

# Stroud's Carnap

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In "Empiricism, Semantics, and Ontology" Carnap drew his famous distinction between 'internal' and 'external' questions of existence, pronouncing the former meaningful and the latter meaningless. In *The Significance of Philosophical Scepticism*, Barry Stroud understands Carnap to be applying the verification criterion of meaningfulness in order to refute Cartesian skepticism. I suggest that Stroud misrepresents both Carnap's aim and method. Carnap was responding to critics who suggested that his willingness to quantify over abstract entities in his work in semantics violated his commitment to empiricism. He rejected that criticism as presupposing a super-scientific standpoint from which constraints on the admissible domain of entities of science could be delivered. Carnap wanted to insulate science from the imposition of first-philosophical metaphysical prejudice, not to defuse scepticism by appeal to verificationism.

## I. The Received View

According to the "received view" of Rudolf Carnap's philosophy, he attempted (and failed) to establish phenomenalistic foundations for science and wielded the verificationist criterion of cognitive significance against traditional metaphysics, religion and values. This characterization of Carnap's philosophy has come to us primarily through A. J. Ayer's introduction of positivism to the English-speaking world in his *Language, Truth and Logic*<sup>1</sup> and the preliminary sketches of positivistic doctrine with which many of W. V. Quine's essays begin (and go on, inevitably, to repudiate).<sup>2</sup> It is now largely taken for granted that the various objections leveled at verificationism—that none of its many reformulations draws the intended line between meaningful science and meaningless metaphysics and that it is meaningless

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<sup>1</sup> Ayer 1952.

<sup>2</sup> "That the current image of the Circle amounts to little more than a version of British empiricism prettied up by the then new tools of formal logic is surely due not in the smallest part to the conceptions of epistemology conveyed in Ayer's *Language, Truth and Logic* and combated in Quine's 'Two Dogmas of Empiricism' and 'Epistemology Naturalized'. Both ... wrongly attribute foundationalist intentions to the approach they present as the Circle's. It is no mere coincidence then that for both the Viennese revolution in philosophy amounted to little more than the pursuit of a particularly hard-headed, namely verificationist, version of reductionist empiricism." Uebel 1996a, pp. 416–17.

according to itself—are devastating.<sup>3</sup> As a result, Carnap's work has been allotted a largely historical role, if a significant one: contemporary views are often identified and distinguished by what in his and the positivists' account of philosophy, science, language, and values they reject.

Carnap's early work, *Der Logische Aufbau der Welt*,<sup>4</sup> is taken to be the positivists' only serious attempt to implement verificationism by showing how a phenomenistic reduction to sense experience might actually proceed. The project failed, as Carnap himself recognized. Carnap's post-*Aufbau* work appears to be little more than a series of unsuccessful attempts to rescue the criterion—and empiricist foundationalism in general—from its failure, attempts that had little point once the phenomenalist and reductionist aims of the *Aufbau* were abandoned.<sup>5</sup>

This approach to Carnap's philosophy has come under considerable attack in recent years. Much of the attack has been directed at the traditional interpretation of the *Aufbau*.<sup>6</sup> Commentators have pointed out that Carnap's aim in that work was to secure the objectivity of scientific discourse in spite of the role of subjective sense experience rather than by appeal to it,<sup>7</sup> and that Carnap considered the phenomenalist basis to be only one among a variety of possible, equally legitimate constitution-bases. Carnap's attitude toward the question which basis is the correct one was to reject the question; they are all legitimate alternatives worth development. Insistence that a phenomenistic basis *must* be successful if science is to be distinguished from metaphysics and made epistemically secure against sceptical attack would, from this point of view, embody just the sort of philosophical absolutism that Carnap repudiated.<sup>8</sup>

So understood, the failure of the *Aufbau* project is considerably less significant. Its lesson is not that positivistic verificationism fails but rather that a phenomenistic language is inadequate to the needs of empirical science and so that alternatives need development. Carnap's rejection of philosophical absolutism is not thereby threatened.<sup>9</sup>

The *Aufbau* is not, of course, Carnap's only work that has been given a verificationist reading. In *The Significance of Philosophical Scepticism*

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<sup>3</sup> See Putnam 1983 for an example of how the charge that verificationism is self-refuting is used as a philosophical point of departure.

<sup>4</sup> Carnap 1928a.

<sup>5</sup> Quine's description of the development of Carnap's empiricism from the *Aufbau* on in Quine 1969c is a paradigmatic account along these lines.

<sup>6</sup> See works cited in footnote 68.

<sup>7</sup> See, for example, Friedman 1987, Friedman 1991, and Richardson 1998 (esp. chapter 1).

<sup>8</sup> "For Carnap, unlike Russell, the rejection of metaphysics is not governed by the acceptance of an ontology of objects of acquaintance and a method that shows how to do without anything else. Carnap seeks to reject all questions of ontology; epistemology has nothing to say about such questions." Richardson 1998, p. 26.

<sup>9</sup> See Section VIII below for further discussion of recent criticisms of the traditional reading of the *Aufbau*.

Barry Stroud surveys attempts by various philosophers to defuse scepticism in general and René Descartes' dream hypothesis in particular.<sup>10</sup> In Chapter V ("Internal and External: Meaningful and Meaningless") he considers, and rejects, what he takes to be Carnap's response to scepticism in Carnap's essay "Empiricism, Semantics, and Ontology" ('ESO' hereafter).<sup>11</sup> In that essay, Carnap distinguished between 'internal' questions of existence answerable in accordance with the rules of a 'linguistic framework', and 'external' questions that concern the epistemic status of the framework itself. Carnap claimed that external questions of existence are incoherent pseudo-questions.<sup>12</sup> Stroud understands that claim to be based on the verification criterion.<sup>13</sup>

Stroud's book has received considerable attention. But that attention does not typically focus on his interpretation of Carnap's aim and method in ESO, and that interpretation has not been directly challenged by recent commentators on Carnap's philosophy. I will argue that Stroud's interpretation of ESO fares no better than do verificationist readings of Carnap's earlier works. Carnap's intent in ESO was to undermine the philosophical absolutism of certain critics—who view his quantification over abstract entities as incompatible with his commitment to empiricism—not to mount a verificationist response to scepticism. ESO thus exemplifies Carnap's unwavering opposition to philosophical absolutism, a stance that commentators have identified in the *Aufbau* and other of Carnap's works. The overall lesson is that Carnap's fundamental position—his 'metaphysical neutrality', as Michael Friedman calls it<sup>14</sup>—is immune to the barrage of criticism that has been directed against verificationism, and that the received view of his work, early and late, misses much that is interesting and important in his philosophy.

## II. Two Interpretations

The verificationist reading of ESO is not the only going interpretation of Carnap's essay. W. V. Quine understood ESO to be Carnap's attempt to take advantage of the benefits of quantifying over abstract entities in his work in

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<sup>10</sup> Stroud 1984.

<sup>11</sup> Carnap 1950/56.

<sup>12</sup> They are pseudo-questions, that is, if they are read as questions of *existence*, concerning whether the framework's entities really exist. They are, however, meaningful if they are interpreted as concerning the utility of adopting the framework.

<sup>13</sup> See also Cornman 1964 for an interpretation along these lines. The terms 'verificationism' and 'verification criterion' are sometimes construed narrowly, requiring that a statement must be conclusively evaluable in order to be meaningful. I follow Stroud in construing these terms widely, as the claim that in order for a sentence to be meaningful it must be at least confirmable or disconfirmable by appeal to sense-experience. See Stroud 1984, p.170.

