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Verificationism and (Some of) its Discontents

Thomas Uebel

Verificationism comes in a great number of varieties. This paper categorizes the distinctions applicable to the different versions of the doctrine held in the Vienna Circle and offers an assessment of which of the two main types falls victim to which of the main objections to verificationism.

Verificationism and (Some of) its Discontents

Thomas Uebel

1. Introduction

Verificationism has had a bad press for many years. The view that the meaning of our words is bound up with the discernible difference it would make if what we say, think or write were true or false, nowadays is often scorned as “positivist” though it was shared by eminent empiricists and pragmatists. This paper seeks to sort through some of the complexities of what is often portrayed as an unduly simplistic conception. I begin with an overview of its main logical empiricist varieties before considering which aspects of it fall victim to which of three major types of objection that have been raised against it. I will argue that an important distinction between two ways of understanding the idea behind verificationism is too often overlooked and that what is left standing is a modest proposal that seems worth further investigation.

2. Verificationism: the Viennese Varieties

There is no such thing as “the” verification theory of empirical meaning—even in logical empiricism.¹ Different representatives had different ideas as to what it was and what it entailed. Since

¹C. I. Lewis (1934, 128) pointed out that it was Berkeley who started verificationism. Yet neither their views nor those of entire philosophical schools of thought like pragmatism (see Misak 1995, chap. 3), nor those of select representatives of still other traditions like Mach, Brentano and Husserl (on the former see Ryle 1951, on the latter two see Mulligan 2017), who also employed verificationist ideas, can be considered here.

even the name “verification theory of meaning” is not neutral between different conceptions, I will speak blandly of “verificationism” if the entire complex is meant to be referred to or a handy moniker is required.

To be sure, there are two common denominators. For one, there was the intention to make metaphysics impossible, but shared motivations need not make for shared implementation.² As for what the different verificationisms positively embraced, proper appreciation is needed. Many criticisms suffer from failure to note correctly what kind of meaning or meaningfulness is supposed to be determined by verification or verifiability.³ This second common denominator was that not any old but “cognitive” meaning was to be so determined: cognitive meaning disregards whatever associations or overtones the turns of phrase may possess which are used to express the proposition at issue. Cognitive meaning only concerns whatever it is that

²This is one respect in which logical empiricist verificationism differs from the version proposed more recently by Michael Dummett (see, e.g., 1975 and 1976), which will not be discussed here.

³It might be thought that the verificationists cannot be absolved of all blame. Thus Carnap wrote in “The Elimination of Metaphysics by Logical Analysis of Language” that when he spoke of “*the alleged statements*” of metaphysics as “*entirely meaningless*”, he intended that characterization “in its strictest sense” (1932b, 61, original emphasis). This would seem to deny them any sort of meaning altogether. But to stop there would be to overlook that Carnap immediately went on to stress that he meant by “meaningless” more than that “it is entirely sterile to assert or ask” such seeming statements or questions and that “strictly” meant that these were not statements at all for no truth or falsity could be assigned to them (however hypothetically). In the last section Carnap even conceded that “metaphysics does indeed have a content; only it is not a theoretical content” and appealed to the notion that such sentences “serve for the expression” of an attitude (1932b, 78). A similar distinction was drawn already in *Scheinprobleme* between “theoretical content” and mere “object representations” which are “theoretically irrelevant but frequently of great practical importance” (1928b, 329–30) and in the so-called manifesto between “description” and “expression” (Carnap, Hahn and Neurath 1929, 82). In a related vein, Carnap later distinguishes the “content” (*Gehalt*) of a proposition as “something logical” from anything “psychological” (1934c, 13).

determines the truth-value of a sentence, it abstracts from everything else. In concentrating on cognitive meaning verificationism did not dismiss as unimportant so-called emotive meaning (the feeling tone expressed or the evaluative reaction prompted by a sentence) or personal and social associations and cultural meanings. The exclusive concern with cognitive meaning simply indicates the domain of logical and semantic analysis for which verificationism is designed (with consequences, depending on further views, for epistemology and ontology). Cognitive meaning isolates, if you like, the subset of meanings of a sentence that matters for logic.⁴ To be sure, that the qualification “cognitive” was not commonly attached to the logical empiricists’ talk of “meaning” early on makes it conceivable that they considered non-cognitive meaning as not properly categorized as meaning at all, but as an amorphous subjectivity only fit for treatment in psychology.⁵ But this does not detract from the fact that cognitive meaning was their target and only highlights the unsettled conceptual background against which their views on meaning were formed.

Consider now the main distinctions that need to be observed given that verificationism is a family of competing conceptions or theories:

⁴Distinguishing cognitive from emotive meaning was by no means a neopositivist invention. Already Ogden and Richards’ *The Meaning of Meaning* had distinguished what they called “symbolic” from “emotive” meaning by the criterion of truth-valuability: “The best test of whether our use of words is essentially symbolic or emotive is the question—‘Is this true or false in the ordinary strict scientific sense?’ If this question is relevant then the use is symbolic, if it is clearly irrelevant then we have an emotive utterance” (1923, 150). Ogden and Richards’ book was widely discussed at the time. Some twenty years later a passage from it applying emotivism to the term “good” even served as one of two mottos for Stevenson (1944, vi) who then explored the notion of emotive meaning in greater depth (1923, chap. 2). The current challenge to the very distinction between cognitive and non-cognitive meaning is noted briefly in Section 6 below.

⁵Carnap as a student of Frege is a prime candidate for this, setting him, like Wittgenstein, against Ogden and Richards’ classification, at least initially.

First, verificationism as a theory of meaning of empirical propositions *versus* verificationism as a criterion of the meaningfulness of empirical propositions or their empirical significance. This distinction can be drawn in terms of the primary task pursued: was the aim to give an account of (cognitive) meaning or was it to distinguish what is and what is not a properly (cognitively) meaningful statement? This distinction between, roughly speaking, meaning-constitutive and significance-criterial versions of verificationism will emerge as the most important one below, even though, astonishingly, it has been rarely discussed as such (and will require further refinement below).

Second, verificationism that requires that verification has actually taken place *versus* verificationism that only requires verifiability, that verification be potentially possible. This distinction has been discussed widely in the literature about verificationism and typically was appealed to in order to defend verificationism against simple misunderstandings; among verificationists it occasioned no disagreement.

Third, verificationism that requires complete or conclusive verification *versus* verificationism that allows less than complete or conclusive verification. By contrast with the second, this also widely discussed distinction did cause division between different verificationists. Incomplete verification should be and properly was called “confirmation”, of course, but having noted this to be understood I won’t do so here.⁶

Fourth, verificationism that conceives of the potential of verification as the nomological possibility of testing the claim expressed by the statement in question (given the physical laws obtaining) *versus* verificationism that conceives of this potential as the logical possibility of engaging in these test procedures.

⁶So-called falsificationism can fall under this heading as a variant of verificationism. Typically, however, as with Popper (1934), falsifiability is forwarded not as a criterion of empirical significance but as a demarcation criterion of legitimate science in which capacity, as Carnap noted (1963, 878), it has different aims; it is not considered here.

This distinction was vaguely discernible already early on but emerged into the light only in the mid-1930s when its discussion was cut short by extraneous events.

Fifth, verificationism as a conception that applies to all languages *versus* verificationism as applying only to formally regimented or constructed languages.

Sixth, verificationism as focusing primarily on sentences as units of meaning *versus* verificationism as focusing on terms as primary units of meaning. Unlike the fifth which remained in the shadows, this distinction again has been widely discussed in the debates about how to formulate verification principles.

All these distinctions make a difference for the assessment of the success of verificationism.⁷ As noted, there appears to have been universal agreement among the verificationists considered here concerning the second distinction: all agreed that only verifiability, potential verification, is required and that no actual process of verification must have taken place.⁸ The remaining five distinctions remained in contention, however, even though some were rarely if ever addressed. The third, fourth and fifth of these distinctions can be seen to help to further distinguish the meaning-constitutive from the significance-criterial versions. Yet that they pair off in this way is not necessary, however natural

⁷Some readers may miss in this list another distinction, that between verification as the capacity of statements to be verified by not further specified persons *versus* verification as the capacity of statements to be verified by their speaker, hearer or reader. Ayer (1936) adopted the latter option and in retrospect often complained about the lack of discussion of the distinction as such (e.g., 1979, 325). Early on Gilbert Ryle called the latter “verifiability-by-me” and disposed of it in (1936, 11) and not even mentioned it in his (1951). That Ayer retained it nevertheless was due to his phenomenalist epistemological starting point which he never abandoned. In Vienna similar questions were part of the debate about the tenability of methodological solipsism in the so-called protocol sentence debate (about which see Uebel 2007) and not discussed separately, so I will follow this practice here.

⁸E.g., Carnap talks of the meaning of a statement as expressing a “conceivable (not necessarily existing) states of affairs” (1928b, 325); at this juncture the precise modality of the conceivability was not yet addressed (1928b, 328).

these characterization of the all-important first pair may appear. Likewise, the sixth distinction can apply to meaning-constitutive verificationism but mainly finds use in variants of criterial verificationism.⁹

Verificationism as a formal criterion of the meaningfulness of empirical propositions (hereafter “V-CRIT”) was first proposed by Rudolf Carnap in *Scheinprobleme* in 1928.¹⁰ Verificationism as a theory of the meaning of empirical propositions (hereafter “V-TOM”) was first announced by Ludwig Wittgenstein in conversations with Moritz Schlick and Friedrich Waismann on 22 December 1929 and 2 January 1930.¹¹ This conception was soon

⁹I have relatively little to say about the sixth distinction. It has, of course, played a considerable role in the development of solutions to the problem of formulating an adequate formal criterion of empirical significance, but this aspect of the history of verificationism I touch on only briefly in Section 3, since it has received ample treatment elsewhere; see, e.g., Creath (1996) and Justus (2006).

¹⁰“If a statement *p* expresses the content of an experience *E*, and if the statement *q* is either the same as *p* or can be derived from *p* and prior experiential knowledge, either through deductive or inductive inferences, then we say that *q* is ‘supported by’ the experience *E*. A statement *p* is said to be ‘testable’ if conditions can be specified under which an experience *E* would occur which supports *p* or the contradictory of *p*. A statement *p* is said to ‘have factual content’, if experiences which would support *p* or the contradictory of *p* are at least conceivable, and if their characteristics can be specified. . . . If it is impossible, not only for the moment, but in principle, to find an experience which will support a given statement then that statement does not have factual content” (Carnap 1928b, 327, as fixed by Richard Zach’s perceptive translational revision: it is not *factual content* that is defined here, but *the having of factual content!*) Note that I disregard Carnap’s *Aufbau* here because it seems to vacillate between conclusive and inconclusive verification (see Creath 1982) and, most importantly, because it does not announce a formal criterion even though it identifies the “verifiable meaning” of statements with the “construction formula[e]” of the objects (1928a, §179).

