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Sellars, Carnap, and the Logical Space of Reasons

A.W. Carus

One of the most enigmatic, but also most influential and captivating, aspects of Kant's overall project is his central concept of "reason" (*Vernunft*), which he contrasts with mere "understanding" (*Verstand*). The scope of reason, for him, is wider than the scope of knowledge, and embraces the practical, ethical, and spiritual as well as the cognitive. Kant's treatment of this concept is perhaps the most systematic attempt in the history of modern philosophy to give substance to the intuition that science is not all there is to our human capacity for rational thought, that there is a kind of reason or reasonableness, consistent with science but not exhausted by it, that can be applied not only in choosing means for given ends, but in the development and choice of ends themselves.[1]

One standard way of viewing logical empiricism is to regard it as the *denial* of this intuition – the refusal to acknowledge anything in it worth explicating or preserving, and the "scientistic" arrogation of all cognitive authority to the scientific model of rationality (whatever that may turn out, in the end, to be). Wilfrid Sellars, on the other hand, is presently regarded as one of the first to challenge this narrow, supposedly logical empiricist, view of rationality. His famous paper "Empiricism and the Philosophy of Mind," for instance, is held by

1. This idea has repeatedly come to the fore within analytic philosophy over the past few decades, from a number of different viewpoints, but these have generally not taken account of each other. Some notable examples are Hilary Putnam's (1981) insistence that "reason can't be naturalized," Richard Velkley's (1989) historical investigation of Rousseau's influence on Kant's conception of reason, Susan Neiman's (1994) proposal how to understand Kant's account of the unity of reason, Stephen Toulmin's (2001) more popular attempt to revive a broader version of "reasonableness" against "scientific reason," and Michael Friedman's (2001) precisely opposite program of reconstructing a version of *scientific* reason as a broader concept. None of these authors was much influenced by Sellars, though certain more recent versions (Rorty, McDowell, Brandom) do show his influence or acknowledge that they have followed a similar path (Habermas 1999).

Rorty to have had the same liberating influence in America that Austin's *Sense and Sensibilia* had in Britain: "It was a decisive move in turning analytic philosophy away from the foundationalist motives of the logical empiricists" (Rorty 1997, p. 5). And consequent on this abandonment of scientific "foundationalism," Sellars returns to something like a Kantian conception of "reason," as possessing a broader scope than just scientific reason, and including the practical and ethical as well as the cognitive. Science, for Sellars, rests on (though is not reducible to) a basis of rationality we possessed long before science, and which we still use in our practical decisions and our deliberation about the ends we pursue. This broader rationality, in terms of which human beings came to self-awareness and which still provides the indispensable framework for our everyday *Lebenswelt*, Sellars called the "manifest image." He contrasted it with the "scientific image," the view of the world (and the image of human life in the world) we find in scientific theory (Sellars 1962a).

Sellars never arrived at a definitive formulation of the precise relation between "manifest image" and "scientific image"; this was a problem he continued to address in different ways for the rest of his life. But one thing that appears to remain constant is that the human enterprise of *understanding* science is a matter of fitting it *into* the manifest image. Our philosophical discourse, our categorial systems, our semantics and our pragmatics, have an inescapably evaluative component and are thus to be regarded as part of the manifest image, not *themselves* participant in the scientific image they aim to understand. In Sellars's own metaphor, the philosopher attempts a "synoptic" or "stereoscopic" vision, in which manifest and scientific images are superimposed and brought into focus with each other.[2]

The backbone of this rational meta-discourse about our knowledge is, for Sellars, what he began by calling "pure pragmatics" (Sellars 1947a) and later called "semantics" (e.g. Sellars 1956) – the part of our language that contains resources for reason-giving: sentences and concepts employed in the service of justification, verification, confirmation, truth, and meaning (Sellars 1947a, pp. 6-7). This is the category or "logical space" within the manifest image, then, which Sellars calls the "logical space of reasons" in a celebrated passage: ". . . in characterizing an episode or a state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what it says" (Sellars

