

Introduction

Stephan Blatti and Sandra Lapointe

Metaphysics incorporates two levels of inquiry: ontology and metaontology.¹ In the first, questions about what exists and about the properties and relations of various existents are posed and answered. The array of entities whose existence and properties are of concern ranges from the more familiar objects of everyday life, such as tables and persons, to the more exotic realms of numbers, fictional characters, propositions, and possible worlds. Given the enormous variety of things concerned, the questions ontologists address often remain highly general. Ontological questions may concern, for example, what exists, what sort of stuff makes up those entities that do exist, in what kinds of relations existents stand with one another, the categories of existents, etc.

Metaontology takes as its subject ontology itself. One may ask how, for instance, are ontological questions to be understood, and what really is at stake in raising and attempting to answer them? Or one may wonder by what standard are we to decide between competing answers to these questions? Or whether there are beliefs, statements, and/or practices that reveal antecedent commitments regarding answers to ontological questions (or antecedent constraints on the range of tenable answers)?

While most, if not all, significant figures in the history of western metaphysics have held at least tacit views concerning these metaontological questions, careful and sustained work in metaontology is a relatively recent phenomenon.² The single most significant episode in the brief history of metaontological inquiry was the mid-twentieth-century debate between the leading exponent of the logical positivist movement, Rudolf Carnap (1891–1970), and the leading critic of that movement, Willard Van Orman Quine (1908–2000).³ The subject of their dispute was the nature

¹ The question of the relation between metaphysics and ontology is not altogether unproblematic. Some of the essays included here (see Koslicki *infra*, Hofweber *infra*, Sidelle *infra*) offer a discussion of these issues.

² Notwithstanding a few prior instances, regular use of the term ‘metaontology’ appears to date back no further than Peter van Inwagen’s 1998 article titled simply “Meta-ontology,” though even he had some reservations about the term’s introduction (249 n1). (See also Koslinski *infra*.)

³ Though preceded and succeeded by other relevant publications (see Quine 1951b and 1960, Carnap 1956, Appendix D and Creath 1990), the primary moves in this debate were made in quick succession in Quine’s “On What There Is” in 1948, Carnap’s “Empiricism, Semantics, and Ontology” in 1950, and Quine’s

of ontological commitment and, in particular, whether it is incumbent upon us to accept the existence of abstract entities such as numbers, propositions, classes, properties, and relations. The issue was a contentious one because Platonism—the view that affirms the existence of abstracta⁴—was regarded as an exemplary instance of the sort of misguided metaphysics disavowed by Carnap and Quine alike. Both figures regarded traditional, a priori metaphysical inquiry as ill-conceived nonsense and sought to replace it with a methodologically rigorous alternative. Guiding them in this effort was a second shared commitment on the importance of science for philosophy. Philosophical reflection, both men agreed, cannot be prior to scientific inquiry, but must be a part of it. And yet both men also recognized that numbers were ineliminable in scientific work. This combination of commitments raised important questions. Is it possible to countenance the existence of numbers without thereby accepting Platonism? And if the existence of numbers is admitted, must the existence of other abstract entities (notably, propositions and properties) also be accepted? These were the questions that Quine and Carnap attempted to answer—and did answer, albeit quite differently from one another—in their common pursuit of an account of ontological commitment that was at once philosophically rigorous and scientifically acceptable.

The debate was instigated by Quine's 1948 article, 'On What There Is.' According to the criterion of ontological commitment he proposes there, one can use a meaningful term like 'ten'—as in the sentence, 'My dog is ten years old'—without thereby committing oneself to the existence of some entity—the number ten—that is that term's meaning. On the contrary, Quine argues, a speaker incurs a commitment to the existence of some entity if and only if she asserts its existence—just in case, in other words, the speaker says something like "The number ten exists". Ontologically committing assertions will take (or will entail an assertion of) the following form: $(\exists x)Fx$. This sentence cannot be true unless there *is* at least one entity in the world of which the predicate 'F' is true: some being, *b*, that makes 'F*x*' true when *b* is assigned as the value of *x*. Such is the meaning of the famous Quinean refrain, "to be is to be the value of a bound variable."

