” Eklund instead interprets ESO as a *nontrivial* pluralism.

⁴⁶This is the principle of uniform solution (PUS) in Priest (2002) p166. I assume PUS to argue ESO should be treated like other self-referential views that are inconsistent as being dialethic.

⁴⁷Priest (2002) p276. There are papers challenging this Inclosure Schema, for example see Badici (2008) and Priest’s response (2010), and the exchange in Mind between Beall and Weber et al (2014). I note that the schema is contentious, however this is not the place to defend it.

⁴⁸Priest (2002) p119

considering the totality of all sentences, we found a sentence that came out as both meaningful and meaningless (<ESO>). On the internal horn, considering the totality of all frameworks, we found a framework that both spoke about itself and did not speak about itself (F). Thus, when we considered a totality, we found an object both within (Closure) and without (Transcendent) it. This destroys the global nature of the theory. The lesson to be learnt here is that if we want to theorize globally, the totality that the global scope ranges over will be open to diagonalisation and thus contradiction, leading us towards dialetheism if we want to hold such global theories as being true.

Carnap's ESO therefore encounters the structure and problems outlined by Priest (2002). But it is not just ESO, rather I take it to be a problem for all quietist metametaphysics. Contradictions are inevitable for metametaphysical views like ESO, due to their global meta-theoretical nature and their negative content about limits which make them quietist. The 'meta' approach aims to transcend the scope of that which it is theorizing about in order to reflect upon it, whilst the global nature will place itself back within the scope of that which it is theorizing about and reflecting upon, which together with the negative content about limits result in the theory *referring* to itself whilst *refuting* itself. Though ESO does not also *validate* itself, the point is that *if* one takes ESO to be true, or any similarly quietist metametaphysical position, *then* one needs to endorse dialetheism. If one engages in quietist metametaphysics seriously (and takes one's theories to be truthful), then dialetheism is needed to make sense of the inevitable inconsistencies that derive from such theorizing. <ESO> itself becomes a dialetheia when ESO is taken to be true, and so proponents of ESO are required to also be dialetheists. And it is not just ESO that is affected, but any quietist metametaphysical view will encounter inconsistency, providing evidence for the need for dialetheism in order to hold any such view as true.

We have seen that contradictions result from positions that discuss totalities or limits, particularly global meta-theories in metametaphysics, and so rejecting one position on the basis of their derived contradiction is futile when all the other positions of that type will encounter similar contradictions. So unless we reject all quietist metametaphysical views on account of their inconsistencies,⁴⁹ then we should endorse dialetheism to accommodate for the contradictions that they produce.⁵⁰ To respond by stopping doing quietist metametaphysics is extreme and unnecessary, and as Priest has argued it is also impossible, as we cannot deny that there are limits or totalities nor can we do without theorizing about them. He states: "it is without doubt that there are limits"; "given notions like set or ordinal, reason forces us to conceive of the totality of things satisfying it";

⁴⁹Which would itself be inconsistent, as it quantifies over all metametaphysics, including itself.

⁵⁰Priest (forthcoming) is in agreement, and says, regarding Moore (2012): "One might say 'so much the worse for these philosophers and their projects'. But this is not Moore's way. He takes it that they are on to something. Specifically, Moore holds that if one is in the business of making sense, there is something inevitable in the situations, something which betokens important non-propositional sense. . . . All the smart philosophers who have essayed this project have landed up in the contradictory predicament; so that seems to be what must happen."

and even cites Kant as stating that “totalisation is conceptually unavoidable.”⁵¹ Moore also takes such inconsistencies to be unavoidable in doing metaphysics.⁵² Limits and totalities therefore are integral to the way that we do philosophy, and cannot easily be dispensed of. Consequently, views that discuss limits and totalities, as they are in quietist metametaphysics, ought not and cannot be rejected on the basis that they encounter contradictions.