2. Almost any definite statement about the import of these concepts in Sellars's thought is controversial; conflicting interpretations are legion, as the texts are notoriously obscure. I have tried to pursue a middle way, and to provide textual evidence for the parts of Sellars's philosophy most relevant in the present context. But I am aware that others read these texts differently; I am grateful to William Rottschaefer for making me aware just how wide the range of variation can be. Regarding the "manifest" and "scientific" images, I use "Philosophy and the Scientific Image of Man" (Sellars 1962a) as my main text, and otherwise follow the interpretation that seems to me most internally consistent and most stalwartly middle-of-the-road, that of Triplett and deVries (2000), here esp. pp. 112-15.

1956, p. 169). It is this return to a broader conception of reason and of a "logical space of reasons" that has made Sellars a starting point for a good deal of present-day philosophy. Not only Rorty, but also McDowell, Brandom, and others base their broader-than-scientific conceptions of reason on the foundation laid by Sellars.

It is not often recalled by his present followers, however, that Sellars developed his conception *within* the framework and vocabulary of logical empiricism, specifically of Carnap. Now this need not imply agreement; his broader conception of reason might have been a reaction *against* the perceived program of the logical empiricists. What better foil and backdrop for articulating a broader, quasi-Kantian view of reason than the most extreme and unequivocal expression of the narrower, scientistic one? But this was not, in fact, his attitude; Sellars adopted a stance not of opposition to logical empiricism but largely of endorsement and agreement; his proposed amendments are framed as internal. In one of his early papers he even describes himself as having "deserted to the camp of logical empiricism" (Sellars 1947b, p. 31).

It turns out that Sellars's expressed goals were not so different from Carnap's. And Carnap's conception of reason is not quite the narrowly "scientistic" one of popular prejudice; there is a Carnapian route to something recognizably like Sellars's "logical space of reasons," though it has a somewhat different status for Carnap than it did for Kant or Sellars. But there is no happy ending. However close his goals were to Carnap's, Sellars did not grasp Carnap's enterprise of explication, and what he did attribute to Carnap was worse than a caricature. So the following is, to some unavoidable extent, an exercise in disentangling misunderstandings and setting the record straight. But this also offers an opportunity to articulate Carnap's project from a point of view like that of Sellars, so that Sellars's misunderstandings can in future be avoided.

I. Material Rules of Inference

Sellars began his career with a series of papers arguing that concepts belonging to the "logical space of reasons" – like justification, confirmation, meaning, and truth (Sellars 1947a, pp. 6-7) – have an irreducibly normative (or, in G.E. Moore's sense, "non-natural") component, and constitute a distinct realm of discourse ("pure pragmatics") from the logical and empirical realms; its sentences are not reducible to logical or empirical ones. One confusing aspect of these early papers is that although they are explicitly positioned against what he calls "psychologism," he means by this something very different from Frege or Husserl. There is an overlap between what he means and this previous meaning, but Sellars applies the term e.g. to truth-conditional accounts of meaning,

which are not psychologistic in Frege's sense; and Sellars does *not* apply the term, as we will see shortly, to the introduction of a "logical" connective defined only in terms of subjective experiences. Still, there *is* an overlap between his and Frege's usage, so Sellars can often sound quite Fregean, as in this passage, whose vocabulary is obviously influenced by Carnap's *Logical Syntax of Language*:

> Characteristic. . . of analytic philosophy has been the rejection of what it terms *psychologism*, that is to say, the mistake of identifying philosophical categories with those of psychology, whether intro- spective or behavioristic. . . . The analytic movement in philosophy has gradually moved towards the conclusion that the defining char- acteristic of philosophical concepts is that they are *formal* concepts relating to the formation and transformation rules of symbol struc- tures called languages. Philosophy, in other words, tends to be conceived of as the *formal theory of languages*. From this stand- point, consequently, psychologism is conceived of as the psychologi- cal treatment of concepts which are properly understood as formal devices defining a mode of linguistic structure. (Sellars 1947a, p. 5)