But what provokes Carnap's response is not the criterion itself. Rather it is the charge that Quine levies against Carnap later in the article. "Classical mathematics," Quine says, "is up to its neck in commitments to an ontology of abstract entities." And by "condon[ing] the use of bound variables to refer to abstract entities known and unknown, specifiable and unspecifiable," Carnap himself (along with Frege, Russell, Whitehead, and Church) counts among those who affirm "the Platonic doctrine that universals or abstract entities have being independently of the mind" (1961, 13).

It is in response to this allegation that Carnap publishes "Empiricism, Semantics, and Ontology" in 1950. Carnap's primary objective in this paper was to demonstrate

"Two Dogmas of Empiricism" and "On Carnap's Views on Ontology" in 1951. More detailed reviews of this debate (to which this introduction is indebted at points) are given by Carnap himself (1963), Hylton (2007: chs. 2–3), Yablo (1998), Price (2009), Soames (2009), and Ebbs (2011), Hofweber (2011).

⁴ Goodman and Quine 1947.

how reference to abstracta “does not imply embracing a Platonic ontology but is perfectly compatible with empiricism and strictly scientific thinking” (1956, 206). To this end, he contends that questions concerning the existence of entities—be they abstract or the more familiar objects of everyday experience—can be answered only relative to a system of linguistic expressions and semantic rules for “testing, accepting, or rejecting” those expressions (208). Carnap calls these systems “linguistic frameworks.”

Further, Carnap distinguishes two ways of understanding an existence question. According to the first, a question of the form “Are there Fs?” is to be understood as asking whether or not the expression ‘F’ is meaningful in a particular linguistic framework. Carnap calls these “internal questions” because they are asked and answered from *within* a framework. The answer to such a question is given trivially, simply by determining the truth-value of expressions that imply reference to the entity whose existence is in question. In the case of internal existence questions about non-abstract entities, the answer will be determined “by empirical investigations” (207). For instance, the answer to the question “Is there a unicorn in my backyard?” will be determined by applying a framework’s evidentiary rules for the extension of the term ‘unicorn’. In our ordinary linguistic framework for “the spatio-temporally ordered system of observable things and events”—what Carnap calls the “thing language”—experiences of the relevant sort in the relevant context are what constitute confirming evidence that the extension of the term ‘unicorn’ is empty (206–7). If these experiences did in fact occur, the answer to the internal question “Is there a unicorn in my backyard?” would be yes; if not, the answer is no.

But an existence question may be intended differently: “Are there Fs?” may instead ask whether Fs *really* exist, whatever the semantics for ‘F’ happens to be in one framework or another. Carnap calls these “external questions” because they are posed not from within, but from *outside* any particular linguistic framework. This is how traditional metaphysicians understand ontological questions (which tend to concern the existence of not a particular thing meeting a further condition like “. . . in my backyard,” but a class of things considered in general). Presented with the news that the answer to the question “Are there unicorns?” is no, *but only when that question is considered from within the thing language framework*, the traditional metaphysician will not be satisfied because what she wants to know is not what truth-value that framework happens to assign the statement ‘there are unicorns’, but whether there *really are* unicorns. “Does the thing language actually correspond to reality?” she will ask.

Carnap’s view is that there is no framework-independent, language-neutral fact of the matter as to whether unicorns “really” exist.⁵ The reason is that, understood externally, the question “Are there Fs?” is completely detached from any semantic rules governing the use of ‘F’ and is therefore unanswerable. As a result, there can be, on Carnap’s view, no *factual* resolution of the familiar metaphysical debates between, say

⁵ Whether this implies that Carnap was a “relativist” (or even a “pluralist”) and what this would mean is a question we leave open. For a discussion, see Eklund *infra*.

realism and idealism. Consider, as Carnap does, two empirically equivalent frameworks with radically different ontological commitments: one committed to the existence of physical objects of everyday experience (the “thing language”), the other committed only to sense data. Faced with choosing between these linguistic systems, Carnap says, we are guided not by further theoretical considerations, but only by *practical* ones—only by determining which framework is “more or less expedient, fruitful, conducive to the aim for which the language is intended” (214). So long as they are formalized carefully, these systems of linguistic expressions and semantic rules may be evaluated instrumentally in this way, with pragmatic success or failure determining which ones are retained and used and which are abandoned. Indeed, since their performance will determine whether or not they are retained, and in the absence of further theoretical reasons to prefer one framework over another, we must remain tolerant in permitting a proliferation of frameworks (221).⁶ And since our ontological commitments are intelligible only in the context of a particular linguistic framework, so too must we remain tolerant of conflicting commitments concerning the existence of various kinds of entities.