¹¹“The sense of a proposition is [the method of] its verification” (in McGuinness 1967, 47, with insertion from McGuinness 1967, 79). It may be added that Carnap was mistaken when in his (1936–37, 422 n) he attributed verificationism to Wittgenstein’s *Tractatus* which, broadly speaking, had a truth-conditional theory of meaning (1922, §4.431), but this conflation is not uncommon still

endorsed, sometimes *verbatim*, by Schlick (1930, 156–57, 1932–1938, 311 and 1936, 458) and Waismann in his own work (1930, 5) and in his Wittgensteinian “Theses” (in McGuinness 1967, 244).¹²

Verificationism as allowing less than complete or conclusive verification was also introduced by Carnap in *Scheinprobleme*.¹³ By contrast, verificationism as requiring complete or conclusive verification was introduced by Wittgenstein also in his conversation with Schlick and Waismann on 22 December 1929.¹⁴ It too was soon endorsed by Schlick (1930, 159) and Waismann (1930, 5 and in McGuinness 1967, 245).¹⁵

today though was criticized long ago (e.g., Anscombe 1959, 150). For other examples of Wittgenstein’s verificationism from the years 1930–1933 from sources Schlick and Waismann did not have available, see Hymers (2005), who also, contrary to the common view which in this instance is shared here, credits Schlick with having influenced Wittgenstein in this matter.

¹²Reichenbach evolved a distinct variant of V-TOM along probabilistic lines. He added to the general verifiability condition of meaningfulness (which from the start he rendered only as assignability of a probability value: see 1930, 351; 1938, 190) the conditions of sameness of meaning for indirectly verifiable statements which follow from the conditions of deductive and inductive derivability between them and the directly verifiable sentences (1951, 94–96). In later years he even added certain “extension rules” so as “to extend the range of laws [meant to be covered] from observable to unobservables” (1951, 100).

¹³See quotation in note 10 above and note also Carnap (1928b, 328).

¹⁴“There are two conceptions here. One of them says that however I shall set about it, I shall never be able to verify the proposition completely. A proposition always keeps a back-door open, as it were. Whatever we do, we are never sure that we are not mistaken. The other conception, the one I want to hold, says, ‘No, if you can never verify the sense of a proposition completely, then I cannot have meant anything with the proposition either. Then the proposition signifies nothing whatsoever’” (in McGuinness 1967, 47). Over the years Wittgenstein’s verificationism morphed into the use theory of meaning.

¹⁵It is unclear whether Schlick upheld this strict conception to the end: Carnap (1936–37, 422 and 37) attributes this to him on the basis of remarks at Schlick (1936, 479–80) which deny the empirical verifiability of a statement that is for Carnap capable of “indirect and incomplete testing and confirmation”.

Clearly then, Carnap and Wittgenstein are the two founts of Vienna Circle verificationisms.¹⁶ Now it must be doubted whether the distinction between what V-CRIT and V-TOM and what they committed their holders to was always clearly drawn, even by their initiators. For instance, Waismann in his “Theses” of 1930–31 tried hard to make V-TOM compatible with the truth-conditional theory of meaning of the *Tractatus* (in McGuinness 1967, 243–44) and Schlick wrote: “Stating the meaning of a sentence amounts to stating the rules according to which the sentence is to be used, and this is the same as stating the way in which it can be verified” (1936, 458; compare 1932–1938, 361). Likewise Carnap’s “Elimination of Metaphysics” considered talk of verification conditions to be a variant of talk of truth conditions and stated that “the meaning is implicitly contained in the criterion” (1932b, 62–64).

That this unclarity obtained is perhaps not surprising. Even though it is clear from their inception that V-CRIT and V-TOM address different issues—one giving an operational criterion for determining whether a sentence possesses cognitive meaning and the other spelling out what that cognitive meaning consists in—it is easy to regard them as closely linked. They certainly are as far as knowledge of meaning is concerned, for, by operationalizing grasp of meaning and demanding effective decidability (at least partially and in principle), truth conditions are turned into verification conditions.¹⁷ But the apparent convergence of meaning and meaningfulness under the heading of knowledge of meaning must not mislead, even when, as with Wittgenstein

Yet Schlick also speaks of the hypothesis of survival after death as empirically meaningful even though it could, like all hypotheses, “never be established as absolutely true” (1936, 471).

¹⁶I leave out of consideration here forerunners like Peirce’s principle or Mach’s demarcation criterion; for brief comments about their possible influence on the pre-World War I discussion group with Frank, Hahn and Neurath and on the role Mach’s criterion for the later Frank, see Uebel (2015a) and (2011) respectively.

¹⁷Such reasoning is close to the surface in Schlick (1932b, 86–87).

and Schlick, an inchoate use theory of meaning was intended. For note that the concepts of meaning and meaningfulness themselves clearly differ, as the following consideration shows. If the meaning of a sentence is given by its truth or verification conditions (whatever our preference), then in order to state its meaning we have to indicate the conditions that are necessary *and* sufficient for its truth or verification. But that is not what we have to do to establish the meaningfulness of a sentence: to establish that we have to indicate only a necessary or a sufficient condition of its truth, but not both. (More precisely, we must indicate either a sufficient condition for its verification or a necessary condition for its falsification, whereas either will do for confirmability or disconfirmability.¹⁸) What follows from the difference between the concepts involved is that V-CRIT is under no obligation to account for what is or constitutes the meaning in question but can take it for granted, all it has to determine is whether a given statement possesses meaning as delimited by certain criteria. V-TOM and V-CRIT do not do more or less of the same job, but perform different jobs.

The Circle's seeming convergence on V-TOM was neither long-lasting nor did it signify agreement across the board. While Carnap appears to have fallen in with Wittgenstein's conception in 1930, major fissures in the united verificationist front emerged with dissent from Wittgenstein's strict conception of what's required for verifiability in "about 1931" (Carnap 1936–37, 37 n; compare 422 and 1963, 57–68). Members of what came to be known as the "left wing" of the Vienna Circle were no longer prepared to consider scientific laws on this account as strictly speaking meaningless, i.e., not as "statements" but "instructions for the formation of statements", as Schlick did (1931a, 188, trans-

¹⁸This point and distinction does not appear to have been stated explicitly until Rynin (1957, 66), but Carnap recognized the independence of V-CRIT and V-TOM at least since 1935 when he sharply differentiated between truth and verification; more on this below.

lation amended; 1932b, 91) in line with Wittgenstein.¹⁹ Carnap thus reverted to his earlier position and allowed universal propositions to be meaningful as long as observable consequences could be derived from them (1932b, 62–65).²⁰ Hans Hahn expressed the same view even more explicitly in public lectures in 1932 (see his 1933, 39–41). In consequence, the ability of a chosen criterion (like having observable consequences) to classify all candidates as either significant or not no longer coincided with the ability of definitely establishing their truth or falsity: here V-CRIT and V-TOM began to pull apart.

While the degree of strictness demanded of verification in principle remained open for both V-CRIT or V-TOM, the choice between these variants of verificationism effectively determined the modality under which the potential verification was conceived, whether it was delimited logically or nomologically. Schlick opted for the former and Carnap for the latter. This difference did not emerge explicitly until 1936 (compare Schlick 1936, 464 with Carnap 1936–37, 423), but it was already in play less visibly since 1932 (compare Schlick 1932b, 265 and 1932–1938, 311 with Carnap 1932b, 63 and 1932a, 48).²¹ In Vienna, in

¹⁹"An hypothesis is not a statement, but a law for constructing statements" (Wittgenstein on 22 March 1930 in McGuinness 1967, 99). Wittgenstein in turn appears to have adopted this view from Ramsey in 1929; see Marion (2012) and Misak (2016, chap. 7). Depending on the construal of the basic language, even singular physical object statements may count as "hypotheses".

²⁰Once the grammatical and category issues are sorted and the simplest sentence form in which a word can feature was determined (this was what Carnap called an "elementary sentence"), the verificationist criterion was applied: consider whether this elementary sentence could conceivably be shown to be either true or false. If it was either it was meaningful. While Carnap's focus on the reduction of descriptive terms allows for the conclusive verification of some statements, it must be noted that this 1932 criterion once again also allowed universally quantified statements to be meaningful, provided they were syntactically and categorically correct: conclusive verification was required (if at all) only for a term's elementary sentences.

²¹Presumably it was only Schlick's murder that prevented public discussion. Carnap and Schlick agreed on the example Carnap chose to focus on ("Rivers

short, the logical interpretation of verifiability was paired with V-TOM while the nomological one was paired with V-CRIT. Notably, their Berlin associate Reichenbach combined a nomological reading of verifiability with a distinct (probabilistic) version of V-TOM and later misleadingly claimed critically, without elaborating the qualification indicated, that “Schlick, and with him most members of the Vienna Circle, have used logical possibility” (1951, 97).²²

Then there was the distinction of whether the criterion or the meaning at issue was that of sentences in natural language or of sentences of a logically regimented or constructed language. Carnap was only ever interested in logically regimented or constructed languages, whereas Wittgenstein after his return to philosophy in 1929 became concerned (when not discussing mathematics) more or less exclusively with natural language. So for Wittgenstein and Schlick V-TOM pertained to natural language, with verifiability covering all of logical space, whereas for Carnap V-CRIT pertained to regimented or constructed languages, with verifiability circumscribed by nomological necessity.

Given these differences we do well to ask whether the apparent convergence of V-CRIT and V-TOM during 1930–31 ever amounted to the same thing for all protagonists. Certainly V-TOM entails V-CRIT (if meaning consists of verification conditions, then verifiability must be a criterion of meaningfulness), but does V-CRIT always entail V-TOM? To see that it does not, note first that, in addition to having settled for testability in place of strict verifiability, Carnap had no interest in his syn-

flow uphill”), but Schlick’s own example was first-person sentences about life after death and his recommended method was waiting until one dies (1936, 470–71). Concerning this example, Carnap is, I think, highly unlikely to have agreed with Schlick.

²²What Reichenbach called the “first principle” of V-TOM which laid down the conditions of meaningfulness—and so was equivalent to V-CRIT—required the nomologicity of verification. Reichenbach spoke of “physical possibility” but since he distinguished it from “technical possibility” it is nomological possibility he meant. The “second principle” defined “sameness of meaning” (1951, 98); see note 12 above.

tactic period from 1932 to 1935 in a theory of meaning properly so-called.²³ What accounts for Carnap’s seeming conflation of V-CRIT and V-TOM during this period is rather that he appears to have approached matters of truth in an epistemic fashion (at least partly under the influence of Otto Neurath).²⁴ Yet when (under the influence of Alfred Tarski) Carnap came to distinguish truth and verification in 1935 and recognized the former as a semantic concept distinct from the latter epistemic one, he could no longer accept any version of V-TOM.²⁵ Two possibilities remained both of which face difficulties. Carnap could have adopted a non-restricted truth-conditional theory of meaning and so had to recognize verification as a merely sufficient criterion for meaningfulness and no longer also necessary and therefore definitive

²³During this period Carnap considered explicit talk of meaning to be part of the philosophically misleading “material mode of speech” of metalinguistic discourse which was better conducted in the “formal mode of speech” of “logical syntax” which covered, Carnap believed, all the relevant meaning relations (1934c, 9). Still in 1936 Schlick argued against this proscription of the “material” mode (1936, 469–70).

²⁴Carnap’s criticism of the confusion of truth and confirmation in (1936e) was as much a self-criticism (see his 1932b, 62) as a criticism of colleagues like Neurath. What must be stressed, however, is that neither Neurath nor Carnap at that time endorsed an epistemic theory of truth as such (say a coherence theory of truth, as many have alleged, following Schlick and Ayer). Thus despite some unhappy formulations during the early 1930s Neurath thought that confirmation was the nearest sense to be made of the problematic concept of truth—short of, that is, abandoning it—not that that was what it meant. (After Carnap’s semantic turn Neurath did prefer its outright abandonment.) In Carnap’s contemporaneous syntactic phase meanwhile we must distinguish between his relative disregard for the “non-syntactic” concept of empirical truth and his endorsement of analytic truth as spelled out by potentially transfinite consequence relations (see 1934a, §34), so the term “epistemic” still applies as well.