Therefore the *metametaphysical* contribution that I am making here is conditional: *if* we want to accept metametaphysical theories like Carnap’s ESO that draw a limit to thought, then we need to also accept contradictions. If we accept a theory with a contradiction, then we need dialetheism, since this is the position that allows for true contradictions. Furthermore, if one is a dialetheist, then a paraconsistent logic must be subscribed to, as Priest states: “One does not have to be a dialetheist to subscribe to the correctness of a paraconsistent logic, though if one is, one will.”⁵³ Since paraconsistent logics allow for some contradictions to be true, a dialetheist (committed to *some* true contradictions) requires a paraconsistent logic to make sense of their dialetheism in a formal way. Priest and Routley helpfully distinguish between those philosophers who explicitly embrace contradictions and those who only do so implicitly:

An author may not explicitly say that both A and $\neg A$ hold, or hold in a given theory, but what is said obviously implies that they do, and the author can be assumed to be aware that they do, or a case can be made that the author is aware of this. In such cases the approach is still explicitly paraconsistent. But an author may not be (clearly) apprised of what his or her position (obviously) implies, in which event the position will be either implicitly paraconsistent or else trivial.⁵⁴

We thus could view Carnap, like Kant and Wittgenstein, as implicitly dialetheist (or paraconsistent), since Carnap does not openly endorse such a view yet his position *requires* him to do so, because it is inconsistent in virtue of referring to itself and producing contradictions. This is not meant as an historical point of Carnapian exegesis - that he *really was* dialetheist - but rather as recognition that to take ESO as true implies and requires dialetheism and a paraconsistent logic.

7 Conclusion

In this paper I hope to have shown that Carnap’s theory encounters a self-reference problem which leads him into contradictions that are typical of those

⁵¹Priest (2002) p3, p162, and p86

⁵²Priest (forthcoming) says regarding Moore (2012): “We both agree that accounts of making sense, when applied to themselves, appear to generate contradictions at the limits of sense-making. We also agree that this is no mere philosophical frill, but at the very core of a central philosophical enterprise. The difference between us is that where he sees nonsense attempting to express the ineffable, I see a plain dialetheia.” I agree that they are evidence for dialetheism.

⁵³Priest (1998) p416

⁵⁴Priest and Routley (1989), in Priest, Routley, and Norman (1989) p1

found at the limits of thought. In Carnap’s attempt to draw a limit to meaningful language, he finds himself straddling both sides of this limit in expressing it in ESO. Metaphysics is argued to be beyond those limits, and as such is described as Transcendent, but in describing it as such it is automatically placed back in the Closure. This self-reference problem presented itself as a dilemma to Carnap – for him to treat his theory itself as being proposed internally or externally. I formalized this dilemma as generating contradictions in the typical ways described by Priest, showing that Carnap’s theory fits the self-referential structure of theories that aim to draw a limit to thought. This is my metametaphysical result – in redirecting metaphysics towards quietism, metametaphysics is redirected towards dialetheism. However, this *metametaphysical* conclusion, being itself global and meta-theoretical, will also be inconsistent if it applies to itself! As Priest says: “At the limit of making sense, we stop making sense; but we can make sense of some of the things beyond the limit... Yes—and we can make sense of that too.”⁵⁵ And in making sense of that too, we ascend to yet another meta-level, further demonstrating the need for adopting dialetheism and a paraconsistent logic to halt the regress in its tracks by simply accepting the contradictions that arise.⁵⁶

