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Conventionalism and the Impoverishment of the Space of Reasons: Carnap, Quine and Sellars

Kenneth R. Westphal

This article examines how Quine and Sellars develop informatively contrasting responses to a fundamental tension in Carnap's semantics *ca.* 1950. Quine's philosophy could well be styled 'Essays in Radical Empiricism'; his essay of radical empiricism is invaluable for what it reveals about the inherent limits of empiricism. Careful examination shows that Quine's criticism of Carnap's semantics in 'Two Dogmas of Empiricism' fails, that at its core Quine's semantics is for two key reasons incoherent and that his hallmark Thesis of Extensionalism is untenable. The tension in Carnap's semantics together with Quine's exposure of the severe limits of radical empiricism illuminate central features of Sellars's philosophy: the fully general form of the myth of givenness, together with Sellars's alternative Kantian characterisation of understanding; the full significance of Carnap's distinction between conceptual analysis and conceptual explication, and its important methodological implications; the specifically pragmatic character of Sellars's realism; and Sellars's methodological reasons for holding that philosophy must be systematic and that systematic philosophy must be deeply historically and textually informed. This paper thus re-examines this recent episode of philosophical history for its philosophical benefits and systematic insights.

Conventionalism and the Impoverishment of the Space of Reasons: Carnap, Quine and Sellars

Kenneth R. Westphal

Only that which has no history can be defined.

– Nietzsche (*GM* 2:13)

1 Introduction

The history of analytic philosophy, and of logical empiricism in particular, has commanded increasing attention, for good philosophical reasons: the ‘received wisdom’ even about recent philosophical history is not always so wise as it could or should be. There is much to be gained philosophically by reconsidering critically whether what we think we have learned from our predecessors is what we could or should have learned from them. Thomas Uebel (1992), for example, has argued that Neurath’s naturalism was a live option then, and remains one now. Michael Friedman (1999) has argued that, alongside his valiant, if failed attempt in the *Aufbau* to replace talk of physical particulars with logical reconstructions of basic sensory experiences (*Elementarerlebnisse*), Carnap’s much more important achievement lay in his neo-Kantian constructivist and formalist solution to the problem of *a priori* knowledge of mathematics and logic, which plagued earlier versions of empiricism.

These and related reconsiderations are salutary and welcome. My point here is not to recount, but to add to those contributions, in part also by correcting some of them. One correction is required because Friedman’s rendition of Carnap’s views is rather more *neo-* than it is Kantian, in part because (it must be said) Friedman’s view of Kant is much more neo-Kantian than *Kant-treu*.¹ At some important junctures, Kant would have been well advised to argue as Friedman, over-generously, claims Kant did argue. The view Friedman develops in Kant’s name, and much more so in connection with Carnap’s, is itself an important philosophical view, deserving attention and assessment in its own right. Friedman’s (2001) view is particularly helpful in connection with fundamental conceptual change in history of science.²

In contrast to Friedman’s views on Carnap, a central theme in the ensuing discussion is that there are fundamental, important, yet unjustly neglected *non-formal* aspects of Carnap’s views. Two specific problems within Carnap’s formal semantics provide strong grounds for taking these non-formal aspects of his views seriously, more so than Carnap himself did. Examining these non-formal aspects of Carnap’s semantics provides cogent reasons favouring pragmatic realism. I argue that the philosophical route forward to a sound pragmatic realism was taken, not by Quine, but by Sellars. To do so I examine how Quine and Sellars developed contrasting

¹For critical assessment of Friedman’s (1992) view of Kant’s philosophy of science, see Westphal (1995); on Friedman’s treatment of Kant’s mathematics, see Ospald (2010).

²See DiSalle (2002), who provides some important further refinements, though one further refinement is required; see below, §4.9.

responses to a fundamental tension in Carnap's semantics. Quine's philosophy could well be styled 'Essays in Radical Empiricism'; his essay of radical empiricism is invaluable for revealing its inherent limits. Careful re-examination shows that Quine's criticism of Carnap's semantics in 'Two Dogmas of Empiricism' fails, that for two key reasons Quine's semantics is fundamentally incoherent and that his hallmark Thesis of Extensionalism is untenable. The tension in Carnap's semantics together with Quine's exposure of the severe limits of radical empiricism illuminate several key features of Sellars's semantics and philosophy of mind, including the fully general form of the myth of givenness, together with Sellars's alternative Kantian characterisation of understanding; the full significance of Carnap's distinction between conceptual analysis and conceptual explication, together with its important, unjustly neglected methodological implications; the specifically pragmatic character of Sellars's realism; and Sellars's methodological reasons for holding that philosophy must be systematic and that systematic philosophy must be deeply historically and textually informed. These results provide grounds for reassessing the unfortunate impetus Carnap (1950a) gave to conventionalism, exacerbated by the reception of Quine's views, especially in 'Two Dogmas', which in various ways – some detailed herein – has prompted and promoted the cleft between 'conventional wisdom' in the field and the important specifics of rather too many philosophical issues and systematic insights into them, both historical and contemporary.

These broader concerns can be framed, in anticipation, by considering Sellars's opening observations on Everett Hall's 'Intentional Realism':

1. Everett Hall's intentional realism is an example of systematic philosophy at its best. It is no myopic sequence of small scale analyses strung together like beads on a string. Yet its foundation was laid over the years by painstaking and scrupulous probings into the many problems and puzzles with which a systematic philosophy must deal. Again, though it is rooted in a sympathetic and perceptive interpretation of the philosophical classics, it is as contemporary as the latest issues of *Mind*. Few philosophers have taken as seriously the obligation to keep in touch with the best work of their contemporaries. He recognized that it is only by submitting ideas to the constant challenge of other lines of thought that philosophers can gain assurance that their speculations are not sheltered idiosyncrasies. Everett Hall's philosophy is thoroughly empiricist in temper, but completely lacking in the Procrustean urge which has marred so many recent empiricisms. Above all, it is in a most important sense self-conscious or self-referential in that it includes as an essential component a theory of the philosophical enterprise, a theory which faces up to the ultimate challenge which any systematic philosophy must face: What is the status of your philosophical claims, and what are the criteria by which you distinguish them as true from the false and unacceptable claims made by rival philosophies? Thus, by no means the least important of his achievements is the way he found between the horns of Hume's dilemma, which, in modern dress, reads as follows:

Philosophical statements are *either* analytic (in which case they tell us nothing about the world) or synthetic (in which case they fall within the scope of empirical science).

Inspired by this dilemma, Hume was willing to throw all distinctively philosophical statements into the flames. ... The Wittgenstein of the *Tractatus* denied that there *are* any distinctively philosophical statements. What purport to be such he found to be therapeutic devices which can be cast aside, perhaps

into the flames, once they have served their purpose. Hall offers instead a conception of philosophy as “neither *a priori* nor empirical” [Hall (1961), 5]. By ‘empirical’ he has in mind, I take it, the inductive methods of the empirical and theoretical sciences. He argues for “a third kind of knowledge” which he calls “categorical” (p. 6). The test of claims falling within this “third enterprise” is to be found “in the forms of everyday thought about everyday matters in so far as these reveal commitment in some tacit way to a view or perhaps several views about how the world is made up, about its basic ‘dimensions’” (p. 6). “We find,” he continues, “these forms of everyday thought chiefly in the grammatical structures (in a broad sense) of daily speech, in what may be called the resources of ordinary language, although they are also present in the ways in which we personally experience things.” “... the latter,” he adds, “reflect, to a great extent, the formative influence of our mother tongue,” (p. 6)

2. This characterization of the philosophical enterprise illustrates once again the catholicity, *i.e.*, the universal sweep, of Everett Hall’s philosophy, for, in my opinion, this conception of philosophy is the truth to which both the descriptive phenomenology of Husserl and the conceptual analysis of the developing phase of Oxford philosophy are halting approximations. (IRH ¶¶1–2)³

The significance of Sellars’s observations about Hall’s philosophy, together with Sellars’s sophisticated form of pragmatic realism are highlighted by considering how Quine and Sellars developed strikingly different responses to core insights of, and tensions within, Carnap’s semantics.

³Sellars’s works are cited by initials of their titles and paragraph number (¶); abbreviations are listed alphabetically in the Appendix. Because philosophers have used single and double quote marks in distinct and important ways (not only to distinguish use from mention), their original usage is quoted *verbatim*.

2 Carnap’s Logical Empiricism

2.1 *Logic, Science & Dismissing Philosophical History.* By 1950 Carnap’s logical empiricism had matured, though its development continued. It has three main components. One is pure syntactic analysis of the sentences of a (re)constructed language and their relations, on the model of his *Logical Syntax of Language* (1934a). The second is pure semantics founded on the work of Tarski, developed in Carnap’s *Foundations of Logic and Mathematics* (1939) and *Introduction to Semantics* (1942), and importantly qualified in ‘Empiricism, Semantics and Ontology’ (1950a).⁴ The third component is ‘descriptive semantics’, which identifies the sentences – especially the observation sentences – uttered by a specific community, especially of scientists, a task Carnap assigned to empirical psychology. According to Carnap, traditional philosophical questions conflate metaphysical, logical and psychological issues in an inherently confused and confusing manner.⁵ Modern logic has become a science, leaving behind historical philosophy as nothing but metaphysical non-sense (Carnap 1931, 22). The legitimate remainder of

⁴Designations: ‘T&M’: ‘Testability and Meaning’ (1936–37); ‘T&C’: ‘Truth and Confirmation’ (1949); ‘ESO’: ‘Empiricism, Semantics, and Ontology’ (1950a [1956]); ‘MCTC’: ‘The Methodological Character of Theoretical Concepts’ (1956b). ESO is quoted and cited by its revised edition [1956]; nothing argued herein turns on those revisions. Where articles have been reprinted, their original date of publication is provided, together with the date of the republication in brackets, followed by page number(s) in the latter; *e.g.*: Lewis (1930 [1970], 10). The chronology of the sources examined herein often is important to their understanding, interrelations and assessment.

⁵Carnap (1934b), 42; T&M 429; Neurath (1932–33), 200.

epistemology is divided between the logical analysis of science and empirical scientific psychology.⁶ The logical analysis of science, in turn, is the pure study of the logical syntax and semantics of the language of science.⁷ Thus the legitimate philosophical remainder of epistemology is a branch of applied logic.⁸

Carnap's syntactical analysis provides a liberalised version of meaning empiricism (or concept empiricism) in terms of verification empiricism (T&M 2, 420). Hence the central problem Carnap addresses is establishing criteria of cognitive significance for two main kinds of sentences: observation sentences and theoretical sentences (T&M 2, 420; MCTC 38). The criteria of significance for observation sentences are to be fully specified on the basis of observation. The criteria of significance for theoretical sentences are then (only) partially specified on the basis of observation sentences (MCTC 40, 47). In each case, specifying criteria of significance for a group of sentences requires specifying the acceptable logical forms of those sentences and specifying criteria of significance for their descriptive terms.⁹ After settling these questions, Carnap adopts the most liberal criteria of significance consistent with them (MCTC 60).

2.2 Conceptual Explication. Classical analytic philosophy aspired to conceptual analysis, *i.e.*, to provide necessary and sufficient conditions for the proper use of any interesting though puzzling or con-

troversial term, phrase, concept or principle. Due to its modal status, conceptual analysis is *a priori*. However, conceptual analysis is inadequate for understanding science. In 1950 Carnap (1950b, 1–18) explicated his method of philosophical explication, which had been implicit in his work, clearly so in 'Testability and Meaning' (1936–37), and already in his appeals in the *Aufbau* (1928a) to 'quasi-analysis' (§73), to 'rational reconstruction'¹⁰ and to the contrast between 'definition' and 'elucidation' (*Erläuterung*; §154). Conceptual 'explication' of a term or principle provides a clarified, though *partial* specification of its meaning or significance, for certain *purposes*, and seeks to improve upon the original explicandum within its original or proposed context(s) of use. Explications are thus both revisable and are rooted in actual usage and thus in antecedent linguistic practices, which are rooted within whatever practices use the explicated term or phrase. Successful explication is to better facilitate the practice from which the explicandum derives.¹¹ Carnap's use of

¹⁰*E.g.*, *Aufbau*, §§81, 92, 94, 100, 103; *cf.* next note.

¹¹Carnap's (1950b) account of explication matches his characterisation of 'rational reconstruction' in the *Aufbau*: 'By rational reconstruction (*rationale Nachkonstruktion*) is here meant the searching out of new definitions for old concepts. The old concepts did not ordinarily originate by way of deliberate formulation, but in more or less unreflected and spontaneous development. The new definitions should be superior to the old in clarity and exactness, and, above all, should fit into a systematic structure of concepts. Such a clarification of concepts, nowadays frequently called "explication," still seems to me one of the most important tasks of philosophy, especially if it is concerned with the main categories of human thought' (1961, x/1967, v). Comparing this characterisation with his use of the designation and with his procedures in the *Aufbau* show that this later characterisation is accurate, not anachronistic. For detailed discussion of Carnap on explication, see Wagner (2012).

⁶Carnap (1931), 23; (1930–31), 133, 143–4; T&M, 26, 429; Hempel (1935a), 54.

⁷Carnap (1931), 38; (1932–33b), 228; (1934b), 45, 47; Hempel (1935a), 54.

⁸Carnap, (1930–31), 133, 137; (1932–33b), 215, 228; T&M 26; Hempel (1935a), 54.

⁹MCTC 59–60. Here Carnap claims to have used a similar approach in T&M regarding the observation language.

conceptual explication and its predecessors in the *Aufbau* just noted, together with the ineliminable role of ‘descriptive semantics’ (§§2.1, 2.6) to complement his formal syntax and formal semantics, show that Carnap never held the strictly formalist views still often attributed to him.¹² These non-formal aspects of Carnap’s views prove to be very significant (*cf.* below, §§2.6, 3, 5–7).

2.3 Reality & ‘Ontology’. Carnap’s liberality about sentence forms worried many empiricists, to whom it seemed he countenanced all the metaphysical extravagances they had censured, both physical and platonic. Carnap responded by distinguishing two different kinds of question about the ‘reality’ of any alleged entity or kind of entity: internal and external. Carnap claimed that the question, ‘Are there any *x*s?’ is ambiguous between three questions: one internal to a linguistic framework and two external to that framework. One external question is whether to adopt that linguistic framework; the other is about the utility of adopting that linguistic framework (ESO 213). Within a linguistic framework, if that framework contains variables ranging over a specified domain of objects, then there are such objects. The answer to the second question, whether to adopt a framework, is a practical rather than a theoretical question and thus a matter for decision rather than an assertion.¹³ Thus it is no matter of proof, for proofs conclude in asser

¹²These central, non-formalist features of Carnap’s views are disregarded by Soames (2007, 433); this undermines the core of his account of the debate – and the issues – between Carnap and Quine. Price (2007) discusses the Carnap-Quine debate at an extreme level of abstraction which prescind from most of the important details of their analyses, especially Carnap’s, which makes matters rather too convenient for his preferred deflationary view.

¹³Carnap (1931), 23; (1932–33b), 216; T&M, 430, 2, 19–20, 26; ESO, 207, 214, 215

tions (ESO 207–8, 213). The answer to the third question, about the utility of adopting a framework, is a matter of estimate and degree, and so lacks the bivalence required for truth and falsehood (ESO 213; quoted in §2.4). Hence the only well-formed question about the reality or existence of any entity, or of any kind of entity, is internal to a specified linguistic framework and is answerable empirically, if at all.

2.4 Physicalism & Conventionalism. One defining shift from logical positivism to logical empiricism was the abandonment of the ego-centric predicament and the adoption of ‘physicalism’, the idea that physical objects exist, that we perceive them and that they can be investigated scientifically.¹⁴ It was widely recognised that empirical science involves scientific communication, which is hardly feasible, or even intelligible, from within an ego-centric predicament; no scientific treatise opens with the second person indefinite form of address, ‘To Hume it may concern ...’.

Within Carnap’s semantics, the proper question is not whether physical objects exist, but rather, whether we should use a linguistic framework, dubbed ‘the thing language’, which has variables ranging over, and designations of, physical objects. About whether to adopt ‘the thing language’ Carnap states:

The decision of accepting the thing language, although itself not of a cognitive nature, will nevertheless usually be influenced by theoretical knowledge, just like any other deliberate decision concerning the acceptance of linguistic or other rules. The purposes for which the language is intended to be used, for in-

note 5, MCTC, 44–5; *cf.* Hempel (1935a), 54; (1935b), 95.

¹⁴*Cf.* Carnap (1961), xii–xiii/(1967), vii, ix.

stance, the purpose of communicating factual knowledge, will determine which factors are relevant for the decision. The efficiency, fruitfulness, and simplicity of the use of the thing language may be among the decisive factors. And the questions concerning these qualities are indeed of a theoretical nature. But these questions cannot be identified with the question of realism. They are not yes-no questions but questions of degree. The thing language in the customary form works indeed with a high degree of efficiency for most purposes of everyday life. This is a matter of fact, based upon the content of our experiences. However, it would be wrong to describe this situation by saying: “the fact of the efficiency of the thing language is confirming evidence for the reality of the thing world”; we should rather say instead: “This fact makes it advisable to accept the thing language”. (ESO 208)

[The question] may be meant in the following sense: “Are our experiences such that the use of the linguistic forms in question will be expedient and fruitful?” This is a theoretical question of a factual, empirical nature. But it concerns a matter of degree; therefore a formulation in the form “real or not” would be inadequate. (ESO 213)

In sum, Carnap advises adopting the ‘thing language’ conventionally, as a linguistic framework to expedite communication and scientific investigation.¹⁵

2.5 Empiricism & Confirmation. Carnap’s view is empiricist, because the incomplete confirmation of any theoretical or law-like statement is possible only insofar as the observation sentences it implies are directly testable, which requires their complete verifica-

¹⁵Creath (1990a, 1992) shows that conventionalism is rooted early and deeply in Carnap’s views, and remained central in them; cf. Wick (1951).

tion. Similarly, the incomplete specification of meaning of any statement of a theory or a law of nature is only possible and tenable insofar as the meaning of the elementary sentences it either comprises or implies can be completely specified. Both specifications require sentences, the meaning of which can be completely specified and the truth of which can be directly tested.¹⁶ Such sentences require that there are predicates, the meaning of which can be completely specified and the instantiation of which can be completely verified. Carnap (1937) states:

... if confirmation is to be feasible at all, this process of referring back to other predicates must terminate at some point. The reduction must finally come to predicates for which we can come to a confirmation directly, *i.e.* without reference to other predicates. ... the observable predicates can be used as such a basis. (T&M 456, cf. 458–9)

Note that ‘direct’ confirmation requires mutually independent observational predicates. This mutual independence is central to Carnap’s empiricism, and to its ultimate problems (below, §4.14). In ‘Truth and Confirmation’ (1949) Carnap describes confirmation in terms of ‘confronting’ observation statements with observations:

Observations are performed and a statement is formulated such that it may be recognized as confirmed on the basis of these observations. If, *e.g.*, I see a key on my desk and I make the state-

¹⁶The ‘test conditions’ for test sentences are simply the pragmatic conditions adumbrated in specifying the meaning of ‘observable’. This requires introducing a predicate without reference to other predicates (T&M 456). This is the basis for Carnap’s semantic atomism; it is required by his concept (or meaning) empiricism.

ment: “There is a key on my desk”, I accept this statement because I acknowledge it as highly confirmed on the basis of my visual and, possibly, tactual observations. (T&C 124; cf. Carnap 1936, 19–20)¹⁷

Van Fraassen (1980) uses ‘acceptance’ independently of truth, a usage deriving from Carnap’s talk of accepting linguistic frameworks.¹⁸ However, in speaking here of observational ‘confrontation’, Carnap did not so restrict his use of this term; ‘accept’ in the statement just quoted means accept as true. Carnap (1963a, 57; cf.

¹⁷As indicated in its first footnote, Carnap (1949) is based upon his (1936) and (1946).

¹⁸ESO 208 (quoted above, §2.4); a few pages later Carnap uses the term ‘acceptance’ expressly without truth-value or ontological commitment: ‘... we take the position that the introduction of the new ways of speaking does not need any theoretical justification because it does not imply any assertion of reality. We may still speak (and have done so) of “the acceptance of the new entities” since this form of speech is customary; but one must keep in mind that this phrase does not mean for us anything more than acceptance of the new framework, i.e., of the new linguistic forms. Above all, it must not be interpreted as referring to an assumption, belief, or assertion of “the reality of the entities”. There is no such assertion. An alleged statement of the reality of the system of entities is a pseudo-statement without cognitive content. To be sure, we have to face at this point an important question; but it is a practical, not a theoretical question; it is the question of whether or not to accept the new linguistic forms. The acceptance cannot be judged as being either true or false because it is not an assertion. It can only be judged as being more or less expedient, fruitful, conducive to the aim for which the language is intended. Judgments of this kind supply the motivation for the decision of accepting or rejecting the kind of entities’ (ESO 214). This usage is a direct precursor to van Fraassen’s (1980), though it is distinct from Carnap’s usage in his (1936) and (1949), most importantly, because ‘acceptance’ in ESO concerns linguistic frameworks, not individual observation statements, which are his concern in these articles (1936, 1949).