Carnap’s diagnosis of the failure of external questions about observables applies equally to external questions about abstract entities. Unless relativized to and understood within a carefully described linguistic framework, ontological questions like “Do numbers exist?” or “Do properties exist?” are unsolvable and should be abandoned. And just as there is no framework-independent reason to adopt the ontological commitments of the language of things instead of the language of sense-data, so too there is no framework-independent reason to prefer the ontological commitments of the language of mathematical nominalism over the language of Platonism.

Carnap’s account of internal existence questions, on the other hand, cannot be the same for non-abstract and abstract entities, since “empirical investigations” cannot (or at any rate, typically do not) help us settle questions concerning the latter. Rather, considered from within a linguistic framework, answers to questions like “Are there numbers?” and “Are there colors” are analytic. That is to say, answers to internal existence questions about abstract entities are given by the semantic rules governing the logical properties of expressions containing references to the kind of abstract entity at issue (208–9). As such, answers to these questions are trivially true, since they follow immediately from other statements within a linguistic framework. Carnap writes: “‘There are numbers’ or, more explicitly, ‘There is an n such that n is a number’ . . . follows from the analytic statement ‘five is a number’ and is therefore itself analytic.” Indeed, no one who has adopted a framework in which ‘five is a number’ is true would even “seriously consider a negative answer” to the internal question “Are there numbers?” (209). Likewise, affirmative answers to “Is green a color?” and “Are there colors?” follow

⁶ This principle of tolerance for a multiplicity of linguistic frameworks was a commitment of long-standing for Carnap. As he put it in *The Logical Syntax of the World*, for instance, “it is not our business to set up prohibitions, but to arrive at conventions” (1934, 51).

analytically from an affirmative answer to the question “Are these two blades of grass green?” This is not to say, of course, that the *discovery* of answers to internal existence questions about abstracta is trivial. Consider, for instance, the questions “Are there any odd perfect numbers?” and “Are there infinitely many twin primes?” But the same is true about the discovery of answers to internal existence questions about non-abstracta; consider “Are there Higgs bosons?” The difficulty in answering this last question stems not from ascertaining the physics framework’s evidentiary rules for the extension of the term ‘Higgs boson’, but from the difficulties involved in obtaining the confirming or disconfirming evidence itself.

It is because of its reliance on the notion of analyticity that Carnap’s internal/external distinction comes under fire in two 1951 articles by Quine: “Two Dogmas of Empiricism” (1951a) and “On Carnap’s Views on Ontology” (1951b). In the former, Quine famously argues that no noncircular explanation of analyticity has been given and that the distinction between analytic and synthetic statements is therefore untenable. And having rejected analyticity, Quine thus rejects Carnap’s distinction between internal and external questions and with it his view that the truth of statements concerning the existence of abstracta like numbers and properties could be established analytically merely upon the adoption of a linguistic framework. He writes: “if there is no proper distinction between analytic and synthetic, then no basis at all remains for the contrast which Carnap urges between ontological statements and empirical statements of existence” (1951b, 71).

In the decades since their debate, the consensus amongst analytic philosophers has been that Quine won: that his criticisms of analyticity were conclusive, that without this notion Carnap’s position was untenable, and that metaphysical inquiry is therefore free to proceed unencumbered by Carnapian misgivings and deflationism. What need is there, then, for a volume such as this? A confluence of two recent trends provides the answer.