<sup>14</sup> "It is metaphysical neutrality rather than radical empiricism that is the essence of Carnap's position." Friedman 1987, p. 538.

semantics while denying that doing so committed him to their existence.<sup>15</sup> As Quine saw it, Carnap claimed that a decision to quantify over numbers, propositions, or events is a pragmatically motivated linguistic convention which therefore does not involve any ontological commitments.<sup>16</sup> Ontologists (and Quine) would consider such decisions to constitute answers to general questions of existence (whether there are numbers, propositions, events, and so on). Quine took Carnap to suggest that those answers are analytic. They therefore only reflect semantic relations set up by linguistic convention; they do not concern extralinguistic reality.

These interpretations are distinct. On Quine's reading, Carnap views the ontologist's error to be that of mistaking an analytic issue concerning the structure of the language for a synthetic issue concerning a matter of fact. Her question is meaningless because it confuses an issue concerning what linguistic conventions to endorse, which is subject to pragmatic reasoning, with an issue concerning extralinguistic reality, which is subject to epistemic reasoning.<sup>17</sup> What reasoning is relevant for a particular existential query turns on the generality of the existential.<sup>18</sup> No appeal to the verification criterion is involved. On Stroud's interpretation, on the other hand, Carnap pronounces the ontological issue meaningless because it fails to conform to the verification criterion. No appeal need be made to a momentous shift in status when the question of existence reaches a certain level of generality.<sup>19</sup>

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<sup>15</sup> "[I] spoke of dodges whereby philosophers have thought to enjoy the systematic benefits of abstract objects without suffering the objects. There is one more such dodge ... the suggestion that the acceptance of such objects is a linguistic convention distinct somehow from serious views about reality." Quine 1960, p. 275.

<sup>16</sup> "In the foregoing paragraphs it has been urged that general terms have the virtue ... of letting us avoid or at least postpone the recognition of abstract entities as values of our variables of quantification. Some logicians, however, attach little value to such avoidance or postponement. This attitude might be explained in some cases by a Platonic predilection for abstract objects; not so in other cases, however, notably Carnap's. His attitude is rather that quantification over abstract objects is a linguistic convention devoid of ontological commitment; see his 'Empiricism, semantics, and ontology.'" Quine 1972, p. 221.

<sup>17</sup> "Consider the question whether to countenance classes as entities. This, as I have argued elsewhere, is the question whether to quantify with respect to variables which take classes as values. Now Carnap has maintained that this is a question not of matters of fact but of choosing a convenient language form, a convenient conceptual scheme or framework for science. With this I agree, but only on the proviso that the same be conceded regarding scientific hypotheses generally. Carnap has recognized that he is able to preserve a double standard for ontological questions and scientific hypotheses only by assuming an absolute distinction between the analytic and the synthetic; and I need not say again that this is a distinction I reject." Quine 1953b, p. 45.

<sup>18</sup> "What typifies the metaphysical cases is rather, according to an early doctrine of Carnap's, the use of category words, or *Allwörter*. It is meaningful to ask whether there are prime numbers between 10 and 20, but meaningless to ask in general whether there are numbers...." Quine 1969b, p. 91.

<sup>19</sup> Stroud recognizes this and so distinguishes his interpretation from Quine's. "[Quine] finds that the 'external' or 'category' questions of the philosopher differ only in their generality from the 'sub-class' questions entertained by the more specialized sciences, but they

I believe that neither of these interpretations is correct, but will concentrate on Stroud's interpretation in this essay.<sup>20</sup>

### III. Stroud's Carnap

Having considered (and rejected) G.E. Moore's and Kant's responses to scepticism, Stroud takes up what he considers to be Carnap's specific maneuver: application of the verification criterion to the sceptical hypothesis itself.

A question is meaningful, according to the criterion, "only if there is some possible sense-experience that would make one answer to it rather than another more likely to be true."<sup>21</sup> But the sceptical hypothesis is specifically designed so as to fail this condition—Descartes' dream hypothesis is supposed to be compatible with any sense experience whatsoever—and that guarantees that the hypothesis is meaningless according to the criterion.<sup>22</sup>

This is not to say that there are no questions concerning "the existence of external things" that are not perfectly meaningful. A pair of geographers might discover that a particular mountain reported in legend, but hitherto not known to exist in fact, does indeed exist. And "there would seem to be no objection to their going further, if the occasion seemed to call for it, and announcing an even more general result. No one would deny that a mountain is an external thing.... So with all the empirical support they originally had for saying 'The mountain is real, not legendary'... they could also say 'There are external things'."<sup>23</sup>

It is not, then, the form of words that renders the sceptical hypothesis meaningless, since there is a grammatically identical question that is perfectly sensible, and answerable.<sup>24</sup> The sceptical conclusion is supposed to be that no confirmation or disconfirmation of the hypothesis that there are external

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are to be answered in essentially the same ways ... [I]t is enough to say that Carnap in drawing the 'external-internal' distinction as he does must have something else in mind." Stroud 1984, p. 183.

<sup>20</sup> I describe and criticize Quine's interpretation and the role of the analytic/synthetic distinction in Alspector-Kelly 2001. For discussion of the relationship between analyticity, epistemology, and ontology in Carnap's and Quine's philosophical views, see Goldfarb and Ricketts 1992, Friedman 1999 (esp. chapters 7, 8, and 9), Richardson 1997, Richardson 1998 (esp. chapter 9), Creath 1987b, Creath 1990, and Creath 1991.

<sup>21</sup> Stroud 1984, p. 171.

<sup>22</sup> "Philosophical scepticism about a particular area or subject-matter appears to say that we can never know anything in that area, and can never even have any more reason to believe one thing in that area rather than another. If that were true it would follow from the verifiability principle that there is nothing meaningful or intelligible in that area for us to fail to know or to lack reason to believe.... It is meant to be a consequence of the verifiability principle, then, that it is impossible for any form of scepticism to be true." Stroud 1984, p. 173.

<sup>23</sup> Stroud 1984, p. 175.

<sup>24</sup> "Obviously it is not the sequence of words alone, but the possibility of its confirmation or disconfirmation in experience, that determines whether or not an otherwise well-formed sentence is meaningful." Stroud 1984, p. 175.

things is available. And that shows that the sceptic's hypothesis is not the hypothesis that can be answered in the manner of the geographers, notwithstanding their equivalent formulation. The two questions must therefore be distinguished. For "[a]ccording to the verifiability principle'... 'there is no such belief or assertion or assumption'"<sup>25</sup> as would constitute the answer to the sceptic's question, while there is a perfectly reasonable answer (in the affirmative) to the geographers'.

While he rejects the sceptic's hypothesis, Stroud's Carnap at least recognizes what Stroud calls the 'conditional correctness' of scepticism: "*If the traditional philosopher did manage to raise a meaningful question about our knowledge of the world, his sceptical answer to it would be correct.*"<sup>26</sup> But it is precisely because the sceptical answer would be correct that Carnap declares the question meaningless.<sup>27</sup> So it is, ironically, the conditional correctness of the sceptic's conclusion that demonstrates its meaninglessness: "[w]hat puts the verificationist in a position to wield his powerful principle is nothing more nor less than the conditional correctness of scepticism."<sup>28</sup>

Carnap does recognize the practical question whether to accept the framework of things. But in denying that this question corresponds to the philosopher's question, Carnap "is pointing out that in this case there simply is no hypothesis or thesis to be justified in that way or in any other way. The verifiability principle implies that there is no such proposition and that we therefore have no such belief."<sup>29</sup>

Stroud raises a variety of objections to Carnap's position so understood, but I will present what I take to be his most significant concern, that Carnap's view amounts to an absurd idealism. It implies that truths 'internal' to a framework would be neither true nor false if the framework had not been adopted. Stroud refers to this claim as Carnap's 'thesis': "the truths we come to know once we have adopted a particular framework are not to be understood as true independently of our adoption of that framework."<sup>30</sup>

Carnap's thesis, Stroud suggests, is crucial to his response to the sceptical argument. If he denied it, "[h]e would then be leaving room for the possibil-

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<sup>25</sup> Stroud 1984, p. 178. Stroud is quoting ESO, p. 208. See Section V below for further discussion of this passage from Stroud's chapter.