1961, x/1967, v) attests that his account of confrontation is his successor to ‘knowledge by acquaintance’, *sans* incorrigibility and infallibility. That confrontation is to determine truth or falsehood Carnap makes explicit on the next page:

Confrontation is understood to consist in finding out as to whether one object (the statement in this case) properly fits the other (the fact); *i.e.*, as to whether the fact is such as it is described in the statement, or, to express it differently, as to whether the statement is true to fact. (T&C 125; cf. T&M 456)

In these passages, Carnap treats correspondence not only as an account of the nature of truth, but also as the criterion of truth for observation statements. Carnap’s notion of ‘confrontation’ of observation statements with facts lived on in Quine’s (1996, 162) view of someone’s ‘immediate assent’ to (perceptual) ‘occasion sentences’ (see below, §§4.4, 4.6, 4.10, 6.21).

2.6 *Descriptive Semantics & the Empirical Psychology of Observation.* I have stressed Carnap’s appeal to ‘descriptive semantics’, the third component of his view, for several reasons. Carnap (1932–33c, 177, 178) first expressly appealed to descriptive semantics because it is required to provide any meaning for his formal syntax, and to avoid any coherence theory of truth.¹⁹ Descriptive semantics determines which protocol sentences were or are uttered by any actual group of scientists (1932–33c, 180). Determining which system of science is the actual system is not a matter of pure logic (1932–33c, 179), but of which system or systems are compatible with those protocols actually issued by the scientists of a specific ‘cultural cir-

¹⁹Hempel (1935a), 57, cf. 54, (1936), 39, Neurath (1934), 352–4, (1931–32), 286.

cle' (1932–33c, 178, 180), and which of those systems we are physiologically able to construct (1932–33c, 179). Carnap (1942, §5; 1963b, 923, 925–7) retained this view of descriptive semantics, with some further specification, though no essential changes.²⁰

Carnap's appeal to descriptive semantics underscores the importance of his appeal to empirical psychology to investigate any genuine issues about human cognition not analysed by his formal syntax and semantics. Carnap's (1949) statements about confirmation and about confronting observation statements with observed circumstances (quoted above, §2.5) directly recall his early account of language, in which he treats verbal or written utterances on an exact par with metre-indications and natural signs.²¹ Indeed:

The assertions of our fellow men contribute a great deal to extending the range of our scientific knowledge. But they cannot bring us anything *basically* new, that is, anything which cannot also be learned in some other way. For the assertions of our fellow men are, at bottom, no different from other physical events. Physical events are different from one another as regards the extent to which they may be used as signs of other physical events. Those physical events which we call "assertions of our fellow men" rank particularly high on this scale. It is for this reason that science, quite rightly, treats these events with special consideration. However, between the contribution of these assertions to our scientific knowledge and the contributions of a barometer there is, basically, at most a difference of degree.

²⁰Carnap's descriptive semantics are neglected, *e.g.*, by Uebel (1992) and by Friedman (1999); Uebel cites Carnap (1932–33c); Friedman does not.

²¹Carnap (MCTC 38) says little about the observation sub-language because he saw no significant philosophical disagreement about it; (T&M 14, 454) avowed a behaviouristic theory of language without elaborating.

(Carnap 1932–33a, 180–1, *cf.* 184, 185; 1932–33b, 221; 1932–33c, 177; Hempel 1935a, 54, 57.)

How are we able to generate (informative, accurate and reliable) protocol statements on the basis of sensory stimulation? Neurath, Carnap and Hempel apparently assign this question to empirical psychology.²² Carnap (1932–33c, 182) recognised that language is first acquired, not by learning rules, but by having one's verbal utterances selectively reinforced; any rules that could be provided are intelligible only to someone who already understands language.

3 A Tension in Carnap's Semantics

Carnap's view has been widely reputed to be purely formal, and he repeatedly called his syntax and his semantics 'pure' or 'formal', although properly speaking, the formal syntax and semantics for which he is justly famous are only two of the three components of his view. In the *Aufbau* Carnap expressly denied that logic is a distinct realm or domain, that instead it holds of all objects whatever (§154). In later writings Carnap repeatedly sought to assimilate to his 'logical' or 'formal' or 'pure' investigations subject matter which otherwise would count as extra-logical or non-formal or impure. For example, in the *Aufbau* Carnap links the 'structural statements' of his constructed system to experience by introducing 'founded relation' as an undefined logical concept, where relation

²²Neurath (1934), 359; Carnap (1931), 43–4; (1932–33b), 221; (1932–33a), 184, 185; Hempel (1935), 94.

extensions are ‘founded’ if they ‘correspond to experientable, “natural” relations’ (§154). Carnap’s introduction of ‘foundedness’ is required to link his constructional system of statements to any actual experiences (whether occurrent or recollected). However, his claim that ‘founded relation’ is a *logical* concept is absurd; particular experiences (however characterised) and their links to any statements we make (whether first-, second- or third-person) are logically contingent if anything is. After developing his formal semantics (1939, 1942), Carnap (1947a, §19; 1947b, 138, 140) assigned this function to ‘positional’ statements, which he again claimed are logical, because they are not descriptive, and are either *L*-true or *L*-false (*sic*).²³ Carnap’s attempt to assimilate non-formal aspects of semantics or experience, especially the spatio-temporal designations of physical or experiential particulars, marks his allegiance to the attempt, initiated by Descartes and expanded by Kant’s Transcendental Idealism, to assimilate the non-formal domain of empirical knowledge to the infallibilist (‘apodictic’) justificatory standards of purely formal, deductive domains.²⁴ This aim, be it noted, finds expression in the English title given to Tarski’s (1956, 152–78)

²³Carnap apparently adopted this account of ‘positional’ designations from Poincaré; Grünbaum (1963, 677) notes that such a treatment of spatio-temporal coordinates presupposes rather than reduces the reality of spatio-temporal dimensionality.

²⁴I discuss this long-standing philosophical attempt in Westphal (2010–11); also see Sorell *et al* (2010) on *scientia* in Modern philosophy. Descartes’ anti-sceptical arguments in the *Meditations* suffer five distinct vicious circularities (Westphal 1989, 18–34); Kant’s Transcendental Idealism cannot provide the results Kant sought from it, nor has he any valid arguments to justify it (Westphal 2004). (Fortunately, Kant’s insightful Critical epistemology can stand independently of Transcendental Idealism.)

justly famous paper, ‘The Concept of Truth in Formalized Languages’. Tarski’s (1933) original (double) title is: ‘Pojęcie Prawdy w Językach nauk Dedukcyjnych’; ‘La notion de la vérité dans les langues des sciences déductives’. Tarski’s notice in the *Akademischer Anzeiger* (1932, lxix) of the Akademie der Wissenschaften in Wien, Mathematisch-naturwissenschaftliche Klasse, provides the same title in German: „Der Wahrheitsbegriff in den Sprachen der deduktiven Disziplinen“.²⁵ Tarski’s account of the concept of truth was developed for *deductive* systems stated in formal languages; formalised languages involve further semantic complications, as we shall see: this contrast is central to using conceptual explication to devise (Carnapian) linguistic frameworks. Initially, Carnap (1942, x–xi) was only partially aware of the significance of this contrast, and how it is central to the differences between Tarski’s work and his own. As noted, according to Carnap, the legitimate philosophical remainder of epistemology is a branch of *applied* logic.²⁶ The issues central to the present examination concern the character and status of both the logic and its domains of application, specifically: in Carnap’s various applications of logic to, or within, philosophy of language, epistemology and philosophy of science, and their respective domains.

Carnap’s claims and terminology caused confusion. Bergmann (1944) and Hall (1944) both thought that the purity or formality of Carnap’s semantics entailed that his semantics could not and did not refer to spatio-temporal particulars, such as the actual city of

²⁵This notice and title are duly recorded as entry (76) in Tarski (1956), 461. (I have checked the relevant originals.)

²⁶Carnap (1930–31), 133, 137; (1932–33b), 215, 228; T&M 26; Hempel (1935a), 54.

Chicago (where Carnap then lived). This follows from Carnap's (1942, §4) specification that formal studies refer only to sign-designs and not to the designata of signs.²⁷ This distinction accords with his (1931, 23; cf. Hempel 1935, 54) prior distinction between the 'formal' and the 'material' modes of speech. Carnap (1945) was shocked, and patiently explained what he took to be their confusion between the mention and the use of linguistic expressions. Had Carnap paid better attention to C. I. Lewis's (1929) work (as did Hall), and to his own specification of his terms, he would (or at least could) have recognised how his (1942, §§4–5) ambiguous use

²⁷In the introductory paragraph heading §4 Carnap states that an investigation of a language 'belongs to *semantics* if designata but not speakers are referred to'. On the next page he duly reiterates: 'If we abstract from the user of the language and analyze only the expressions and their designata, we are in the field of **semantics**' (1942, 9). On the next page, however, he states: 'An investigation, a method, a concept concerning expressions of a language are called **formal** if in their application reference is made not to the designata of the expressions but only to their form, i.e. to the kinds of signs occurring in an expression and the order in which they occur' (*ibid.*, 10). Initially he associates such formality with syntax, but in the explanatory note to §4 he states: 'The representation of certain concepts or procedures in a formal way and hence within syntax is sometimes called *formalization*. The formalization of semantical systems, i.e. the construction of corresponding syntactical systems, will be explained in §36' (*ibid.*, 11). In §5 he states: 'The construction and analysis of semantical systems is called **pure semantics**. The rules of a semantical system *S* constitute ... a definition of certain semantical concepts with respect to *S*, e.g., "designation in *S*" or "true in *S*". Pure semantics consists of definitions of this kind and their consequences; therefore, in contradistinction to descriptive semantics, it is entirely analytic and without factual content' (*ibid.*, 12). Bergmann and Hall are not at fault for having taken seriously Carnap's claims about the formality and the purity of his semantics. Sellars (EAE ¶42) quotes a closely related passage from Carnap (1942), §5. (The boldface is original.)

of the terms 'formal' and 'pure' (quoted in note 27) was faulty.

Formal domains are those which involve no existence postulates. Strictly speaking, the one purely formal domain is a careful reconstruction of Aristotle's Square of Opposition (Wolff 1995, 2000, 2009, 2012). All further logical or mathematical domains involve various sorts of existence postulates, including semantic postulates. We may define 'formal domains' more broadly to include all formally defined logistic systems (Lewis 1930 [1970], 10). These are many and intrinsically fascinating. The important point here was made by C. I. Lewis (1929, 298): the relevance of any logistic system to any non-formal, substantive domain rests, not upon formal considerations alone, but also upon substantive considerations of how helpful the use of a specific logistic system may be within a non-formal, substantive domain.²⁸ A few years after his exchange with Bergmann and Hall, Carnap (ESO) seconded this same point.²⁹ The purportedly 'formal' or 'pure' character of Carnap's programme proves to be important in understanding Quine's and Sellars's contrasting responses to it.

4 Quine's Benighted Empiricism

4.1 Famously, in 'Two Dogmas of Empiricism' Quine objected to Carnap's empiricism that there is no tenable, general distinction

²⁸See Westphal (2010b), §2. Lewis' important observation is widely neglected in contemporary 'metaphysics', which has regrown like weeds: by neglecting the non-formal conditions required to use any formally defined analysis to understand, elucidate or otherwise illuminate non-formal phenomena or subject-matter.

²⁹Whether Carnap's shift in ESO resulted from his exchange with Bergmann and Hall I do not know; all three kept abreast of the active discussions in the journals.

between analytic and synthetic statements, and that Carnap's attempt in the *Aufbau* to replace talk of physical objects with talk of sensory data and logical constructions of them failed because Carnap didn't sketch how to translate the connective 'is at' in statements of the form 'Quality q is at $x;y;z;t$ ' into his initial language of sense data and logic (Quine 1953, 40), and so failed to define temporal predicates in phenomenal and logical terms (Quine 1969a, 76).

Consequently, Quine rejected the traditional empiricist aim of reconstructing the whole of empirical knowledge based on one's own sensory data, and advocated 'naturalised epistemology' (1969a, 69–90), an 'enlightened' empiricism (1973, 3), which (officially) appeals to empirical, scientific psychology to understand how we come to believe what we do about the world. The only genuine form of empirical knowledge, and the only genuine form of cognitive justification, is natural-scientific, to which Quine (1995, 49) assimilates any commonsense knowledge, as part of science 'broadly' speaking. The normative aspirations of epistemology reduce to analysing and distinguishing more from less effective methods of generating empirical knowledge (Quine 1995, 50). In contrast to Descartes and Hume, Quine (1969a, 84) wants to 'let consciousness fall where it may'. Quine (1953, 17–18, 44; 1969a, 83) insists that 'physical objects' are a posit we make to provide the simplest account of our sense stimuli. Consequently, unobserved 'theoretical' entities postulated by scientific theories are no more, and no less, legitimate than are ordinary physical objects. Once we reject reductionism, there is nothing illegitimate about affirming the existence of physical objects, along with many of our beliefs

about them, whether commonsense or scientific.

4.2 All of this now sounds familiar, but is it sound philosophy? A first critical question is: Did Quine jettison Descartes' epistemological package? Note that 'assigning' is an activity, it is something we do; to 'assign' sense stimuli to an individual object requires that we are self-conscious. The only legitimate sense of 'hypothesis' is a thesis one proposes, or posits, in order to account for some range of apparent, manifest phenomena. Hypotheses are the province of self-conscious intelligent inquirers. Either Quine is not entitled to 'let consciousness fall where it may', or he is not entitled to his account of physical objects as a simplifying 'posit'. Quine cannot 'let consciousness fall where it may' whilst treating physical objects as a simplifying explanatory, theoretical 'posit' to account for our sensory stimuli. In this regard, the Modern epistemological tradition continues in and through Quine. This is no accident.

At its inception, analytic philosophy rebelled against 'metaphysics', however (mis-)understood, and rooted itself deeply in the Eighteenth Century. The prevalence of sense-datum theories and their ilk in early analytic epistemology was driven primarily by reductionist semantics and (anti-)metaphysics, not by epistemological concerns with justification or truth. The reactionary character of early analytic philosophy was frankly proclaimed by Russell in 1922:

I should take 'back to the 18th century' as a battle-cry, if I could entertain any hope that others would rally to it. (Russell 1994, 9:39)

The Eighteenth Century Russell advocated was epitomised by

Hume, not Kant. Hume's associationist psychology was to be replaced by powerful new logical techniques to provide constructions of physical objects out of sense data – a project well worth attempting!

Russell's deep allegiance to Hume was seconded by Quine, who held:

On the doctrinal side, I do not see that we are farther along today than where Hume left us. The Humean predicament is the human predicament. (Quine 1969a, 72, *cf.* 74, 76)

Quine rejected Hume's distinction in kind between 'relations of ideas' and 'matters of fact'. However, this shift left intact the most basic Cartesian orientation of Quine's philosophy: Quine, too, believed that any genuine form of meaning can only come from sensation (1969a, 75; *cf.* 1974, 1; 1995, 22, 25, 43), and Quine, too, believed unquestioningly in the priority of inner experience over outer experience. This is evident in his declaration:

Save the surface [of the sentient body] and you save all. (Quine 1969a, 155, *cf.* 75, 82–3, 158; 1960, 22; 1974, 3; 1975, 68; 1990a, *xii*)

Quine's focus on sensory stimulation appears also in his account of radical translation:

In experimentally equating the uses of 'Gavagai' and 'Rabbit' it is stimulations that must be made to match, not animals. (Quine 1960, 31)

Quine persisted in this commitment to the end, in the form of glo-

bal neuronal stimulations on any occasion, and accordingly rejected Davidson's contention that we best begin our semantics with experiences of physical objects and events in our surroundings.³⁰ In 1990 Quine declared:

I have no definition of meaning, but whatever goes into meaning must be traceable ultimately to the associations of our linguistic forms with sensory stimulation and with one another. (1990b [2008], 361)

Because Quine is committed to 'the Humean predicament', matching stimulations can only be a matter of any observer matching various of his or her own sensory stimulations – whatever that may mean, and however that may be done. Once admitted, the egocentric predicament swallows all.

4.3 At its core, Quine's semantics is incoherent. One reason for this is at hand: Quine's rejection of 'mentalism' requires adopting a behaviouristic approach to 'meaning'. Behaviourism of any variety requires studying an organism's responses to, and its actions in and upon its environment. However, Quine's theses of the indeterminacy of translation and the inscrutability of reference preclude any unambiguous identification of any organism's environment, its environmental stimuli, or indeed of the observed organism itself! What kind of 'matching' of sense stimulations can this predicament possibly afford any purported radical translator or Quinean field linguist? If radical translators are human, they too must start in this

³⁰Quine (1992a), 41, *cf.* (1993 [2008]), 418, and the transcripts of the 1986 meeting at Stanford between Quine, Davidson, Føllesdal and Dreben (MSAm2587(2749), Folder 3); quoted and discussed in Murphey (2012), 199–202.

ego-centric predicament, trying to 'assign' their sense-stimuli to physical objects and events.³¹ Indeed, they must not merely try to do this, they must succeed at such assignments, *if* they are to study the (presumed) vocables uttered by any (presumed) human subject within his or her (presumed) native environment. Yet exactly what such alleged success could consist in, and how any such success could be ascertained, are in principle entirely obscure, for in their own all-too-human case, any purported radical translator can only try to match up his or her own sense-stimuli in ways which afford a coherent web of belief about the world, including those portions of the world it posits as the (purported) target subject, and his or her environment and vocables. Quine's behaviouristic programme simply cannot get started. Indeed, Quine's behaviourist approach to meaning requires semantic externalism, whereas his theses of the indeterminacy of translation and of the inscrutability of reference require semantic internalism.³² (Quine's doctrine of the inscrutability of reference is discussed below, §6.19.) Quine's semantic *theorising* itself requires and uses semantic capacities, abilities and knowledge for which *his* semantic *theory* in principle cannot account. And whilst Quine's own semantic capacities &c may have been extraordinary in degree, there is no apparent reason to suppose they differed in kind from any other healthy member of the species, all of whom were officially included within the scope of his semantic

³¹Any suggestion that Quine's radical translators are super-human violates Quine's naturalism.

³²For critical examination and assessment of Quine's views on the indeterminacy of translation and on the inscrutability of reference, see Kirk (1986) and Nimtz (2002), 79–174.

theory.

Later Quine claimed that his translators (in the field, as he posits) had no regard to neurophysiology, but simply had to guess at the meanings of a native's utterances based on their environmental context, whilst

Talk of stimulus meaning and of analytical hypotheses was rather *my* business, my theory of the translator's activity. Stimulus meaning was what, theoretically speaking, correct translation of an observation sentence preserved. (Quine 1996, 159)

This clarification (officially) extricates Quine's field translators from the Humean ego-centric predicament, or at least in this passage Quine posited that his field translators are not trapped within that predicament and can get on with their behavioural-linguistic guess-work *in situ*.³³

Exactly here Quine neglected the philosophical duty Sellars

³³This clarification, however, is a considerable revision of Quine's (1986a, 566) previous clarification of 'stimulus meaning': 'Readers have sometimes objected to my notion of stimulus meaning, protesting that the native cannot be expected even to know about stimulations, especially as they are defined in my way as sets of receptors. The answer is, of course, that stimulus meanings are the business rather of those who are investigating the native's discourse about those other things that are the native's business'. On the basis of this passage, Johnsen (2014, 984) confidently asserts: 'The stimulations of her nerve endings *are* part of the *stimulus* meaning of her utterance, but they are *no* part of what *she* means by her sentence; the stimulations are what Quine takes the *investigating linguist* to be able to *observe* in the way of *what the native has to go on* in responding to queries'. Johnsen neglects Quine's still later 'clarification', just quoted in the body of the text. Johnsen's selective attention to Quine's writings facilitates his presenting a (not quite) coherent Quinean view; see below, notes 104, 109.

credits Hall for addressing (§1): accounting for one's own philosophical claims and one's abilities to make and to justify those claims – consistently with both the content and one's own (purported) capacity as philosophical author to make and to substantiate (justify) those claims. Quine must account for how *he*, on the basis of nothing but alleged 'stimulus meanings' – utterances prompted by stimuli in the form of 'the near-simultaneous firing of some subset of the subject's neuroreceptors' (1996, 159), in the present case: some subset(s) of Quine's own neuroreceptors – and physical particulars as (nothing but his own) 'posits', can identify any translator, any native, any physical environment, any linguistic utterance, any writing instruments, any printer's proofs – or any lectern.

4.4 Quine (1969, 75) belittled the 'make believe' involved in creatively reconstructing the world using only sense data and logic, and recommended outright appeal to empirical cognitive science instead. Nevertheless, he (1973, 1995a) persisted in publishing fictional outlines of our alleged neuro-physio-psychological acquisition and use of significant language. In 1961 Quine observed that, although Carnap rescinded reductionism,

the dogma of reductionism has, in a subtler and more tenuous form, continued to influence the thought of empiricists. (Quine 1961, 40)

Though Quine here wrote as if only describing others, he himself drove ahead as an empiricist heavily under the influence of strong reductionism.³⁴ As Murphey notes,³⁵ Quine replaced Carnap's basic

³⁴Fogelin (2006) highlights many Humean features of Quine's views, especially

sensory experiences with his own (putative) global neuronal stimuli, but otherwise Quine largely adhered to the aims and structure of Carnap's *Aufbau* – indeed, in more ways than Murphey indicates. Quine's 'occasion sentences' are direct successors to Carnap's 'observation statements', except that at semantic ground zero Carnap was happy to talk about his desk, a key upon it, their illumination and his perception of them (above, §2.5), whereas Quine insisted on postulating 'global stimulus' patterns as 'the temporally ordered class of all sensory receptors triggered during [a] specious present' (Quine 1995a, 17; cf. 1961, 43; 1969a, 84, 155, 158), though only some unspecified 'sub-set' of triggered sensory receptors is said to induce the utterance of any occasion sentence.