²⁵Back in *Scheinprobleme*, a truth-conditional conception was basic to his conception of meaning, though importantly modulated by talk of “acceptance as true”. Thus he wrote that, for purposes of indicating the factual content or meaning of a statement, “it is necessary and sufficient to specify under what experiential conditions the statement should be counted as true (not ‘to be true’), under what conditions it is to be called false” (1928b, 325, translation amended).

of it.²⁶ Yet rendering possession of cognitive meaning potentially recognition-transcendent would have contradicted the very spirit of the verificationist project altogether. Or Carnap could have adopted a restricted truth-conditional theory of meaning that simply discounted as inadmissible into the language under consideration sentences with recognition-transcendent truth conditions. His re-formulation of the Principle of Empiricism in “Testability and Meaning” strongly suggests that he adopted the second alternative.²⁷

The position just ascribed to Carnap faces at least three objections which it is instructive to see overcome. First, that Carnap’s proscription of statements with recognition-transcendent truth conditions is *ad hoc*: if you allow for truth conditions to bestow meaning, then why rule out some? The answer is that now cognitive meaning is thought of as the possession of *discernible* truth conditions and that the limitation to these was defended on principled albeit pragmatic grounds. Against the next objection that it is surely nonsensical to speak of truth conditions that are wholly indiscernible, as seems presupposed, it must be noted that recognition transcendence can mean exceeding the nomological or logical bounds of possible verification. Having chosen nomological possibility as his criterion Carnap can recruit as the required contrast class propositions the verification of which is merely logically conceivable. This response then prompts the third objection that this is a distinction without difference: what

²⁶A similar weakening of his position concerning the reduction of dispositional terms to observational ones took place at the same time (see his 1936c and 1936–37, 440–41). By 1939 theoretical terms were recognized as irreducible (see his 1939, §24).

²⁷“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 a suitable way” (Carnap 1936–37, 33).

but the name separates a verification-conditional theory of meaning from a truth-conditional theory of meaning which discounts statements with recognition-transcendent truth conditions? The answer lies in the principles lying behind them which lead to the required differentiation.

To be sure, in a sense what cognitive meaning consists in, operationally speaking, also reveals cognitive meaningfulness: discernible truth conditions, a.k.a. verification conditions. Speaking so broadly, the class of sentences with discernible, verifiable truth conditions and the class of sentences deemed meaningful by a verificationist theory of meaning could be coextensive. But the theories of meaning and meaningfulness at hand differ and, importantly, end up with non-coextensive classes of by their light legitimate sentences that only overlap in part. Carnap’s V-CRIT arrives at its class of sentences with verifiable truth conditions by first presupposing that a broader sense of meaning of sentences be fixed by truth conditions, but then demanding that this class of “cognitively meaningful” sentences is still further delimited by an additional requirement: that these sentences be such that it is physically possible that their truth conditions are identified and (inconclusively) judged satisfied. By contrast, Schlick’s V-TOM arrives at its class of cognitively meaningful sentences by requiring all cognitive meaning to be constituted by the kinds of operations that it is logically conceivable would verify the sentence at issue (so no additional delimitation is required). This difference between the theory of the criterion of cognitive meaningfulness and the theory of cognitive meaning is highly significant, for not only do the theories issue in distinct classes of cognitively meaningful sentences; it also means that V-CRIT can employ (and then restrict) standard truth-conditional semantics whereas V-TOM cannot.²⁸

²⁸It may be noted that truth conditions that fit with Carnap’s notion of verifiability, indeed fit with the Ramseyfications of theories he favored in his later years (see, e.g., 1958 and 1963, 961–66), are described in Andreas (2017, §4.2).

So the general theory of meaning that Carnap in his semantic period paired his V-CRIT with differs markedly from that typically associated with verificationism.²⁹ Indeed, along with the thorough integration of the Principle of Tolerance into all aspects of his philosophy—“In logic there are no morals”³⁰—Carnap abjured categorically prescriptive theories like V-TOM altogether, as shown by his formulation of the Principle of Empiricism in “Testability and Meaning”.³¹ By contrast, as his response to C. I. Lewis shows, Schlick stuck with V-TOM as traditionally described, while Wittgenstein’s own views on meaning as use became ever more rarified and resistant to categorization. Ultimately Wittgenstein embraced in *On Certainty* (1967), as basic to all empirical knowledge, certain presuppositions (so-called hinge propositions) expressible in meaningful yet both indubitable but unjustifiable propositions—a view that presses to the very limit and ultimately rejects verificationism.

Readers will have noted that I have said little so far about other logical empiricists, but beyond pointing out that in their Vienna Circle days Waismann largely agreed with Schlick and Wittgenstein while Neurath, Hahn and Philipp Frank largely aligned with Carnap in his pre-semantic phase (later differences set in)—and that Hans Reichenbach in Berlin pursued a yet dif-

²⁹Putnam noted what he criticized as a two-track approach of Carnap’s verificationism: “in effect, Carnap operates with two conceptions of meaning; he employs the customary (linguistic) conception when synonymy is at issue; he employs the Verifiability Theory of Meaning . . . when the question ‘is a term in the language at all?’ is at issue” (1965, 124, original emphasis; see also 131). Puzzlement like Putnam’s disappears when it is noted that Carnap from 1935 onward was interested only in V-CRIT, but no longer in V-TOM.

³⁰“In logic there are no morals. Everyone is at liberty to build up his own logic, i.e. his own form of language, as he wishes. All that is required of him is that if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments” (Carnap 1934a, §17). For further discussion of what the Principle does for Carnap, see §§5–6 below.

³¹Note that the phrase “As empiricists” in the second sentence quoted in note 27 above clearly states the non-categorical nature of this principle.

ferent course—there are only three things to add on the issue of verificationism. First, Neurath right away (1935) opposed Karl Popper’s “naïve falsificationism”—as Imre Lakatos came to label the view of Popper’s *The Logic of Discovery* (1934) in his own (1970, 93–94). Given his life-long anti-foundationalism (as expressed in his famous simile of sailors having to repair their boat at sea, first used in 1913), Neurath is unlikely ever to have fallen for conclusive verification (even in 1930–31) and so can be regarded as further to the “left” of Carnap. Second, Frank deserves mention for his decidedly pragmatist turn towards a practice- or exemplar-oriented understanding of verification in the 1950s, very much in the face of the mounting difficulties to pin down a logico-linguistic criterion of empirical significance. Frank’s move can be considered an alternative to Carnap’s return in his (1956) to a term-based logical criterion that included theoretical terms in constructed languages, both of which, like Neurath’s dark remarks on the matter, cannot be considered further here.³² Third, with the possible exception of Waismann, V-TOM no longer found significant support among the logical empiricists who survived into the mid-1950s, but this did not stop the tendency of critics, common to this day, to conflate V-TOM and V-CRIT.³³

³²See Uebel (2011) for a reconstruction of Frank’s hints scattered over numerous papers.

³³It might be wondered whether V-CRIT theorists do not also end up with a theory of cognitive meaning, so that the distinction as I draw it is moot. My answer is that it is not, for the simple reason that not only is theirs a secondary consequence of what their theory is primarily about, but also because, as in Carnap’s case, their theory of cognitive meaning legitimates a class of sentences distinct from that which a V-TOM like Schlick legitimates. So yes, V-CRIT ends up with a theory of cognitive meaning (cognitively meaningful is whatever passes the criterion), just as V-TOM also delivers a criterion (whatever delimits its class of cognitively meaningful sentences). But the distinction I draw is in terms of what’s of primary interest as a consequence of which, as in the cases of Carnap and Schlick, what is a secondary result also differs.

3. The Main Types of Criticisms of Verificationism: Overview

The distinctions just drawn are important when it comes to evaluating the various objections that have been raised against verificationism.

The first and perhaps most common objection is that verificationism is incoherent because according to it all philosophical sentences (including statements of verificationism itself), being neither analytic nor empirically verifiable, are meaningless. Call this the “self-refutation” objection. (Sometimes it is called the “metalogical” objection.)

The second objection seems no less devastating. It is that verificationism puts the cart before the horse: we have to understand the meaning of a proposition before we can verify it. Isaiah Berlin (1938–39) called it the *hysteron proteron* objection and it was recently revived in this journal by Francis Jeffry Pelletier and Bernard Linsky (2018).

The third objection has already been mentioned: it is that despite considerable efforts it has proved difficult, if not impossible, to come up with a correct formulation according to which verificationism could be applied in a way that is consistent with the intentions of its inventors. It is this objection that gives a sharp edge to the worry that verificationism wrongly discounts recognition-transcendent truth conditions. (The joint satisfaction of two crucial desiderata proved problematic: to bar as cognitively meaningless so-called metaphysical assertions and retain as meaningful the theoretical claims of science about non-observable entities.) Call this the “unformulatability” objection.

A fourth objection, sometimes raised in connection with the third but self-standing, is that verificationism presupposes an unduly atomistic conception of meaning, the objects of knowledge and the components of scientific theories. Call this the “holism” objection. Typically it is joined by opposition, associated with W. V. Quine (1951), to the distinction between analytic

and synthetic statements that is fundamental to most logical empiricist theorizing.

It seems fair to say that the first two and the fourth one were not developed by friends of logical empiricist verificationism. The third objection, by contrast, naturally emerged out of the discussions of efforts to overcome the limitations imposed by the demand for strict verification and so can be regarded as at least initially “homegrown” within the camp of these verificationists themselves. But also the issues raised by the first two objections were discussed early on by proponents of verificationism and so were not neglected in the logical empiricist camp; the leading proponent of the fourth objection, moreover, embraced a distinct form of verificationism of his own. In any case, an extraordinary amount of effort has been spent on these objections, but as comprehensiveness cannot be attempted here I have to confine myself first to some general observations, followed by selected remarks about the unformulatability and holism objections, before discussing the first two objections in greater detail.

The self-refutation objection easily appears to be the most weighty and far-reaching one. If it were to hold, then any difference between V-CRIT and V-TOM is simply irrelevant—the whole verificationist idea would be shown to be incoherent. In this respect the *hysteron proteron* and unformulatability objections are different. They may appear at first to share their refutational responsibilities by dividing their duties. To argue with the *hysteron proteron* objection that verificationism puts the cart before the horse, that we have to understand the meaning of a proposition before we can verify it, most obviously argues against V-TOM. By contrast, to argue with the unformulatability objection that it has proved difficult, if not impossible, to come up with a correct formulation of a criterion of empiricist significance, is clearly to argue against V-CRIT. On second thought we may wonder, though. For instance, since V-TOM entails V-CRIT, why should an argument against V-TOM not also work against V-CRIT? The answer is that V-TOM is sufficient but not neces-

sary for V-CRIT: as the case of Carnap shows, it is possible to hold V-CRIT without holding a version of V-TOM. So refuting V-TOM does not yet amount to refuting V-CRIT. On the other hand, however, given this sufficiency, an argument against V-CRIT also works against V-TOM. This—and the relative paucity of elucidations of what a V-TOM might amount to—presumably accounts for the popularity of engaging with verificationism via the unformulatability argument: it would make short work of V-TOM as well.