<sup>26</sup> Stroud 1984, p. 179.

<sup>27</sup> "The only reason Carnap has got for declaring the sceptical conclusion meaningless is that the philosopher's 'statement' of the existence of the external world is neither confirmable nor disconfirmable." Stroud 1984, p. 179.

<sup>28</sup> Stroud 1984, p. 180. The verificationist thus finds herself in a delicate position. She needs to follow the sceptic's argument far enough along to recognize its conditional correctness, for otherwise she is not in a position to apply the criterion. But she cannot follow it all the way, for doing so would amount to counting the conclusion meaningful. In the later sections of the chapter, Stroud explores this delicate relationship between the sceptic and the verificationist.

<sup>29</sup> Stroud 1984, p. 186.

<sup>30</sup> Stroud 1984, p. 195.

ity that truths about things remain true even if we abandon the thing language, and would have been true independently of our having adopted it.”<sup>31</sup> But this in turn would allow “that our adoption of a linguistic framework is necessary only to provide us with some means of formulating and eventually coming to know what is or is not true independently of our adoption of that framework.”<sup>32</sup> And that would mean that the theoretical question concerning the thing language that the philosopher intends to ask would be intelligible; for then “[i]t would make sense to ask whether the particular means we have chosen do or do not enable us to know the way things objectively are.”<sup>33</sup>

But the claim that such questions are meaningless “is the heart of Carnap’s opposition to the traditional question.”<sup>34</sup>

It is easy to see why. The idea that the way things objectively are is completely independent of us and our language, and that we seek knowledge of those independent facts, is what lies behind the traditional philosophical investigation of our knowledge. It is what makes possible the conclusion that even when our best procedures are followed as carefully and as thoroughly as we can humanly manage, things might still be other than we believe them to be, and so we can never know.

[So if] Carnap did not deny that the assertions we now make ‘within’ the thing language would remain true or false quite independently of our adopting that language, his account would be as tolerant of the sceptical question as is the traditional conception of our relation to the things around us. That denial is therefore essential to Carnap’s position despite its obscurity and its apparent commitment to some form of idealism.<sup>35</sup>

The difficulties just identified, Stroud suggests in the end, “stand in the way of understanding and accepting the verifiability principle itself.”<sup>36</sup>

The rest of Stroud’s chapter is devoted to the relation between the principle and scepticism and problems that arise for a verificationist who wishes to wield the principle in the above manner against scepticism. I will not present this discussion in detail here; it will not be relevant for what follows.

#### IV. Reconstructing the Distinction

Stroud makes essentially two interpretive claims: that the internal/external distinction can be made out in terms of the verification criterion and that Carnap’s purpose in drawing the distinction is to defuse the threat that the sceptical hypothesis seems to pose to our ordinary claims of knowledge and justification. I think that each of these claims is incorrect. I will consider them in turn.

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31 Stroud 1984, p. 194.

32 Stroud 1984, p. 194.

33 Stroud 1984, p. 194.

34 Stroud 1984, p. 194.

35 Stroud 1984, pp. 194–95.

36 Stroud 1984, p. 197.

It is no surprise that Stroud (and others) would assume that Carnap's rejection of external questions in ESO is based on verificationism. After all, Carnap explicitly derides external existence questions in ESO as non-cognitive, non-theoretical, metaphysical pseudo-questions,<sup>37</sup> and this is just the way that Carnap and the positivists famously characterized those philosophical pronouncements that they considered to run afoul of the verification criterion.

However, an interpreter determined to read Carnap's rejection of external questions as based on the criterion has a problem. Metaphysical doctrines that Carnap is best known to have denounced on the basis of the criterion—that there is nothingness, an absolute, noumena, absolute moral good—are not ambiguous expressions that could be read in either a meaningful empirical or meaningless metaphysical way. They are, the verificationist story goes, simply devoid of sense. But, as Stroud recognizes, this is not the case for those questions (and answers) to which Carnap refers when distinguishing internal and external questions. Such sentences as "There are numbers" and "There are material objects" admit of an internal meaningful reading as well as an external meaningless reading in a way that "There is an absolute" does not. So there is a question that does not arise when dealing with the more familiar cases of rejected metaphysics: what is the difference between the assertion (for example) "There are material objects" when read externally and when read internally, such that the first is meaningless and the second meaningful? When does an expression of what appears to be the very same sentence turn from empirical sense into metaphysical nonsense?

Stroud rejects Quine's suggestion that the difference turns on the generality of the existential. He also recognizes that the difference is not purely syntactic. He says that the external question is distinguished on the basis of its "undecidability and ill-formedness,"<sup>38</sup> but this does not mean that the external question is syntactically or grammatically ill-formed. "The only reason Carnap gives for saying that the 'external' question about the whole system of things is framed 'in the wrong way,'" Stroud tells us, "is simply that it is an empirically unanswerable question."<sup>39</sup> So it is by appeal to the verification criterion itself that the distinction between internal and external questions is to be drawn: "it is not the sequence of words alone, but the possibility of its confirmation or disconfirmation in experience, that determines whether or not an otherwise well-formed sentence is meaningful."<sup>40</sup>

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<sup>37</sup> Again, such questions are meaningless if they are construed as theoretical issues concerning whether the framework's entities really exist; questions concerning the utility of the framework itself are, however, meaningful.

<sup>38</sup> Stroud 1984, p. 185.

<sup>39</sup> Stroud 1984, p. 185.

<sup>40</sup> Stroud 1984, p. 175.



But just what is *it* whose confirmation or disconfirmation in experience determines whether it is meaningful? If it is, for example, the sentence "There are material things", then since this is a sentence that Carnap counts as meaningful (as an internal assertion), and since meaningfulness requires confirmability, the sceptic's claim that experience could never decide whether there are material things is straightforwardly false. Carnap's response to the sceptic would not be that the assertion "There are material things" is ambiguous between a meaningful internal and a meaningless external reading. It would instead be that the sceptic has failed to understand the meaning of the sentence "There are material things", as evidenced in her suggestion that it is immune to confirmation from experience. Appeal to the verification criterion on its own puts Stroud in no better a position to distinguish internal and external questions than does appeal to either generality or syntax.

Stroud's reason for suggesting that Carnap was trying to identify a question that *was* meaningless—aside from the fact that Carnap was obviously declaring *something* to be meaningless—is his assumption that Carnap recognized the conditional correctness of scepticism. Carnap was willing to follow the sceptic's argument far enough along to recognize at least that *if* the sceptic did manage to raise a meaningful question, her sceptical answer to it would be correct.<sup>41</sup> It is precisely Carnap's recognition of the conditional correctness of scepticism that puts him in a position to wield his "powerful principle" against it.

But this does not put us in a position to distinguish internal and external questions either. If you recognize the conditional correctness of the sceptic's argument against our belief that there are material objects, for example, and you accept verificationism, then your conclusion should simply be that "There are material objects" is meaningless. And since Cartesian scepticism applies equally to the proposition "This is a human hand" as to "There are external things", this would imply an extreme *semantic* scepticism: none of the propositions we think we are making concerning material objects are in fact meaningful, since they are all subject to the conditional correctness of the sceptic's argument, and so fall prey to the verification criterion.