Quine's (1996, 159) later distinction between his own viewpoint and that of field translators (quoted in §4.3) may extricate his field translators from Quine's neo-Humean ego-centric predicament, but Quine himself is stuck in that predicament by his own official semantic theory and its presumed physiological appeal to neuronal stimulations. This point is important for understanding and assessing Quine's 'proxy function' argument (below, §6.19).³⁶ First it is important to see how Quine's (cf. 1985, 194) dismissal of the history

their shared scepticism about induction, but neglects 'Of Scepticism with regard to the senses' (see below) and, like Quine, he neglects Popper's (1971) and Will's (1974) demonstrations that the real problem is that the 'problem' of induction is fundamentally ill-conceived.

³⁵Murphey (2012), 160–1, 201, 218, 221, 225, 228–30, 236–7; cf. Quine (1970 [1976]), 40–3, (1993 [2008]), 419.

³⁶For detailed critique of Quine's attempt to dispense with intensional idioms and phenomena, see Parrini (1976), 19–116, Murphey (2012), chapters 4, 5; and Keskinen (2014).

of philosophy as no more important to philosophy than history of science is to science imperilled, indeed, impugns his own philosophy.

4.5 Quine read Hume's *Treatise*, and in particular one supremely important section which has no parallel in the first *Enquiry*, namely Hume's brilliant and profound analysis in 'Of Scepticism with regard to the senses'. Quine cites precisely this section, indeed in direct connection with, and apparently as his basis for, asserting that physical objects are simply a 'posit'. This is Quine's basis for contending that 'on the doctrinal side', we have not advanced beyond Hume. Quine cannot, however, be credited with a very deep understanding of Hume's analysis.³⁷

In 'Of Scepticism with regard to the senses' (T 1.4.2) Hume realised that his three laws of psychological association cannot account even for our concept 'physical object' (what Hume called 'body'). At best, Hume can only indicate (alleged) occasioning causes of our belief in physical objects, in terms of three (non-quantified) psychological propensities to respond to certain patterns of impressions with certain beliefs about the persistence and re-identifiability of alleged physical objects. Hume espoused what we would now call an 'error' theory of perception (cf. Westphal 1998a, §4). Unfortunately for Hume, the beliefs with which we respond to those patterns cannot be defined in terms of his official concept empiricism.

³⁷The superficiality of Quine's reading of Hume's *Treatise* is confirmed by the recent publication of his lecture notes on it; though he (1946, 37, 77) noticed problems in Hume's separability principle and theory of relations, and that these bear upon Hume's account of time, he never examined these problems in detail, finding that 'less appealing than determining the truth and imparting that' to students (1985, 190); quoted by the editors in *idem.*, (1946), 37.

(If they could be so defined, he would not have needed to introduce special psychological propensities, which significantly transcend the principles of his official empiricism.) Hume's propensities smuggle into his account concepts which can only count (on Hume's own view of meaning) as *a priori*. Accordingly, Hume condemned the extra-mental existence of physical objects as a 'fiction'; similarly, Quine preferred to call physical objects a 'myth', rather than consider whether any of our nonlogical concepts are *a priori* – quite aside from the issue of whether our use of such concepts may be cognitively legitimate (justifiable).

Strictly internal critique of Hume's analysis in 'Of Scepticism with regard to the senses', and likewise of Carnap's *Aufbau*, show that the concepts 'space', 'spaces', 'time', 'times', 'I', 'individual' (including 'perceptible object') and 'individuation' and are *a priori* and that their competent use is required to locate and to identify any sensed particular, on the basis of which alone we can learn, acquire or define any empirical concept.³⁸ Indeed, in his criticism of Quine in 'Identity and Predication', Evans (1975) showed this to be the case, without expressly arguing for it. Within the *Aufbau*, the problem is not only that Carnap didn't sketch how to translate the connective 'is at' in statements of the form 'Quality *q* is at *x;y;z;t*' into his initial language of elementary experiences and logic (Quine 1953, 40), and so failed to define temporal predicates in phenomenal and logical terms (Quine 1969a, 76). The fundamental problem

³⁸See Chisholm (1957), 189–97; (1976), 138–44, Westphal (1989), 230–2; (1998), (2000), (2013), (2014a). Empiricists loath *a priori* concepts, for fear that they suffice for *a priori* metaphysical knowledge; they do not, for reasons Kant first identified, concerning cognitive constraints on successful reference to known objects (or events); see Westphal (2014a).

is that Carnap first chose 'Recollection of Part Similarity' ('RPs') rather than 'Part Similarity' ('Ps') as his 'basic relation' – *i.e.*: the relation, basic to his logical reconstructions, of experienced similarities among similar aspects of different sensory *Gestalten* – in order to preserve the time-order within his constructional system. He expressly noted that if the time order, implicit in 'recollection' *as* memorial, is omitted when constructing the system, nothing within the system can later reconstruct temporal order (§§78, 87). To complete his reconstruction of science in purely 'structural' statements, however, he later replaced instances of 'RPs' by instances of 'Ps' (§155), thus obviating the recollected temporal order and barring in principle – and in practice – its reconstruction.³⁹ Accordingly, there is excellent reason to abandon the ego-centric, 'auto-psychological' basis of the attempted reduction of statements about physical objects and events to structural statements about relations of part similarity amongst sensory *Gestalten*. Carnap knew about this problem, and this reason for adopting physicalism, though in a way and for a reason discussed below (§6.7), he occluded it.

4.6 The significant problem Hume saw but Quine did not, is that if all we have is a sensory field, it is impossible to understand how some sensations are distinguished from other sensations so as to be perceptions of different particulars, or to be the recurrent experience of any object we previously perceived. In 'Of Scepticism with regard to the senses' Hume verges upon and attempts to address what has become known in neuro-physiology of perception as the sensory 'binding problem' (Roskies 1999, Cleeremans 2003). Quine speaks of 'global stimulus' patterns as 'the temporally or-

³⁹For details, see Westphal (1989), 230–2 (note 99).

dered class of all sensory receptors triggered during [a] specious present' (Quine 1995a, 17; *cf.* 1961, 43; 1969a, 84, 155, 158). If 'global' includes all of an organism's sensory receptors, then these alleged classes provide no individuation of objects or events, nor as such do they provide any basis for such individuation. In connection with an 'occasion sentence' bearing a 'stimulus meaning', Quine appeals to 'the near-simultaneous firing of some subset of the subject's neuroreceptors' (1996, 159). 'Some sub-set'? Which sub-set? What allows 'global stimulus patterns' to provide any regular sub-sets, such that there can be any one 'stimulus meaning', such that anyone can either assent to or dissent from – or even to formulate and to utter – any one occasion sentence, presumably in response to some one particular object, event, person or action? Quine's semantics cannot answer these central questions, nor can his semantics provide any basis for answering them. Consequently Quine should have followed his own advice by consulting actual cognitive psychology and actual neurophysiology, and curtailing his own semantic-epistemological make-believe.

4.7 Within analytic philosophy, the flaws eventually exposed in meaning (or concept) empiricism and in verification empiricism led to rescinding them, though without re-examining the epistemological issues thus revealed. In this regard, mainstream analytic philosophy continued Carnap's programme of trying to supplant epistemology by logic and semantics, on the one hand, and empirical psychology on the other (§§2.1, 2.6). Prinz's (2005) recent causal version of concept empiricism is a direct heir to Quine's behaviouristic psychology; both are direct heirs to Hume's causal account of ideas and beliefs. None of these philosophers noticed that causal

relations do not suffice for information relations (Dretske 1981, 27–39); *a fortiori* they do not suffice for human cognitive comprehension (see below, §6.7), nor even for semantic content. The vague appeals to causality and to alleged causal relations characteristic of ‘causal theories’ in contemporary philosophy barely count as causal descriptions; they do not suffice for causal ascriptions, much less for justified – or even justifiable – causal ascriptions (Westphal 2012, 2016). Causal talk is cheap; causal theory must be earned. In connection with the explanation of human actions, Davidson was frank about this:

Unavoidable mention of causality is a cloak for ignorance; we must appeal to the notion of cause when we lack detailed and accurate laws. In the analysis of action, mention of causality takes up some of the slack between analysis and science. (Davidson 1980, 80)

In general, ... appeal to causal powers and dispositions reveals ignorance of detailed explanatory mechanisms and structures. (Davidson 2004, 98)

Cloaking our ignorance beneath causal talk is no substitute for informed and informative judgments about any matter at hand. Causal *theory* can be earned only by successful, sufficient, justified, exclusively causal explanations. Causal explanations require identifying specific causes by locating them within space and time. This is necessary for ascription, and for the very possibility of truth, falsehood, accuracy, inaccuracy or (cognitively) sufficient approximation. Such determinate reference to relevant particulars is also required for causal ascriptions to have any cognitive status, to have

any cognitive justification, and to afford any assessment of their cognitive justification. The ‘causal theories’ now so popular in philosophy of mind, of language and of action are pseudo-scientific just-so stories. It is altogether to Sellars’ credit that he pursued the epistemological issues revealed by the failures of empiricism, both as a theory of meaning and as a philosophy of mind.

4.8 Quine’s appeal to psychology was an open-ended appeal to scientific psychology, whatever that proved to be. In reply to Chomsky, Quine offered

... an explicit word of welcome toward any innate mechanisms of language aptitude, however elaborate, that Chomsky can make intelligible and plausible. Innate mechanism, after all, is the heart and sinew of behavior. (Quine 1969b, 305; cf. 1970, 5–6; 1975c; 1995a)

Quine’s ecumenical attitude towards whatever proves to be sound empirical psychology bears comparison with another hallmark of Quine’s philosophy: his effort to devise a canonical form of notation, to facilitate comparison between and evaluation of theories or ontologies, either in whole or in part. Were such a notation devised, it would be of very little use: Any notation for, *e.g.*, relations does nothing to help distinguish between genuine, inapt or merely feigned relations – especially so in view of Quine’s (vaguely Carnapian) criterion of ontological commitment. Taken together, Quine’s open-ended commitment to empirical psychology, his projected canonical notation and his criterion of ontological commitment amount to what might be called Quine’s empty formal-

ism.⁴⁰ Indeed

Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system. (Quine 1951a, 40/1961, 43)

However, nothing in Quine's views can tell us whether or how we *should* hold this or that or the other statement to be true. About analytic sentences Quine later noted:

... the analytic sentences are those that we are prepared to affirm come what may. This comes to naught unless we independently circumscribe the 'what may'. (Quine 1960, 65)

Indeed so. By the same token, Quine's radical semantic holism and his naturalised epistemology come to naught, unless and until he rescinds the ego-centric predicament, which deflates his cases for physical objects *qua* mere simplifying posits and for ontological relativity (*cf.* below, §§4.9, 4.10).

The closest Quine came to circumscribing independently this 'what may' is in *The Roots of Reference* (1973, §§20, 21), where he recognised that some basic linguistic equivalences (*e.g.*, about bachelors being unmarried men, about 'cousins' being a symmetrical relation) and logical constants are learned by learning one's mother

⁴⁰Quine (1969b, 305) expressed frustration with Chomsky's misunderstandings of his view, but failed to note that he continued to speak only of behaviourism, chronically failing to note that it designates but one approach to behavioural psychology – though a behaviourist approach is required by Quine's Thesis of Extensionalism (*cf.* §4.10). As for Quine's empty formalism, *cp.* Murphey (2012), 236, 244.

tongue. Twenty years later he summarised his revision in these terms:

In *Roots of Reference* I proposed a rough theoretical definition of analyticity to fit these familiar sorts of cases. A sentence is analytic for a native speaker, I suggested, if he learned the truth of the sentence by learning the use of one or more of its words. This obviously works for 'No bachelor is married' and the like, and it also works for the basic laws of logic. Anyone who goes counter to *modus ponens*, or who affirms a conjunction and denies one of its components, is simply flouting what he learned in learning to use 'if' and 'and'. (I limit this to native speakers, because a foreigner can have learned our words indirectly by translation.) I also recommended improving this rough definition by providing for deductive closure, so that truths deducible from analytic ones by analytic steps would count as analytic in turn. All logical truths in my narrow sense – that is, the logic of truth functions, quantification, and identity – would then perhaps qualify as analytic, in view of Gödel's completeness proof. (Quine 1991, 270; *cf.* 1992a, §§6–7, 1995c, 255)

Though Quine's re-affirmation of analyticity is tied to his behaviourist account of language acquisition, the view of analytic truths expressed here is, as Murphey (2012, 218–9, 242) notes, tantamount to those of Carnap, Lewis and Kant: precisely the view apparently rejected in 'Two Dogmas'. More precisely, Quine's putative *Roots of Reference* do not solve the problem about 'Truth by Convention' he highlighted in 1936: To learn a language at all requires being able to differentiate physical particulars (or their aspects) and to differentiate significant, relevant vocalisations (namely those of one's family), both of which *require* – rather than explain! – behaving

proto-linguistically, though definitely educationally – *i.e.*, (per-)formatively and intelligently – in accord with disjunction, if not, perhaps, the law of excluded middle.⁴¹ Once Quine admits an innate sense of incompatibility and elementary analyticity, he has unwittingly concurred with Leibniz (1702 [1989], 188), that ‘... there is nothing in the understanding that did not come from the senses, except the understanding itself, or that which understands’, a point developed much more carefully in connection both with semantics (theory of meaning and reference) and with epistemology by Kant (*KdrV*, A1/B1), Lewis (1929) and Sellars, but chronically neglected by empiricists.

Rather than apologising to Carnap – and to his readers and especially to his all too many faithful followers – for having so hastily dismissed analyticity in ‘Two Dogmas’, Quine (1973, §21) instead alleged that Carnap was among those epistemologists who ‘called for’ a ‘radical cleavage between analytic and synthetic sentences’. Carnap’s account and use of explication and his constructivism about linguistic frameworks neither call for nor require any radical cleavage between analytic and synthetic sentences, with the possible exception Quine too requires (and which C. I. Lewis upheld): The most basic logical constants and principles are required to construct or to understand any language or any linguistic framework whatever, and so are not simply parts of that language or

⁴¹Quine (1991, 270) states: ‘All logical truths in my narrow sense – that is, the logic of truth functions, quantification, and identity – would then perhaps qualify as analytic, in view of Gödel’s completeness proof’ (*cf.* Quine 1992a, §§6–7; 1995c, 255). (On the law of excluded middle, see Quine 1973, 80.)

framework.⁴² These concepts and principles are *a priori*, both regarding their origin and regarding their justification; their legitimate use, as C. I. Lewis (1929) recognised, is a more complex matter. It is neither accidental nor incidental that these basic logical concepts and inferences are precisely those belonging to a careful reconstruction of Aristotle’s square of opposition (*per* Wolff, *op. cit.*). Nor is it incidental that this basic level of competent use of disjunction is the psychological-cognitive counterpart to Quine’s (1936) own critique of conventionalism about elementary logic.

4.9 Quine also came to retract the radical holism asserted in ‘Two Dogmas’, which he mistakenly ascribed to Duhem, and which was his pretext for claiming to be more thoroughly pragmatic than Lewis and Carnap (Quine 1961, 41 note, 46, resp.). Later (1990a, §10) Quine admitted that a ‘pretty big’ set or conjunction of sentences is testable by confirming or disconfirming observation categoricals implied by it; such a set or conjunction has ‘critical semantic mass’. How such (alleged) sets or conjunctions are to be identified as having or lacking ‘critical semantic mass’ is not and cannot be indicated by Quine’s semantics. Indeed, how such (alleged) sets or conjunctions can *have* ‘critical semantic mass’ is not and cannot be indicated by Quine’s semantics. His (1992, §6; 1986a [2008], 168) ‘maxim of minimum mutilation’ tells us very little, yet it and its counterpart (‘maximise simplicity’) are all that can be provided by Quine’s extensionalist logical point of view. This, too, is part of Quine’s empty formalism. These maxims pale before this

⁴²Goodman wrote to Quine about this problem confronting the latter’s radical holism, apparently in 1951 (MSAm2587(420); Goodman to Quine 1/2/51; quoted by Murphey 2012, 90).

pronouncement by a progenitor of pragmatism:

... in the choice of these man-made formulas [*viz.*, quantitative laws of nature] we can not be capricious with impunity any more than we can be capricious on the commonsense practical level. We must find a theory that will work; and that means something extremely difficult; for our theory must mediate between all previous truths and certain new experiences. It must derange common sense and previous belief as little as possible, and it must lead to some sensible terminus or other that can be verified exactly. To 'work' means both these things; and the squeeze is so tight that there is little loose play for any hypothesis. Our theories are wedged and controlled as nothing else is.

That is very tough-minded talk from that purportedly tender-hearted philosopher, William James (1907 [1975], 104). It is an insight borne of involvement in the sciences; it cannot be won by remaining aloof from them by adopting a lofty, merely logical point of view. Quine's maxims are useless without the imperatives of accuracy and informativeness. Consider his opening remarks in 'Truth by Convention':

The less a science has advanced, the more its terminology tends to rest on an uncritical assumption of mutual understanding. With the increase of rigor this basis is replaced piecemeal by the introduction of definitions. The interrelationships recruited for these definitions gain the status of analytic principles; what was once regarded as a theory about the world becomes reconstructed as a convention of language. Thus it is that some flow from the theoretical to the conventional is an adjunct of progress in the logical foundations of any science. The concept of simultaneity at a distance affords a stock example of such development:

in supplanting uncritical use of this phrase by a definition, Einstein so chose the definitive relationship as to verify conventionally the previously paradoxical principle of the absoluteness of the speed of light. (Quine 1949 [1976], 77)

However 'stock' this example may be (or may have been), it glibly trivialises the kind and character of Einstein's achievement, by oversimplifying the problems addressed and ultimately solved by General Relativity, starting not with issues about simultaneity, but with the odd asymmetry of the Lorenz equations in electrodynamics. Einstein's achievement in part lies in better fulfilling Newton's own very rigorous ideal of explanatory adequacy (of precise, agreeing independent *measures* of a causal parameter by the phenomena explained by that parameter) better than Newtonian Mechanics did (Harper 2011, 378–85), in part by brilliantly *re-explicating* the concepts of space, time and motion (DiSalle 2002). Einstein's achievement involves Carnapian *explication*. Einstein's theories of relativity do not (merely) *analyse* the concepts 'space' and 'time', and its successor concepts and principles; Einstein's concepts and principles are no merely elective, chosen conventions. NB: These profoundly important details of scientific research and theoretical development – which so wedge and control our theories, as James put it – are entirely occluded by Quine's extensionalist logical point of view. Quine's quest for simplicity chronically neglected Einstein's (2000, 314) important corollary to Ockham's Razor: 'Everything should be made as simple as possible, but not any simpler'.

4.10 Ultimately, Quine's hallmark thesis of the 'inscrutability of reference' rests entirely upon his use of 'proxy functions', and is

independent of the thesis of the indeterminacy of translation.⁴³ In 'The Elusiveness of Reference' Quine contends:

I have argued [in *Roots of Reference*, 1973] that reference is at hand, full blown and unmistakable, only with mastery of the relative clause. ... The grammar of the relative clause is a sophisticated development, standing in no direct correlation with the sensory stimulation that is the ultimate source of evidence for scientific theories. The sentences that are ... conditioned to stimulation are what I call observation sentences. They are conditioned as wholes. The referential status of their component words is indifferent to that connection. It hinges rather on the articulated structure of the eventual scientific theory. If we are to understand scientific evidence, as well as language learning, it is imperative that we see the interface between language and stimulation as consisting of ... observation sentences. Terms and their objects are adjuncts of the elaborated superstructure.

Once we appreciate this, it becomes evident that all references can be revised and reshuffled at will without rewriting any of our science, falsifying any of its sentences, or disturbing any of its observational evidence. We have merely to reinterpret all terms, singular and general, by ... a *proxy function*, namely, an arbitrary one-to-one transformation that carries each of the old objects into a new one.

My ... fourth [topic here is]: the inscrutability of reference. For science, for all knowledge and all evidence, any objects will do as well as any others. All we need are neutral values of variables, neutral nodes in a network of sentences that connects sensory stimulations with other, future sensory stimulations. (1990b [2008], 360–1)

I have no definition of meaning, but whatever goes into meaning must be traceable ultimately to the associations of our linguistic forms with sensory stimulation and with one another. Proxy functions leave these connections unchanged while revising reference across the board. ... meaning determines reference [only] within each fixed ontology. (1990b [2008], 361)

Quine's view here is of a piece with his earlier, more physicalistic rendition of the Humean predicament, that as neonatal infants we must start with sensory stimulations, and wind up positing physical objects. Quine's view requires a causal, indirect theory of perception; only then is there any basis for his proxy functions to work their semantic magic (black magic though it be). If instead we directly perceive physical objects in our surroundings, then what Quine states here is irrelevant to the human condition. Ultimately Quine's proxy functions require his rejection of 'attributes' in favour of objects which are (or can be) members of sets. This feature of Quine's view is examined more closely below (§6.11).