Now as regards the unformulatability criticism, most press was doubtlessly garnered by A. J. Ayer's *Language, Truth and Logic* which popularized a rather crude version of Viennese logical empiricism and offered two separate attempts to characterize empirical significance for sentences, one in the first edition of 1936 and a replacement in the second of 1946.³⁴ Ayer started out with criticism of Wittgenstein's and Schlick's demand for conclusive verification (in the process confusing Tractarian and verificationist reasonings) and then set to specifying what "indirect" verification may amount to. In doing so Ayer's criteria focused only on V-CRIT but this was merely the visible part of a V-TOM which was left suitably vague. "Literal" or "factual" meaning—unlike "emotive" meaning—was said to be possessed only by propositions that are either true or false (1946, 15–16 and 44–45) but nothing more was said about it.³⁵

Another logical empiricist combatant to be mentioned in this connection is C. G. Hempel. Two of his papers from around 1950 charted the difficulties of finding suitable formulations for the

³⁴Ayer himself characterized his book as "populariz[ing] what may be called the classical position of the Vienna Circle" (1959a, 8); for a discussion of some differences between Ayer's and the Vienna Circle's conceptions, see Uebel (2013).

³⁵How a V-TOM is actually presupposed in Ayer's anti-metaphysical arguments of (1936) cannot be shown here, but note that still in the mid-1950s he stated that "it is the way in which a statement is tested . . . that determines what it means" (1963, 275).

criterion of empirical significance and attained canonical status in their combined form in his 1965 collection of essays.³⁶ It is notable that while Hempel was concerned only to exhibit the formal failures to date of V-CRIT—account was taken of the failure of Ayer's repair of his first attempt as demonstrated by Church (1949)—his results have been widely taken also to indicate the failure of V-TOM. This is reasonable not only in light of the entailment relations involved, but also due to Hempel's anti-atomistic conclusion that empirical significance attaches only to larger chunks of discourse or entire theories, a conclusion which touches on the holism objection. As for that objection, note that it is typically directed, as the unformulatability objection cannot be, directly against V-TOM, so it might also deserve discussion. However, since Quine's opposition to the analytic-synthetic distinction, from which the holism objection springs, raises many issues independent of verificationism and so demands separate treatment, I can forgo, as noted, its consideration here—especially since Quine himself embraced what he was happy to call a "verification theory of meaning" (1969, 81).

The unformulatability objection has been chronicled many times from Hempel onwards and I won't duplicate these efforts here.³⁷ But I must note that Carnap's last efforts of finding a new criterion for what are meaningful theoretical terms in a logically regimented language (1956) have recently been given a new lease of life by James Justus (2014), updating efforts by Richard Creath (1976), while Sebastian Lutz (2017) derived a criterion for theoretical sentences from Carnap's work on Ramsey-sentences, the so-called Carnap-sentence. Given then that Scott Soames's historical survey (2003) neither considered Carnap's last proposal

³⁶See Hempel (1950, 1951, 1965). Hempel's critique, it may be noted, underwent a decided radicalization in the time between the first two pieces; this development is no longer discernible in their later compilation.

³⁷For succinct accounts that also cover relevant technical details, with references to all the main contributions along the way, see again Creath (1996) and Justus (2006).

for a term-based criterion, nor Crispin Wright's amendment of Ayer's second criterion (1993, but see Yi 2001), nor Frank's return to an exemplar-based practical understanding of the criterion, his widely shared negative judgment on the possibility of providing a concept of empirical significance must be tempered.³⁸ Clearly, the discussion has not been closed and is still ongoing, though it is admittedly not high on the current agenda.

The next question is: are the other objections any more conclusive? If not, then there may be life in verificationism yet, but again close attention must be paid to the distinction between V-CRIT and V-TOM and between their variants. That it is a mistake to equate V-TOM and V-CRIT means, as noted, that we cannot accept an argument against V-TOM as an argument against V-CRIT.

4. Responses to the *Hysteron Proteron* Objection

Before assessing what damage it causes, let's first consider the objection itself in greater detail.³⁹ Isaiah Berlin raised it against "the principle of verification" as given "in its earliest and most uncompromising form". In that form the principle declared that "the meaning of a proposition resided in the means of its verification; the questions 'What does the statement *p* mean?' and 'What must one do to discover whether *p* is true?' were logically equivalent—the answer to one was the answer to the other" (1938–39, 227–28). Berlin continued:

The most obvious objection to this doctrine, which critics were not slow to urge, was that this formulation involved a glaring *hysteron proteron*: for before I could think of possible ways of verifying a

³⁸"For all intents and purposes, the collapse of Ayer's final formulation signaled the end of attempts to formulate the empiricist criterion of meaning in terms of either strong or weak verifiability" (Soames 2003, 291).

³⁹To be sure, not in as great detail as Pelletier and Linsky (2018), but hopefully detailed enough to support my intended points.

given statement I must first know what the statement means, otherwise there could be nothing for me to verify. How can I ask whether a group of symbols asserts a truth or a falsehood if I am not certain of what it means, or indeed whether it means anything at all? (Berlin 1938–39, 228)

It was shown above that V-CRIT and V-TOM are not equivalent, but that is not the criticism that Berlin made. Indeed, he did not draw this distinction either, but evidently understood the argument to be addressed to V-TOM. The *hysteron proteron* criticism—which Berlin, unlike his criticism of Ayer's first criterion, did not invent⁴⁰—is rather that we must know the meaning of a statement before we can investigate and decide whether it is true or false.

Berlin himself commented that the *hysteron proteron* criticism "is not as formidable as it looks" and noted with agreement:⁴¹

A supporter of the theory may reply that what he means by the expression 'to know the means of the verification of *p*' is knowing in what circumstances one *would* judge the group of symbols '*p*' to convey something which was or was not the case; adding that what one means by saying that one understands a given sentence, or that the sentence has meaning, is precisely this, that *one can conceive of* a state of affairs such that if it is the case—exists—the sentence in

⁴⁰To spell out Berlin's implicit reference to prior discussions, Pelletier and Linsky (2018) point to MacDonald (1933–34, 146), Russell (1936), Ingarden (1936, 206), and Lazerowitz (1938, 36) as pre-Berlin uses of the *hysteron proteron* argument, as well as to Lewis (1929, 259) and Schlick (1936, 349). On MacDonald's use of the argument and Berlin's and Schlick's reaction—as well as on its anticipation by Carnap and his response to Ingarden still much earlier—see the text below (and note 41), on Lewis's and Russell's uses of the argument see notes 42 and 45 below. (Lazerowitz's argument is concerned with aspects of John Wisdom's idiosyncratic argumentation so will be left out of consideration.)

⁴¹Berlin considered this defense "*prima facie* plausible enough" (1938–39, 229). What he then went on to argue rendered verificationism *implausible* were the difficulties of specifying formally strict criteria: so Berlin failed verificationism—again, he did not distinguish between V-TOM and V-CRIT—not on account of the *hysteron proteron* but of the unformulatability objection.

question is the proper, conventionally correct description of it, i.e. the proposition expressed by the sentence is true, while if it not the case, the proposition is false. (Berlin 1938–39, 228, emphasis added)

This counter has been held to be “inadequate” mainly on account of begging the question: if one is ignorant of the meaning of a sentence one will not know what experiences confirm or disconfirm a sentence (Pelletier and Linsky 2018, 12–13). One may agree that Berlin here did not wholly dispose of the objection, but his comment is not wholly beside the point either, as can be seen once we put it in context.

One supporter of verificationism who fell under Berlin’s description was Schlick in “Meaning and Verification” (1936), written in response to C. I. Lewis’s presidential address “Experience and Meaning” (1934).⁴² In the course of explaining his own view

⁴²In his 1934 address, incidentally, Lewis did not raise the *hysteron proteron* argument but mostly articulated worries about Viennese verificationism that depended on its perceived egocentric predicament. But even when Lewis did raise the *hysteron proteron* argument earlier in *Mind and World Order* in the course of delineating the pragmatic nature of the *a priori*, it was not directed against verificationism—to a variety of which he, as a pragmatist, was committed himself—but to pure or naïve empiricism. Lewis made the point that the contribution of the mind to experience in terms of the concepts applied to it is crucial. “We cannot even interrogate experience without a network of categories and definitive concepts. Until our meanings are definite and classifications are fixed, experience cannot conceivably determine anything. We must first be in possession of criteria which tell us what experience would answer what questions, and how, before observation or experiment could tell us anything” (1929, 259, emphasis added). Here the *hysteron proteron* argument, as expressed in the last sentence quoted, speaks against the pure empiricism which was opposed by the Circle as well (Lewis’s example was also Schlick’s favourite: Einstein’s definition of simultaneity). It does not speak against connecting concepts more or less freely determined (1929, 233) to experience such that, ultimately, “it is the *a priori* element in knowledge which is thus pragmatic, not the empirical” (1929, 266). The broad similarity of Lewis’s “conceptualistic pragmatism” (1929, xi) to logical empiricism should be evident. It was noted, in any case, by Herbert Feigl on his reading of *Mind and World Order* while at Harvard and communicated to Schlick already in 1930 (Limbeck-Lilienau 2010, 102).

of what Viennese verificationism required Schlick wrote, not for the first time: “You cannot even start verifying before you know the meaning, i.e., before you have established the possibility of verification” (1936, 464; see also 1931b, 173). This sounds like conceding the *hysteron proteron* objection against verificationism, but that was far from Schlick’s intention. His remark was intended as rebuttal to the following misconception:

Many of those who refuse to accept our criterion of meaning seem to imagine that the procedure of its application in a special case is somewhat like this: A proposition is presented to us ready made, and in order to discover its meaning we have to try various methods of verifying or falsifying it, and if one of these methods works we have found the meaning of the proposition; but if not, we say it has no meaning. (Schlick 1936, 463–64)

Can we identify a critic of this persuasion? Schlick may well have had Margaret MacDonald in mind who attacked the claim that “the meaning of a proposition *is* the method of its verification” (1933–34, 145, original emphasis) as it had been put in his London lectures “Form and Content” of November 1932: “To understand the meaning of a proposition is to understand or indicate the ways in which the proposition is verified. These are identical procedures.”⁴³ To this MacDonald replied:

What always puzzles me on this view is, how do I know what experiences will verify what propositions? . . . I must know what experience would verify my propositions; I must first understand them before I can prove them true. They would seem, then, not to be identical procedures. (MacDonald 1933–34, 145–46)

Schlick’s reply to Lewis’s presidential address sought to underscore it further.