No verificationist will, of course, endorse the suggestion that little if anything of what we say about material objects is meaningful. But then she had better not concede the conditional correctness of scepticism. Appeal to verificationism itself will not insulate a distinct assertion, expressed in the very same words, that escapes scepticism's conditional correctness. However

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<sup>41</sup> It is not at all clear that the concept of the "conditional correctness" of scepticism is coherent. Carnap would have to countenance the sceptic's question far enough along to determine what answer to it would be correct—the sceptic's answer—and nevertheless deny that the question is meaningful, on the basis, moreover, of that very determination. But how can *any* answer to a meaningless question be correct, even "conditionally"? I owe this point to an anonymous referee.

much Descartes himself might have distinguished between the reflective context of his study and the engaged context of everyday life, he did not distinguish between the assertions open to sceptical attack in the former context and those not open to attack in the latter. It was the everyday claims themselves that he brought into his study for closer examination.

In sum, appeal to verificationism does nothing to help us distinguish internal and external questions. If "There are material objects" is meaningful, then it is empirically evaluable and therefore not subject to the conditional correctness of scepticism. There is then no need to criticize the sceptic for entertaining a meaningless assertion. And if "There are material objects" *is* subject to the conditional correctness of scepticism, then it is meaningless, as is just about every other empirical assertion. That does not leave us with a meaningful internal correlate.

I do not mean to suggest that Carnap would in fact respond to the sceptical challenge in either of these ways. My point is, rather, that *if* we assume with Stroud that Carnap was dealing with that challenge *and* that Carnap's response to that challenge was verificationist, we are nonetheless left in no position to distinguish internal and external questions as Stroud suggests we are. According to Stroud, Carnap claimed that the external question is meaningless because unverifiable and that the internal question is meaningful because verifiable. This would account for Carnap's calling *something* meaningless while obviously not endorsing extreme semantic scepticism. But nothing in Stroud's reconstruction puts us in a position to distinguish internal and external questions in the first place. Stroud's interpretation, at best, presupposes that the distinction is already drawn; it does not help us understand the distinction itself.

## V. Carnap's Purpose

On Stroud's reading, Carnap intended to insulate our everyday knowledge claims from sceptical attack by imposing an epistemic constraint on meaning. The sceptical hypothesis requires that we can formulate meaningful assertions that outstrip any possible evidence for them. But the verificationist criterion limits the meaningful to only those assertions for which evidence is possible. So the sceptical hypothesis is self-defeating.

Were this Carnap's aim in ESO, we would expect him to present the sceptical hypothesis, enunciate the verification criterion, and then point out that the latter implies that the former is meaningless. But one searches in vain for any explicit reference to either scepticism or verificationism in the essay.

Stroud structures some quotations from ESO in ways that suggest that Carnap does discuss the sceptical hypothesis and apply the verification criterion. But the impression is misleading. Consider the following passage in which Stroud characterizes Carnap's argument:

The sceptical conclusion is supposed to show that it is a belief which can find no confirmation or disconfirmation in experience. According to the verifiability principle, therefore, "there is no such belief or assertion or assumption."<sup>42</sup>

This suggests that Carnap has just discussed the sceptical hypothesis, pointed out its unverifiability, and proceeded to draw the conclusion that there is no such belief or assertion or assumption. But what does in fact precede the passage Stroud cites from ESO is the following distinction between internal and external questions of existence regarding the system of things.

To recognize something as a real thing or event is to succeed in incorporating it into the system of things at a particular space-time position so that it fits together with the other things recognized as real, according to the rules of the framework.... From these questions we must distinguish the external question of the thing world itself.... Realists give an affirmative answer, subjective idealists a negative one.... And [the controversy] cannot be solved because it is framed in the wrong way. To be real in the scientific sense means to be an element of the system; hence this concept cannot be meaningfully applied to the system itself.<sup>43</sup>

The distinction between the scientific sense of "is real" as a matter of being an element of the system and the philosophical sense which purports to concern the system itself does beg for further clarification. But there is no indication here that Carnap is concerned with the sceptical hypothesis, nor is there any indication that he is responding to it by appeal to verificationism.

Indeed, in a passage from *Philosophy and Logical Syntax*, Carnap explicitly *distinguishes* a response amounting to that above and one based on the verification principle.

The disagreement [between realists and idealists] begins only when the question about the reality of the physical world as a whole is raised. But this question *has no sense, because* the reality of anything is nothing else than the possibility of its being placed in a certain system, in this case, in the space-time system of the physical world, and such a question *has a sense* only if it concerns elements or parts, not if it concerns the system itself.

*The same result* is obtained by applying the criterion explained before: the possibility of deducing perceptive propositions. While from the assertion of the reality or the existence of kangaroos we can deduce perceptive propositions, from the assertion of the Reality of the physical world this is not possible; nor is it possible from the opposite assertion of the Unreality of the physical world. Therefore both assertions have no empirical content—no sense at all.<sup>44</sup>

This passage presents us with *two different* explanations for the meaninglessness of the realism/idealism dispute. The first—which is almost verbatim that of the passage in ESO which Stroud characterizes as an expression of verificationism—is that the only legitimate concept of reality is being located in a system of entities, a concept that is inapplicable to the system itself. But it is the *second* explanation—the impossibility of deducing perceptive propo-

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<sup>42</sup> Stroud 1984, p. 178. Stroud quotes ESO, p. 208.

<sup>43</sup> Carnap 1950/56, p. 207.

<sup>44</sup> Carnap 1996, p. 20 (my italics).

sitions—that proceeds from the application of the verification criterion. The passage makes it clear that these explanations are distinct. Hence the passage in ESO cannot be taken as evidence that the internal/external distinction should be identified with the verifiable/unverifiable distinction.<sup>45</sup>

Note also that the philosophical debate that Carnap is concerned to undermine is not that between the realist and the *sceptic*; it is that between the realist and the *idealist*. The “problem of the external world” that Carnap was addressing was not the problem of how we justify our beliefs in such external things as candles, pens and paper in the face of the possibility that the sceptical hypothesis might be correct. He was, rather, addressing the ontological dispute between realism and phenomenalist idealism with respect to the fundamental constituents of reality.

The idealistic position is itself often designed as a response to the sceptical dilemma: to account for our knowledge of the external world, we characterize that world in such a way as to bring it within range of our epistemic reach. This is just what the verification criterion of meaning is designed to achieve by semantic means. But Carnap does not side with the idealist. He claims that there is no objective sense to the claim that one is really right and the other really wrong, except insofar as we ask which language-structure better suits the aims for which the language is intended. Not only is Carnap not dealing with the scepticism/realism debate as Stroud suggests, his response to the debate he *is* dealing with is not to affirm the side better positioned to withstand sceptical attack, but to reject the debate itself.

There is only one point at which Stroud explicitly identifies a link between Carnap’s commitment to verificationism and the text of ESO. Having rejected Quine’s claim that the generality of the existential is the interpretive key, Stroud suggests that “[t]he only reason Carnap gives for saying that the ‘external’ question about the whole system of things is ‘framed in the wrong way’ is simply that it is an empirically unanswerable question.”<sup>46</sup> In a footnote attached to this sentence, apparently in way of textual evidence that this is indeed Carnap’s reason, Stroud refers to the following passage from ESO:

A brief historical remark may here be inserted. The non-cognitive character of the questions which we have been calling external questions was recognized and emphasized already by the Vienna Circle under the leadership of Moritz Schlick, the group from which the movement of

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<sup>45</sup> Michael Friedman makes essentially the same point with reference to the *Aufbau*: “Carnap argues... that this concept ‘does not belong within (rational) science’ because no notion of ‘independence from consciousness’ suitable to the needs of the dispute ‘can be constructed.’ This emphatically does not mean, however, that the notion is ‘metaphysical’ because it cannot be constructed within a phenomenalist system; rather, according to Carnap, it cannot be constructed within *any* of the systems considered by construction theory...” Friedman 1987, p. 538.