For now, note that changing physical objects is unlikely to leave sensory stimulations unchanged. Had it not been an elephant, but a garden hose the seven legendary blind men had felt, their reports, like their experiences and their sensory stimulations, would have been very different, but not so very different from one another's. 'Any objects will do', only because Quine in principle disregards their characteristics or attributes. Disregarding their attributes, however, leaves us bereft of any ways of identifying or distinguishing them, either in practice or in theory. How is Quine to specify so much as the cardinality of his arbitrary objects? Perhaps a minimum number he can stipulate by counting his quantifiers, variables

⁴³Quine (1976), 217–20; (1981a), 19–23; (1976), 217–20; (2008), 19, 189, 316–8, 320–2, 339–40, 345, 360–3, 374–6, 404–6, 415, 433–7, 457–9, 496.

and names; but no maximum, nor any interim cardinality can be so specified.

Most directly: Quine's claim that reference is 'elusive', which is the key point of his 'proxy function argument', disregards the main point of Gettier's (1963) classic article, namely, that understanding human knowledge of particular objects or events in our surroundings requires taking into philosophical account our actual cognitive processes and our actual circumstances, within which alone we have any experience, any evidence and any cognitive justification for our contingent statements about occurrent, observed states of affairs. (All of Gettier's famous counter-examples turn on such factors.) Nor was necessary to wait for Gettier's article to know that context is crucial to human knowledge, because it is crucial to the truth – as also to the (in)accuracy and to the evidence *pro* or *contra* – of any statement one may make. Sentences are not the primary bearers of truth, nor of knowledge: statements are, as Austin made plain (1946, 1979, *cf.* Travis 2008). Quine mentions and appeals to 'occasion sentences', but cannot be bothered to consider how anyone is able to make any one statement on any one occasion using any one sentence. Reference to everyday particulars is only 'elusive' from within the 'cramped position' (Gibson 1982, xi) of Quine's extensionalist logical point of view.⁴⁴

⁴⁴Nelson (1997) argues in detail that Quine's proxy function argument is inconsistent with Tarski's account of truth. In trying to make the best of Quine's semantics, however, Nelson (1997, 75–6) neglects three vital points: what is involved in extending Tarski's (1933) formal account of truth for deductive sciences to the non-formal domain of natural science, that the 'merist' view he provides for Quine (81*ff.*) unwittingly concedes much of Evans' (1975) criticism of Quine's semantics and that, despite his long-standing avowal of behaviourism

4.11 Famously, throughout his career Quine (1992, 1994a, 2001) avowed the Thesis of Extensionalism, that there are only individuals, classes and sequences of these, so that truth-functional predicate logic suffices, not only for mathematics, but also for natural science. In sum:

Stripped down to the austere economy that I first described for predicate logic, our simple new syntax is as follows. The parts of speech are: (1) the truth-functional connective, (2) the universal quantifier, (3) variables, and (4) atomic predicates of one and more places. The syntactic constructions are: (1) application of a predicate to the appropriate number of variables to form a sentence; (2) prefixtures of a quantifier, with its variable, to a sentence; and (3) joining sentences by the truth-functional connective and then adjusting parentheses.

I hesitate to claim that this syntax, so trim and clear, can accommodate in translation all cognitive discourse. I can say, however, that no theory is fully clear to me unless I can see how this syntax would accommodate it. ... What makes for the surpassing clarity of theories couched in this syntax is their *extensionality*. (Quine 1994a [2008], 439–40)

Quine repeatedly stressed that 'I find extensionality necessary, indeed, though not sufficient, for my full understanding of a theory' (1995a, 90), and that both subjunctive conditionals and causal relations can be rendered in strictly extensional (truth-functional) terms (1994a, [2008], 444–5), in part because, he claimed:

and dismissal of propositional attitudes, Quine (1995a, 2000 [2008], 497) had to accommodate them, however reluctantly.

Implication, expressed by the universal conditional ' $\forall x (Fx \supset Gx)$ ', generates structure generously, establishing an instance of ' Gx ' for every established instance of ' Fx '. In particular it expresses causal connections, and accommodates the time dimension. (Quine 2000 [2008], 496)

I find the truth-functional conditional ' $p \supset q$ ' a satisfactory rendering of 'if-then' in the indicative mood. (Quine 2001 [2008], 502)

Quine devoted his career to 'the selfless business of making the world safe for extensionalism' (2001 [2008], 500, *cf.* 497), although he ultimately found he must accommodate propositional attitudes (2000 [2008], 497, citing 1995a). Deferring for now issues about propositional attitudes (see below, §5.10), consider four important points Quine never understood about extensionalism and its truth-functional languages(s):

4.11.1 Robert Brandom (1981) demonstrated a semantic paradox of material implication, showing that determining the truth-values of all conditional sentences within a truth-functional language *also* determines all the truth values of all of the simple (categorical) sentences of that language. This is absurd, because merely conditional truths should not determine categorical truths. Consequently, material implication cannot render 'if ... then' in ordinary usage. Brandom (1981, 130) notes that modal forms of conditional sentences, such as C. I. Lewis' strict implication, do not generate this paradox. (Indeed, Lewis developed strict implication in order to avoid this and other problems with the material implication of *Principia Mathematica*.)

4.11.2 Van Fraassen (1980, 114–5) made a further, broader, impor-

tant point also pertaining to modal forms of conditional sentences (all of which are strict logical implications): No logic of conditionals can capture 'if ... then' within causal explanations (whether commonsense, scientific or forensic), because explanatory usage of 'if ... then' presumes at least tacitly a *ceteris paribus* clause (*cf.* Goodman 1946, Hempel 1988b), so that modal forms of conditional statements (such as strict implication) cannot correctly render ordinary uses (including specialist uses in the sciences) of 'if ... then' within causal explanations.⁴⁵

4.11.3 Quine (and Van Fraassen) failed to realise that extensionalism is in principle *inadequate* even to Newton's physics.⁴⁶ William Harper (2011) has shown that Newton's scientific method and explanatory ideals are more stringent than any criteria of theoretical adequacy current in Anglophone history and philosophy of science (including Glymour's boot-strap account), in part because Newton's gravitational theory used orbital phenomena to *measure* the strength of gravitational attraction.⁴⁷ One important measure is Newton's determination that the aphelia of six orbits known to him (*i.e.*, each planet's closest approach to, and the furthest recession from, the Sun) are stable, and that this stability measures precisely an inverse square ratio between distance and gravitational attraction:

⁴⁵For discussion, see Westphal (2014a), §6.

⁴⁶For discussion of van Fraassen's 'Constructive Empiricism', and its extensionalist definition of 'empirical adequacy', which concerns only *de facto* natural occurrences, see Westphal (2014a). Van Fraassen failed to recognise the implications of his observation (quoted just above) for his own Constructive Empiricism.

⁴⁷For discussion of Harper (2011), see Harper *et al* (2013), Westphal (2014a).

... this [ratio ...] is proved with the greatest exactness from the fact that the aphelia are at rest. For the slightest departure from the ratio of the square would (by book 2, prop. 45, corol. 1) necessarily result in a noticeable motion of the apsides in a single revolution and an immense such motion in many revolutions. (Newton 1999, 802; 1871, 395; cf. Harper 2011, 116)

In ways Harper explains in detail, Newton's causal-explanatory gravitational theory uses systematic dependencies to analyse motions so as to measure the strength of gravitational force. These systematic dependencies are formulated as mathematically and physically precise continuous functions. Because these functions are subjunctive conditionals, they cannot be properly rendered by material implication (' \supset '). Because Newton's functions are mathematically and physically defined, they are not creatures of modal logic; nor are they subject to the vicissitudes of ill-defined 'accessibility relations' between possible worlds, nor to philosopher's 'modal intuitions' nor to their not infrequent 'modal scepticism'. From Quine's Thesis of Extensionalism (1995a, 90; 2008, 172, 191, 439–40, 504) and these three observations, it follows deductively by material implication that Quine never fully understood any causal explanation, whether commonsense, forensic or scientific – despite Goodman's (1946) pointed attention to *ceteris paribus* clauses. *Ceteris paribus* clauses are but one important non-formal presupposition of the use of any formalised linguistic framework within any causal-explanatory, hence non-formal, domain.

4.11.4 Since the development of mathematical logic, philosophers have recognised several distinct senses of the English verb 'to be' or 'is' (and its counterparts in other languages, whether verbal or

syntactic), namely: the 'is' of identity, of existence, of predication and of subsumption. Jaakko Hintikka has argued cogently that the use of logic within epistemology – epistemic logic – requires a fifth distinct sense: the 'is' of identification, which is required to identify actual or possible objects of knowledge across different possible worlds. Accordingly, the Russell-Frege paradigm of first-order quantification theory is, in principle, insufficient for epistemology, whether commonsense or scientific.⁴⁸ Hintikka's 'is of identification' is required to model, e.g., Newton's physically specified, mathematically quantified, observable subjunctive measurement claims, such as that quoted just above, within any (adequate) epistemic logic.

From these four points it follows deductively that Quine never realised the insufficiency of his extensionalist 'logical point of view' for philosophical explication of issues within substantive, non-formal domains, including the entirety of empirical knowledge, the sciences (broadly and narrowly speaking) and morals. Quine's hallmark Thesis of Extensionalism is yet another dogma of (radical) empiricism.

4.12 The titles of two prior articles notwithstanding – 'Progress in Language Theory' (1970) and 'Progress on Two Fronts' (1996) – it is little wonder that, when asked in 1998 what progress philosophy had made in recent decades, Quine literally had nothing to say.⁴⁹ Given his views, that's all he could say. His honesty is exemplary, though his empiricism is not. If Quine insisted upon holding incoherent semantic views (*per* above), that's his affair. Yet many phi-

⁴⁸Hintikka (2005, 2006, 2007), Hintikka and Vilkkio (2006, 2007).

⁴⁹Boxer (1998), cited by Hanna (2001), 284 note.

losophers jumped aboard Quine's band-wagon without noticing that his newly 'enlightened' empiricist garb was transparently ill-conceived.⁵⁰ In 1996 Quine reported as 'recent' progress the adoption of physicalism:

My account [in *From Stimulus to Science*; 1995] differed only in one crucial detail. Today, I have the two subjects exposed to the same external event, whereas in *Roots of Reference* [1973] I was still grudgingly according them homologous neural intakes. It made a difference of twenty years. (Quine 1996, 162/2008, 476)

A difference of twenty years is merely chronological, not philosophical, and even this temporal difference is disingenuous, for in conversation with Davidson in 1985 Quine expressly rejected Davidson's case for semantic externalism. This restricts Quine's philosophical progress in accepting semantic externalism to a decade; or did he merely accommodate it? It is deeply puzzling that Quine (1996, §1) required so very long to realise that natural selection requires of us that we can identify objects and events in our surroundings. Quine's durable, indeed, obdurate rejection of semantic externalism signals how very deep-set was his commitment to his purportedly neurological version of the Humean predicament (above, §4.2), and his long-standing disregard of the central message of his own 'naturalised epistemology' to appeal to *actual cognitive psychology*.⁵¹

⁵⁰It was not due to lack of good information; see below, §5.

⁵¹Sinclair (2012) contends that Quine adopted Lewis' conceptual pragmatism. However, Sinclair fails to understand Lewis (1929) properly, only finding some aspects of Lewis's views which appear to recur in Quine's. Sinclair (339) claims that, according to 'Lewis, all knowledge is conceptual – requiring the use of

concepts and interpretation – since appearances by themselves have no conceptual structure and thus cannot serve as an object of knowledge. We are capable of expressing this knowledge not because we share the same 'streams of sensation' but because we share a general system of categorical commitments'. Additionally (340), 'Lewis thinks [that ... the] distinction between the conceptual, *a priori* frameworks that we bring to experience and the chaotic, unorganized empirical content given to the mind through experience is [...] central for any adequate explanatory epistemological account'. These claims are central to Sinclair's case for Lewis's influence on Quine, but they are false. According to Lewis (1929), all knowledge is conceptual insofar as all knowledge involves conceptual classification, but natural (and social) phenomena can be objects of knowledge insofar as we successfully classify and deal with them. 'Appearances by themselves' are only an analytical abstraction in Lewis' (1929) view; especially in this regard it is important not to assimilate his earlier to his later work (AKV, 1946). We can and do share a general system of categorical commitments, according to Lewis (1929), though not simply as a set of categories, but as categories *in use* in dealing with each other and with the world we inhabit. Sinclair neglects, *inter alia*, Lewis's (1929, 167–74) incisive analysis of 'the logic of relativity'. Lewis nowhere claims that the empirical content of experience is 'chaotic', nor that it is 'given to the mind through experience' as chaotic. To the contrary, Lewis is one of the few to have identified that, and how, Kant's analysis of the humanly identifiable similarities and contrasts amongst whatever we experience is a necessary condition of our being able to think, to judge, to classify, to expect or to act at all. Properly developed, this point provides a sound transcendental proof of mental content externalism, which underwrites (moderate) semantic externalism. For discussion of Lewis (1929) on these points, see Westphal (2010a), §2; for concise presentation of Kant's analysis of this point, see Westphal (2005). In sum, like Quine and today's neo-pragmatists, Sinclair misses entirely the semantic externalism which is fundamental to pragmatism. According to pragmatism, our *pragma* have philosophical priority over what we say about our *pragma*, because they have (*inter alia*) semantic priority over what we say about our *pragma*. According to neo-pragmatism, what there is, what we do, what we can say, and what we can ascribe to one another as believing are all hostage to one's preferred, merely conventional meta-language (of whatever level). Neo-pragmatism clings

It also indicates Quine's long-standing neglect of other developments within epistemology. James and Dewey both sought to understand and to exploit the epistemological implications of Darwinism; evolutionary epistemology took root within analytic epistemology in the mid-1970s (Campbell 1974; Bradie & Harms 2012). Though he could not have read it before going to press, Quine's (1995) many appeals to natural selection to fill in the gaps in his empiricist account of language and concept acquisition pale by contrast to the genuine article: Pinker's (1994) account of our language instinct makes plain by contrast the extent to which Quine spent his career following out the hint he thought he had learned from Hume and Carnap:

Maybe Hume is nearer the truth genetically; but ours would be an account of how it *might well be* – an account of how firmly we *can* reconstitute the world. If the proposed modern construction is impossible (as it may very well be) then from an empirical point of view there is *only* the genetic account: psychology of meaningless verbal behavior. (1946 [2008], 103–4)

Why all the make-believe? Quine never answered; his adherents should.

4.13 The second front on which Quine (1996, 163) reported having made progress in the mid-1990s is having accepted that 'observation is inseparable from theory' (*sic*), a conclusion others (such as Kaplan) had reached a quarter-century before, and which had been advertised as a key point of Quine's holism in 'Two Dogmas'.

to Carnap's (untenable) ESO, whereas the route back to genuine pragmatic realism is via Carnap's account of conceptual explication.

Quine's remarks about the links between observation and theory remained to the end vaguely programmatic. It is illuminating by contrast to reconsider the case of Carnap's semantics.

Briefly, the problem with the minimal semantic atomism required by Carnap's empiricist account of the meaning of observation predicates is that it is inconsistent with the structure of his semantic theory, according to which the syntactic forms of observation sentences are set by the formation rules, L-rules and P-rules of any linguistic framework. These syntactic forms partially determine which inferences can, and which cannot, be drawn using any particular observation sentence (whether type or token, *i.e.* statement). Because such inferential differences constitute differences in meaning according to Carnap (1931, 91; MCTC 49–52), on his own account, the meaning of observation predicates is not solely a function of observations. Because the syntactic forms of observation statements are specified in the ways indicated by the rules of their linguistic framework, and bear upon the possible and actual inferential roles of observation statements within that framework, the meaning of any one observation sentence is linked with other sentences within that framework. Hence meaning is (moderately) holistic within any Carnapian linguistic framework. This point is semantic, and distinct from the moderate evidentiary or justificatory holism entailed by the fact that in any confirmation or test of an hypothesis, some set of related claims, beliefs and procedures are also 'put to the test'. Carnap (1934a, 246/1937, 118) also recognised this latter point, citing both Duhem and Poincaré in just this connection.⁵²

⁵²It is thus highly curious that Quine (1991, 269/2008, 394) did not know of Duhem

Furthermore, we cannot know by simple perceptual ‘confrontation’ with states of affairs (*cf.* above, §2.5) which observed sensory qualities may be physically dependent upon unacknowledged physical factors; not merely lighting in the case of colours, or humidity in the case of sounds, but also *e.g.* relative speed (due to Doppler shift).⁵³ Accordingly, Carnapian linguistic frameworks must be explications writ large, which must be assessed in part by whether or how well they serve or improve our activities within their original practical and worldly contexts, whence our explications come and to which they must return to do better justice than their alternatives (see below, §6.5–6.9).

4.14 Quine’s sense of progress on the two fronts noted (§§4.13, 4.14) in 1996 does not betoken a progressive research programme. The conventional wisdom remains that empiricism has a monopoly upon empirical knowledge, and especially upon scientific knowledge. That is sheer dogma, in the least reputable senses of the term. The history of empiricism is a philosophical goldmine because it reveals how fundamentally inadequate empiricism is. Sellars mined it deeply, to excellent effect. We can see how by reconsidering the article most widely credited with eclipsing Carnap’s empiricism.

(nor of Poincaré’s similar point) when he wrote and first published ‘Two Dogmas’.

⁵³For detailed derivation of this result, see Westphal (1989), 60–7. Not at issue here are Kaplan’s (1961) objections to Hempel and Oppenheim’s account of scientific explanation, to which Creath (1976) replied.

5 Quine’s ‘Two Dogmas of Empiricism’ Revisited (yet again)

5.1 Quine is widely reputed to have altogether rejected the analytic/synthetic distinction in ‘Two Dogmas’. This is philosophical mythology.⁵⁴ Quine (1961, 22–3, 25, 26) expressly granted the distinction between analytic and synthetic statements in three cases: logical truths, Carnapian explications and explicit definitions by stipulation. These cases are not trivial, for they and their use are required for identifying, defining or using any mark as a meaningful symbol, as Quine (1951a) himself urged against Carnap (see *infra* §§4.8, 5.8, 5.9, 6.4).

So what is the problem? Quine (1961, 23, 29n7) sought a univocal but general definition of cognitive synonymy which would hold for artificial and for natural languages, including those containing extra-logical pairs of synonyms. Quine’s paper has been (and still is) widely reputed to have refuted Carnap’s empiricism. Following its publication Quine himself learned otherwise when he presented it in Chicago, with Carnap in attendance. Carnap responded vigorously and drafted a reply, which in correspondence Quine encouraged him to publish, though only recently did it appear.⁵⁵ However, telling replies on Carnap’s behalf were promptly published by Mates (1951) and by Martin (1952), both of which Carnap soon cited in his article, ‘Meaning Postulates’ (1952a, 72 note 3), which

⁵⁴For a sympathetic re-reading of Quine’s ‘Two Dogmas’, see Lugg (2012). The criticisms of Quine’s paper to which Lugg responds do not include those developed herein.

⁵⁵Thanks to Richard Creath, whose (1991) examines Carnap’s reply; see Creath (1990b, 364–5) about its occasion and origins, and his (1987) about the early cross-purposes of the two philosophers.

further elaborated his reply to Quine. Whoever may have missed those replies should not have missed Carnap's (1955) further reply, nor Bohnert's (1963), nor Carnap's (1963b, 922) endorsement of the same, nor, *e.g.*, Waller's (1978, 310–1) discussion of both.

Right here, right at this time, right in this way opens a debilitating cleft between 'received' and genuine philosophical wisdom. Nine key points emerge from this debate. I state six briefly, to focus upon the three central issues, which concern Quine's focus upon natural languages in 'Two Dogmas', whereas Carnap appeals to 'analyticity' only within explicated linguistic frameworks.

5.2 Quine's failure in 'Two Dogmas' to find any general account of analyticity for natural languages unwittingly reflects the open texture of ordinary concepts, which of course is endemic to non-formal, substantive domains and terms in natural languages, including all empirical concepts.⁵⁶

5.3 Taken very charitably – which required Carnap (1963b, 915–22) several years⁵⁷ – all of Quine's arguments to show that there is no empirically verifiable or behavioural criteria of analyticity merely demonstrate that analyticity is not an empirical concept. (Conversely, as C. I. Lewis realised, no sense can be made of analyticity if one dogmatically assumes extensionalism.)

5.4 Quine's theses of the indeterminacy of translation and of the

⁵⁶On 'open texture', see Waismann (1945), Austin (1946 [1979]), 77–89. Only because the field has become so historically myopic are such references required. Quine bears significant responsibility for this unfortunate devolution, though not as much as his legion of loyal followers.

⁵⁷Quine's reasoning in 'Two Dogmas' is elusive and elliptical; for an unsparing assessment see Hunter (1995). Creath (2006) and Gutting (2009, 11–30) detail Quine's lack of argument and analysis in 'Two Dogmas'.

inscrutability of reference – such as they may be, and whatever they may mean – likewise lack discriminable behavioural consequences or effects. Consequently, by the reasoning of 'Two Dogmas' they too must be consigned to the same non-empirical, *a priori*, officially illicit classification as Carnap's concept of analyticity.

5.5 The relevant semantic phenomena of interest in natural languages all belong, according to Carnap (1955), to pragmatics, which is a *non*-formal domain. (Though Carnap does not say so directly, pragmatics and descriptive semantics are close cousins, at least.)