⁴³This is MacDonald’s quote “from a verbatim report” of the lectures in November 1932 (1933–34, 145 and 145 n). (From Stebbing 1934, 67 n, it emerges that very likely this report was MacDonald’s own notes.) Schlick’s lectures were not published until 1938; for the relevant published, and possibly amended, passage, see Schlick (1932–1938, 361, original emphasis): “To indicate the meaning of a proposition and to indicate the way in which it is verified *are identical procedures.*”

Acts of verifying a proposition presupposed an understanding of its meaning.⁴⁴ As Pelletier and Linsky note (2018, 18), MacDonald clearly articulated the *hysteron proteron* argument.⁴⁵

Now as Schlick portrayed this objection in his reply to Lewis, it holds that the verification that verificationism speaks of is “of the empirical sort”, against which he pointed out, however, “when we speak of verifiability we mean *logical possibility* of verification” (1936, 464, original emphasis). Now against the *hysteron proteron* objection it would not seem to make a difference whether the modality that fixes the potential of verification is logical or nomological; what matters is that it is the possibility of verification (however conceived) that fixes empirical meaning or determines meaningfulness, so that knowledge of what the verification conditions are constitutes knowledge of meaning. (It was this condition that was taken as definitive of both V-TOM and V-CRIT by its Viennese and Berlin inventors and more or less sympathetic onlookers alike from the beginning.)⁴⁶ Yet even though Schlick’s defense appears somewhat muddled, it remains valid in this sense: if the *hysteron proteron* objection were to presuppose that V-TOM requires actual verification for meaning determination, then his response is adequate. And to argue, as MacDonald did, that knowledge of what would verify

⁴⁴MacDonald’s criticism was fully endorsed at a subsequent joint session of the Aristotelian Society and the Mind Association by A. E. Heath (1934, 195–96).

⁴⁵Russell’s argument (1936, 332–33) against Ayer—“it is difficult to see how he can know that a form of words ‘records’ an observation. Does he know anything about the occurrence except the form of words? If not, how does he know that the words describe the occurrence?”—seems to repeat the charge. That Ayer did not respond to this criticism or Berlin’s mention of the *hysteron proteron* argument would be explained if he thought Berlin had disarmed it.

⁴⁶See also Ernest Nagel (1934, 151) and Susan Stebbing (1933, 65). This appreciation did not, however, stop Stebbing from criticizing the principle of verifiability, especially when it was taken in conjunction with methodological solipsism in (1933, 78) and (1934, 173). A similar concern moved Lewis (1934), thus Schlick’s effort in his (1936) to defend verificationism without reference to the offending doctrine.

a statement presupposes knowing its meaning is not to disagree with how Schlick understood V-TOM: that is what he himself stated repeatedly, as we saw. Whatever the *hysteron proteron* objection opposes on this account, it was not his verificationism.

Here one may wonder not only whether Schlick understood MacDonald’s objection, but also about the coherence of his understanding of verificationism: given his concern with V-TOM, how can he so happily agree that we must know the meaning before we can begin verification? There is available this simple answer: V-TOM tells us what the meaning of a sentence consists in, it spells out what a competent speaker knows. What V-TOM does not address is how it is metaphysically possible for there to be competent speakers, it only specifies what it is to be a competent speaker. Of course, what one has to do to become one follows from it and Schlick noted it: to learn the meaning of sentences, one has to learn the rules according to which they are used and that is learning the way in which they can be verified.⁴⁷ So if it is the everyday sense of the possibility of speaker competency that is at issue, then Schlick’s apparent concession to the *hysteron proteron* objection amounts to nothing more than spelling out that being and becoming a competent speaker are different things. Learning the meaning of a sentence is to learn under what conditions it can be verified, but this cannot presuppose that we must already know under what conditions it can be verified in order to learn its meaning. If that were the charge, Schlick’s answer would be that it is simply confused.

Yet Pelletier and Linsky (2018, 16) still consider Schlick’s answer inadequate. In response to his references to language learning they write that this “presumes knowing features of a meta-language, which one might argue will give rise once again to a *hysteron proteron* argument at a different level”. This counter, however, either puts a radically different spin on what the *hys-*

⁴⁷“Stating the meaning of a sentence amounts to stating the rules according to which the sentence is to be used, and this is the same as stating the way in which it can be verified (or falsified)” (Schlick 1936, 458).

teron proteron argument is about or brings out what it is presupposed to be about all by critics who are persuaded by it. Either way, the *hysteron proteron* objection stops being an objection to verificationism specifically and demands an answer to a quite different question. In effect, it now asks the metaphysical question of how it is possible that there should be such a thing as meaning at all. But that is not an issue that even V-TOM (never mind V-CRIT) ever was nor should be concerned with.

Next consider Carnap's response to the *hysteron proteron* charge put to him by Roman Ingarden at the International Congress for Philosophy in Prague in 1934.⁴⁸ Carnap responded:

To determine whether a given sentence is verifiable or not, one does not need to already know its meaning [*Sinn*]. This can be established purely formally: one checks whether the given sentence, on the basis of the rules of the language of concern, stands in a deductive relation with sentences of a particular form, namely the so-called 'observation sentences'. (Carnap 1936b, 5)

Prima facie this is puzzling. Carnap seems to refer to syntactic analyses of given formal languages where protocol sentences are distinguished as a class from non-protocol singular sentences. Since being verifiable means standing in deductive relations to protocol sentences, the recommended procedure would indeed identify verifiable sentences, but the answer appears plainly Pickwickian: replacing meaning talk by syntax talk about formal languages would seem to miss the point of the objection. (You have to know what you are looking for if you want to verify a statement.⁴⁹) But did Carnap argue against the *hysteron proteron* argument at all? That is far from clear. Arguing with a phenomenalist like Ingarden and therefore, he thought, a card-carrying Husserlian, Carnap may have wanted to guard against appeal

⁴⁸See Pelletier and Linsky (2018) for a very sympathetic exposition of Ingarden (1936).

⁴⁹Pelletier and Linsky (2018, 20) object that the counter does not address the worries about verificationism vis-à-vis natural languages and would beg the question if it were meant to do so.

to metaphysical meaning entities, which he rejected as "the supposed results of phenomenological intuition of essences" (1936b, 6). What Carnap was geared up to defend in his response, as the first sentence of his reply makes clear (see 1936b, 5), was his logical syntax project which held that what non-metaphysical meaning it still made sense to talk about can be encoded in the formal relations that logical syntax specified.⁵⁰ For better or worse, beyond this anti-metaphysical point Carnap was not concerned with the *hysteron proteron* argument at all. And Neurath's comment on Ingarden certainly missed this point altogether (see 1936, 6). Yet failure to have found a wholly appropriate response does not by itself render the *hysteron proteron* argument valid.

In any case, after his own return to exclusive concern with V-CRIT, two years after the Prague conference, on the opening page of "Testability and Meaning", Carnap joined Schlick in stating: "Obviously, we must understand a sentence, i.e. we must know its meaning, before we can try to find out whether it is true or not" (1936–37, 420). Carnap evidently took his view to be unaffected by the *hysteron proteron* argument—if he had taken note of it. But even if he somehow missed it, the larger passage from which this remark is taken raises a pressing question: what are we to make of how Carnap continued?

But, from the point of view of empiricism, there is a still closer connection between the two problems. In a certain sense, there is only one answer to the two questions. If we knew what it would be for a given sentence to be found true then we would know what its meaning is. And if for two sentences the conditions under which we would have to take them as true are the same, then they have the same meaning. Thus the meaning of a sentence is in a certain sense

⁵⁰See note 23 above and note that Carnap around the time of his response to Ingarden wrote about his logical syntax: "It is possible in the case of a purely formal procedure, that is from a viewpoint in which one does not reckon with the meaning, finally to arrive to the answering of all those questions which are formulated as connotative questions", i.e., questions of meaning (1934c, 9). These ambitions for logical syntax were abandoned with his switch to semantics.

identical with the way we determine its truth or falsehood; and a sentence has meaning only if such a determination is possible. (Carnap 1936–37, 420)

Does what Carnap wrote here take back his agreement with the “obvious” truth he had just affirmed?⁵¹ Carnap’s qualification “in a certain sense” signals that he wants to make plausible why earlier discussions of the issue by members of the Vienna Circle, including his own, ran explanations of meaning (or its formal substitute) and criteria of meaningfulness together. To see this, note that Carnap began his paper prior to the sentences quoted as follows:

Two chief problems of the theory of knowledge are the question of meaning and the question of verification. The first question asks under what conditions a sentence has meaning, in the sense of cognitive, factual meaning. The second one asks how we get to know something, how we can find out whether a given sentence is true or false. The second question presupposes the first one. (Carnap 1936–37, 420)

Clearly, Carnap no longer regarded these two questions as identical—if, indeed, he ever did. So we can expect him to have answered the *hysteron proteron* objection much like Schlick if he were defending V-TOM. Yet being concerned with V-CRIT instead Carnap’s response did not differ much either. V-CRIT says that in order to determine whether a statement *p* is cognitively meaningful we must assess whether it possesses truth conditions that it is nomologically possible for us to show satisfied. That what must be in place for such an assessment to take place is indeed in place is not the business of V-CRIT to establish.

Might proponents of the *hysteron proteron* argument still object that, as described so far, I have short-changed it and that both Carnap and Schlick missed the points made, respectively, by Ingarden and MacDonald? Pelletier and Linsky’s illustration of the *hysteron proteron* argument has it that coming across what may or may not be a significant string of marks or sounds and having

⁵¹This appears to be the worry of Pelletier and Linsky (2018, 30–31).

identified them as pieces of some language, we first need to know what they mean (“step 3”) before we can decide whether they are true or not (“step 4”). They reject the “merger” of these last two steps (2018, 11).⁵² Notably they also complain that Schlick and Carnap “keep saying that meaning and truth conditions are the same, without explaining how it could be possible to get truth conditions if you do not antecedently have meaning” (2018, 31). But Pelletier and Linsky overlook that their illustration presents a story of linguistic discovery and that, as we saw, concerning just such concrete cases both Schlick and Carnap clearly denied that such a merger was possible. Then note, second, that when Schlick and Carnap did affirm and elucidate the merger, they were not concerned with stories of discoveries but with spelling out what cognitive meaning was thought to be.

I conclude that the *hysteron proteron* objection is—as already Berlin suggested (though not with the best arguments)—not as powerful as might be thought at first. It does not touch V-CRIT and even its force against V-TOM is illusory.⁵³ As deployed against the latter it seems to fall for an ambiguity that is also carried by my naming its office as “meaning-constitutive” and indeed demands guarding against. The objection misinterprets the nature of the “constitution” at issue: it misinterprets a spelling out of what cognitive meaning consists in as either a causal account of discovery or a metaphysical account of meaning in general. Against a version of verificationism which sets out to tell us how meaning came into the world, the *hysteron proteron* argument may well succeed, but there is no reason to think that

⁵²“To insist that verifying the sentence in one way is better than some other way without knowing its meaning already, is to commit the *hysteron proteron* fallacy” (Pelletier and Linsky 2018, 12).

⁵³To reiterate, a theorist holding V-CRIT independently of V-TOM presupposes a broader conception of meaning (like unrestricted truth-conditional meaning in the case of Carnap) within which the notion of cognitive meaning is to be located via verifiability. Against this position the *hysteron proteron* argument is ineffective. Note, however, that the price of holding such a V-CRIT independently of V-TOM is that the criterion of verifiability is its nomological, not its logical possibility.

any of the Vienna Circle theorists ever sought to answer such an “essence” question.

5. The Circle Meets the Self-Refutation Objection

As regards the self-refutation objection, it would have been nice to be able to claim that, despite its wide popularity, it is wholly inconclusive against both main variants of verificationism. But reflection favors only one of these variants. Moreover, reflection on the challenge represented by this objection also requires that further account is taken of the major clarification of Viennese metaphilosophy on Carnap’s part—a clarification that amounts to nothing less than a philosophical revolution that is still not as widely understood as it should be.