<sup>46</sup> Stroud 1984, p. 185.

logical empiricism originated. Influenced by the ideas of Ludwig Wittgenstein, the Circle rejected both the thesis of the reality of the external world and the thesis of its irreality as pseudo-statements;\* the same was the case for the thesis of the reality of universals ... and the nominalistic thesis that they are not real and that their alleged names are not names of anything but merely *flatus vocis*.<sup>47</sup>

The asterisk “\*” marks the point where Carnap inserts a footnote referring to his own earlier *Pseudoproblems in Philosophy*<sup>48</sup> and to Moritz Schlick’s essay “Positivism and Realism”.<sup>49</sup>

Stroud tells us in his footnote that in these two works to which Carnap refers in Carnap’s footnote “an appeal to the verifiability principle of meaningfulness is the only argument used to show that those ‘theses’ are meaningless.”<sup>50</sup>

On Stroud’s account, then, Carnap wrote ESO in order to refute scepticism by application of the verification criterion. Stroud seems to recognize, however, that no explicit mention is made of the criterion or of scepticism in the essay itself, that the only allusion to the criterion is in a footnote, that the footnote itself does not specify the criterion or its application but only refers its readers to further essays in which the criterion is applied, and that the crucial passage to which this crucial footnote is attached is introduced as the insertion of a “brief historical remark.” Carnap was typically more straightforward.

In fact, I believe that Stroud’s claim that in the essays to which Carnap refers “an appeal to the verifiability principle is the only argument used to show that those ‘theses’ are meaningless” is contestable.<sup>51</sup> But even if we grant Stroud that verificationism is all that is involved in these essays, and we put aside the worry that there is no indication that Carnap was responding to scepticism in ESO, it still does not follow from what Carnap said that it is the verification criterion that is being wielded in ESO itself. All he said is that the Vienna Circle rejected both the thesis of the reality of the external world and that of its irreality as pseudo-statements. This does not imply that

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47 Carnap 1950/56, p. 215.

48 Carnap 1928b.

49 Schlick 1932/33.

50 Stroud 1984, p. 185, fn. 5.

51 As does Alan Richardson: “This then is the received view of the *Aufbau*: It was the first systematic attempt to use the resources of modern logic to carry out the reduction of all scientific discourse into the terms of immediate experience... There is something highly unsatisfactory from an interpretive point of view, however, with this view of Carnap’s work generally... The fundamental questions that an interpreter of Carnap’s philosophy must seek to answer are questions about what constitutes the core of Carnap’s philosophical thinking throughout his career so that, for example, Carnap in ‘Empiricism, Semantics, and Ontology’ can refer the reader to arguments given in ‘Pseudoproblems in Philosophy’ despite the intervening twenty-two years and the fact that Carnap had changed his views on many issues including reductionism, verificationism, syntacticism, and logicism.” Richardson 1990, p. 4.

their rejection was for the same reason as that endorsed in ESO. And we saw in the passage from *Philosophy and Logical Syntax* above that Carnap distinguished the two reasons. So the passage and footnote to which Stroud refers do not indicate that Carnap appealed to verificationism in ESO.<sup>52</sup> And there is no indication whatsoever that the refutation of scepticism was his aim.

## VI. Nominalism and Platonism

The philosophical issue that *was* Carnap's immediate concern in ESO was the dispute between the nominalist and the Platonist.<sup>53</sup> Carnap appended the second version of ESO to *Meaning and Necessity*, the third book in his series on semantics, in which he had quantified over such abstract entities as properties, classes, propositions, and numbers. Critics had charged that quantification over such entities amounts to an illegitimate hypostatization. According to Carnap, they considered such reference to be "either meaningless, or at least in need of proof that such entities 'do actually exist'".<sup>54</sup> He was all the more displeased to find the charge leveled at him "not by metaphysicians, but by anti-metaphysical empiricists like Ernest Nagel, W. V. Quine, Nelson Goodman, and others."<sup>55</sup>

Carnap's response to this charge of ontological excess was to suggest that it was the critics, not he, who had betrayed their commitment to empiricism.<sup>56</sup> For they had answered the question whether there are abstract entities in the negative solely on the basis of their commitment to empiricism.<sup>57</sup> To do so is to suggest that the empiricist is in a position to limit the domain of entities over which the variables of empirical scientific doctrine can be allowed to range. This is to derive ontological constraints from a philosophical orientation. But it is precisely the empiricist, Carnap insisted, whose job it is to protect empirical science from the imposition of metaphysical doctrine.<sup>58</sup> In posing and answering their "external" question of existence,

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<sup>52</sup> See Section VII below for discussion of the role of verificationism in Carnap's philosophy.

<sup>53</sup> So Quine was right, at least in that he correctly identified the philosophical topic with which Carnap was concerned.

<sup>54</sup> Carnap 1963, p. 65.

<sup>55</sup> Carnap 1963, p. 65.

<sup>56</sup> "At the time", Carnap noted of the dispute, "each of the two parties seemed to criticize the other for using bad metaphysics." Carnap, 1963, p. 65.

<sup>57</sup> "Empiricists are in general rather suspicious with respect to any kind of abstract entities ... As far as possible they try to avoid any reference to abstract entities and to restrict themselves to what is sometimes called a nominalistic language, i.e., one not containing such references." Carnap 1950/56, p. 205.

<sup>58</sup> "The acceptance or rejection of abstract linguistic forms, just as the acceptance or rejection of any other linguistic forms in any branch of science, will finally be decided by their efficiency as instruments, the ratio of the results achieved to the amount and complexity of the efforts required. To decree dogmatic prohibitions of certain linguistic forms instead of testing them by their success or failure in practical use, is worse than futile; it is positively harmful because it may obstruct scientific progress. The history of

Carnap's critics purport to decide whether there *really* are such things that the framework would have us quantify over, from a privileged philosophical standpoint detached from empirical inquiry.<sup>59</sup> In so doing, they unwittingly traffic in ontological prejudice masked as philosophical insight, the repudiation of which is definitive of (Carnap's) empiricism.

Carnap had no objection to the nominalist's project of attempting to write scientific doctrine without quantification over abstract entities, although he did not hold out much hope for its success.<sup>60</sup> But he did object to the suggestion that the project is reasonably motivated by a prior conviction that there really are no such things as abstract entities<sup>61</sup> and so that scientific theory needs rewriting in order to reflect this philosophical insight.<sup>62</sup>

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science shows examples of such prohibitions based on prejudices deriving from religious, mythological, metaphysical, or other irrational sources, which slowed up the developments for shorter or longer periods of time. Let us learn the lessons of history. Let us grant to those who work in any special field of investigation the freedom to use any form of expression which seems useful to them; the work in the field will sooner or later lead to the elimination of those forms which have no useful function. *Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms.*" Carnap 1950/56, p. 221.

<sup>59</sup> "[W]e have to recognize ... that these terms ['class', 'property', 'natural number', etc.] have for centuries been in general use in mathematics and physics. Therefore, in our view, very strong reasons must be offered if such terms are to be condemned as incompatible with empiricism or as illegitimate and unscientific.... If a philosopher asks a question like 'are there natural numbers', he means it as a question so-to-speak outside the given language, raised for the purpose of examining the admissibility of such a language... My main point is the rejection of the customary view that the introduction of a linguistic framework is legitimate only if the affirmative answer to the external question of existence (e.g., 'there are natural numbers') can be shown to be true." Carnap 1963, p. 66.

<sup>60</sup> "[W]ithin certain scientific contexts it hardly seems possible to avoid [abstract entities].... [The empiricist] will just speak about all these things like anybody else but with an uneasy conscience, like a man who in his everyday life does with qualms many things which are not in accord with the high moral principles he professes on Sundays." Carnap 1950/56, p. 205.

<sup>61</sup> Such as Quine and Goodman's opening declaration of motive for their project in "Steps Toward a Constructive Nominalism": "We do not believe in abstract entities. No one supposes that abstract entities—classes, relations, properties, etc.—exist in space-time; but we mean more than this. We renounce them altogether.... Why do we refuse to admit the abstract objects that mathematics needs? Fundamentally this refusal is based on a philosophical intuition that cannot be justified by appeal to anything more ultimate." Quine and Goodman 1947, pp. 105–6.