5.6 In 'Two Dogmas' Quine claimed that Carnapian explications presuppose synonymy:

But even explication, though not merely reporting a preexisting synonymy between definiendum and definiens, does rest nevertheless on other preexisting synonymies. The matter may be viewed as follows. Any word worth explicating has some contexts which, as wholes, are clear and precise enough to be useful; and the purpose of explication is to preserve the usage of these favored contexts while sharpening the usage of other contexts. In order that a given definition be usable for purposes of explication, therefore, what is required is not that the definiendum in its antecedent usage be synonymous with the definiens, but just that each of these favored contexts of the definiendum, taken as a whole in its antecedent usage, be synonymous with the corresponding context of the definiens. (Quine 1961, 25)

Neither Carnap's explication, nor his use, of the method of explication requires or involves what Quine here claims. What Quine here describes is mere disambiguation, and betrays his immediately preceding, more accurate gloss:

In explication the purpose is ... actually to improve upon the definiendum by refining or supplementing its meaning. (*ibid.*)

Precisely because Carnapian explication aims to, can and does improve by refining or supplementing the meaning of the explicatum (not 'definiendum'!), it is not limited to mere disambiguation; these refinements or augmentations can involve changes of meaning, too.⁵⁸ Quine was careful and accurate about 'explication' in *Word and Object* (1963, 257–8), though without mentioning either his improvement, nor his greater fidelity to Carnap's (1950b) explication of 'explication'.

5.7 Though he would have been loath to acknowledge it, Carnap's willingness to use natural languages as informal meta-languages, and to explicate key terms as needed when (re)constructing a linguistic framework to improve the use and function of any term or phrase within its original context of use, exhibits important, fundamental, yet undeveloped traces of semantic externalism and of hermeneutics within Carnap's formal(ised) methodology.⁵⁹

5.8 Carnap's use of natural languages as informal meta-languages within which to explicate various terms or phrases in use, or to construct any linguistic framework, may give a point to Quine's insistent focus in 'Two Dogmas' upon natural language. What might that point be?

⁵⁸Cf. T&C 126, MCTC 51; cp. DiSalle (2002), though he speaks of 'analysis', whereas the proper term is 'explication', in Carnap's sense.

⁵⁹Careful consideration of the concept of logical consequence – such as Hanson (1997) – reveals that these aspects of hermeneutics and explication also pertain to the most fundamental principles of formal logic. (Thanks to Jack Woods for directing my attention to Hanson (1997).)

In 'Two Dogmas' Quine insisted that we first understand 'analytic' prior to using the term (or the concept) in any explicitly defined statement:

[Carnap's] ... semantic rules ... tell us that such and such statements, and only those, are the analytic statements of L_0 . Now here the difficulty is simply that the rules contain the word 'analytic', which we do not understand! We understand what expressions the rules attribute analyticity to, but we do not understand what the rules attribute to those expressions. In short, before we can understand a rule which begins, "A statement S is analytic for language L_0 if and only if ...", we must understand the general relative term "analytic for"; we must understand " S is analytic for L " where " S " and " L " are variables. (Quine 1961, 33, cf. 35, 36)

Similarly, in direct connection with his suggestion that synonymy may be a function of substitution of words in all contexts of use *salvo veritate*, Quine (1961, 28) notes that this suggestion 'has indeed the drawback of appealing to a prior conception of "word" which can be counted on to present difficulties of formulation in its turn'. Why does Quine insist upon first having his meta-language well-defined before using it to define any first- (or lower-)order language?

Quine (1961, 35) is correct that considered simply as symbols, nothing distinguishes Carnap's meaning postulates from any other symbols or strings of symbols. This point deserves special emphasis, for it is made in a paragraph added to the revised edition of 'Two Dogmas', in response to Martin (1952). The significance of this point, however, is not readily apparent, certainly not within

'Two Dogmas'. It is worth discovering.

Twenty years later, Quine stated in retrospect:

I had not thought to look on my strictures over analyticity [in 'Two Dogmas'] as the stuff of revolution. It was mere criticism, a negative point with no suggestion of a bright replacement. I had not felt moved to follow 'Truth by Convention' with more of the same. (Quine 1991, 267)

Quine is right that 'Two Dogmas' should not have been understood as revolutionary; he is also right to link 'Two Dogmas' with 'Truth by Convention', which begins with a theme which resonates with 'Two Dogmas':

... whereas the physical sciences are generally recognized as ... destined to retain always a non-conventional kernel of doctrine, developments of the past few decades have led to a widespread conviction that logic and mathematics are purely analytical or conventional. It is less the purpose of the present inquiry to question the validity of this contrast than to question its sense. (1936 [1976], 77)

One (characteristic) problem with both essays is how obliquely Quine indicates his purpose. If we consider Quine's place within the history of empiricism, however, a central theme of his philosophy stands out in relief. Quine (1963 [1972], 107–8) briefly alludes to just this historical-systematic issue in the opening paragraphs of his contribution to the Schilpp volume on Carnap, 'Carnap and Logical Truth'.

The development of predicate calculi and quantifier theory appeared to infuse new life into empiricism, which had always lacked

a plausible account of logical and mathematical truth or knowledge. That lack now appeared to be either irrelevant or unproblematic, if and insofar as any '*a priori*' truths or knowledge are simply matters of convention. Central to Quine's empiricism, early, middle and late, is the quest for a tenable account of the origin of our ideas, including the ideas (concepts, principles, understanding *etc.*) we require in order to formulate and to use logic and mathematics. *That* is why Quine the logician so ardently sought an empiricist account of language learning: because he recognised that appealing to 'truth by convention' to account for mathematics and for logic blithely papered over basic issues:

... an *analytic* statement is commonly explained merely as one which proceeds from logic and definitions, or as one which, on replacement of definienda by definienda, becomes a truth of logic.* But in strictness we cannot regard mathematics as true purely by convention unless all those logical principles to which mathematics is supposed to reduce are likewise true by convention. And the doctrine that mathematics is *analytic* accomplishes a less fundamental simplification for philosophy than would first appear, if it asserts only that mathematics is a conventional transcription of logic and not that logic is convention in turn: for if in the end we are to countenance any *a priori* principles at all which are independent of convention, we should not scruple to admit a few more, nor attribute crucial importance to conventions which serve only to diminish the number of such principles by reducing some to others. (Quine 1936 [1972], 87–8)

Quine footnotes (*) Frege, Behmann and Carnap (1934a) as holding this view of analytic statement; its core difficulty, Quine notes, is this:

In a word, the difficulty is that if logic is to proceed *mediately* from conventions, logic is needed for inferring logic from the conventions. Alternatively, the difficulty which appears thus as a self-presupposition of doctrine can be framed as turning upon a self-presupposition of primitives. It is supposed that the *if*-idiom, the *not*-idiom, the *every*-idiom, and so on, mean nothing to us initially, and that we adopt the [basic logical] conventions (I)–(VII) by way of circumscribing their meaning; and the difficulty is that communication of (I)–(VII) themselves depends upon free use of those very idioms which we are attempting to circumscribe, and can succeed only if we are already conversant with the idioms. ... the conventions of truth assignment cannot be ... withheld until [logical and semantic] preparations are complete, because they are needed in the preparations. (Quine 1936 [1972], 104–5)

Quine's central, indeed growing concerns with language learning implicitly, though directly and persistently pursue issues Carnap blithely assigned to 'descriptive semantics' and to empirical psychology (above, §§2.1, 2.6). This is an important regard in which Quine remained, as Murphey (2012, 161) notes in other regards, the last positivist, not the first post-positivist analytic philosopher.⁶⁰

5.9 As noted above (§4.8), Quine (1991, 270; *cf.* 1992a, §§6–7, 1995c, 255) ultimately acknowledged basic analytic statements; he must in order for any proto-lingual child to differentiate the apparent significance of any one vocalisation from any other, and for any field linguist to differentiate any signs of assent from any of dis-

⁶⁰Murphey (2012, 124) notes the puzzlement of many readers of *Word and Object* that Quine the logician would devote such attention to language acquisition, but does not note Quine's paradigmatic (if unacknowledged) empiricist concern with the origin of our ideas, especially puzzling as regards our most basic logical ideas.

sent. However, Quine's late accommodation of basic analytic statements does nothing to explain or to justify them, nor our mastery of them. Our grasp and use of analytic statements is presupposed by any and all significant discourse, and its acquisition.

Likewise, Quine (1995a; 2000 [2008], 497) ultimately accommodated propositional attitudes. These too he must accommodate in order for any proto-lingual child to differentiate the apparent significance of any one vocalisation from any other, for any field linguist to differentiate any signs of assent from any of dissent, and for the basic interpersonal 'empathy' required for any mutual linguistic understanding, which is required for language learning, for verbal communication and for field linguistics (however ordinary or radical it may be). Most succinctly, Quine states:

Perception of another's unspoken thought, however – up to a point – is older than language. Empathy is instinctive. ... Empathy figures also in the child's acquisition of his first observation sentences. (Quine 1995a, 89; *cf. idem.* 1987, 7–8; 1992a, 42–3, 46–7, 68–9; 1994b, 145; 2008, 172, 343, 366, 371–2, 440)

However, Quine's late accommodation of propositional attitudes does nothing to explain or to justify them, nor our mastery of them. Our having and understanding propositional attitudes – both our own and others' – is *presupposed* by any and all significant discourse, and its acquisition, interpretation or radical translation – including the communication of elementary logical terms or principles, *per* Quine's (1936) discussion in 'Truth by Convention' (quoted just above, §5.8)

In sum, Quine spent most of his career seeking to avoid Carnap's

recourse to intensions as meanings, and as the necessary precondition of understanding meaning, whether regarding linguistic frameworks or natural languages. Carnap put the key point with characteristic clarity and concision:

... the theory of intension of a given language *L* enables us to *understand* the sentences of *L*. (Carnap 1955 [1956], 234)

Ultimately, Quine winds up back where Carnap had begun, having provided in the interim what amounts to a lengthy *reductio ad absurdum* argument supporting Carnap's intensionalism, but providing no insight into our understanding, use or first mastery of intensions. Quine justified this vitally important conclusion, but did not (so far as I have been able to trace) state it, nor acknowledge that Carnap had been right all along. Whereas Quine's 'Two Dogmas' apparently proposed that we could dispense with 'analyticity', Quine's extensionalist career demonstrates to the contrary that we cannot. Whereas Quine had always disparaged 'mentalistic semantics', he chronically failed to acknowledge that the key feature of intensions is that they are classifications. Prompted by Harman (1990), Quine (1990c, 158) acknowledged Dilthey's lead regarding empathy and its role in our understanding others' expressions – though only this once, and he neglected to apologise for all the indiscriminate scorn he (and his corps of followers) had poured upon those philosophers who had long since known that hermeneutics is essential both to philosophy, and to human understanding. Several times Quine remarked on how commonsense is our reliance upon empathy in acquiring or understanding language, and in ascribing propositional attitudes. His career-long aversion to

intensions and propositional attitudes testifies to the over-weening extent to which he was not a commonsense philosopher.

5.10 One final historical-philosophical observation brings the significance of this feature of Quine's philosophy into sharp relief. Intensional idioms are not only involved in philosophical puzzles about beliefs: knowledge in the form of sufficiently justified true belief is an intensional context, as brief reflection on Frege's famous example suffices to make clear. In some season, at some latitude, one can know that a specific planet can be seen at a specific place in the evening sky, also know that a specific planet can be seen at a specific place in the dawn sky, and it can be the same planet twice over, although one may not know that it is. One central principle of post-Gettier epistemology is that knowledge is not (as it is said) 'closed under known implication' (Dretske 2006, 2013). This non-closure principle belongs to post-Gettier rejection of infallibilism about cognitive justification. This non-closure principle is tantamount to the principle that it is possible to know something about some (non-formal) state of affairs – a spatio-temporal object, event, person or phenomenon – without knowing all of its features. So long as someone's knowledge of any particular is incomplete, we can construct Fregean or Gettier-style cases where substitution of one and the same particular does not preserve the truth of the statement expressing what someone knows (and not merely believes). This is simply a variation on Frege's distinctions between objects, modes of presentation and concepts (though without invoking his ontological views). 'Naturalising' epistemology by appeal to cognitive sciences is one (important) thing; but it is quite another to naturalise away, not only epistemology, but also knowl-

edge itself by rejecting intensions and intensional idioms and phenomena altogether by countenancing only extensional languages. It is a great benefit to philosophy that Quine ultimately if unwittingly demonstrated that such cannot be done, but this demonstration need not have been so prolonged, obfuscating and otherwise unproductive. No extensional language suffices even to formulate either cognitive or epistemological phenomena, claims or theories. This corroborates in the material mode Hintikka's corresponding point about epistemic logic and the 'is' of identification (above, §4.11.4). This is also why Quine's insistent substitution of co-extensive predicates in 'Two Dogmas of Empiricism' is in principle irrelevant to the domain of his purported investigation; the alleged epistemic or semantic relevance of Quine's substitution test is itself a dogma of benighted empiricism.⁶¹

In 1953 Sellars argued cogently on behalf of C. I. Lewis's and Carnap's intensionalism and against the behaviourism required by Quine's extensionalism, that the logical grammar of modal and normative terms cannot be reduced to, nor can it be sufficiently accounted for by, learned psychological dispositions, unless these include linguistic dispositions (IM 42–5). As for today's hard-boiled naturalists who seek to explain away intensional phenomena, let them present their theories only after their theories can account for their capacities to formulate, express, publish, argue for and to justify their theories (*per* §§1, 4.3, 5.9). About Hobbes and his 'utter materialism, indeed mechanism', Quine (1995) claimed:

Hobbes's view of knowledge was strikingly modern. Our sensations are the effects upon us of the otherwise unknowable material world. It is on these that we base our ideas about the world, and we have nothing further to go on but the meshing of the ideas. (Quine 1995a, 3)

That Quine felt such an affinity to Hobbes's materialism and epistemology is unsurprising. What is surprising is how seldom it is acknowledged that most contemporary philosophical naturalism owes much more to the materialism of Hobbes, D'Holbach or La Matrie than to anything in contemporary natural science (*cf.* Ladyman *et al* 2009). This, too, betokens the unfortunate effectiveness of Russell's battle-cry (above, §4.2). Also surprising is how Quine in this passage characterises Hobbes' view of knowledge in terms which amount to the (alleged) Humean predicament (above, §4.2), at the very time Quine himself had officially adopted semantic externalism (*per* above, §4.12).

Having examined Quine's views in such detail, we can understand why Sellars sought to develop Carnap's semantics in a more robust, Kantian and hermeneutical vein. One central reason for this is that merely acknowledging intensions as classifications and as linguistic and psychological phenomena, as Carnap did readily, or 'accommodating' them as Quine did only reluctantly, provides no account of what is required for us to *understand* intensions as classifications of, or claims or beliefs about, various particulars, as (purported) instances of those kinds.

⁶¹These problems also infect much of contemporary analytic 'metaphysics', which also presumes extensionalism.

6 The Genuine Article: Sellars's Pragmatic Realism

6.1 In the introduction to 'Two Dogmas', Quine (1961, 20) claims that rejecting the analytic/synthetic distinction and reductionism blurs 'the supposed boundary between speculative metaphysics and natural science' and shifts us 'toward pragmatism'. He was much closer to the mark in his penultimate paragraph, where he states:

The issue over there being classes seems more a question of convenient conceptual scheme; the issue over their being centaurs, or brick houses on Elm Street, seems more a question of fact. But I have been urging that this difference is only one of degree, and that it turns upon our vaguely pragmatic inclination to adjust one strand of the fabric of science rather than another in accommodating some particular recalcitrant experience. (Quine 1961, 46)

Much of these debates transpired in the pages of *Philosophical Studies*, under the editorial eyes of Sellars and Feigl. Sellars's writings, early and late, reflect his intensive engagement with Carnap's views, and with what Quine did and did not make of them. The points examined above illuminate Sellars's pragmatic realism, in decided contrast to Quine's 'vaguely pragmatic inclinations' (cf. Quine 1981b), inclinations which typify neo-pragmatism.

6.2 *Pragmatics: Pure or Descriptive?* To resolve the debate between Carnap and Quine, Sellars first attempted for pragmatics what Carnap did for syntax and semantics: to develop a formal account of it. Though fascinating, those early efforts failed for several rea-

sons, and not only technical ones.⁶² Sellars soon recognised that Carnap is right, that pragmatics is a non-formal domain (above, §5.4), and that

... Carnap's studies in pure semantics ... provide the essential materials for a non-metaphysical account of abstract entities, but ... by failing to examine in more detail the relation between pure and descriptive semantics, they leave dark corners where metaphysical views can find sanctuary. (EAE ¶25)

The prior discussion of Carnap's and Quine's views highlight Sellars's key, characteristic insight. Sellars (EAE ¶10) noted that Carnap used the philosophical jargon of perceptual givenness (cf. above, §§2.5, 2.6) without having explicitly discussed, much less rejected, the epistemological views that jargon embodies. Consider again Carnap's view:

The assertions of our fellow men contribute a great deal to extending the range of our scientific knowledge. But they cannot bring us anything *basically* new, that is, anything which cannot also be learned in some other way. For the assertions of our fellow men are, at bottom, no different from other physical events. Physical events are different from one another as regards the extent to which they may be used as signs of other physical events. Those physical events which we call "assertions of our fellow men" rank particularly high on this scale. It is for this

⁶²See Olen (2012), from which my thinking about these issues has benefited significantly, though not in ways which allow footnoting. I thank Peter for kindly sharing his research with me. The relations and contrasts between Sellars's and Quine's views discussed here are neglected by Rosenberg (2007), 33–46; this is one reason for considering their views in relation to Carnap's.

reason that science, quite rightly, treats these events with special consideration. However, between the contribution of these assertions to our scientific knowledge and the contributions of a barometer there is, basically, at most a difference of degree. (Carnap 1932–33a, 180–1, *cf.* 184, 185; 1932–33b, 221; 1932–33c, 177; Hempel 1935, 54, 57.)

The core problem is this: Carnap presumes that each of us can learn and can understand; presumably their proficiency in learning and understanding is why it is worth while to attend to those physical events which happen to be ‘the assertions of our fellow’ scientists. However, recognising that humans learn to, and do, make utterances which regularly and reliably covary with their circumstances does not entail, *pace* Carnap (1932–33a, 181, 185), that the covariance manifest in competent linguistic behaviour differs only in degree from the covariance of barometers or tree-toads with atmospheric pressure. Under special circumstances (Dretske 1981, 57–82), regular correlations may enable one state of affairs to carry information about another covarying state of affairs, including when one of those states of affairs is a person uttering vocables. However, sheer covariance between worldly events and the audible output of a human mouth (however fine-grained) does not constitute the mouth’s, nor the person’s, decoding, recognition, understanding or use of that information. Although our recognition of received information *as* informative about some event in the world is a regular response to the receipt of information, this does not entail that any regular response to a source of information is a *recognition* of that information *as* information, nor *as* the *specific* information it is. A barometer, to take Carnap’s example, has a

metre scale and a pointer which covaries with atmospheric pressure. However, no barometer picks out atmospheric pressure as something with which to covary, nor does it pick out the fact nor indicate the fact that its pointer covaries with atmospheric pressure. In contrast to any barometer as such, we who use barometers *do* pick out the fact that their pointers covary with atmospheric pressure, and we use such devices *because* they do so covary and because we know that they do so covary. There’s lots of covariance in the world, but *recognising* a covariance and *taking* it to be informative is quite another matter. This is the crux of Sellars’s criticism of merely ‘regulist’ views of meaning, of which Carnap’s (in the above passage) is paradigmatic.⁶³

Carnap (1931, 60; T&M 468–70) admits his analysis does not address this issue. Insofar as Carnap’s writings are methodological tracts within philosophy of science, such omissions are unobjectionable; as van Fraassen (1980, 19) remarked, one needn’t settle all epistemological problems whilst pursuing philosophy of science.

⁶³LRB ¶¶20–23, EAE ¶48; in this latter passage Sellars again quotes from Carnap (1942), §5, and expressly notes that ‘if one takes the pragmatical study of an historical language (*L*) to eventuate in statements which are empirical in the *narrow* sense – if, for example, one takes it to be the behavioristic socio-psychology of language habits in a certain community – then no process of “abstraction” will result in semantical or syntactical statements about *L*, or even in pragmatical statements about *L* in that sense of “pragmatical” in which [they pertain to observation predicates]’. I have appealed only to Dretske’s account of information channels; his account of information decoding solely in terms only of referential opacity (1981, 171–82) is a sophisticated example of the regulist views Sellars (rightly) criticised. *Our* decoding and understanding of sensory or verbal information *as* the information it is requires the Kantian considerations Sellars develops, and are examined here.

However, Carnap plainly claimed and intended much more, namely, to have *replaced* epistemology with the logic of science *cum* the logical analysis of the syntax and semantics of scientific language, together with descriptive semantics and an unredeemed promissory note about empirical cognitive psychology. In sum, Carnap simply stopped asking epistemological questions.⁶⁴ Carnap's program thus presupposes an epistemology rather than substituting for it the logical analysis (plus an unspecified empirical psychology) of scientific language. Accounting for scientific knowledge requires epistemology (*cf.* Dretske 1985), and at least some core strands of an account of human understanding. Rather than addressing these issues, as we saw (§§5.9–5.1), Quine merely accommodated propositional attitudes, but did not account for them.

6.3 Sellars's Kantian Insight. Our question is, given that true statements, and especially true and (cognitively) justified statements, carry information, what constitutes – or at least suffices to indicate – *understanding* that information *as* the information it is? This, I submit, is precisely the crux of Sellars's Kantian insight. In the *Groundwork* Kant observes:

Everything in nature works according to laws. Only a rational being has the capacity to act according to a representation of laws, *i.e.*, according to principles, and so has a will. Since deriving actions from laws requires reason, the will is nothing but practical reason. (*GMS*, *GS* 4:412; my tr.)