First of all, during the past twenty-five years, historical scholarship on the work of Vienna Circle members like Carnap has exploded both in quality and quantity.⁷ This scholarship has emphasized several of the older and deeper motivations that lay behind the views that Carnap advocated in his debate with Quine, and this in turn has provided occasions for philosophers to re-evaluate whether or not Quine’s argument against analyticity succeed in undermining (or even in addressing) Carnap’s empiricist project. It has been argued, for example, that the debate between Carnap and Quine reflects not a straightforward disagreement about analyticity, but rather a deeper dispute about philosophical method (George 2000), or perhaps just two rival epistemologies (Creath 1991). Alspector-Kelly (2001) argues that Carnap’s aim in “Empiricism, Semantics, Ontology” was not, as Quine thought, to avoid any commitment to abstracta, but to demonstrate how empiricism does not imply nominalism. And there

⁷ See, for instance, Coffa 1991, Creath 1990, Friedman 1999, and Soames 2003.

is no shortage of other challenges to various aspects of the standard account of the Quine–Carnap debate.⁸

Yet the aim of this volume is not principally to engage the historical scholarship concerning Carnap's work and his debate with Quine. Rather, it is to validate the important legacy of that work and debate by exploring what insights a Carnapian approach might offer to contemporary work in metaontology. As a result, there would be less demand for this collection of papers were there not—and here is the second trend—a recent resurgence of interest in metaontology.⁹ In this context, while Carnap's anti-metaphysical outlook remains unpopular, philosophers have begun to revisit his arguments and to adapt for contemporary purposes some of the insights they contain. Examples of these efforts include everything from Thomasson's (2007) neo-Carnapian deflationism in ontology to Yablo's (1998) argument that Carnap's internal/external distinction could be more fruitfully understood as the distinction between metaphorical and literal discourse.

Unsurprisingly, what counts as a Carnapian insight is, explicitly or not, at the heart of many of the essays that follow. To a great extent, what one's answer turns out to be depends on what is made of Carnap's distinction between internal and external questions. For Carnap's treatment of ontological questions yields a position which traditional metaphysicians are likely to find onerous. In order to interpret questions of existence as both meaningful and factual, metaphysicians are forced to construe them as *internal* to a linguistic framework and therefore as trivially answered. In order to be in a position to claim any substance for questions of existence, the metaphysician must forego ontology's claim's to be a factual discipline. Metaphysical questions are fruitful and interesting to the extent that they are construed as external and pragmatic; they concern the practical advisability of adopting one framework over another. One consequence of Carnap's approach is thus metaphysical deflationism: the investigation of traditional metaphysical questions is not a genuinely descriptive endeavor since there is no fact of the matter as to which ontology is the correct one. Metaphysical debates are, for this reason, theoretically vacuous.

Some of the essays we include here conceive of what is distinctively Carnapian about their projects as the commitment to metametaphysical deflationism. Others, however, seek to maintain a broadly Carnapian line while rejecting the deflationist implications of Carnap's project. Thomas Hofweber, for one, proposes to reframe Carnap's distinction between internal and external questions so as to avoid the anti-metaphysical conclusion to which Carnap himself was led. As Hofweber sees it, Carnap was right to assume that there are two questions at stake when one asks a question of the form 'Are there Fs?' But on Hofweber's account, both questions—the one corresponding to the trivial claim and the other corresponding to the sub-

⁸ See, for instance, Richardson 1997, 2007, Creath 2007, Price 2009, and Ebbs 2011.

⁹ Examples include McGinn 2000, Azzouni 2006, Hawley 2006, Williamson 2007, Chalmers, Manley, and Wasserman 2009, Varzi 2011, and Haug 2013.

stantial claim—are factual. According to Hofweber, the difference between these two questions is attributable to the fact that the quantifiers involved in questions of the form ‘Are there Fs?’ are polysemous: sentences in which they occur have different readings which correspond to the different functions that quantifiers play in communication. As Hofweber sees it, the need to distinguish between two kinds of existence question is key to ontology, and we have Carnap to thank for this insight.

Robert Kraut concurs with Hofweber in rejecting the deflationist interpretation of Carnap. Kraut accepts that, on Carnap’s view, substantial questions of existence ultimately concern the practical advisability of adopting one linguistic framework over another. But according to Kraut, rather than being assimilated to a form of eliminativism or reductionism, Carnap’s theory should be construed as the metaphysical counterpart of non-cognitivist theories of morality. As Kraut sees it, Carnap sought neither to eliminate metaphysical questions—a project that, according to Kraut, borders on incoherence—nor to reduce them to practical ones—a strategy Kraut deems implausible—but rather to make them impervious to empiricist epistemological scruples by denying that their content is descriptive in the first place. On this view, metaphysics is a tool that serves to articulate what are in fact pragmatic commitments. What is more, on Kraut’s account—and in this he diverges from the more liberal, historical Carnap—the kinds of commitments expressed by ontological claims are constrained by a specific pragmatic criterion: the explanatory ineliminability of linguistic frameworks. Kraut defends his account against a number of objections, arguing that, in spite of worries concerning circularity, conservativeness, and the general plausibility of expressivism, his brand of metaphysical non-cognitivism provides a deeper insight into the content of ontological disputes.