Ayer’s remark concerning the self-refutation objection to the verification principle, that “[t]he Vienna Circle tended to ignore this difficulty” (1959a, 15), is at best misleading.⁵⁴ To begin with, could it really have escaped the attention of the proponents of this principle that it was a prime candidate for a philosophical proposition and that its endorsement threatened to conflict with the often repeated assertion that “philosophy is not a system of propositions” but an “activity”, the “clarification of meanings”, and that beyond the truths of formal and empirical science “there is no additional domain of ‘philosophical’ truths”, as Schlick put it in his inaugural essay for *Erkenntnis* (1930, 157)? To be sure, they did not think of the verification principle as a philosophical proposition in the disparaged sense, but this very fact already indicates that some thought must have been spent on the question of its theoretical standing.⁵⁵

⁵⁴A similar claim was made by Putnam: “Strangely enough this criticism had very little impact on the logical positivists and did little to impede the growth of their movement” (1981b, 106). I turn to Putnam’s criticism in the next section.

⁵⁵Ayer did note the challenge the *Tractatus* posed to the Circle’s understanding of philosophy (1959a, 24) but did not link this to the problem of the status of the verification principle.

Long before the demand for strict verifiability split the ranks of the verificationists, when they were still engaged in their collective study of the *Tractatus*, the Circlists found themselves confronted by its pronouncements on philosophy and its paradoxical ending (1922, §§4.112, 6.54) with the question of the meaningfulness of their own “clarifying” discourse. Often and presumably much to the chagrin of Schlick, Neurath objected to what he regarded as the metaphysics of Wittgenstein’s “elucidations”—philosophical statements at odds with his own rules for meaning—objections he did not put into print until 1931.⁵⁶ Yet Schlick’s position remained to the end that “the philosopher seeks to illuminate the meaning of our utterances, the scientist to decide their truth” (1937, 495; compare 1930, 157; 1932–1938, 367) and with this he continued to claim the special status of “activity” for philosophy. Following the Tractarian strictures against metalinguistic discourse Schlick had to assign the highly contentious status of “elucidation” to the principle of verification, a principle which, as he repeatedly stressed, expressed but a triviality or truism and did not deserve to be called a “theory” (1932b, 265; 1932–1938, 311; 1936, 458–59). It would seem then that Schlick’s verificationism flirted with self-refutation as much as the *Tractatus* did.⁵⁷

In what follows I will therefore concentrate on Carnap’s V-CRIT. For what must be added right away is that what brought on this unfortunate consequence for Schlick (and Waismann) was an idiosyncrasy of Wittgenstein’s that did not generalize to all proponents of V-TOM or even V-CRIT. The divisions within the Circle about Wittgenstein’s elucidations matter here. Carnap

⁵⁶See the anecdote about Neurath’s interventions in the Circle meetings first related in Hempel (1969, 168) and compare the later criticism in Neurath (1931, 52–53) and (1932, 59–60); in the latter incidentally he endorsed Carnap’s incipient metalogic or logical syntax project.

⁵⁷That the verificationist account of meaning was “self-stultifying” and “cannot eliminate metaphysics without destroying itself” was precisely the view of Julius Weinberg (1936, 198–99) who closely associated that account with the Tractarian ineffability theses.

dealt with the question of the possibility of making proper sense philosophically already briefly in “Elimination of Metaphysics” where he simply asserted the meaningfulness of metalinguistic discourse against the Wittgensteinian strictures (1932b, 77–78).⁵⁸ He returned to the topic for an extensive discussion in “On the Character of Philosophic Problems”, his contribution to the first issue of *Philosophy of Science*.⁵⁹ In between these two writings lay Carnap’s consequential embrace of the metaphilosophical Principle of Tolerance—“In logic there are no morals”—which replaced ambitions to reconstruct, say, *the* logic of the scientific language with the license to explicate that logic as best may fit various purposes. Embrace of the Principle of Tolerance did not lessen Carnap’s disapproval of metaphysics but in important ways modulated the tone of his rejection of it; even more importantly, it managed to render his position consistent in the face of the self-refutation objection.

In “On the Character of Philosophic Problems” Carnap formulated the self-refutation challenge as follows: “If every proposition which does not belong either to mathematics or to the empirical investigation of facts, is meaningless, how does it fare then with your own propositions? You positivists and antimetaphysicians yourselves cut off the branch on which you sit” (1934c, 7).⁶⁰

⁵⁸As it happened, Carnap was overly optimistic when he stated there without qualification that “the metalogic which speaks about the sentences of a given language can be formulated in that very language itself” (1932b, 78). That this cannot be done with all languages was subsequently pointed out to him by Gödel and the moral was subsequently incorporated into *Logical Syntax*; see Awodey and Carus (2007, 185).

⁵⁹To judge from the (incomplete) reference to *Logik der Syntax* as published in “1933”—instead of 1934—at (1934c, 19) this paper was written in 1933. Carnap (1934c) thus clearly predates his attendance of the International Congress in Prague in 1934 where Ingarden presented his (1936) which also raises the problem of the meaningfulness of philosophical discourse at great length (which Carnap also responded to: see text below). Carnap indicated explicitly (1934c, 7–8), that what prompted his reflections were Wittgenstein’s paradoxical remarks about philosophical discourse in the *Tractatus* (see also 1934a, §73).

⁶⁰For present purposes we can neglect the “syntactic” and reductionist aber-

Given Carnap’s conception of philosophy, this challenge translated into: “Are the propositions of the logic of science meaningless?” His answer:

Here it must . . . be noted that a philosophic theorem . . . can be meant in different ways:

A. As *Assertion*; e.g.

1. In the language of science available today (or a part of it: of physics, biology, . . .) such and such holds.
2. In every language (or: in every language of such and such a nature) such and such holds.
3. There is a language for which such and such holds.

B. As *Proposal*; e.g.

1. I propose to build up the language of science (or of mathematics, of psychology, . . .) so that it acquires such and such properties.
2. I wish (along with other things) to investigate a language which possesses such and such properties.

(Carnap 1934c, 15)

Apart from making clear that it is the language of science that is the proper focus of philosophy Carnap stressed the need to declare “whether a thesis is meant as an assertion or as a proposal”. Understood as an *assertion* a philosophical thesis was a metalinguistic description of features of a particular language or class of languages and therefore was either true or false; for *proposals*, by contrast, questions of truth had no bearing, only whether what was proposed was “simpler or more pertinent (for certain purposes of a scientific methodological nature)” (1934c, 15). Metalinguistic statements are meaningful assertions whether they are issued in the pure syntax of mathematical combinatorics for constructed languages or in the descriptive syntax of historically given languages: if true, they are analytic in the former case and synthetic and verifiable in the latter case (as Carnap also replied

rations that make Carnap’s essay a period piece and concentrate on his response to our concern which is unaffected by these.

to Ingarden).⁶¹ Statements offering proposals set out, in their content clause, in a metalanguage what the essential aspects of the object-languages under investigation are to be and so state analytical features of these object-languages. As Carnap also put it, proposals are “part of the definition of ‘L’ (the name of the proposed language)” (1934b, 360).

Now in “On the Character” Carnap did not say which of candidates A_1 , A_2 or A_3 or B_1 or B_2 he preferred as interpretations of philosophical theses generally.⁶² Concerning seemingly ontological theses about numbers he kept his options open (A_3 or B_1), whereas concerning ways to conceive of “the given”, he opted for proposals (B_1 or B_2). (Where previous investigations of the logic of science had made sufficient progress metalinguistic assertions became possible, but in their absence it was safer to opt for proposals.) Carnap’s choice of the proposal status for verificationist theses was made explicit only in “Testability and Meaning” two years later (1936–37, 3, 33; see note 27 above) and was retained ever since (1963, 917), but there is no reason to think that his view in 1934 was different.

Note that the proposal strategy does fit Carnap’s verificationism. Understood à la B_1 , V-CRIT proposed the (re-)construction of the language of science such that it observed the demand that all of its propositions be at least indirectly testable or, à la B_2 , elected to investigate such a language. (Likewise, V-TOM could

⁶¹“One part of the syntactic (or metalogical) sentences belongs to pure syntax; then they are analytic sentences of combinatorics, i.e. pure mathematics; they do not require empirical verification. The other part of those sentences belongs to descriptive syntax; then they refer to linguistic structures as physical processes and are verifiable by observations. The syntactic sentences are therefore meaningful in both cases” (Carnap 1936b, 244, original emphasis, my translation).

⁶²Carnap adduced as examples seemingly incompatible philosophical theses about the language of mathematics that became compatible once they were understood along the lines of either A_3 or B_1 and seemingly incompatible philosophical theses about the epistemological given that required to be understood as either B_1 or B_2 . A further example showing the supposed compatibility of “positivism” and “realism” founders on its reductionist assumptions.

be construed either way.) V-CRIT understood as a proposal can be conceived of in different strengths. Carnap adopted the “Requirement of Confirmability: ‘Every synthetic sentence must be confirmable.’” It is, he noted “the most liberal of the four requirements. But it suffices to exclude all sentences of a non-empirical nature, e.g. those of transcendental metaphysics inasmuch as they are not confirmable, not even incompletely” (1936–37, 34–35).

In light of Carnap’s explanations it is difficult to see why verificationism should be thought self-defeating or render philosophy itself impossible or meaningless, especially if it confined itself to V-CRIT as it did from 1935 onwards. (Let’s grant that the self-refutation objection did not overlook the all-important qualification that it is cognitive meaning that is at issue.)

Perhaps Ayer’s claim that “the propositions of philosophy themselves” are “linguistically necessary and so analytic” (1946, 31, see also 26) muddied the waters. Ayer’s analytic truths in *Language, Truth and Logic* gave little hint, as by contrast Carnap’s did, of being relative to particular languages or linguistic frameworks and appeared at least to constitute a merely linguistic *Ersatz* of the truths of reason of old. And later, in the introduction to the book’s second edition, Ayer opposed criticisms of the verification principle as an “empirical hypothesis” by stating that the verification principle was a “definition . . . not supposed to be entirely arbitrary” (1946, 16) and so also seemed to distance himself from analyticity claims. Naturally, thinking of the verification criterion as an empirically based definition only invited the opposition to claim that, no, “the sense in which either scientific hypotheses or common-sense statements are habitually understood” (1946, 16) is *not* such that they satisfy it. Left unanswered was the question why one should adopt such a definition—a point Ayer himself made in later years.⁶³

⁶³In later years Ayer turned against what he then described as the Circle’s *de facto* “adopt[ion] of the verification principle as a convention”. He again agreed that it was descriptive for how empirically informative statements “actually

But that clearly was not Carnap's view of the matter, and this seems to underscore that the popularity of the self-refutation criticism is owed in large degree to the fact that both the reach and the subtlety of Carnap's philosophy has not been understood. Let me highlight therefore that, very much in line with what he wrote in "On the Character" (but without its *faux*-syntacticism), Carnap expanded on his metaphilosophy in his response to critics in the mid-1950s as follows:

A philosophical thesis on logic or language, in contrast to a psychological or linguistic thesis, is not intended to assert anything about the speaking or thinking habits of the majority of people, but rather something about possible kinds of meanings and the relations between these meanings. In other words, a philosophical thesis does not talk about the haphazard features of natural languages, but about meaning relations, which can be represented with the help of a constructed language. The thesis on arithmetic, mentioned above, says that it is possible to construct a system of arithmetic in such a way that its theorems (which correspond to the customarily accepted theorems of arithmetic) are analytic statements. Analogously, the thesis of pure optatives is meant as saying that it is possible to construct a language in such a way that it contains pure optatives. (Carnap 1963, 1003)

Here Carnap very clearly stated that the theses of the analyticity of logic and arithmetic and the distinction between facts and values are not empirical hypotheses but philosophical theses about possible meaning relations. (So-called pure optatives are statements with purely expressive content.) Such theses are neither descriptive of actual language use nor in any sense ontologically committing. They represent conventions of philosophical analysis to be judged for their fruitfulness in rendering reasonings about logic, arithmetic and ethics clearer. Likewise, I suggest, the distinctions between cognitive and non-cognitive meaning and the verification criterion of cognitive meaningful-

function" but rejected it as "prescriptive" for by then he was open to "the interest that metaphysical questions can have" (1959a, 15–16).

ness are conventions of philosophical analysis adopted to render reasoning about language perspicuous. Such conventions are to be understood as proposals for the pursuit of philosophical analysis—or better: for the languages to pursue the logics of science—and are as such meaningful à la B_1 or B_2 , due to their analytical description of the target language to be developed.