Kant's observation about the human will is the practical counter-

⁶⁴Ayer (1936–37, 236–7) noticed this shift of attention from the project of the *Aufbau* to Carnap's syntactic program and its implications.

part of his theory of judgment, that we judge and resolve what to conclude or to do by recognising justifying reasons so to conclude or so to act. Linguistic objects are 'fraught with ought' (TC 43.1), not because language is somehow magically non-natural, but because we exhibit – to ourselves and to others – our understanding of what we or others think or say by judging what, on that basis, we are permitted or obligated or prohibited from thinking, saying or doing next.⁶⁵ However much our conceptual, verbal and perceptual understanding and comprehension is rooted in the proper functioning of our neuro-physiopsychology, such proper functioning – so far as it is understood strictly causally – is necessary though not sufficient to account for human intelligence in thought or in action. Sellars recognised that this insight of Kant's is altogether independent of Transcendental Idealism.⁶⁶

Sellars also recognised that this Kantian insight incorporates and augments Carnap's recognition that the meaning of a term or

⁶⁵*Cf.* Carnap's talk of linguistic 'objects' (T&C 125; quoted above, §2.5), and Sellars: 'Obeying a rule entails recognizing that a circumstance is one to which the rule applies' (IM ¶46(4)).

⁶⁶Sellars's non-reductive naturalism appears, *e.g.*, in this passage: '... the fact that empirical evidence is relevant to the statements of descriptive semantics no more entails that characteristically semantical concepts are *descriptive*, than the fact that empirical evidence is relevant to the statements of descriptive syntax entails that characteristically syntactical concepts are descriptive, or the fact that empirical evidence is relevant to the statements of comparative ethics entails that characteristically ethical concepts are descriptive' (EAE ¶48, *cf.* ¶¶63–4). Sellars's appreciation of Kant's account of rule-following is evident already in LRB (1948). For discussion of Sellars's Kantianism, see Westphal (2010), §4. For disentangling Kant's insights about reason from Transcendental Idealism and from causal determinism, see Westphal (2004, 2012).

phrase can be specified by determining which inferences can, and which cannot, be drawn by using that term or phrase.⁶⁷ Understanding a term or phrase involves recognising and being able to draw such inferences, together with recognising in what circumstances various of those inferences may or may not be relevant, permissible or even obligatory, and behaving accordingly (whether verbally or corporeally).⁶⁸

6.4 Logical Givenness? We are so used to hearing about sensory ‘knowledge by acquaintance’ that Sellars’s claim that there can be logical forms of givenness can be puzzling.⁶⁹ Recall Quine’s (1961, 35) point (above, §5.8), added to the revised edition of ‘Two Dogmas’, that considered simply as symbols, nothing distinguishes Carnap’s meaning postulates from any other signs or strings of signs. Initially Sellars (IM ¶32) criticised Carnap’s semantical rules for omitting their prescriptive ‘rulishness’, but later argued (EAE ¶¶48, 50, 63), much more cogently, that Carnap had failed to recognise that semantical rules are neither descriptive nor prescriptive nor logical, but are distinctively semiotic (EAE ¶¶54, 57, 70–2). In just this connection Sellars (EAE ¶56) clarifies what Carnap had not

⁶⁷Carnap (1931), 91, (1934 [1959]), 175; MCTC 49–52.

⁶⁸Michael Williams too, recognises these two components of meaning and understanding. His presentation on Sellars (Rome 2012) helped me appreciate them; cf. *idem.* (2013), 67–71; (2015).

⁶⁹He may (also) have had in mind Russell’s sometimes claim that we can be directly acquainted with relations, or with uncritical empiricist assumptions about our grasp of negation – something Quine (1946, 100–1) noted about Hume – but I believe the point I develop here is more fundamental to Sellars’s thought, because it concerns what is involved in recognising whatever we are aware of, and recognising its significance; cp. Sellars, OPM.

made clear about the officially ‘pure’ status of his formal syntax and semantics. Carnap (1963b, 923) denied his semantical rules did or should contain anything prescriptive. Their disagreement is as profound and significant as it is easy to miss.⁷⁰

Any formal system contains rules governing the composition of well-formed formulae (WFFs); such composition rules are normative, so to this minimal extent, any formal system contains normative rules, albeit semiotic rules. The problem with Carnap’s strategy is breathtakingly simple but decisive:

‘Predicate’ is a role word, and to specify the counters which are to play a role is not to define the role word. (EAE ¶54)

Pointing to marks (‘counters’) arrayed beneath another series of other marks – e.g., beneath: ‘предикаты’
or beneath: ‘ندرك تل ال د، ربخ، دن سم’ – does not make them predicates, nor even signs. I mention the Russian and Farsi terms for ‘predicate’ to illustrate and to stress the distinction between marks, symbols or signs and semantically significant words, such as the word ‘predicate’ (or rather ‘predicate’).⁷¹ Supposing that simply pointing to marks or to markers (‘counters’ or even ‘sign designs’) – say, as (purported) inscriptions of the particles and rules for a linguistic framework – suffices to make them predicates, is a *logical* form and fallacy of ‘givenness’.

At its most basic and general, the error of ‘givenness’ or of ‘factualism’ is to mistake the occurrence of a particular – even of a

⁷⁰E.g., it is missed by Carus (2004).

⁷¹Sellars’s dot quotes mark counterpart expressions across languages. How he uses them to address issues about universals is nicely presented by Kraut (2010).

particular (specific) universal, or of a particular which happens to be a sign or a representation or a mental state, no matter how regularly its occurrence or recurrence covaries with the circumstance it represents – for *understanding* that particular, including *understanding* that sign or representation.

It is significant that this point was made by Quine in connection with elementary logical terms and principles and in connection with Carnap's formalised linguistic frameworks (above, §5.8). Now Sellars was clear that Carnap never mistook marks for sign designs, nor strings of signs for meaningful statements (EAE 54). Carnap's intensionalism and meaning postulates preclude such an error. However, Quine's pressing Carnap about how we can understand basic logical terms (the '*not*-idiom', &c) and how we can understand Carnap's lists of (*e.g.*) predicates or the *L*- and *P*-rules constitutive of any linguistic framework (above, §5.8) highlights a key issue neglected by Friedman of the ways in which and the extent to which Carnap's intensionalism seriously restricts, if not compromises, his empiricism. Quine's own ultimate concessions to propositional attitudes and to intensional idioms (above, §§5.9–5.10; *cf.* below, §6.11), and his interest in language acquisition implicitly though rightly pursue the question, How are meaning and understanding at all possible, on the basis of interaction between organism and environment? Recognising this concern underlying Quine's researches underscores that the genuine problems here lie not in Carnap's semantics, but rather in empiricism, as Sellars recognised.

Sellars's central point about 'the logical space of reasons' and about his functional or conceptual role semantics addresses the

relation between what Descartes called the 'formal' and the 'objective' reality of ideas, where the formal reality of an idea is its occurrence as a mental state, a mode of a mental substance, whereas the objective reality of that idea is its content, what it represents and how it represents it, what it represents it to be, or what it represents it *as*. Early on Carnap (1931, 91; 1934 [1959], 175) had used inference to specify meaning of a term or phrase by specifying which inferences can, and which cannot, be drawn by using it.⁷² This is very important, but *understanding* that meaning requires being able to make or to draw those inferences, *and* to recognise when or how those inferences may be relevant. Sellars summarises this point in these terms:

... the use of a conceptual frame is the awareness of a system of logical and extra-logical necessities. (EPM ¶67)

Such use and such awareness are central to understanding in all its forms, whether it be our understanding of ordinary things, of natural phenomena, of signs of whatever kind (including linguistic signs or logical symbols) or of thoughts, beliefs or emotions. This fundamental, constitutive character of human understanding Carnap together with the entire empiricist tradition neglected.⁷³ Rationalists did no better by appealing to intuition or to clear and distinct ideas. Ryle (1949, 121) was right to highlight our use of material 'inference tickets', but he too neglected what is central to our

⁷²Carnap (MCTC, 49–52) developed this idea (to an extent) three years later than Sellars (IM).

⁷³On Hume's failing in this regard, see Westphal (2013); on Russell's, see Westphal (2010b); on Broad's, see Turnbull (1959).

understanding such use, whether our own or by others.⁷⁴ With apologies to Austin, Sellars's point might be put by saying – with Kant, Hegel, Peirce and Dewey – that our intelligent manipulation of signs consists in knowing how to do things with signs, because we know how to reason about their permissible, appropriate and inappropriate use, because we understand their various possible and actual roles in various circumstances or contexts, whether present, pending or remote. 'Meaning' consists in functional, specifically semiotic roles; *understanding* meaning consists in intelligent, reasoned use of those roles (and their markers) in thought and action. This general point is illustrated by what Sellars calls 'the most basic form of the myth of the given':

If a person is directly aware of an item which has categorial status C, then the person is aware of it *as* having categorial status C. (FMPP 1.44; emphasis added)⁷⁵

This way of characterising the 'myth of the given' may appear to

⁷⁴Likewise, Dretske's (1981, 171–89, 214–35) appeal to intensional opacity to specify concepts and conceptual content is necessary, but only accounts for an organism's differential responses to sensed objects or events. Millikan (1984, 1993) persuasively argues that biological functions, too, must be taken into account to specify representational and conceptual content. Dretske's account is not sufficient to account for our understanding or self-conscious (*e.g.*, linguistically expressed) use of concepts, which is required for decoding information, including the semantic information contained in or conveyed by those concepts or their particular use on any occasion.

⁷⁵*E.g.*, Russell (1914, 15) claimed that 'abstract facts', such as logical or mathematical facts, are included within the scope of 'my present experience' and amongst objects of acquaintance.

omit Sellars's point that first principles have been claimed to be given (EPM ¶2), but it does not: Whether in the case of sense data, physical objects, relations, signs (*e.g.*, ' \wedge ') or a statement of a first principle, merely confronting these *qua* objects or presences (so to speak) provides no understanding. Only by articulating their aspects, components or members, the various relations among these, and integrating these factors within a judgment by which we grasp them together, and on that basis recognising what can be done with them appropriately, do we understand the item(s) in question. (Some logical notations use ' \wedge ' to mark exclusive disjunction, others to mark addition; the intelligent use makes the mark a sign, the mark makes neither the sign nor the intelligent use.)

This is exactly Sellars's conclusion in his examination of Russell's philosophy of mind and ontology, which focuses especially upon Russell's view of 'knowledge by acquaintance':

... rather than accounting for our acquiring the ability to use [the temporal term] 'succeeds' significantly, the describing of facts of the form ' x succeeds y ' represents the fruits of the process of acquiring the ability to use 'succeeds' significantly. Russell is still looking for an *epistemic* act of acquaintance which makes the meaningful use of the corresponding symbols possible. He is trapped in the myth of the given. The alternative is to realize that epistemic abilities are patterns of non-epistemic connections. It is not by being epistemically related to *facts* of the form that xRy that we acquire the ability to "think of the relation R "; rather we acquire this ability by acquiring *inter alia* the propensity to respond to *objects* which are R to one another with sentences of the form ' xRy ', and to fit these sentences into certain inference patterns.

The 'knowledge by acquaintance' with particulars, qualities

and facts which Russell takes to be a substratum which supports the meaningful use of symbols, is simply the effective exercise of the very abilities it is supposed to support. (OPM ¶119)

This is Sellars's insight into the fundamental, irreducibly *normative* character of rational judgment, constituted by assessing the *which* judgment (if any) it is *proper* to make in view of the available information and relevant considerations. This is Kant's fundamental insight: Kant noted that, in any judgment about objects, events or actions, we must consider whether the various factors we happen to consider are integrated by us in judgment as they *ought* to be integrated (*KdrV* A262/B318). Such normatively structured judgment is required to guide our thought or action by evidence, reasons and principles (*per* the quotation from Kant's *Groundwork*; above, §6.2).⁷⁶ This is why Carnap's reply to Quine regarding intensions (above, §5.9) is correct, though insufficient.

6.5 Carnap's formal semantics straddles the fence between logicism and hermeneutics (*cf.* above, §5.8). For all of Quine's stress on actual, natural languages – in which he insistently sought analyticity in general – Quine's problems with analyticity (and with the indeterminacy of translation and with the inscrutability of reference) are a logicist's nightmares about non-formal domains, *i.e.*, about dealing with the real world, with real people and with real languages in real contexts of use and action. Sellars's stress upon the rootedness of explication in the use of terms, and how the use

⁷⁶This way of characterising 'givenness' and Sellars's critique of and alternative to it, differ from Rosenberg (2007), who focusses on sensory forms of givenness, to which he contrasts inference. Rosenberg does not properly identify the full generality of Sellars's point.

of terms is structured by rules of their correct and appropriate usage within their appropriate contexts, all point to fundamental externalist aspects implicit – that is: latent – in and yet central to Carnap's semantics.⁷⁷

Sellars put the point this way:

This brings me to the heart of the matter. The emphasis of Carnap's studies in semantics is on the formal manipulation of semantical words as defined expressions in pure semantical systems. He deals in much too cavalier a fashion with semantical words as they function in the assertions of descriptive semantics, that is to say, with semantical words functioning as such. The latter, however, is the essential concern of a *philosophical* semantics. For it, the primary value of formally elaborated semantical systems lies in their contribution to the analysis of semantical concepts in actual usage. Now Carnap is, of course, aware that a pure semantical theory is a *semantical* theory only if it relates its vocabulary to semantical expressions in actual usage.^[78] And he undoubtedly thinks of his semantical studies as providing an explication (in his sense) of semantical discourse. My complaint is that his treatment of the relation between pure and descriptive semantics is much too perfunctory. It leaves important and relevant things unsaid, and what he does say is, by its over-simplification, misleading where it is not downright mistaken. (EAE ¶67)

Now Sellars's formalised, that is, partially regimented, though impure semantics and pragmatics are philosophical *tours de force*, which defy detailed summary here. Several important points about

⁷⁷*Cf.* EPM ¶115 (§40, ¶1).

⁷⁸See Carnap's (1945) reply to Hall and Bergmann, ESO and his (1950b) distinction between conceptual analysis and conceptual explication.

them may be made briefly, however, to highlight Sellars's pragmatic realism.

6.6 As this last passage shows, Sellars's philosophical semantics interprets our language and symbol systems in their actual use, which is use in our practical engagements with and within the world, whether commonsense, professional or scientific.⁷⁹ Quine's semantics holds our ontology hostage to our symbolic systems ('to be is to be the value of a bound variable'), which themselves are allegedly hostage to non-empirical, presumably arbitrary decisions about quantification and individuation devices or conventions, and to the ontological instability of arbitrary semantic proxy functions.

Sellars, to the contrary, holds our symbolic systems responsible to the world, both in its commonsense and in its scientific manifestations. Today, many 'minimalists' or 'quietists' about truth hold the world – or at least: our ontology, our 'ontological commitments' or or whatever propositional attitudes they deign to ascribe to us – accountable to our (or to their) language or meta-language. Sellars rightly seized upon Carnap's insight that our philosophically regimented meta-language(s) must be used to improve our natural language(s) within their original, worldly contexts of use, both cognitive and practical (including moral), by explicating improved linguistic frameworks which better articulate and facilitate our antecedent (though through explication, perhaps now revised and improved) cognitive and practical activities and achievements. These crucial aspects of semantic externalism – the thesis that speci-

⁷⁹As Williams (2013) notes, there are two main components of meaning involved: inferential role, and permissible and appropriate uses of terms, phrases, concepts or principles. Their relations cannot be explored here.

fying the meaning of many terms and phrases requires specifying the spatio-temporal objects, events or structures to which they pertain – are fundamental to Carnap's explication of conceptual 'explication', and to Carnap's use of natural languages as informal metalanguages for his formalised (*i.e.*, explicated) syntax and semantics, which is required for any account or assessment of the comparative utility of linguistic frameworks and of any basis we may have to adopt one or another linguistic framework as improving upon available alternatives.

Quine's notion of 'ontological commitment' is no more than a rough guide to certain features of *theories* or of logically reconstructed fragments of 'a language'; it is no credible guide to what there is – and especially not in 'metaphysics'. The proper guides to what there is, are the various forms, methods and above all the *results* of actual empirical inquiries *in situ*.

6.7 We noted Carnap's account of our decisions to adopt one or another linguistic framework as unjustified and unjustifiable practical decisions regarding expected convenience (above, §2.4). This tenet accords with the predominant conventionalism of the period; as Wick (1951, 50) noted, physicalism or the adoption of 'the thing language' is thus made into a matter of policy, not a thesis or principle with a truth-value or cognitive justification. To avoid admitting philosophical theses, in ESO Carnap swept under the conventionalist rug the crippling problems with reducing talk of physical objects to talk only of series of aspects of elementary experiences. The conventionalism Carnap espoused in ESO lives on, *e.g.*, in Quine's (1961, 4) magisterial 'preference' for ontological 'desert landscapes'; in philosophical trade in 'intuitions'; in the non-meth-

od of reflective equilibrium (Westphal 2003, 101); in philosophical preoccupation with the acceptance or rejection of one or another view, rather than with their justification or critical assessment; and in the pride philosophers often take in presenting 'my analysis' of some term or concept – whereas because that term or concept originated in some broader context of use, the account must needs be an explication (in Carnap's sense); in principle it cannot be a conceptual analysis, regardless of anyone's preferring to say otherwise.

About Carnap's treatment of decisions to adopt a linguistic framework Sellars adroitly observed:

... although a question of the form 'Shall I ...?' calls indeed for decision, it is generally sensible to ask of a decision 'Is it reasonable?' or 'Can it be justified?' and *these* questions call for assertion rather than a decision. Thus, the question inevitably arises: Is it proper to ask of a decision to accept a framework of entities, 'Is it reasonable?' 'Can this decision be justified, and if so, how?' This is the crux of the matter, and on this point, it must be remarked, Carnap's discussion is less incisive. (EAE ¶5)

In fact, Carnap's account of such decisions is inconsistent with his rejection of framework-independent facts, truths or realities. Sellars recognised this (*cf.* EAE ¶26), though the special occasion required politesse. Sellars knew, of course, that Wick (1951) had made this point *en detail*, and cited Wick's article accordingly (EAE ¶5, note).⁸⁰ For there to be any utility in adopting a linguistic framework, it must *be* more useful in some regard(s) than other frameworks, and we must *know* enough about the domain in question to be able to

⁸⁰Wick (1951) appeared in *Philosophical Studies*, the year after it was founded by Sellars and Herbert Feigl.

anticipate how useful one rather than another linguistic framework may be. This knowledge, however minimal or minimally described, must in principle be knowledge of facts – at a minimum, and however roughly, about the relative frequency at which some kind of events occurs; these events, their kind and their frequency obtain independently of whatever linguistic framework(s) we consider adopting, for any framework whatever (otherwise they provide no basis for assessing or adopting the utility of any framework).⁸¹

6.8 Too often contemporary philosophers indicate their philosophical preferences – including, *e.g.*, their preference for ontological desert landscapes – without considering sufficiently what status preferences can, do or may have within philosophy. This is one symptom of the pervasive and corrosive influence of conventionalism in contemporary Anglophone analytic philosophy. It must be said, Carnap's ESO bears significant responsibility for this pervasive conventionalism. He knew that in principle the reduction of talk of physical objects to talk of sets of sensory states is impossible, and that these reasons (at the very least) strongly support common-sense realism about spatio-temporal objects and events, but he swept these considerations under the conventionalist rug in this passage:

⁸¹For detailed proof, see Westphal (1989), 64–7. Carus (2010) neglects these problems, in part because his study focusses on Carnap's work prior to ESO (1950), though in the concluding sections he over-extends the reach of his analysis by claiming there are no such problems. Creath (1985) recognises many of the subtleties and intricacies of Carnap's views on realism, though without addressing the issues about ESO examined here.

The thing language in the customary form works indeed with a high degree of efficiency for most purposes of everyday life. This is a matter of fact, based upon the content of our experiences. However, it would be wrong to describe this situation by saying: “the fact of the efficiency of the thing language is confirming evidence for the reality of the thing world”; we should rather say instead: “This fact makes it advisable to accept the thing language”. (ESO 208; quoted more fully above, §2.4)

This passage belongs to Carnap’s campaign to replace philosophical theses, which can be true or false, and for which we could argue *pro* or *contra*, with philosophical proposals in the form of linguistic frameworks, which may be more or less useful for various purposes, and which may be assessed only in such terms. Replacing philosophical theses with framework proposals in the way Carnap proposed requires a sound and tenable distinction between framework-internal and framework-independent questions, and sound reasons for rejecting realism and truth (and so also justification) regarding framework-independent facts. Carnap’s semantics fails to provide such reasons, as Quine (1951c) soon made clear to him.

There is an important methodological reason for emphasising why Carnap’s semantics fails to dissolve issues about framework-independent realism and about philosophical theses. Carnapian linguistic frameworks, if they are any use at all, are explications of terms or phrases in use in some domain of interest, within which their use is rooted in those activities and the objects, events or structures they involve (whether natural or artifacts). As noted above (§6.4), Carnapian explication involves important aspects of semantic externalism. This holds, too, of Carnapian linguistic frameworks, and these externalist aspects accord with the non-

formalist features of Carnap’s syntax and semantics (above, §2.2). Unwitting though they may be, these externalist aspects are important virtues of Carnap’s semantics, which Sellars developed further (though without formulating this point in terms of semantic externalism).⁸² The crux is this: Within non-formal domains, ascent to a meta-language to explicate an improved linguistic framework (or an aspect of one) can only be cogent, successful and assessable if that ascent is complemented by a descent into the practices and their context whence our chosen *explicandum* derives, in which it is rooted, and within which alone it has any sense, meaning or point, and within which alone we can consider and assess its adequacy and the adequacy of any successor *explicatum*. This marks one crucial divide between Classical American pragmatism and recent neo-pragmatist views.