8 References

- Ayer, A. J. (1936) *Language, Truth, and Logic*, London: Gollancz.
- Badici, E. (2008) ‘The Liar Paradox and the Inclosure Schema’, *Australasian Journal of Philosophy*, 86.4, 583-596.
- Beall, J. C. and Armour-Garb, B. (eds.) (2005) *Deflationary Truth*, Open Court I.
- Beall, J. C. (2014) ‘Finding Tolerance without Gluts’, *Mind*, 123, 791–811.
- Benningson, T. (1999) ‘Is Relativism Really Self-Refuting?’, *Philosophical Studies*, 94, 211-236.
- Bradley, F. H. (1897) *Appearance and Reality*, 2nd ed., Swan Sonnenschein: London.
- Burgess, J. P. (2004) ‘Mathematics and Bleak House’, *Philosophia Mathematica*, 12, 18-36.
- Carnap, R. (1934a) *Logical Syntax of Language*, Routledge Press.
- (1934b) ‘On the character of philosophical problems’ *Philosophy of Science*, 1.1, 5-19.
- (1950) ‘Empiricism, Semantics and Ontology’, *Revue Internationale de Philosophie*, 4, 20-40.
- Chalmers, D., Manley, D. and Wasserman, R. (eds.) (2009) *Metametaphysics: New Essays on the Foundations of Ontology*, Oxford University Press.
- Creath, R. (2014) ‘Logical Empiricism’, *The Stanford Encyclopedia of Philosophy*, Zalta, E. N. (ed.), <http://plato.stanford.edu/archives/spr2014/entries/logical-empiricism/>
- Eklund, M. (2009) ‘The Frege-Geach Problem and Kalderon’s Moral Fictionalism’, *The Philosophical Quarterly*, 59.237, 705-712.
- (2011) ‘Carnap’s Metaontology’, *Nous*, 0.0, 1-23.

⁵⁵Priest (forthcoming) concluding remark.

⁵⁶Special thanks to Mary Leng, Graham Priest, Keith Allen, and Francesco Berto, for their very helpful comments on many earlier drafts of this paper, and to the audiences of the ‘Language and World’ workshop (University of Hamburg), the ‘Wittgenstein and the Limits of Language’ conference (University of Helsinki), and the ‘Mind and Reason’ research group (University of York), where I presented these ideas.

- Hales, S. (2006) *Relativism and the Foundations of Philosophy*, The MIT Press.
- Hirsch, E. (2011) *Quantifier Variance and Realism*, Oxford University Press.
- Kemp Smith, N. (trans.) (1933) *Immanuel Kant's Critique of Pure Reason*, 2nd ed., London: Macmillan.
- Moore, A. W. (2012) *The Evolution of Modern Metaphysics: Making Sense of Things*, Cambridge: Cambridge University Press.
- Pears, D. F. and McGuinness, B. F. (trans.) (1961) *Wittgenstein's Tractatus Logico-Philosophicus*, Routledge and Kegan Paul.
- Price, H. (2011) *Naturalism Without Mirrors*, Oxford University Press.
- Priest, G., Routley, R. and Norman, J. (eds.) (1989) *Paraconsistent Logic: Essays on the Inconsistent*, Philosophia Verlag: Munich.
- Priest, G. (1998) 'What is so Bad about Contradiction?', *The Journal of Philosophy*, 95.8, 410-426.
- (2002) *Beyond the Limits of Thought*, 2nd ed., Clarendon Press: Oxford.
- (2010) 'Badici on Inclosures and the Liar Paradox', *Australasian Journal of Philosophy*, 88, 359-366.
- (forthcoming) 'Stop Making Sense'.
- Quine, W. V. O. (1951a) 'On Carnap's views on ontology', *Philosophical Studies*, 2.5, 65-73.
- (1951b) 'Two Dogmas of Empiricism', *Philosophical Review*, 60.1, 20-43.
- Rayo, A. and Uzquiano, G. (2006) *Absolute Generality*, Oxford University Press.
- Sinnott-Armstrong, W. (2006) *Moral Skepticisms*, Oxford University Press.
- Soames, S. (2009) 'Ontology, Analyticity and Meaning: the Quine-Carnap Dispute', in Chalmers, D. et al. (2009), 424-443.
- Tarski, A. (1944) 'The semantic conception of truth: And the foundations of semantics', *Philosophy and Phenomenological Research* 4.3, 341-376.
- Thomasson, A. (2015) *Ontology Made Easy*, Oxford University Press.
- Weber, Z., Ripley, D., Priest, G., Hyde, M., and Colyvan, M. (2014) 'Tolerating Gluts', *Mind*, 123, 813-28.
- Yablo, S. (1998) 'Does Ontology Rest on a Mistake?', *Proceedings of the Aristotelian Society* 72, 229-261.