<sup>62</sup> "I should prefer not to use the word '*ontology*' for the recognition of entities by the admission of variables. This use seems to me to be misleading; it might be understood as implying that the decision to use certain kinds of variables must be based on ontological, metaphysical convictions.... I agree, of course, with Quine that the problem of "Nominalism" as he interprets it is a meaningful problem; it is the question of whether all natural science can be expressed in a "nominalistic" language, that is, one containing only individual variables whose values are concrete objects, not classes, properties, and the like. However, I am doubtful whether it is advisable to transfer to this new problem in logic or semantics the label 'nominalism' which stems from an old metaphysical problem." Carnap 1956, p. 43.

This is a long way from the sceptical problem that Stroud suggests was Carnap's concern. The sceptical hypothesis is intended to undermine our knowledge, not of the abstract entities that offend the nominalistic sensibilities of Carnap's critics, but of the mundane objects of everyday life (Descartes' candle, paper and pen, G.E. Moore's hands, and so on).

It is true that Descartes did extend his sceptical hypothesis to our knowledge of mathematics. He shifted from the dream hypothesis to the evil genius in order to show how it is possible to doubt mathematical knowledge claims that appear to be immune from the worry that we might be dreaming. I can dream a nonexistent candle, but not an even square root of 7. However, I can imagine a demon who ensures that I always mistake erroneous mathematical reasoning for correct. The demon can ensure that what seems to me to be the correct sum of 2 and 3 is inevitably not the correct sum, no matter how often and carefully I check my work.<sup>63</sup>

But the possibility of undetectable miscalculation is not the nominalist's reason for doubting our knowledge of abstract entities. She is quite prepared to grant that our mathematical reasoning is in good order. Her question concerns whether there really could be the entities that such reasoning, correctly performed, leads us to countenance. She disdains abstract entities for their lack of spatiotemporal and causal properties, not for their susceptibility to Cartesian doubt. Her unease with their abstract character would not be alleviated by any assurance that we are in fact doing our sums correctly.

Conversely, the Cartesian sceptic is fully prepared to grant that if we are not in fact being duped into making erroneous mathematical calculations, our mathematical knowledge is secure. Indeed she assumes it. The sceptical hypothesis is just an indication that we might not be doing what we think we are doing when we engage in mathematical reasoning, just as we might not be doing what we think we are doing when, in mid-dream, we ride up to take a closer look at the golden mountain. It is because we cannot tell which we are doing—being duped into miscalculation or calculating correctly, dreaming or really getting a better view of the mountain—that there is a reason for doubt.

Both the Cartesian sceptic and the nominalist raise doubts about knowledge claims concerning abstract entities, although knowledge of these entities is not the Cartesian sceptic's primary target. But their doubts are of quite a different order. Cartesian scepticism is an internal critique of our epistemol-

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<sup>63</sup> "For whether I am awake or asleep, two and three together always form five, and the square can never have more than four sides ... And besides, as I sometimes imagine that others deceive themselves in the things which they think they know best, how do I know that I am not deceived every time that I add two and three, or count the sides of a square ... I shall then suppose, not that God, who is supremely good and the fountain of truth, but some evil genius not less powerful than deceitful, has employed his whole energies in deceiving me ..." Descartes 1931, pp. 147–48.



ogy. It assumes that the epistemic procedures we engage in would lead us to correct beliefs were it not for the sceptical hypothesis. The sceptical scenario introduces the possibility that the path to the truth on which those procedures would otherwise take us can be interrupted without our detection. But it is precisely those procedures—not interrupted in the fanciful ways that the Cartesian sceptic envisages—that Carnap’s critics suspect because they lead us to affirm the existence of abstract entities that do not accord with their ontological convictions.<sup>64</sup> And, in any event, the verificationist appeal to sense-experience that Stroud takes to be Carnap’s response to scepticism is inapplicable in the case of our knowledge of pure mathematics, and so applies to neither the sceptic’s nor the nominalist’s doubts concerning such knowledge.

### VII. Carnap’s ‘Thesis’

Stroud’s Carnap wants to rule out the possibility that “even when our best procedures are followed as carefully and as thoroughly as we can humanly manage, things might still be other than we believe them to be, and so we can never know.”<sup>65</sup> In a sense, this is correct. Carnap denied that the question as to whether the framework as a whole independently tracks reality—the question his nominalist critics answered in the negative—is coherent.

But this is not the same gap between what is the case and what we are able to determine to be the case that either Stroud’s sceptic holds open or the verificationist wants closed. Carnap can grant that there may be mathematical propositions the evaluation of which is beyond our ken and that there are propositions concerning material objects that we will never be in a position to confirm or disconfirm. The conditional to which Carnap adhered is that mathematical claims are susceptible *only* to mathematical reasoning. The ontological insights to which his critics appeal in rejecting quantification over abstract entities therefore deserve to be renounced as mere metaphysical prejudice. Similarly, claims about material objects are evaluable *only* by means of the local observations and inferences from such observations that we ordinarily take to warrant such claims once the material object framework is in place. No independent philosophical insight into whether quantification over material objects tracks reality can play a legitimate role in determining the domain of values over which our variables range.

This is not to affirm verificationism. To say that it is only by mathematical reasoning that mathematical knowledge is achieved is not to say that a

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<sup>64</sup> The nominalist suspects those procedures, in particular, if the abstract ontological commitments that they appear to lead us to endorse are taken literally and seriously. Some nominalists might view the apparent commitment to abstract entities as just a convenient manner of speaking, where their nominalist reconstrual captures the significant ontological import.

<sup>65</sup> Stroud 1984, p. 195.

mathematical proposition is meaningless unless we can specify a proof for it.<sup>66</sup> And to say that it is only by our familiar practices of observation that we can know of material objects is not to say that for every proposition concerning such things there must be some observation we can make that would confirm or disconfirm it. Carnap's claims could be correct even if the most extensive Cartesian scepticism, applying to our purported knowledge of objects both abstract and concrete, were correct as well. Neither the falsehood of scepticism nor the truth of verificationism results from the closure of the gap Carnap wants closed.

Stroud claims that Carnap is saddled with an intolerably idealistic thesis: statements true in a framework are true only if and when we adopt the framework. Carnap is therefore committed to believing that whether there are mountains in Africa "depends on how we choose to speak or think". As Stroud recognizes, the suggestion that mountains in Africa are so dependent would be false as an internal claim; in deciding whether there *are* mountains in Africa, we do not begin by conducting a socio-historical investigation into the practices of our language community. Nonetheless, Stroud suggests, Carnap needs the thesis. Without it, we could draw a distinction between what we believe when "our best procedures are followed as carefully and thoroughly as we can humanly manage" and what is the case. And it is into that gap that the sceptic inserts her sceptical hypothesis.

But the gap Carnap wants closed is that between what existentials would be correct on the basis of mathematical reasoning *correctly* performed (not just "as carefully and thoroughly as we can humanly manage") and the truth. The notion of correctness involved does depend on the framework, in the sense that if we perform our mathematical calculations as the framework prescribes and determine that a particular mathematical existential (such as "There is an even prime") is true, Carnap refuses to recognize any further grounds for suspicion that it is false. But this provides no assurance that we *are* performing our calculations as the framework prescribes, and so no security against the Cartesian sceptic's concern that our best attempts to do so might still be in error. The gap between what we arrive at when doing our best epistemically and what would result when the procedures are correctly applied remains. What is the case does not therefore depend on what we would determine to be the case were we to apply those procedures as carefully and thoroughly as we can humanly manage.