6.9 This raises an important point about the scope and character of Carnap’s formal syntax and semantics. Carnap states:

Sometimes the question is discussed whether semantics and

⁸²See above, note 30. Granting the resulting commonsense and scientific realism and the externalist aspects of semantics is no license for any substantive metaphysics; that is blocked by Kant’s (non-verificationist) semantics of singular cognitive reference; see Westphal (2014a), §§3–4; and below, §§6.10, 6.12, 6.21 for Sellars’s counterpart. To avoid potential misunderstanding, please note that my criticisms of Carnap’s semantics are specific and limited: His semantic atomism, his rejection of philosophical theses and his rejection of framework-independent issues about realism all fail; these failures, however, leave his semantics – now moderately holist (see below, §6.11) – and his accounts of explication and of linguistic frameworks otherwise intact. These are very important philosophical achievements, which on other occasions I have steadfastly defended against misguided objections – and here, against Quine’s.

syntax are dependent upon pragmatics or not. The answer is that in one sense they are but in another they are not. Descriptive semantics and syntax are indeed based on pragmatics. ... Only after finding by observation the pragmatical fact that [Inuit] have the habit of using the word 'igloo' when they intend to refer to a house are we in a position to make the semantical statement "igloo' means (designates) house' and the syntactical statement "igloo' is a predicate'. In this way all knowledge in the field of descriptive semantics and descriptive syntax is based upon previous knowledge in pragmatics. *Linguistics ... is the descriptive, empirical part of semiotic ... hence it consists of pragmatics, descriptive semantics and descriptive syntax. But these three parts are not on the same level; pragmatics is the basis for all of linguistics.* However, this does not mean that, within linguistics, we must always explicitly refer to the users of the language in question. Once the semantical and syntactical features of a language have been found by way of pragmatics, we may turn our attention away from the users and restrict it to those semantical and syntactical features. Thus, e.g. the two statements mentioned before no longer contain explicit pragmatical references. In this way, descriptive semantics and syntax are, strictly speaking, parts of pragmatics. (Carnap 1942, §5; pp. 11–12; quoted by Sellars, EAE 48)

We noted (above, §2.1) Carnap's view that the philosophically legitimate remainder of epistemology is a branch of 'applied logic'.⁸³ Carnap developed this branch industriously and incisively throughout his career, at least from the *Aufbau* (1928) through his 'Systematic Replies and Expositions' (1963). One of Sellars's key points is: Calling this branch of applied logic a *Formalization of Logic*, as Carnap (1943) titled the second of his *Studies in Semantics*,

⁸³Carnap, (1930–31), 133, 137; (1932–33b), 215, 228; T&M 26; Hempel (1935a), 54.

or likewise examining epistemology, philosophy of language or philosophy of mind *From a Logical Point of View* (Quine 1953), does *not* assimilate – and thereby restrict – semantics or epistemology or philosophy of language or philosophy of mind *to* logic, nor to what can be expressed in a logic. At most and at best such investigations bring logical resources and techniques to bear upon issues within the domains of (e.g.) semantics or epistemology or philosophy of language or philosophy of mind. In this connection, as regards 'meaning' and the proper classification and understanding of the term 'means' (said of terms or phrases), Sellars states:

But if 'means' is not a *prescriptive* term, and if it is not a *logical* term, is it then a *descriptive* term? No! The Procrustean urge must be suppressed. It is none of these. It is a *semantical* term. (EAE 61)

This is an instance of a general point on which Sellars rightly insists: any applied logic – even in such masterful hands as Carnap's – must and can only be assessed by its adequacy to the domain of application; it is philosophically misguided obfuscation to restrict that domain to whatever one can handle with one's (independently, antecedently) chosen logical resources. This is an instance of Dewey's methodological point, that our characterisation of whatever is, and how or to what extent we know it, must *result* from inquiry, and cannot be predetermined by our antecedent theoretical predilections.⁸⁴ It is also an instance of Lewis's (1929, 298) important point that the justified or justifiable use of a formal logic system within any non-formal domain requires non-formal re-

⁸⁴See Dewey (1930), 105–134, 187–212; (1938), 11–19; (1939), 556–59, 563, 565.

sources and assessment.

There are significant indications of the need to capture material mode expressions in more careful formal mode expressions in Carnap's semantics; the term 'quasi-analysis' from the *Aufbau* (above, §2.2) has obvious successors in *The Logical Syntax of Language* (1934a/1937), in which, Carnap (1942, §39) noted, 'The concept of *quasi-syntactical sentences* plays a large role in the discussions in [Syntax] §§ 63ff and Part V', and likewise in his *Introduction to Semantics* (1942), which uses such phrases as 'quasi-logical sentences' (§§38, 39), which Carnap proposes to restate using his formalised logical expressions (*L*-terms and *L*-semantics). In contrast to Carnap, insensitivity to basic characteristics of any non-formal domain to be stated or modelled logically underlies the fundamental inadequacies of Quine's extensionalism. These inadequacies can now be further detailed.

6.10 Sellars highlighted a further, basic, decisive example of trimming 'ontology' to conform to one's antecedent logical presumptions. Carnap's semantics were suspected of harbouring Platonism because he allowed quantification over variables whose values purportedly designated abstracta such as universals. If indeed logical quantification is the key to ontological commitment, as Quine always maintained – not only by affirming sets, but also in 'Two Dogmas' by persistently seeking 'meanings' only as objects meant, *i.e.*, *qua* objects designated by predicates – then Carnap's linguistic frameworks can easily become ontologically profligate, and his attempt (in ESO) to avoid this problem by distinguishing internal from external questions failed. Willem deVries concisely characterises Sellars's alternative:

Sellars ... argued that the current standard of ontological commitment, being the value of a variable of quantification, is mistaken. It makes the indeterminate reference of the quantifier more primitive than any form of determinate reference, which is incompatible with naturalism, and it also gets the grammar of existence claims wrong. Sellars proposes a different standard: we are committed to the kinds of things we can explicitly name and classify in true, bottom-level, object-language statements. (deVries 2005, 89)

To be sure, those first-order object-language statements (not sentences, but particular uses of sentences) refer to particular objects or events. Existential quantification has been central to analytic semantics since Russell's 'On Denoting' (1905). Sellars is quite right, however, that we are much better advised to focus upon actual reference to actual particulars made by actual persons on actual occasions by using actual statements.⁸⁵ In this way, 'ontology' is held accountable to actual knowledge of actual occurrences, entities or structures. This is excellent news for realism about the objects of knowledge and for semiotics, including that branch of semiotics called semantics. Sellars (EAE 81) thought this was also excellent news for nominalism and for naturalism (though not reductive or eliminative naturalism).

Here it suffices to note that Quine (1966, 19) made precisely the mistake Sellars indicates by quantifying over predicate terms indiscriminately, for his 'logical point of view' in principle provides no basis for discriminating between those statements which actually refer to actual objects or events or structures, and those which are

⁸⁵For discussion, see deVries (2005), 67–89. On this point, Sellars concurs with Austin, Donnellan, Evans and Travis.

significant but lack referents. This directly echoes how Russell's account of 'knowledge by description' presupposes rather than analyses our knowledge that there is any such individual as we may (implicitly) describe, because no description, however extensive or specific, by itself determines whether it is logically empty, definite or ambiguous because there is no, only one or several objects featuring the described characteristics.⁸⁶

6.11 Quine's inattention to actual individuals and any actual knowledge we may have of them is underscored by a further, related basic deficiency of his logical point of view. On the one hand, Quine avows that:

Science would be hopelessly crippled without abstract objects. Even so earthy science as natural history would suffer without reification of species. A species name, say 'dog', does not commit us to species as objects, but we are committed to them when we say that species are seldom cross-fertile. We are quantifying over them. (1994b [2008], 455)

Nevertheless, throughout his career Quine rejected 'attributes' and favoured 'sets' because sets and the coincidence of any two or more sets can be specified by specifying their members, whereas 'attributes' are not necessarily distinguished by distinguishing – nor by identifying – their instances because any object may have various attributes of various sorts. Most succinctly, Quine contends:

What I find more imperative [than eliminating classes] is extensionality which condones reification of classes but challenges

⁸⁶See Westphal 2010b, §4.1. This is the crux of Kant's criticism of Leibniz (*KdrV* A263–4/B319–20), and of Evans' (1975) criticism of Quine.

that of properties. The urgency of extensionalism arises from the demand for individuation: no entity without identity. Thus it is that I reify classes but not properties; for we cannot satisfactorily distinguish two properties if they have the same extension.⁸⁷

Quine is correct that extensional logic cannot distinguish between any two properties or attributes which happen to be coextensive, such as 'is coloured' and 'is extended'. About properties, Quine held:

I have no sense of loss as regards properties, but I was stopped by the idioms of propositional attitude; for these fail of extensionality but are indispensable – I have arrived at an accommodation here also, but must refer you to my [1995a]. (2000 [2008], 497)

The philosophical question does not turn on whether Quine (or anyone else) has or lacks a 'sense of loss' regarding properties, but whether rescinding attributes or properties makes cogent philosophical sense.

On this count, Quine's view is nonsense: Class membership is specified by whether any object has or lacks a specified property, designated by a predicate. Those properties are *attributes*, but within non-formal domains (whether empirical knowledge or morals) it is a matter of inquiry to determine which objects instantiate whatever property or attribute is used to specify any relevant class membership. It is a further matter of inquiry to determine which properties or attributes are significantly similar and which are not,

⁸⁷Quine (2000 [2008]), 497; cf. (1941 [1966]), 22; (1961), 107–8, 123; (1963), 208, 243; (1969), 17–21, 98; (1976), 193; (1986b), 67; cp. (1961), 76, 152, 157; (1963), 168.

so as to include or exclude them from the relevant class appropriately. This was Aristotle's 'problem of induction',⁸⁸ which no exercise in set theory can exorcise, as Goodman's (1954 [1983], 71–83) 'new riddle of induction' underscored by temporalising Aristotle's problem with his own 'bent' grue-some predicates.⁸⁹

6.12 This issue about proper classification of particulars raises another, more fundamental issue, noted by Hume, but which Quine no more than noted in passing. Officially, Hume's theory of ideas requires that any two distinct ideas also have distinct objects which can be separated from each other. Hume acknowledged, however, that our idea of any one colour, our idea of any one size and our idea of any one shape are co-instantiated, say, in black and white globes and cubes of marble. Hume recognised that we can only distinguish the colour from the shape of any particular physical object by distinguishing them in reason, though they are not distinct in fact. If Quine thinks the distinctions between (*e.g.*) shape and size is 'unsatisfactory' because those two attributes have the same instances (the same class extensions), so much the worse for the point of view of extensionalist logic upon human knowledge of nature, whether commonsense or scientific. Quine's dogmatic insistence upon extensionalism blinds him to an obvious, evident *modus tollendo tollens*.

Note too, in the above passage, that Quine speaks of 'reifying'

⁸⁸*An Post*, I:5.27b, I:7.92b, II:7.92a37–b1, II:19.100a11–b5; *Top.* II:2.109b13ff, IV:1.121a30ff, V:4.132a28ff, VIII:1.155b34f, VIII:2.157a20–34f; *Met.* IX:6.1048a32–b9; *Phys.* I:1.

⁸⁹Much the same problem of classification recurs in mathematics; see Lakatos (1976).

classes 'but not properties'. That is Quine's quantificational criterion of ontological commitment on display, exhibiting Quine's elective choice about what to 'reify'. However, insofar as our philosophical task is to understand empirical knowledge, Sellars is right that Quine's criterion of ontological commitment is defective. Quine (1946, 38) had noted that Hume's 'separability principle' is problematic (a point examined in detail by Quine's secondary sources: Kemp Smith, Church and Hendry), but Quine never investigated this important point. It is important in two regards.

First, Hume's examples and analysis highlight that any and every physical object (and likewise event) has a plurality of characteristics. Accordingly, any one of them would be a proper member of any set of objects 'containing' only objects which instantiate any one of something's several properties. Quine's repeated presumption that the identity conditions of sets is unambiguous, and in this logically important regard contrasts to the identity conditions of attributes, so that 'attributes' are to be disavowed but sets affirmed – 'reified', he says – shows that Quine's logic and its attendant 'logical point of view' are also in this basic regard unfit for the non-formal domain of empirical knowledge.

Second, Hume's account of distinctions of reason requires his linguistic account of merely determinable concepts, but at this crucial juncture, Hume's imagination does all the linguistic *cum* conceptual, classificatory work, in ways which *in principle* cannot be accounted for by his official copy theory of impressions and ideas and his official three laws of psychological association. At best, and taken very sympathetically, Hume's official theory of ideas can only account for determinate concepts (classifications), as

fine-grained as anyone can perceptually distinguish. However, in principle Hume's official theory of ideas cannot account for determinable concepts, such as 'space', 'region of space', 'time', 'period of time', 'size' (in contrast, *e.g.*, to: 1.58 cm) or 'duration' (in contrast, *e.g.*, to: 543 seconds) (Westphal 2013). Determinable concepts are fundamental to human thought, language and knowledge. Sellars (EPM 79, 83–4, 88) was right to see what Kant saw (in these regards) in the shortcomings of Hume's official theory of ideas, for they betray the incapacity of empiricism to account for human language, thought and knowledge.

All of these reasons underscore Sellars's elementary though decisive point, that logical quantification is no guide to ontology, and that instead we must model our regimented (partially formalised) philosophical semantics to fit what we know about particulars and how we correctly refer to, describe and otherwise deal with them.

Consider in this connection Carnap's statement of one central point and aim of his formalised semantics:

Many sentences in philosophy are such that, in their customary formulation, they seem to deal not with language but merely with certain features of things or events or nature in general, while a closer analysis shows that they are translatable into sentences of L-semantics. Sentences of this kind might be called quasi-logical or crypto-logical. By translating quasi-logical sentences into L-terms, the philosophical problems involved will often become clearer and their treatment in terms of L-semantics more precise. (Carnap 1943, §38*h*)

In this important regard Sellars followed Carnap's advice, but im-

proved upon his semantic practice, indeed, from the start of his career. Carnap recognised that syntax and semantics are abstracted from pragmatics, from actual linguistic usage by actual persons on actual occasions. In the ways just detailed, Quine failed to recognise the pragmatic roots of formalised syntax and formalised semantics. Indeed, in a session attended by Quine of the American Academy of Arts and Sciences, Lotz (1951) noted that natural languages are far less like formalised languages than advocates of the latter acknowledged. Quine disregarded Lotz's cogent observations; through the failure of his early attempts to formalise pragmatics, Sellars had already learnt these vitally important differences.

Unlike Quine, Sellars took these pragmatic roots seriously, more so than had Carnap. Speaking of Carnap's formalisations, and using the term 'interpretation' accordingly, Sellars notes:

Nowhere, however, does Carnap give an *independent* defense of the idea that semantical expressions in ordinary usage are thus definable (or explicable). Indeed, it clearly has not occurred to him that the relation between the semantical words of a pure semantical system and the semantical words of the corresponding set of descriptive semantical sentences could be other than that of 'interpretation'. He rather *infers* the logical status of semantical words in descriptive semantics from the logical status of semantical words in pure semantics together with the premise that the relation between the two is one of interpretation. (EAE ¶69)

Actual statements by actual persons in actual circumstances on actual occasions – these are the domain of Carnap's 'descriptive

semantics', noted here by Sellars – require more detailed attention than Carnap's formalised syntax and semantics can provide. However, Sellars is right that these issues cannot simply be consigned to Carnap's third classification 'descriptive semantics': There is need for properly *philosophical* semantics in connection with actual language usage, both commonsense and scientific (EAE 67; quoted above §6.5). Indeed, this philosophical semantics is necessary for assessing conceptual explications, and conceptual explications writ large as linguistic frameworks; Sellars's philosophical semantics is surely also a great aid in developing explications as well, especially in philosophical domains.

In 1948 Sellars had already rejected – for good reason, as we have seen – that the 'meaning' of predicates consists in their designating or referring to properties, to universals. This is the kernel of his 'non-relational' theory of meaning:

To say that 'means' is a formal term in such a language is to say that 'means' or 'designates' is one of the bones of the skeleton of the language, enabling it to contain a logic of meaning and truth, just as logical words enable any language to contain a logic of implication. *Meaning* in this sense is no more to be found in the world than is a referent for 'or'. (RNWW 21)

'Meaning' is a matter of classification; that predicates as such do not refer is consistent with particular sentences which use meaningful predicates being used on particular occasions by particular people in particular contexts to make particular statements, each of which refers to particular object(s) or event(s) which have characteristics appropriately classified as instances of the predicate(s)

used in that statement.

In *The Time of [his] Life*, Quine (1985, 428) mentions rather breezily an occasion on which he heard 'Wilfrid's review of his familiar views'. There is no indication that Quine understood Sellars's views on the issues examined here. Quine's relatively few references to Sellars's work indicate no more than broad accord about moderate behaviourism.⁹⁰ Quine missed Sellars's important point that conditioned verbal responses to occasioning circumstances as such fail to account for the norm-governed linguistic roles in terms of which alone utterances can be appropriate (or not). Quine's behaviourism, too, is an inadequate 'regulist' (non-)account of linguistic meaning.⁹¹ Having not very well understood Hume's view and its fundamental, instructive problems, Quine's disregard of Sellars's 'familiar' views is unsurprising.

6.13 Sellars's emphasis on, and central use and development of Carnapian explication is deeply informed by his Kantian insight into reason and reasoning, the common basis of both practical and theoretical activity – including philosophy (above, §6.2). C. I. Lewis (1941, 94) distinguished his pragmatic theory of meaning from the verification principles of logical positivism and logical empiricism by his emphasis upon human agency.⁹² In stark contrast, Wick (1951, 50) noted that, although logical empiricism is a radically

⁹⁰Quine (1981c); (2004), 321, 324; (2008), 255. The one other relevant point is Quine's rejection of substitutional approaches to quantification, an approach Sellars (1963c, 1963d) took. Though not easy, Sellars's substitutional approach can be developed in defensible form (Lance 1996).

⁹¹Cf. above, §6.2, and Green (1998), esp. §2.

⁹²Lewis emphasised this contrast prior to *AKV* (1946).

practical philosophy, it formulated no philosophy of the practical.⁹³ Quine's views are no improvement in this basic regard (cp. Murphey 2012, 164–5). Like C. I. Lewis and the Classical pragmatists, human agency, practical reason and philosophical ethics are central to Sellars's views. One indication of this centrality is Sellars's recognition of the mutual irreducibility of descriptive, prescriptive, logical and semiotic rules (above, §6.3).

6.14 Whereas Quine sought (in 'Two Dogmas') a univocal, general account of 'the' analytic/synthetic distinction for natural *and* for formal languages, Sellars (EAE 16, 18, 43) realised we need to acknowledge (at least) a four-fold distinction: broad and narrow senses of 'analytic' and 'synthetic', and broad and narrow senses of 'empirical'. By seeking only one, univocal, general distinction between 'the' analytic and 'the' synthetic in 'Two Dogmas of Empiricism', Quine obscured and neglected these and other important semiotic issues.⁹⁴

6.15 Sellars's use of explication verges upon hermeneutics:

It is essential ... to note that the resources *introduced* (i.e. the variables and the term 'proposition') can do their job only because the language already contains the sentential connectives with their characteristic syntax by virtue of which such sentences as 'Either Chicago is large or Chicago is not large' are analytic. In other words, the introduced *nominal* resources mobilize existing *syntactical* resources of the language to make possible the statement 'There are propositions'. (EAE ¶3, cf. ¶28)

⁹³This alone suffices to exclude Carnap from the pragmatist tradition, *pace* Sinclair (2012), §4.

⁹⁴Sellars' quadruple distinction in EAE has clear precedents ten years previous in 'Is there a Synthetic "a priori"?', in Sellars (1963a), 298–320.

Here Sellars clearly recognises that we are able to state explicit definitions only because we are already competent speakers and thinkers. This point holds both with regard to ordinary language and to any explicitly stated meta-language.⁹⁵ This circumstance appears to be a predicament only if one denigrates ordinary – or any relevantly first- or lower-order – language, and insists that these can only be fit for use if, when and insofar as they are regulated by an explicitly defined metalanguage. Three characteristic points show that Quine landed himself in this 'lingui-centric predicament':

1. Quine's (1995a, 90–1) insistence that he could only properly understand extensional languages. (above, §4.8)
2. Quine's demand (in 'Two Dogmas') for one univocal account of 'analyticity' holding across all natural, as well as formal, languages. (above, §5.1)
3. Quine's use of proxy functions to justify his thesis of the inscrutability of reference. (above, §4.10)

Everett Hall (*e.g.*, 1952, 197, 230–46; 1961, 64; *cf.* 1960, 63–5) had characterised this lingui-centric predicament and noted how it threatens ideal language theories. This same lingui-centric predicament recurs today in those minimalist or quietist accounts of truth which hold our first-order statements (or our second-order ascriptions) hostage to our meta-linguistic *theory* of truth. Sellars clearly recognised that any explicitly stated meta-language (or fragment

⁹⁵Alert readers can see some sensitivity to this hermeneutical point both in Frege and in Peirce; see Hintikka and Sandu (1994), 113.

thereof) presupposes intact, richer, lower-order linguistic resources, which can *be*, and can *function* as, linguistic resources only within our natural and social contexts of linguistic usage. Metalinguistic statements can at best explicate lower-order linguistic resources, by drawing upon our linguistic capacities and competence; no meta-language can define those lower-order resources into existence – just as Quine (1936) recognised about basic logical symbols and concepts. Sellars’s explications aimed to introduce an illuminating degree of ‘regimentation’ into our philosophical discourse, but in sharp contrast to Quine, Sellars tied explication to the original context of use and perplexity which called for explication, and he used his explications to better articulate and to understand that original context of perplexing phenomena.