As if to underline his acceptance of Carnap's terms, he adds that he will draw a distinction, "perhaps sharper than that usually drawn, between the formal the- ory of languages and the empirical study of historical language-behavior" (ibid.). But actually his use of the term "formal" here is as eccentric as his use of "psychologism," as we see when he applies it to a problem that had, many years before, also preoccupied Carnap: how to make precise the idea of "empir- ical content."[3] Sellars's approach to this problem is to impose what he calls "a certain *formal* restriction on the calculi to the expressions of which pragmatic predicates are assignable." That what he means by "formal" here bears little relation to the standard meaning becomes evident from the following "non- technical" explanation of what he has in mind:

> . . . *the minimum formal requirement which a formal system must fulfill in order to be a candidate for the position of empirically mean- ingful language is that it be capable of being "about" a world in which it is used.* This statement should be kept in mind as the key to the argument which follows, for its aim can be summarized as *the attempt to give a formal reconstruction of the common-sense notion that an empirically meaningful language is one that is about the world in which it is used.* (ibid., p. 11)

3. Carnap's problem in the *Aufbau* had been, more specifically, how to make the idea of "empirical content" precise *without an elucidatory metalanguage to establish a connec- tion between language and world.* His solution to this problem, at that time, was to build the connection between language and world into the language by making the entire sys- tem relational or, in his terms, "purely structural." Sellars has nothing of this sort in mind, in the passage discussed here.

He does not mean "formal," then, in Carnap's sense, since the very idea of ref- erence (of "about") is eliminated (regarded as an intra-linguistic notion) in the *Syntax*. And in present-day logical parlance, a "formal" language is an entirely uninterpreted one, not "about" anything at all. But if neither Carnap's nor the standard sense of "formal" is intended, what is? We get an oblique hint a few lines down, where Sellars introduces what he calls a "purely formal" connective "coex" (short for "co-experienced with") to define "verifiable sentence," as follows:

> By requiring any constructed calculus to contain such a predicate. . . and with the aid of the metalinguistic predicate "token," we can introduce the predicate "verifiable sentence" in the following way: "'p' is a verifiable sentence in C if C includes a sentence 'q' and a sentence 'r' such that 'q' designates r *coex* p, and r is a token of 'p'." The sentences 'q' and 'r' will be called the *experiential tie* of 'p'. This concept of an experiential tie is, consequently, a purely formal one. It is the *philosophical* concept which has been sought mistakenly in the psychological object language. (ibid., pp. 11–12)

So by "purely formal" Sellars does not mean "purely linguistic," or "syntactic," or even "logical," in Carnap's or the modern sense, but something much less definite, perhaps "metalinguistic." He equates "formal" with "philosophi- cal"–as Carnap does in the final section of the *Syntax* (Carnap 1934, pp. 203ff.). But the *Syntax* had attempted to *eliminate* the vague notion of "philo- sophical" by reducing it to an antecedent specification of "formal," while Sellars does just the opposite. He equates "formal" to an antecedently under- stood (but not precisely specified) concept of "philosophical." Sellars never acknowledges – he seems unaware of – Carnap's antecedent notion of "formal," deriving from Frege's purely formal system of logic and Gödel's clear distinc- tion, in his dissertation (Gödel 1929), between syntactic (purely formal) deriva- tion and semantic (interpreted) logical consequence. For Carnap, the point of the final section of the *Syntax* had been to *define* "philosophical" sentences or "elucidations,"[4] and thus to give such elucidations a clear *status* by showing that they could be taken as purely formal statements of *Wissenschaftslogik* (and were thus as legitimate as logic or mathematics). This also yielded a clear crite- rion to distinguish elucidations that could be so interpreted (the "quasi-syntac- tic" or "pseudo-object" sentences) from those that could not (Carnap 1934, pp. 176ff., 210ff.).