In *Meaning and Necessity*, Carnap advocated an intensionalist semantic framework within which the truth of a modal claim follows from “semantical rules . . . alone without any reference to extra-linguistic facts” (1947/56, 10). Two decades later, in defending his view that some claims of necessity are true a posteriori, Kripke both challenged the descriptivist theory of meaning that Carnap presupposed and sharply distinguished the notions of necessity and apriority that Carnap conflated. But against the apparent upshot that “if Kripke is right . . . then it seems Carnap must be wrong,” Stephen Biggs and Jessica Wilson suggest that, by accepting a form of epistemic two-dimensionalism (Chalmers and Jackson 2001), a contemporary neo-Carnapian can preserve Kripke’s insights within a broadly descriptivist, intensionalist semantics of the sort advocated by Carnap. According to the two-dimensionalist view that they commend to neo-Carnapians, necessary a posteriori claims are justified by inferences to the best explanation; surprisingly, these inferences are a priori (if fallibly so). Moreover, Biggs and Wilson argue, the neo-Carnapian who adopts their “abductive two-dimensionalism” must abandon Carnap’s metaphysical deflationism.

One question that arises naturally is whether Carnap’s deflationism comes in one piece, or whether it is possible to be selective when adopting his metaontology. In his

contribution, Alan Sidelle considers contemporary deflationist views about the metaphysics of material objects. On the one hand, Sidelle seeks to determine how contemporary deflationism about material objects relates to the views Carnap puts forward in “Empiricism, Semantics and Ontology,” and he points to a number of differences. On the other hand, Sidelle raises the question of whether it is coherent to adopt Carnap’s position concerning material objects, but to reject it in the case of abstract ones? While Sidelle is inclined to answer affirmatively, he also concludes that “Empiricism, Semantics and Ontology” provides us not so much with an argument for, as with an approach and a type of skeptical challenge that may be compatible with, contemporary deflationism about material objects.

From a historical and exegetical perspective, any attempt at maintaining a broadly Carnapian line while bypassing metaontological deflationism is problematic, and neither Hofweber, Kraut, nor Biggs and Wilson contend that their accounts would have received Carnap’s approval. But what of neo-Carnapian deflationism? Here it may be useful to consider Eli Hirsch’s three-way distinction between “increasingly problematic degrees of Carnapian tolerance” that disputants in a metaphysical debate may adopt when acknowledging that their disagreement boils down to a choice between alternative linguistic frameworks. First-degree tolerance—which Hirsch defends as “clearly correct”—is illustrated by metaphysical disputes in which each interlocutor can devise a semantics for the other’s linguistic framework wherein the disputant’s assertions come out true. Two assertions are shown to be truth-conditionally equivalent just in case, in any actual or possible case of utterance, “they express the same unstructured (coarse-grained) proposition.” According to his quantifier variantist view (Hirsch 2011), given two truth-conditionally equivalent linguistic frameworks, neither will offer a privileged or superior description of the world, and ontological disputes in which those frameworks are employed will be resolved either “by charity” or “by stipulation.” Third-degree tolerance involves verificationism, and notwithstanding Carnap’s own attitude to this form of tolerance, Hirsch rejects it as “clearly incorrect.” It is with a discussion of an intermediate form of tolerance—the second degree—that Hirsch concludes his essay. Whereas in the first degree, truth-conditional equivalences enable disputants to move back and forth between languages without altering their coarse-grained thoughts, in cases of second-degree tolerance, one goes further “by leaping into new ontological languages that do alter one’s coarse-grained thoughts.” Unable to define the boundaries of this degree of tolerance with much precision, Hirsch concedes that he is ambivalent about its prospects.