6. Putnam's Anti-Positivist Gambit

Hilary Putnam was one influential critic who refused to concede Carnap's case. In *Reason, Truth and History* Putnam aimed to develop a properly philosophical theory of rationality and, preparatory for that, mounted a very wide-ranging argument that sought to divest philosophy of all forms of "scientism", one of which was logical positivism.

In the last fifty years, the clearest manifestation of the tendency to think of the methods of 'rational justification' as given by something like a list or canon (although one that philosophers of science have admittedly not yet succeeded in fully formalizing) was the movement known as Logical Positivism. Not only was this list or canon ... supposed to exhaustively describe the 'scientific method'; but, since, according to the logical positivists, the 'scientific method' exhausts rationality itself, and testability by that method exhausts meaningfulness ('The meaning of a sentence is its method of verification'), the list or canon would determine what is and what is not a cognitively meaningful statement. Statements testable by the methods in this list (the methods of mathematics, logic and the empirical sciences) would count as meaningful; all other statements, the positivists maintained, are 'pseudo-statements', or disguised nonsense. (Putnam 1981b, 105)

Putnam here attributed to the logical positivists the ambition to reduce scientific reason to a set of algorithms and the denigration of emotive meaning as nonsense. To be sure, a composite portrait collected from different utterances by different people at different times (read somewhat unsympathetically) could perhaps be

created partly along the lines of the latter attribution, but the former remains at best a gross misunderstanding of Carnap's inductive logic. That said, Putnam very accurately captures the caricature of logical positivism that has long captured the popular imagination. Perhaps the rhetoric can be excused given how much Putnam believed to be at stake: nothing less than the place of reason in human affairs. While not overly conscientious in his portrayal of the logical positivists, Putnam cannot be said to have diminished their lasting importance. (Indeed, asked to justify our own seemingly antiquarian concern with verificationism, we could hardly do better than refer to Putnam's concerns.)

Against logical positivism Putnam invoked as "obvious rejoinder" the self-refutation argument—"the criterion itself is neither (a) 'analytic' . . . nor (b) empirically testable" (1981b, 106)—and generalized it as follows:

[T]he gambit that refutes the logical positivists' verification principle is *deep* because it refutes every attempt to argue for a criterial conception of rationality, that is because it refutes the thesis that nothing is rationally verifiable unless it is criterially verifiable. . . . if it is true that only statements that can be criterially verifiable can be rationally acceptable, that statement itself cannot be criterially verified, and hence cannot be rationally acceptable. If there is such a thing as rationality at all—and we commit ourselves to believing in *some* notion of rationality by engaging in the activities of *speaking* and *arguing*—then it is self-refuting to argue for the position that it is identical with or properly speaking contained in what the institutionalized norms of culture determine to be instances of it. For no such argument can be verified to be correct, or even probably correct, by those norms alone. (Putnam 1981b, 111, original emphases)⁶⁴

So Putnam held that "we cannot appeal to *public* norms to decide what is and what is not rationally argued and justified in philosophy" (1981b, 111, original emphasis). But how can we decide

⁶⁴Nearly the entire large-scale argument is repeated—minus its value-theoretical dimension—more or less verbatim in Putnam (1981a, 184–91). A cruder variant of this "obvious rejoinder" is invoked at (1982, 139–40).

then? Putnam only offered bromides like "we are left with the necessity of seeing our search for better conceptions of rationality as an intentional human activity, which . . . is guided by our idea of the good" (1981b, 137). But if indeed it is the case that "*fact* (or truth) and *rationality* are interdependent notions"—such that "'rationally acceptable' and 'true' are notions that take in each other's wash" (1981b, 137, original emphases)—and if it is the case, as Putnam also claimed, that "theory of truth presupposes theory of rationality which in turn presupposes our theory of the good" and, moreover, that the latter in turn is "dependent upon assumptions about human nature, about society, about the universe (including theological and metaphysical assumptions)", then what does it mean to be told that we are "invited to engage in a truly human dialogue" (1981b, 215–16)?

Putnam prized that in his own conception "there is no such thing as a 'foundation'"—but anti-foundationalism is no advance over his opponents here. More distinctively Putnam held that all views for which "philosophical truth" is beholden to the same standards of evidence as scientific truth are "simply unreasonable" (1981b, 112), but apart from his broad reference to concern with "the good"—to normative ethics—he failed to specify what the standards of philosophy should be, even more importantly, how such superior insight could be justified and why it should command consent. Just that, of course, may well have been Putnam's point: simply to begin to reorient philosophy itself to the self-conscious pursuit of the good, without guarantees or safety nets of any sort.⁶⁵ (Fittingly, Putnam's later work became one long campaign against the positivist fact/value "dichotomy", presumably including the distinction between cog-

⁶⁵Thus in the essay version of his argument against criterial rationality where Putnam invokes a "modification" of "Neurath's picture of science as the enterprise of reconstructing a boat while the boat floats on the open ocean": "First I would put ethics, philosophy, in fact the whole culture, in the boat . . . And, second, my image is not of a single boat but of a *fleet* of boats . . . no one . . . ever totally out of signaling distance from all the other boats" (1981a, 204, original emphasis).

nitive and non-cognitive meaning.⁶⁶) But let the battle for the standards of reason be fought another day. For while it is true that the fact/value distinction is closely related to verificationism broadly understood, our present concern is only to determine whether any variant of verificationism would be worth fighting for still. (Like Quine's attack on the analytic/synthetic distinction, Putnam's on the fact/value distinction must be discussed separately.)

Back then to the self-refutation argument. On an earlier occasion Putnam had criticized the defense of the verification principle as an "explication" as "disingenuous" for "to accomplish its purpose (ruling out metaphysics, normative ethics, theology, etc.) it was precisely necessary that the Verifiability Theory of Meaning should *fail* to explicate the customary conception of meaning" (1965, 123, original emphasis; see also 1969, 442). This refutation would seem to be directed against construals of verificationism of the type suggested by Ayer's remarks, but even there overlooks the emphasis on scientific language. Yet as Putnam made clear, this criticism was not intended against Carnap. So how did he argue against him?

"The positivists, I will be reminded, concluded that the verification principle was 'cognitively meaningless'. They said it was a proposal and as such not true or false" (1981b, 111). In light of what Carnap argued, this is misleading: a proposal, not being an assertion, is not cognitively meaningless because it cannot be true or false. Still, Putnam's challenge is to spell out why this holds without self-contradiction. One might argue that proposals are grammatical transforms of declaratives: verificationists distinguished in a likewise fashion between meaningful and meaningless questions.⁶⁷ Another way might be to spell out, as above, precisely what is meant by saying that truth and falsity

⁶⁶See, e.g., the essays in Putnam (2002) and Putnam and Walsh (2012).

⁶⁷See, e.g., Schlick (1932a, 231) or (1936, 466–67) and Carnap (1932b, 61); for the distinction between meaningful and meaningless commands even see Schlick (1932–1938, 457).

do not apply to proposals. Yet Putnam discounted all rejoinders by adding: "But they argued for their proposal and the arguments were (and had to be) non-starters. So the point stands" (1981b, 112).⁶⁸ But the non-starter is Putnam's: why should it be a non-starter to argue for a proposal? To argue for a Carnapian proposal is not to argue for its truth but for its instrumental virtues in achieving some aim or other. To be sure, Putnam rejected what he viewed as an artificial separation of the practical from the theoretical, even more generally, of issues where there is a fact of the matter and issues where there is not. In a footnote he elaborated:

According to Carnap, all rational reconstructions are proposals. The only factual questions concern the logical and empirical consequences of accepting this or that reconstruction. (Carnap compared the 'choice' of a rational reconstruction to the choice of an engine for an airplane.) The conclusion he drew was that in philosophy one should be tolerant of divergent rational reconstructions. However, this Principle of Tolerance, as Carnap called it, *presupposes* the Verification Principle. For the doctrine that no rational reconstruction is uniquely *correct* or corresponds to the way things 'really are', the doctrine that all 'external questions' are without cognitive sense, is just the Verification Principle. To apply the Principle of Tolerance to the Verification Principle itself would be circular. (Putnam 1981b, 111 n4)

So Putnam saw Carnap putting forward the verifiability demand for cognitively meaningful discourse as a *reasoned* proposal and found the reasoning in its favor to be circular for its ground, the principle of tolerance, supposedly was in turn based on the principle of verificationism. Tolerance was indicated because no fact of the matter dictated one way of speaking or proceeding rather than another, but that was only argued for on verificationist grounds.

⁶⁸Likewise Putnam wrote that "what the logical positivists and Wittgenstein (and perhaps the later Quine as well) did was to *produce philosophies which leave no room for a rational activity of philosophy*" (1981b, 113, original emphasis).

Is it the case that verifiability could only be argued for on the basis of tolerance? That is not clear. Why could one not claim that the verification principle does after all codify the true nature of the logic of science? (For instance, if one believes the principle to come out as the undisputed winner in some pragmatic sweepstakes and “naturalistically” draws ontological consequences.) Needless to say, this was not Carnap’s point of view, but it illustrates that there can be different paths towards the conclusion (acceptance of the proposal) that verifiability should rule in the language of science. Carnap rather would ask whether we should be coerced into tolerance by a rational argument: would it not suffice that tolerance simply be an *option*? Note that adopting this stance changes the dialectical situation quite drastically.

The power of what Richard Creath (2009) called “the gentle force of tolerance” springs precisely from renouncing categorical injunctions. Rather than demand a knock-down argument against metaphysics that makes mandatory the transformation of philosophy into proposal making, going optional on tolerance demands only that pragmatic reasons be given that promise a plausible payoff. Carnap’s engineering approach to philosophy demands no more. By contrast, Putnam lumbered him with the need for an impossibility proof that incurs circular reasoning. Putnam’s Carnap is a militant empiricist seeking to refute a metaphysical opponent. The tolerant Carnap simply gets on with the job of logico-linguistic reconstruction of non-metaphysically significant parts of human discourse. While Putnam’s Carnap gets drawn into the quicksand of philosophical argument, the tolerant Carnap stands freed of the requirement for foundations that cannot be provided.⁶⁹

We are now in a position to turn to Thomas Ricketts’s important rejoinder to Putnam’s argument. Putnam’s objection “supposes that Carnap, in adopting the principle of tolerance, as-

⁶⁹For further explorations of what tolerance buys Carnap, see also Creath (2014) and the reflections on Carnap’s pragmatism in Richardson (2007) and Carus (2007).

sumes an explanatory burden of excluding the general question of the representational adequacy of a language” (1994, 178). The circularity Putnam alleged comes about only if Carnap requires that philosophy *must* be reduced to the making of proposals because any insight into “the way things really are” is foreclosed to us. The challenge now is to show that Carnap’s undeniable “recommendation of empiricism does not involve any vicious circularity” (1994, 179). At issue is the nature of Carnap’s empiricism.