Carnap can then rest with the internal denial of the thesis Stroud ascribes to him. He does not need to claim that whether there are mountains in Africa,

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<sup>66</sup> Intuitionism is the verificationist correlate in mathematics. Carnap was not an intuitionist. It should come as no surprise that at least by the *Logical Syntax of Language* (Carnap 1937a) he considered the debate between intuitionistic and classical mathematics to be a matter of which is more conducive to the purposes to which mathematical reasoning is put rather than a matter of which is correct.

or prime numbers, depends on our adoption of the corresponding framework in order to secure our knowledge of these claims against sceptical attack. The framework does determine the meaning of the expressions within it, and so what must be the case in order for them to be true. But this does not translate into a form of pernicious idealism of the sort Stroud ascribes to Carnap. Nor need Carnap claim that truths are framework-relative in the sense that the same sentence might be true in one framework and false in another. Since there is no framework-independent meaning, there can be no one sentence with the same meaning that has different truth values in different frameworks.<sup>67</sup>

Carnap was not attempting to provide a semantic guarantee for our epistemological efforts. He was instead trying to undermine the suggestion that there might be a uniquely philosophical standpoint from which we can take both the framework and reality in view and assess the first for the accuracy of its representation of the latter. And to reject the coherence of such a standpoint is not to reject the possibility of Cartesian scepticism, nor is it to endorse verificationism. It is to repudiate the coherence of a first-philosophical, super-scientific inquiry capable of delivering ontological insights to which the language of science must conform if it is to accurately represent reality.

### VIII. Carnap and The Empiricist Criterion of Significance

However much Stroud has mischaracterized Carnap's purpose and claims in ESO, he is nevertheless correct to think that Carnap did advocate some version of the empiricist criterion of cognitive significance throughout his career. My claim has not been that Carnap did not endorse some such criterion. It is instead that he was not attempting to defeat scepticism in ESO and that he did not appeal to the criterion in order to do so.

But it is worth considering the development of Carnap's empiricism in more detail. It is well known that Carnap reformulated the criterion over the years. But there is a constant theme in Carnap's empiricism that is reiterated throughout his various attempts to formulate an acceptable version of it. It is a theme that rises to prominence especially in ESO, the recognition of which poses further problems for Stroud's interpretation. I begin with the *Aufbau*.

Carnap is traditionally understood to have been moved to write the *Aufbau* by the concerns that Stroud suggests moved him to write ESO. It is thought that he wanted to provide unassailable epistemological foundations for empirical science, and thereby insulate it from sceptical attack, by demonstrating that scientific statements ultimately refer to, and so are answerable to, experience. This was to be achieved by applying the new and powerful logical tools developed by Russell and Whitehead to Russell's "supreme maxim of philosophizing" that wherever possible logical constructions are to be substituted

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<sup>67</sup> I owe this point to an anonymous referee.

for inferred entities. The basis of the construction in the *Aufbau* was to consist of time-slices of one's own experience related only by remembered similarity. Statements about objects, then other people, then other people's experiences, and finally social entities were to be reconstrued as concerning sets of (sets of sets of . . .) experiences so related. They are therefore conclusively verifiable: for any such statement, simply write its *Aufbau* equivalent and check whether the requisite experiences stand in the requisite relations. If they do, the sentence is true; if not, not. Thus is science insulated from sceptical attack.

To fill their epistemological role, the entities that provide the basis for the construction must be, in *Aufbau*-terminology, autopsychological: they must concern the knower's experiences. Carnap could not hope to insulate science from sceptical attack if the construction proceeded on the basis of common material objects of the table-and-chair variety, and certainly not on the basis of the entities of fundamental physics. But, as many recent "revisionist" historians of Carnap's work have pointed out,<sup>68</sup> Carnap's own express attitude toward the choice of basis was entirely liberal. He was quite willing to grant the legitimacy of systems with "heteropsychological" bases, and these included systems that would proceed on the basis of the entities of physical science. Indeed, he apparently had plans at one time to write a companion to the *Aufbau* that would proceed on a physicalistic rather than a phenomenalist basis.<sup>69</sup>

Carnap continued to maintain this liberal attitude toward the basis during the Vienna Circle's protocol sentence debate concerning the character of the sentences in which observation-reports are couched. Of concern was accounting for the relevance of observation to the testing of empirical hypotheses. Doing so requires that the protocols and the sentences of science be couched in the same language. For otherwise there can be no inferential relations between them, and so no derivation of the protocols from scientific theory that are needed for the theory to be subject to experimental test.<sup>70</sup>

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<sup>68</sup> See Friedman 1987, Friedman 1991, Uebel 1996a, Uebel 1996b, Seibt 1997, Richardson 1990, and Richardson 1998. See Hamilton 1992 for a characterization of the *Aufbau* as a work "in transition" embodying Carnap's "final expression of empirico-critical positivism" as well as "the beginnings of the linguistic relativism famously expressed as the Principle of Tolerance" that Friedman *et al.* emphasize. See Creath 1982 for an argument that Carnap did not consider the *Aufbau*'s autopsychological constructions to be conclusively verifiable.

<sup>69</sup> See Richardson 1990, p. 10.

<sup>70</sup> "[A]n inferential connection between the protocol statements and the singular physical statements must exist for if, from the physical statements, nothing can be deduced as to the truth or falsity of the protocol statements there would be no connection between scientific knowledge and experience. Physical statements would float in a void disconnected, in principle, from all experience. If, however, an inferential connection between physical language and protocol language does exist there must also be a connection between two kinds of facts. For one statement can be deduced from another if, and only

But that there must be such a connection does not decide what the facts are that the scientific language and the protocol sentences must commonly report. Carnap recognized that there are two ways in which the needed reconciliation between protocol sentences and the sentences of physical science can be reached. The first is to interpret the protocols as themselves sentences in the language of physical science, and thus as referring to physical entities, states and processes. The second is to proceed in reverse: interpret the protocol language as referring to the contents of private experience, and translate the physical language in terms of private experience.<sup>71</sup> The latter method is that of the *Aufbau*. But Otto Neurath persuaded Carnap that the former method is preferable for its intersubjectivity.<sup>72</sup>

Thus Carnap came to prefer a physicalistic protocol as the form for sentences in which observations are couched. But his attitude toward that choice did not change. As in the *Aufbau*, he did not consider the choice to be a matter of which language is the correct language for the representation of experience. It was instead a matter of which language is most suited to the needs of physical science.<sup>73</sup> The language needs to be susceptible to intersubjective confirmation and regularity of law, while maintaining the required inferential relations between the language of the physical theory and the language in which experimental results are encoded. Carnap would not countenance any issue as to which language is correct beyond the question which best fulfills the conditions that an adequate language for the conduct of physical science must satisfy.

I regarded in the *Logister Aufbau* a phenomenistic language as the best for a philosophical analysis of knowledge.... In the Vienna discussions my attitude changed gradually toward a preference for the physicalistic language.... In our discussions Neurath, in particular, urged

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if, the fact described by the first is contained in the fact described by the second." Carnap 1981, pp. 158–59.

<sup>71</sup> "In order to save the empirical basis of the physical descriptions the hypothesis might perhaps be adopted that although protocol language does not refer to physical events the converse is true and physical language refers to the content of experiences and definite complexes abstracted from such content." Carnap 1981, p. 159.

<sup>72</sup> "Difficulties then arise however on considering the relation between the several persons' protocol languages and physical language. S1's protocol language refers to the content of S1's experience. S2's protocol language refers to the content of the experiences of S2. What can the intersubjective physical language refer to? It must refer to the content of both S1 and S2. This is however impossible for the realms of experience of the two persons do not overlap." Carnap 1981, p. 159.