By connecting deflationism with quantifier variance, Hirsch’s position raises some important questions, including whether Carnap himself was committed to quantifier variance, and whether quantifier variance is the only viable support for metaphysical deflationism. In her essay, Amie Thomasson gives negative answers to both of these questions and sketches a neo-Carnapian form of deflationism that is meant to bypass standard objections to quantifier variance, verificationism, and anti-realism, with all of which Carnap’s project has been associated. Thomasson’s position—a form of

ontological minimalism—revolves around the idea that, since the only legitimate uses of terms are governed by the rules of use (including the conditions of application) within a linguistic framework, the only legitimate ontological questions are those that are asked “internally.” On her account, then, existence questions have an “easy” answer: if a question concerning the existence of such-and-such entities can be meaningfully stated, namely within a framework, the answer follows from the rules that were used to introduce it in the framework in the first place. Existence claims can thus easily be shown to be true: the concepts they involve come with the conditions for their own application, and whenever the concept applies, we can conclude analytically that the corresponding entity exists. On Thomasson’s account, then, debate can arise only if what is at stake is the question whether the relevant terms and rules should be adopted in the first place. Whenever this is the case, the relevant terms are no longer *used* but merely *mentioned*, and the answer concerns not a matter of fact but the practical advisability of the adoption of one framework over another. Thomasson argues that the “easy” approach to ontology implies neither that the choice of framework is arbitrary nor that it relegates metaphysicians to idleness. As Thomasson sees it, metaphysicians are, of course, tasked to engage with pragmatic questions concerning conceptual choices. But they are also responsible for the relevant preliminary work that involves both conceptual explication and engineering.

Ontological minimalism, as Thomasson points out, presents its own challenges. In his essay, Simon Evnine argues that this view (also defended by Schiffer) is problematic to the extent that it is unclear how it can, in addition to establishing the existence of the entities in question, also establish that these entities have other properties, including properties essential to what these entities are. If we follow Evnine, the consistency of ontological minimalism is threatened whenever more is supposed to be true of the entities it establishes than what follows from the satisfaction of the existence conditions alone. The problem, according to Evnine, lies with the notion of application conditions. Evnine distinguishes between different ways in which concepts can be said to be applied, and argues that none of these will be satisfactory for the purpose of ontological minimalism. The ontological minimalist thus faces a dilemma. On the one hand, she can maintain the minimalist project. The price of doing so, however, is that the entities whose existence she establishes are both too minimal and different from the entities that are at issue in the metaphysical debate to satisfy the proponents of rival theories. On the other hand, she can resort to substantial metaphysical claims to ensure that the entities whose existence she establishes really have the desired properties. But in doing so, she abandons minimalism and, with it, the idea that we can pursue a deflationist project.

Adjacent to the question of what counts as a Carnapian approach is that of Carnap’s legacy. Matti Eklund’s essay aims at providing a general appraisal of Carnap’s legacy. His discussion, which ranges over the positions of a number of authors included in the present collection (Hofweber, Thomasson, Hirsch, and Creath) thus sets the stage for future debate. Eklund looks first at contemporary treatments of arguably Carnapian themes: the distinction between internal and external questions, analyticity, and verificationism.

Eklund then assesses what Carnap has to say on a number of issues arising in contemporary debates: the idea that ontological disputes are “merely verbal,” quantifier variance, and the idea that what makes a meaning “good” is its “naturalness” (i.e., its capacity to “carve nature at its joints”). The conclusion Eklund draws from his discussion is two-fold. On the one hand, according to Eklund, the widespread conviction that Carnap’s influence on contemporary ontology was substantial is misleading; what Carnap has in mind when he discusses the internal/external dichotomy, analyticity, and the empiricist criterion is either more specific or altogether distinct from what contemporary ontologists—even contemporary ontologists who claim a Carnapian heritage—have in mind. On the other hand, Eklund argues, contemporary discussions of verbal disputes, quantifier variance, and naturalness—to the extent that these are themes that are indeed found in Carnap—are as problematic as Carnap’s own discussions were.

Eklund is on the whole a rather unsympathetic critic of Carnap, and some of his other work (e.g., Eklund 2009) shows him committed to a form of metaphysical realism which, as Richard Creath points out, Carnap was at pains to avoid. In his essay, however, Creath argues that historians have everything to gain from taking Eklund’s and other arguments seriously, helping them make better sense of what Carnap was doing. Likewise, non-historians have much to gain from a better understanding of Carnap. Creath illustrates both points, arguing in the second part of the paper for a neo-Carnapian approach to the treatment of theoretical diversity in metaphysics. As Creath puts it, Carnap’s principle of tolerance was a proposal to defuse conflict and reorient discussion, and a better appreciation of Carnap opens the same sort of possibilities for contemporary ontology.