6.16 Sellars recognised that his functional role semantics involves complexly interconnected conceptual roles, and thus a (moderate) form of meaning holism. As an empiricist, Carnap sought to preserve semantic atomism, at least for observation statements (*per* above, §2.5). However, as Wick (1951) noted, Carnap’s account of linguistic frameworks in ESO entailed (moderate) meaning holism. Carnap’s (1963b) last semantics again sought to preserve semantic atomism for observation statements, though again it did not. Carnap graciously conceded the point (Kaplan 1971).⁹⁶ Carnap’s failure

⁹⁶In his ‘Homage to Carnap’ Kaplan does not disclose his counter-examples, nor indicate whether they addressed Carnap (1963b), his most mature and sophisticated statement of his semantics, which nevertheless is subject to just this problem, because the meanings of predicates is in part a function of the linguistic form(s) of observation statements in which they occur, and these forms are set by the *L*-rules of their linguistic framework. Consequently, on Carnap’s own specification of meaning in terms of which inferences can, and which cannot, be drawn

to preserve semantic atomism unwittingly corroborated C. I. Lewis’s (1929, 107) view, that linguistic intension – *i.e.*, classifications of particulars and their features – is implicitly holistic, so that verbal definition is eventually circular. Consequently, logical analysis cannot involve reduction to primitive terms, but instead must and can only interrelate (and explicate) terms, together with their proper circumstances of use. In sum, concepts consist in relational structures of meaningful classification and inference. This view is adopted and further developed by Sellars, whose account of ‘synthetic necessary truth’ (*SM* 3.18–19) is a direct successor of Lewis’ pragmatic conception of the *a priori*, and to Hall’s form of categorial analysis.

6.17 Semantic holism – whether moderate or radical – underscores the importance of these methodological questions:

1. What, if anything, can guide proper analysis or explication?
2. On what basis can an analysis or explication be assessed?

Most importantly:

3. What can limit or counter-act the importation of linguistic or conceptual confusions from the object-level language in the material mode of speech into an analysis or an explication in a formal mode of speech?

To the best of my knowledge only one analytic philosopher overtly addressed this question: Wilfrid Sellars, who on this important

using a specific term or phrase, the meaning of any observation predicates is in part a function of the linguistic framework in which it occurs (Westphal 1989, 60–2).

point followed the sage advice of Aristotle. Because philosophical issues are so complex, elusive and easily obscured by incautious phrasing, one must consult carefully the opinions of the many and the wise. Sellars found the wise throughout philosophical history, from the pre-Socratics to the present day,⁹⁷ because core issues regarding the logical forms of thought and the connection of thought with things are perennial, arising in distinctive, paradigmatic forms in each era (*SM* 3.15–20). One result of Sellars's expansive research is a catalogue and critical assessment of philosophical locutions, that is, so to speak, of the 'ordinary language' of *philosophers*. Only by examining these can one find the most suitable, least misleading formulations of issues, specific theses, distinctions and their relations. Thus even when cast in the formal mode of speech, any philosophical explication must be systematic as well as historical and textual. Indeed: a philosophical explication can only be systematic by *also* being historical and textual. The semantic interconnections amongst philosophical issues, *via* the semantic relations of their central terms and their interrelated contexts of use, provides a crucial check against inapt formulations, analyses and explications.⁹⁸ As noted at the outset (above, §1), Sellars credits Hall with due attention to these crucial considerations.

Quine's disregard of philosophical history is directly linked to the paucity of his semantic views, and to the paucity of much con-

⁹⁷For example, Sellars (*SM* 3.3, 24, *cf.* 43) refers thrice to Parmenides; the contemporary counterparts of Heraclitus are radical sense-datum theorists, trope theorists and causal process time-slicers, all of whom are neo-Humeans.

⁹⁸Sellars (*PPHE*, *EPH*, *KPT*, *KTM*) contributed substantially to historical philosophy; compared to which Rorty (1979) and Brandom (2002) pale.

temporary discussion, too much of which has followed his, and then Rorty's, deeply misleading ahistorical preferences.

6.18 From the failure of empiricist semantic atomism one only gets to radical semantic holism by assuming Quine's extensionalist 'logical point of view', which treats the entirety of (scientific) language as a huge set of logical formulae, all on a par, across which we are to assign truth values as suits our preferences.⁹⁹ However, that favourite tool of anti-metaphysicians – Ockham's Razor – can be used only to compare and to assess two or more distinct theories which are otherwise equally adequate explanations of the same domain (Sober 1975). This is a rare circumstance, especially in philosophy, where we're still challenged simply to devise a roughly adequate account for many domains. Use of Ockham's Razor can only be subsequent to at least two equally successful explanatory inquiries; it is no *antecedent* criterion for any ontology or theory, especially in philosophy. This is part of Dewey's reason for insisting that we cannot inquire into antecedent – *i.e.* presupposed – realities; what we determine to be real can only result from open inquiry, where our theories and expectations are as subject to investigation as are the phenomenon into which we inquire.¹⁰⁰ Though Quine (1951a, 1969) affiliated his views with Dewey's (and Peirce's), as he (1985, 415; 1995b, 272) later indicated, he simply and literally didn't know what he was talking about.¹⁰¹

⁹⁹For more a more nuanced account, see Fodor and LePore (1992).

¹⁰⁰See Murphy (1939), Dewey (1939), 556–9, 563, 565; Will (1997), 45 note.

¹⁰¹*Cf.* Pihlström and Koskinen (2006). Murphey (2012, 20, 81) presumes Quine must have understood pragmatism because he had studied with C. I. Lewis, and had written a paper for him on 'Conceptual Pragmatism'. Murphey is surely right that Quine's notion of 'analytic' sentences as those we most refuse to rescind is

6.19 Quine's criterion of ontological commitment led to his life-long, if reluctant affirmation of numbers and classes as abstract objects,¹⁰² which he regarded as one extreme of a (radial) continuum of sentences and commitments, with individual empirical claims at the other (peripheral) extreme. On Quine's approach to ontology, physical objects, neutrinos and sets are all on a par; only their relative semantic positions differ.

Sellars adroitly noted a decisive break in Quine's purported semantic *cum* ontological continuum: The natural sciences not only develop theories involving various sub-observable phenomena, processes or entities, they also develop theories which explain how we can obtain information about and knowledge of those sub-observables. There is no such counterpart scientific explanation of how we can obtain information about or knowledge of, *e.g.*, sets or set theory (EAE ¶21, BLM). Having recommended that epistemologists take recourse to empirical psychology, one might expect Quine to take more seriously his official naturalistic approach to knowledge, and so to have noticed the question his naturalism raises about how – or whether – we can have knowledge of abstrac-

indebted to, though also distinct from, Lewis's view (*MWO* 305–6, 1923 [1970], 234; Murphey 2012, 20, 67, *cf.* 79). However, Quine was deeply committed both to extensionalism and to behaviourism from his undergraduate studies, and regarded his professors at Harvard, including Lewis, as hopelessly enmeshed in intensionalism. Hence Quine's semantics would strongly tend toward disregarding Lewis' sophisticated views in *MWO* about the pragmatic character and basis of conceptual classifications, their use and their revision or replacement. Quine (1981b) shows he rejected pragmatism, such as he understood it (*ca.* 1975), except insofar as it coincided with his own empiricism. For a better view of pragmatism, starting with Lewis', see Westphal (2010a), (2014b).

¹⁰²Goodman and Quine (1947); Quine (1969a), 75, 102, (2000 [2008]), 497.

ta (*cf.* Benacerraf 1973), but this issue is occluded by Quine's devotion to his extensionalist 'logical point of view' and its attendant notion of ontological commitment, which in principle provide no resources for *assessing* anyone's ontological commitments.¹⁰³ Quine's under-examined commitment to sets is one of the metaphysical views lurking in the dark corners of Carnap's neglected relations between pure and descriptive semantics (EAE ¶25, quoted above, §6.1).

6.20 Quine's (1973, 1995a) later sketches of how we are able to refer to physical objects merit his earlier rejoinder to reductionist epistemology:

If all we hope for is a reconstruction that links science to experience in explicit ways short of translation, then it would seem more sensible to settle for psychology. Better to discover how science is in fact developed and learned than to fabricate a fictitious structure to a similar effect. (Quine 1969, 78)

Quine, however, devoted no attention to history of science, nor any significant attention to cognitive psychology or to empirical research about human learning (Murphey 2012, 141–4, 165, 232, 242–3, *cf.* 219). Nor did Quine disambiguate his purportedly 'naturalised' epistemology (Haack 1993, 118–38).¹⁰⁴ Instead, he spent his

¹⁰³Benacerraf (1973) appeared a decade after Sellars's EAE, eight years prior to BLM. I have found no indication that Quine considered their common epistemological point.

¹⁰⁴Johnsen's (2014) impassioned plea to preserve Quine's empiricism neglects the fundamental problems with Quine's views detailed here, by Haack and by Murphey. (Johnsen (2005) also neglects Haack's critique, and others who have previously noted Quine's restricted epistemic normativity.) One simple example

career trying to figure out the smallest steps from parental conditioning of verbal responses to first-order quantification, appealing causally to Darwinian natural selection to impute to us whatever capacities might be required to take those steps (Quine 1995a). Quine devoted most of his career to pursuing the old empiricist quest for an account of the origin of our ideas.¹⁰⁵

6.21 Part of Quine's (1969a, 155) Humean predicament is his view, that if you 'save the surface' of a percipient's body 'you save all'

is that Johnsen stresses Quine's (1992, 13) statement that 'Pure observation lends only negative evidence' (ms. 15), but shortly thereafter speaks of observational evidence much more positively: 'We learn, for example, that observed emeralds' having been green *is* evidence that all emeralds are green by learning that *we take it* to be such, and if, at some point, we encounter the term "grue" (meaning "observed before 2020 and green, or not observed before 2020 and blue"), we learn that observed emeralds' having been grue is *not* evidence that all emeralds are grue by learning that *we do not take it* to be such' (ms. 19; original emphases). If there is a 'calamity' (Johnsen 2013, 961), it is how unsystematic and neglectful philosophy has become in recent decades. (Murphey's book appeared at about the time Johnsen would have been completing his article, but Murphey's book catalogues what Johnsen – and his referees – neglect. Quine's regal editorial voice, his contempt for both scholarship and for history of philosophy, and the often piecemeal, casual presentation of his views have contributed mightily to his gaining a loyal though often insufficiently critical following, and to the deterioration of the calibre and scope of philosophical research in recent decades in many areas. As for empiricism, it has no monopoly upon empirical knowledge (Westphal 2014a).

¹⁰⁵Murphey (2012) extensively documents this point, though without stating it expressly. He both documents (esp. chapters 4, 5) and expressly identifies (p. 203) Quine's failure to do away with 'mentalistic': mentalistic locutions are Quine's only handle on purported 'global stimulus' patterns as 'the temporally ordered class of all sensory receptors triggered during [a] specious present' (Quine 1995a, 17; cf. 1961, 43; 1969a, 84, 155, 158).

(above, §4.2). If not outright false, Quine's fixation upon (purported) sensory stimulations is deeply misleading, especially when coupled with Quine's (1969a, 83; 1981a, 21; 1995a, 16) contrast between what he styles the 'torrential output' of our theorising and our allegedly 'meagre', 'sketchy' sensory 'input'. How any relevant 'occasion' – *i.e.*, any relevant 'specious present' during which any 'global sensory stimulus' is said to occur, and which magically individuates some one particular – is to be specified or identified, is a key question Quine neglects; it is a question to which he should and could have been alerted by Hume's examination, 'Of Scepticism with regard to the senses': 'global' with respect to sensory stimuli cannot refer to all concurrent sensory stimuli of any one living body; if it did, it would fail entirely to be linked in the way Quine clearly – dare I say – intends to the individuation and recognition of any particular(s). 'Global' in this context is supposed to refer to all sensory stimuli occasioned by any one particular, regarding which Quine supposes there are enough shared patterns within such global sensory stimuli occasions to allow us to recognise one another, various particulars in our surroundings and various mutually understood occasion sentences. A key problem, as Murphey (2012, 203) notes, is that the only grip Quine has on such alleged 'global' (though somehow individuated) patterns of sensory stimuli is solely in terms of perceived and identified environmental particulars and meaningful linguistic statements. Quine's chronic mis-underestimation of human perception is sheer empiricist dogma; it is not even remotely an empirically confirmed truth. What an organism can perceive of or in its surroundings, given its perceptual physiology, is in part a function of what kind of envi-

ronment it occupies (Gibson 1966, Dretske 1981, Millikan 1984, 1993).¹⁰⁶ Quine never learnt this basic, naturalistic point, which is to say: Quine never saw through this standard problem with causal theories of perception, that they chronically restrict perception to internal sensory states.¹⁰⁷ Indeed, he refused it when it was suggested by Davidson, who recognised in just this regard that Quine's view remained 'Cartesian'.¹⁰⁸ Like Reid, Tetens, Kant, Hegel, the Critical Realists – including Roy Wood Sellars and Everett Hall – and also Chisholm, P. F. Strawson (in his later essays) and Dretske, Wilfrid Sellars (SM 1.24– 25, 42n7) held that sensations are not typically objects of our awareness; instead, typically they are components of acts of awareness of objects and events in our surroundings. Ordinary physical objects are no mere 'posit', like electrons or neutrinos only much bigger and slower: Ordinarily we and other animals perceive physical objects and events in our surroundings, even if some philosophers convince themselves otherwise. This is not the place to delve into philosophy of perception, but consider carefully Hall's or Sellars's accounts of perception in con-

¹⁰⁶Deliberately I cite three very different theories of perception which nevertheless agree on the basic point at issue here.

¹⁰⁷Impacts of rays and particles are irrelevant except as they trigger receptors, and happily it is only a question of triggering, with no question of more or less' (Quine 1995b, 272–3). This is make-believe physiology, which does too little to update *Word and Object* (cf. *ibid.*, 273). Johnsen (2014, 983) accepts Quine's view of sensations unreservedly, faulting him only with an 'enormous expository blunder'.

¹⁰⁸Davidson made the suggestion to Quine in 1986; he surmised that Quine's view is 'internalist (read: Cartesian)' in a 1993 letter to Gibson. The relevant references (Transcripts of Stanford Meeting, MSAm2587(2749), Folder 2; Donald Davidson to Gibson, MSAm2587(287), 1/13/93) are quoted and discussed by Murphey (2012, 200–1, 215–6).

trast to Carnap's or to Quine's (cf. Coates 2007). (If seeing for yourself, dear reader, is insufficient for believing, please do let me know; I'd like to discuss it with you – once you explain to me how you found me again.¹⁰⁹)

¹⁰⁹Johnsen (2014, 986) ascribes this cleaned-up view to Quine: 'Note, finally, that [Quine's] own proposal concerning how *to understand* subjective observation sentences virtually requires him to regard them as evidence for the corresponding objective ones: What better evidence could I have for my belief *that there is a horse before me* than my highly certain introspective belief *that I am in a neuroperceptual brain state of the sort typically induced in me by my seeing a horse*? Thus Quine has solid scientific reason to count my introspective knowledge of my neuroperceptual brain states as my ultimate evidence concerning how the world is' (original emphases). Rhetorical questions are not arguments, and his can be directly answered by any direct theory of perception, including sophisticated versions such as Dretske's, especially once alerted to level confusions in epistemology by Alston (1980). Perhaps my best evidence *that I believe there is a horse in front of me* is some sort of first-person privileged access, but any such first-person access requires no beliefs about brain states or any other physiology. My best evidence *that there is a horse in front of me* is that I see *that horse* there in front of me and recognise it to be a horse. That was easy enough when I last passed a horse pasture (recently). On Johnsen's (2013, 986) Quinean view, we don't observe objects or events in our surroundings, 'we observe irradiations and their ilk': 'Recall first that [Quine] characterizes the input that we accord the physical human subject as irradiations and the like, not as stimulations of its sensory organs. This gets things exactly right, since what we are to learn about our physical subject is to be learned strictly on the basis of our *observations* of its inputs and outputs, and we do not, except under extremely unusual conditions, observe stimulations of a subject's sensory organs; we *observe* irradiations and their ilk, and we *theorize* that the subject has normally functioning sensory receptors that are thereby stimulated' (original emphases). Causal theories of perception inevitably lead to indirect theories of perception (even in sophisticated versions; e.g., Perkins 1983); a key virtue of Dretske's (1981) account of sensory systems as information channels is that it neatly accounts for how observed objects and events can be distal, though information

7 Conclusion

These reflections opened by quoting Sellars's homage to Everett Hall, because what he said of Hall surely also should be said of Sellars himself. At a time when there is much talk of 'neo-Pragmatism', which owes far more to semantic ascent than it does to the Classical Pragmatists,¹¹⁰ and when much of this talk follows Quine's fledgling steps in an ill-defined 'pragmatic' (or, some claim, even a 'post-analytical') direction, we may conclude by recalling Sellars's opening paragraph on 'Phenomenalism':

Once again, as so often in the history of philosophy, there is a danger that a position will be abandoned before the reasons for its inadequacy are fully understood, with the twin results that: (a) it will not be noticed that its successor, to all appearances a direct contrary, shares some of its mistakes; (b) the truths contained in the old position will be cast aside with its errors. The almost inevitable result of these stampedes has been the "swing of the pendulum" character of philosophical thought; the partial truth of the old position reasserts itself in the long run and brings the rest of the tangle with it. (PHM ¶1)

Sellars's philosophical *caveat emptor* is vital, as both Quine's conun-

receipt (and decoding) is proximal, and ultimately neuro-physio-psychological. (The same level-confusion and the same neglect of direct theories of perception, including critical realist theories of perception, occurs in the first premise of Johnsen's (2009, 691) version of the prime argument for global perceptual scepticism.)

¹¹⁰E.g., Hempel (1979, 1988, 1992), Stich (1993), Rorty (1995), Putnam (1995), Wolters (2003), Price (2011); cf. Sleeper (1986), Haack (1998), 31–47; Pihlström and Koskinen (2006).

drums and the un- or under-appreciated features of Carnap's views highlighted herein show, e.g., about verification empiricism (§4.7). When it comes to pragmatism, accept no substitutes: insist upon the genuine article. To do so, however, requires philosophically careful history, and systematically historical philosophy, of which Sellars was a past master. Anything less condemns us to inept conventionalism and parochialism, thus impoverishing the space of reasons.¹¹¹

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in memoriam

Rein VIHALEM (1938–2015)

Chemist, philosopher, mentor, practical realist, *Mensch*

¹¹¹See also Boulter (2011), Scharff (2014). This paper first took shape at the kind invitation of Jim O'Shea to participate in a session on Sellars at the first European Pragmatism Conference (Rome, 2012), where Michael Williams, Maria Baghramian and Jim also presented. Discussions there, especially with Michael, were very helpful. My new colleagues at Boğaziçi Üniversitesi occasioned, heard and discussed a revised version, which again was helpful. An anonymous referee for this journal kindly provided several helpful suggestions. This paper is for Ron Laymon, who first advised me to study Carnap (at the Ohio State University in 1985), whose semantic views have remained enormously useful ever since. I am very grateful for Ron's advice and guidance then, in person and through his published research. It is most unfortunate that he left the field, dejected by excessive, pointless factionalism supplanting critical philosophical analysis. Ron exhibited the best of engineering virtues: entirely non-ideological neutrality when assessing soundness and cogency of reasoning in problem solving.

Appendix: Abbreviations for Sellars's Works Cited,
listed alphabetically.

- BLM 'Behaviorism, Language and Meaning', 1980.
CIL 'Concepts as Involving Laws and as Inconceivable Without Them', 1948.
EAE 'Empiricism and Abstract Entities', 1963.
EPM 'Empiricism and the Philosophy of Mind', 1956.
FMPP 'Foundations for a Metaphysics of Pure Process', 1981.
IM 'Inference and Meaning', 1953.
IRH 'The Intentional Realism of Everett Hall', 1966.
KPT *Kant and Pre-Kantian Themes: Lectures by Wilfrid Sellars*, 2002.
KTM *Kant's Transcendental Metaphysics: Sellars' Cassirer Lectures & Other Essays*, 2002.
LRB 'Language, Rules, and Behavior', 1949.
NAO *Naturalism and Ontology*, 1980.
OPM 'Ontology and the Philosophy of Mind in Russell', 1974.
PPE 'Pure Pragmatics and Epistemology', 1947.
PPHP *Philosophical Perspectives: History of Philosophy*, 1977.
PPME *Philosophical Perspectives: Metaphysics and Epistemology*, 1977.
PPPW *Pure Pragmatics and Possible Worlds: The Early Essays of Wilfrid Sellars*, 1980.
SM *Science and Metaphysics: Variations on Kantian Themes*, 1968.
SPR *Science, Perception, and Reality*, 1963.

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