<sup>73</sup> "My opinion here is that this is a question, not of two mutually inconsistent views, but rather of *two different methods for structuring the language of science both of which are possible and legitimate*." Carnap 1987, p. 457. See Oberdan 1990, Creath 1987a, and Creath 1992 for discussion of the role of Carnap's principle of tolerance in his views on protocol-sentences.

the development toward a physicalistic attitude. I say deliberately “attitude” and not “belief” because it was a practical question of preference, not a theoretical question of truth.<sup>74</sup>

This was his attitude in the *Aufbau* itself.

With respect to the problem of the basis, my attitude was again ontologically neutral. For me it was simply a methodological question of choosing the most suitable basis for the system to be constructed, either a phenomenalist or a physicalistic basis. The ontological theses of the traditional doctrines of either phenomenism or materialism remained for me entirely out of consideration.

This neutral attitude toward the various philosophical forms of language, based on the principle that everyone is free to use the language most suited to his purpose, has remained the same throughout my life. It was formulated as the “principle of tolerance” in *Logical Syntax* and I still hold it today, e.g., with respect to the contemporary controversy about a nominalistic or Platonistic language.<sup>75</sup>

Application of the principle of tolerance to the nominalism/Platonism debate is precisely the program of ESO.<sup>76</sup>

Throughout his career, Carnap maintained the same conception of language choice. It is not accountable to an a priori, super-scientific inquiry into whether a language is representatively accurate, but only to the question which language best accommodates the needs of empirical scientific inquiry. This is the attitude he held toward his *Aufbau* project, maintained in the protocol sentence debate, affirmed in *The Logical Syntax of Language* as the principle of tolerance, and applied to the nominalism/Platonism debate in ESO. While his opinion as to which languages are in fact most conducive to the conduct of empirical science changed over the years, his attitude with respect to what determines choice of language (and what must be prevented from influencing that choice) remained constant.

The empiricist criterion of cognitive significance has been repeatedly criticized as self-undermining. It is not analytic, but it also does not seem to be

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<sup>74</sup> Carnap 1963, pp. 50–51.

<sup>75</sup> Carnap 1963, p. 18.

<sup>76</sup> There is a narrow and wide reading of the principle of tolerance. Carnap explicitly introduces it in Carnap 1937a. There, the principle specifically expresses his rejection of absolutism and endorsement of pluralism in logic and mathematics, a response to issues in the foundations of mathematics not evident in the *Aufbau* (though one not explicitly excluded there either). In the wide sense, the principle expresses his rejection of absolutism and endorsement of pluralism with respect to linguistic frameworks generally, including choice of protocol-language and choice of ontology for the pursuit of formal semantics. As the passage just quoted indicates, Carnap saw the application of the principle to mathematics and logic as a manifestation of his more general attitude toward philosophical disputes, one that he saw himself as applying to various specific disputes throughout his career. I suspect that the attitude is absent with respect to the logical scaffolding of the *Aufbau* simply because his attention was not at the time directed toward issues in the foundations of mathematics.

confirmable in experience. It is therefore meaningless according to itself.<sup>77</sup> But Carnap did not consider it to be either analytic or confirmable in experience. His view, at least by “Testability and Meaning”, was that it is the *proposal* that the frameworks employed in empirical science countenance only verifiable (or confirmable) assertions.<sup>78</sup> It is therefore a suggested constraint on what frameworks are accepted for empirical science, presumably so as to ensure that science keeps its feet firmly planted on the empirical ground. But if it turns out, as many have suggested, that languages satisfying the criterion are too impoverished to fulfill the needs of empirical science, Carnap’s response would be to reject the proposal (although he would, I am sure, suggest that we conform to it as much as possible while ensuring adequacy).

ESO is an expression of the same approach to philosophical issues, and a specific application of it to the nominalism/Platonism debate. This attitude is one Carnap took to the observation language in terms of which the criterion is implemented and even to the question whether to accept the criterion. The charge of the meaningfulness of external questions could not therefore itself be based on the verification criterion.<sup>79</sup>

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<sup>77</sup> “The only reason that I can find for holding the second premise, and it would be, I believe, Carnap’s reason, is one based upon the claim that an assertion must be an empirically verifiable sentence.... Thus according to this argument an answer to an external question cannot be an assertion because it is not empirically verifiable.... [however], as has been amply shown by others, such a justification does not seem to be possible. We can emphasize the problem facing any attempt to justify it by pointing out that the criterion, if meaningful, which some may doubt, is neither analytic nor an empirically verifiable assertion.” Cornman 1964, pp. 139–40. See also Putnam 1983.

<sup>78</sup> “It seems to me that it is preferable to formulate the principle of empiricism not in the form of an assertion—‘all knowledge is empirical’ or ‘all synthetic sentences that we can know are based on (or connected with) experiences’ or the like—but rather in the form of a proposal or requirement. As empiricists, we require the language of science to be restricted in a certain way; we require that descriptive predicates and hence synthetic sentences are not to be admitted unless they have some connection with possible observations, a connection which has to be characterized in some suitable way.” Carnap 1937b, p. 33.

Carnap’s characterization of the verification criterion as a proposal was not an *ad hoc* attempt to dodge the problem of the criterion’s self-application, but was consonant with the principle of tolerance that was his fundamental philosophical orientation. This aspect is entirely missed by reading Carnap as nothing more than a radical empiricist.

<sup>79</sup> Like Stroud, Hilary Putnam also claims (in Putnam 1983) that Carnap’s tolerance of alternative frameworks itself presupposes the empiricist criterion. But he misunderstands the order of priority between Carnap’s commitment to the principle, which comes first in Carnap’s philosophy both theoretically and historically, and his commitment to empiricism. Putnam is correct to note that *if* the doctrine that external questions of existence are meaningless unless construed as linguistic proposals rests on the verification principle, then calling the verification principle itself a proposal is circular. That is, in part, why we should not understand Carnap’s rejection of external questions to be based on the verification principle. Thomas Ricketts argues along similar lines against Putnam’s interpretation in Ricketts 1994.

## IX. Conclusion

It is a mistake to see Carnap as doggedly applying an unstable and under-developed verification criterion to ontological questions of existence, or to see him as preoccupied with Cartesian scepticism. Michael Friedman has pointed out that it is no easy matter to find references in Carnap's work to the sceptical problem, even in the *Aufbau* where his paradigmatic response to it is supposed to be located.<sup>80</sup> Carnap's endorsement of some variant of the empiricist criterion of significance is an independent matter and conceptually contained within his steadfast commitment to the principle of tolerance. It is far more accurate to read the *Aufbau* in terms of the metaphysical neutrality expressed in ESO than to read ESO in terms of the phenomenalistic reductionism of the *Aufbau*.<sup>81</sup> Doing so leaves Carnap's attitude toward ontological disputes, and toward philosophical disputes generally, untouched by the criticisms Stroud and others have raised against verificationism.<sup>82</sup> Carnap might then still have something to teach us concerning how we should conceive of the nature and purpose of philosophical inquiry.

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<sup>80</sup> "[C]arnap shows no interest whatsoever in the philosophical skepticism that motivates (for example) Russell in *Our Knowledge of the External World* (1914), nor does the text of the *Aufbau* at any point engage the traditional vocabulary of 'certainty', 'doubt', 'justification', and so on." Friedman 1991, p. 508.

<sup>81</sup> "[R]ather than presenting a traditional empiricist or phenomenalistic account of our knowledge of the external world, the *Aufbau* instead anticipates Carnap's later strategy of 'Empiricism, Semantics, and Ontology': the question of the reality of the external world dissolves into the 'external question' of whether or not to accept and use the forms of expression of the 'thing language'." Friedman 1992, p. 22.

<sup>82</sup> Nor does it fall prey to Quine's criticisms of the analytic/synthetic distinction. Quine's interpretation of ESO, according to which that distinction is the basis for Carnap's views of ontology, is mistaken as well. I defend this claim in Alspector-Kelly 2001.



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