Gregory Lavers’ essay—the only one to tackle historical and exegetical questions directly—deals with Carnap’s views on the existence of abstract objects, as well as with his views on the existence of theoretical objects. According to Lavers, Carnap’s treatment of both kinds of entities is subject to an asymmetry that is unmotivated: while Carnap is a realist when it comes to abstract entities, his views on theoretical entities are better understood as implying instrumentalism, and Lavers attempts to show why. The first part of his essay explains how Carnap’s mature view on numbers—a form of realism—compares with his earlier formalist theory. According to Lavers, Carnap’s realism is prompted by the adoption of a Tarskian semantics, a move that Lavers argues was justified for Carnap to the extent that he saw Tarski’s treatment of meaning and truth as consistent with his own views on explication. In the second part of the chapter, Lavers shows that Carnap’s views on theoretical entities in empirical sciences do not appeal to the same resources. When it comes to answering questions such as “Do theoretical terms refer?” or “Are statements asserting the existence of theoretical entities such as electrons true?” Carnap, rather than relying on Tarskian semantics, offers an alternative theory and consequently sides with instrumentalists. While this alternative approach is consistent with reliance on the Carnap–Ramsey sentence approach to theories for the introduction of terms for theoretical entities, Lavers argues that it is also somewhat awkward and arbitrary.

The book concludes with an essay that raises what may be the biggest challenge to Carnap’s conception of ontology. On Carnap’s own account, ontology really has no

domain, no area of inquiry of its own. But according to Kathrin Koslicki, this view—a source of worry for serious metaphysics—relies on an impoverished conception of ontology. Koslicki argues that, contrary to what Carnap assumes, questions of existence do not exhaust the scope of ontology. In some important cases, metaphysical disputes concern not questions of existence but questions of fundamentality. These questions, Koslicki argues, can be neither dealt with analytically, within a given framework, nor reframed as practical questions; this in turn calls into question the adequacy of Carnap's internal/external dichotomy. Koslicki illustrates the point by considering the disagreement between proponents of two different versions of trope theory as regards trope individuation, documenting the fact that this disagreement touches on not the (internal/external) question of the existence of tropes, but rather the question of their fundamentality.¹⁰

References

- Alspector-Kelly, M. (2001). "On Quine on Carnap on Ontology," *Philosophical Studies* 102: 93–122.
- Azzouni, J. (2006). *Deflating Existential Consequence: A Case for Nominalism* (Oxford: Oxford University Press).
- Carnap, R. (1934). *Logische Syntax der Sprache*; trans. *The Logical Syntax of Language* (London: Humanities Press, 1937).
- Carnap, R. (1947). *Meaning and Necessity: A Study in Semantics and Modal Logic* (Chicago: University of Chicago Press).
- Carnap, R. (1950). "Empiricism, Semantics, and Ontology," *Revue Internationale de Philosophie* 4: 20–40; rev. and repr. in *Meaning and Necessity: A Study in Semantics and Modal Logic*, 2nd ed. (Chicago: University of Chicago Press, 1956), 205–21.
- Carnap, R. (1952). "Meaning Postulates," *Philosophical Studies* 3: 65–73; repr. in *Meaning and Necessity: A Study in Semantics and Modal Logic*, 2nd ed. (Chicago: University of Chicago Press, 1956), 222–29.
- Carnap, R. (1963). "Intellectual Autobiography," in *The Philosophy of Rudolf Carnap*, ed. P. A. Schilpp (La Salle, IL: Open Court), 3–84.
- Chalmers, D. and F. Jackson (2001). "Conceptual Analysis and Reductive Explanation," *Philosophical Review* 110: 315–61.
- Chalmers, D., D. Manley, and R. Wasserman, eds. (2009). *Metametaphysics: New Essays on the Foundations of Ontology* (Oxford: Oxford University Press).
- Coffa, A. (1991). *The Semantic Tradition from Kant to Carnap: To the Vienna Station* (Cambridge: Cambridge University Press).
- Creath, R., ed. (1990). *Dear Carnap, Dear Van: The Quine–Carnap Correspondence and Related Work* (Berkeley: University of California Press).
- Creath, R. (1991). "Every Dogma Has its Day," *Erkenntnis* 35: 347–89.
- Creath, R. (2007). "Quine's Challenge to Carnap," in Creath and Friedman (2007), 316–35.
- Creath, R. and M. Friedman, eds. (2007). *The Cambridge Companion to Carnap* (Cambridge: Cambridge University Press).