Putnam urges that the principle of tolerance depends on empiricism, for only by invoking empiricism can Carnap dismiss the question of the correctness, the descriptive adequacy, of a language as a pseudo-question. Putnam’s challenge, however, assumes that the notion of fact, of the way things really are, is sufficiently clear that Carnap owes us an argument for rejecting it. Carnap would view matters differently. He would ask for a clarification of this notion. (Ricketts 1994, 195–96)

Now it might be thought that Carnap is committed to precisely such a notion of fact by his analytic/synthetic distinction: is it not the case that analytic truth is fixed as such by stipulation whereas synthetic truths are determined by the way the world is? But Carnap, as Ricketts shows by reference to the subtleties of *Logical Syntax*, does not endorse a language-transcendent notion of fact. To begin with, analytic sentences are not “true-in-virtue-of” anything but they encode speakers’ dispositions or commitments to affirm the rules which they take to govern their language. Synthetic sentences fill out, as it were, that formal framework with content ultimately answerable to observational tests but, given that different logical frameworks are possible for different languages, content need not stay constant across different languages. Factual content typically represents matters independent of the language of representation but it cannot do this representing independently of its means of representation.

For ease of intelligibility of the point at issue we may turn to how Carnap put the matter of what we nowadays think of as

Kuhnian incommensurability already at the Paris Congress in 1935:

The answer to a question concerning reality however depends not only upon that ‘reality’, or upon the facts but also upon the structure (and the set of concepts) of the language used for description. In translating one language into another the factual content of an empirical statement cannot always be preserved unchanged. Such changes are inevitable if the structures of the two languages differ in essential points. For example: while many statements of modern physics are completely translatable into statements of classical physics, this is not so or only incompletely so with other statements. The latter situation arises when the statement in question contains concepts (like, e.g., ‘wave function’ or ‘quantization’) which simply do not occur in classical physics; the essential point being that these concepts cannot be subsequently included since they presuppose a different form of language. (Carnap 1936e, 22, translation taken from Carnap 1949, 126)

For Carnap, what truths there are is fixed in part by the language used. That does make truth language-relative, but it does not open the door to idealism but rather demands a refashioning of empiricism, the recognition of the deeply conceptual nature even of empirical truth.⁷⁰

As Ricketts put it soberly, Carnap’s empiricism simply consists in the endorsement of evidential standards that are demanded by verifiable forms of language and the advocacy “to restrict our enquiries to claims formulated in empiricist languages” (1994, 194–95). Such an endorsement does not require proof that languages cannot match reality in some correspondentist fashion, it only requires the resolve to stick to the employment of languages whose claims are justifiable by intersubjectively available

⁷⁰While Schlick rejected the possibility of incommensurability that Carnap pointed to—see Uebel (2007, 348–56) for discussion of this episode—it may be noted that this was Carnap’s distinctive way of establishing the broad agreement with Lewis’s “conceptualistic pragmatism” that Schlick was concerned to establish as well; see note 42 above.

evidence. Now does this require the absolutization of the concept of criterial rationality, as Putnam feared? The answer is that there is no need to think that “rationality is *constituted* by the use of an empiricist language” (1994, 196, emphasis added) in an exclusivist sense. But it can be rational and make sense to use such a language—that is all that Carnap required for his V-CRIT to escape the charge of self-refutation.

Putnam’s response is telling. While apparently conceding that Carnap did not employ a notion of language-transcendent fact in *Logical Syntax*, Putnam also refused “to admit that [his] criticisms of Carnap were based on misreadings” and he noted, pointing to the *Aufbau*, that “Ricketts’s Carnap, the Carnap who holds no doctrines but only asks for ‘clarification’, without any substantive position on what clarification consists of, is just not the Carnap I knew and loved” (1994, 281). Putnam is right, of course, that there may well be a difference between these Carnaps.⁷¹ Yet the point must be stressed that at issue here are not just images of Carnap but the philosophical positions of the historical Carnap himself and that it is Carnap’s logical tolerance that matters.

7. Conclusion

In sum, verificationism in logical empiricism was a varied set of doctrines some of which—like others of its provenance—underwent considerable developments over a course of less than ten years. Representing even only all Viennese versions by

⁷¹More recently Putnam returned to the matter to “strongly disagree” with Ricketts and asserted that the late Carnap’s conception of individual fact “remained strongly influenced by classical empiricism”, namely fixated on statements with “completely interpreted” observation terms (2002, 24, 153 n 38). But, tellingly, no reason was given why even such a strategy chosen in the spirit of tolerance should undermine that tolerance, especially when the insufficiency of this observational base to account for all scientific knowledge claims is freely admitted. (It was Carnap, after all, who defended logical empiricism against Einstein’s doubts by invoking Neurath’s boat; see 1963, 38.) For more on the tolerant Carnap, see again Creath (2009, 2014).

Wittgenstein's motto "The sense of a proposition is the method of its verification" misleads substantially. Of the two strands of verificationism readily discernible, the Schlick-Waismann variant deriving from Wittgenstein (V-TOM) and the Carnapian one (V-CRIT), the former focused on explicating what constitutes (cognitive) meaning, whereas the latter sought to provide only a criterion of empirical meaningfulness. With that difference of primary focus came a difference in how the secondary object of interest was thought of. This led not only to differences concerning the strictness of verification and the type of modality under which verifiability was conceived, but also to differences in how meaning and knowledge of meaning was understood. Schlick remained committed to what were at best programmatic outlines of an admittedly suggestive use theory of meaning with which to the present day many philosophers hope to be able to comprehend the multitude of natural language phenomena. Having entertained an equally vague conception of acceptance conditions when he proposed his first criterion of empirical meaningfulness, Carnap later returned to a restricted truth-conditional theory to underwrite the concept of discernible cognitive meaning by means of which his constructed languages were to engage in unraveling conceptual puzzles in our theoretical understanding of the world.

These differentiations between Viennese verificationisms which the historical record demands make a difference to their standing. V-TOM and V-CRIT differ in how they hold up under the standard criticisms here discussed. My claim above that the unformulatability objection remains inconclusive depends on ongoing research of how in formally constructed languages the criterion of cognitive significance is to be suitably formulated. This already may appear to put Schlick's V-TOM with its focus on natural language at a distinct disadvantage. What speaks against it more decisively, however, is that, given its adoption of the logical modality for the verifiability condition, Schlick's V-TOM cannot provide a criterion of *empirical* meaningfulness, quite apart

from its questionable status vis-à-vis the self-refutation objection.

Since tolerance is required to escape the self-refutation charge, it is Carnap's approach to V-CRIT that deserves further research, if any version of verificationism does.⁷² But in expressing such modest optimism I may be thought to have betrayed one of the essential lessons of Quine's "Two Dogmas" (1951), the failure of reductionism. Quine's argument there was that sentences other than ones strictly keyed to observation can be confirmed or disconfirmed only in the context of entire theories (this confirmational holism was later reduced to more manageable proportions). As noted, Hempel quickly drew the consequence that the proper units of confirmation were entire theories (or suitable chunks of those) and he concluded that the prospect of formulating empiricist criteria of significance for them were exceedingly slim. Of course, this holism did not stop Quine himself from continuing to affirm a Peircean type of verificationism, so why should it stop development of an appropriate version of Carnap's V-CRIT?⁷³

Here the thought may be that, unlike Quine, all a Carnapian could do was relativize the meanings of words and sentences to languages, but given his strict distinction between analytic and synthetic truths, not also to theories (so that the relativization to

⁷²That even the militant Neurath acceded to Carnap's metaphilosophy of proposal making (for instance with regard to his own favored form for protocol sentences: 1935, 128) surely lends weight to Creath's claim that far from weakening the anti-metaphysical position, tolerance puts it "in an extremely strong rhetorical position" (2009, 209).

⁷³Trying to frighten logical positivists with references to Duhem is a vain undertaking: Carnap referred to Duhem's confirmational holism some twenty years before Quine added the footnote reference to the French original of *Aim and Structure of Physical Theory* (1906) and Lowinger (1941) to the reprint of "Two Dogmas" at the prompting of Frank, amongst others; see Carnap (1934a, §82, 318), Quine (1951/1953, note 17), Quine (1991). Frank, Hahn and Neurath meanwhile had digested Duhemian lessons already the early 1910s; for discussion of their early reception of French conventionalism, see Haller (1985) and Uebel (2003).

suitable theory chunks was unavailable to him). But this, I believe, is a mistake, for it overlooks that for Carnap the boundary between what customarily is counted as language and as theory was no less flexible than it was for Quine. Just as the logical nature of Carnapian frameworks was up for conventional decision, so was the dividing line between frame and content. By means of employing in his logico-linguistic frameworks alongside the so-called L-rules, the formation and inference rules defining the language in question, also so-called P-rules, which included empirical laws and generalizations, Carnap was able to make these frameworks as theory-specific as the reconstructive task demanded (1934a, §51). There is no reason therefore to think that Carnap was unable to relativize any of the meaning determinations by his formal reconstructions to theories once these were in effect built into the logico-linguistic frameworks. In other words, the verificationism which logical tolerance afforded Carnap no longer lumbered him with the atomistic presuppositions of the reductionist schemes that had inspired the empiricisms of old and against which Quine had argued successfully. Quine's objection may well tell against Schlick's V-TOM, but not against versions of Carnap's V-CRIT.

If it is objected here that it is difficult to see how the resulting complexity of reconstruction could be mapped onto ordinary discourse in natural language, the answer is simple. They were not meant to be so mapped. As noted, unlike Schlick's V-TOM, Carnap's V-CRIT was meant to be applied to constructed languages only as part of the logic of science or what became "theoretical philosophy". But *pace* what even Burt Dreben once suggested (1994, 441) and what many others believe, misled by Quine's rhetoric, even that does not mean that Carnap needed to occupy an Archimedean point outside of or above the languages we speak. To begin with, his explications were never more than partial and provisional clarifications, liable to be revised in future, and so, more to the point, count as pragmatically and so contextually motivated proposals. Nevertheless, while

the formal explications of contested concepts and natural language conundra like Neurath's "*Ballungen*" (concepts of multiple semantic valences that can pull apart) rarely if ever can be mapped back into the very forms of discourse they sought to clarify, they can inspire new ways of speaking that change and improve the kind of discourse that prompted the explication.⁷⁴

I return to the outstanding challenge (bar Quine's to the analytic/synthetic distinction). To say that the unformulatability objection has proved inconclusive so far is neither to concede that V-CRIT scrapes through on a technicality, nor to brag that it is in rude health—although it certainly contradicts the numerous obituaries verificationism has received in the past. What it does is indicate that further investigations are needed, as noted above. Neurath had a point when he called unified science the work of generations.

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⁷⁴For discussion of what Carus, following Stein (1992), calls the "dialectic" between explicandum and explicans in Carnap, see his (2007, chap. 11); for the later Carnap's switch to the locution "theoretical philosophy", see Uebel (2018).

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