¹⁰ Our thanks go to Chris Pinock and to an anonymous referee for much appreciated input. We would also like to thank Chandra Kavanagh for her assistance in preparing the index.

- Ebbs, G. (2011). "Carnap and Quine on Truth by Convention," *Mind* 120: 193–237.
- Eklund, Matti (2009). "Carnap and Ontological Pluralism," in Chalmers, Manley, and Wasserman (2009), 130–56.
- Friedman, M. (1999). *Reconsidering Logical Positivism* (Cambridge: Cambridge University Press).
- George, A. (2000). "On Washing the Fur Without Wetting It: Quine, Carnap, and Analyticity," *Mind* 109: 1–24.
- Goodman, N. and W. V. O. Quine (1947). "Steps Toward a Constructive Nominalism," *Journal of Symbolic Logic* 12: 105–22.
- Haug, M., ed. (2013). *New Essays on Philosophical Methodology* (London: Routledge).
- Hawley, K. (2006). "Science as a Guide to Metaphysics?," *Synthese* 149: 451–70.
- Hirsch, E. (2011). *Quantifier Variance and Realism: Essays in Metaontology* (Oxford: Oxford University Press).
- Hofweber, T. (2011). "Logic and Ontology," *Stanford Encyclopedia of Philosophy*, ed. E. Zalta, <<http://plato.stanford.edu/archives/spr2013/entries/logic-ontology>>.
- Hylton, P. (2007). *Quine* (London: Routledge).
- McGinn, C. (2000). *Logical Properties: Identity, Existence, Predication, Necessity, Truth* (Oxford: Oxford University Press).
- Price, H. (2009). "Metaphysics After Carnap: The Ghost Who Walks," in Chalmers, Manley, and Wasserman (2009), 320–46.
- Quine, W. V. O. (1948). "On What There Is," *Review of Metaphysics* 2: 21–38; repr. in Quine (1961), 1–19.
- Quine, W. V. O. (1951a). "Two Dogmas of Empiricism," *Philosophical Review* 60: 20–43; rev. and repr. in Quine (1961), 20–43.
- Quine, W. V. O. (1951b). "On Carnap's Views on Ontology," *Philosophical Studies* 2: 65–72; repr. in Quine (1966), 126–34.
- Quine, W. V. O. (1960). *Word and Object* (Cambridge, MA: MIT Press).
- Quine, W. V. O. (1961). *From a Logical Point of View* (Cambridge, MA: Harvard University Press).
- Quine, W. V. O. (1966). *The Ways of Paradox and Other Essays* (New York: Random House).
- Richardson, A. (1997). "Two Dogmas about Logical Empiricism: Carnap and Quine on Logic, Epistemology, and Empiricism," *Philosophical Topics* 25: 145–68.
- Richardson, A. (2007). "Carnapian Pragmatism," in Creath and Friedman (2007), 295–315.
- Soames, S. (2003). *Philosophical Analysis in the Twentieth Century*, 2 vols. (Princeton, NJ: Princeton University Press).
- Soames, S. (2009). "Ontology, Analyticity, and Meaning: the Quine–Carnap Dispute," in Chalmers, Manley, and Wasserman (2009), 424–43.
- Thomasson, A. (2007). *Ordinary Object* (Oxford: Oxford University Press).
- Van Inwagen, P. (1998). "Meta-ontology," *Erkenntnis* 48: 233–50.
- Varzi, A. (2011). "On Doing Ontology without Metaphysics," *Philosophical Perspectives* 25: 407–23.
- Williamson, T. (2007). *The Philosophy of Philosophy* (Malden, MA: Wiley-Blackwell).
- Yablo, S. (1998). "Does Ontology Rest on a Mistake?," *Proceedings of the Aristotelian Society* 72: 229–61.