Sellars completely disregards this central preoccupation of Carnap's *Syntax* and evidently takes the point of Carnap's definition of "philosophical"

4. The *Tractatus* had left this notion notoriously unclear, indicating in its final passages that elucidations were themselves a sophisticated form of nonsense. The Vienna Circle was much concerned, in the late 1920s and early 1930s, to distinguish metalogical, "legit- imate" elucidations from metaphysical nonsense, as the minutes of their meetings indi- cate (ASP/RC 081-07, reprinted in Stadler (1997), pp. 275–334).

as "formal" to be that suggested by a superficial reading of the *Tractatus*:[5] "philosophical" is to mean "having a content that contributes to the task of elucidation," and "formal," accordingly, is understood to mean simply "having to do with elucidation" (or just "metalinguistic"). The doubts raised by Wittgenstein regarding the very possibility of metalinguistic discourse – doubts which were central to the Vienna Circle's debates – are of no concern to Sellars. A notion of "psychologism" defined negatively by reference to "formal" in *this* sense (of "metalinguistic") will therefore *include* much that Frege and Husserl (and Carnap) regarded as "psychological." It will include, for instance, Sellars's proposed connective "co-ex" that is identified only by reference to an intended psychological interpretation ("co-experienced with")[6] and used to ground a concept of "experiential tie." Its actual *formal* properties, in Frege's sense or Carnap's, within a calculus or formal language (a system defined only its by formation and transformation rules), are not specified or even discussed. But these versions of "psychologism" and "formal" allow Sellars to claim that the concept of "experiential tie" – since it is expressed as a metalinguistic requirement (rather than within an empirically interpreted object language) – "is, *consequently* [my emphasis], a purely formal one"!

The recurring argument of these early papers is, roughly, that "psychologism" in Sellars's special sense – also called "factualism" (Sellars 1947a) or "descriptivism" (Sellars 1950) – commits something akin to what has been called, since G.E. Moore, the "naturalistic fallacy" in ethics (e.g. Sellars 1948, p. 60; 1956, p. 131). The idea is that the "formal" (metalinguistic) predicates of "pure pragmatics" (such as "meaningful") have an irreducibly normative (or inexhaustibly "non-natural") component, and thus cannot be either logical or empirical. Any attempt to give a logical and/or empirical criterion for, say, "S is meaningful" must fail, Sellars says, because "meaningful," like other predicates of "pure pragmatics" (later "semantics"), governs the *action* of forming, or refraining from forming, sentences of certain kinds, and purely logical or empirical sentences contain no normative components that could guide or govern these actions.

"Pure pragmatics" is partly constituted by what Sellars calls "material rules of inference." A language with the capability of being "about" the world (in the sense of the above quotations) must be governed by *rules of inference*, he maintains, that are *not* logical.[7] His main example (Sellars 1953, p. 261) is:

5. A reading, to be specific, that remains content with the 4.11's without attending to the later dialectic of "elucidations" and "throwing away the ladder" that so exercised the Vienna Circle (see above, note 4).
6. As Sellars says explicitly: "The model for this predicate is the common-sense expression 'is-present-to- consciousness-along-with'" (Sellars 1947a, p. 11).
7. What he actually contrasts "material" rules of inference with, in the paper quoted from here (Sellars 1953), are "formal" rules – but now, forgetting his previous usage (see above) he has switched, without warning, to using "formal" to mean only "logical"; previously, as we saw, "formal" had embraced *both* logical *and* what would ordinarily be called empirical or descriptive sentences, provided they were in some sense metalinguistic.

(E)   It is raining, therefore the streets will be wet.

Sellars objects, that is, to the usual interpretation of such sentences as elliptical or implicit instances of modus ponens. But his hypothesized "material rules of inference" remain *just* as implicit. He thus evidently regards one kind of implicit rule as a "correct" interpretation of (E) and another as "incorrect." But no standard of correctness is given. Implicitly, Sellars appeals to a standard of empirical fact about about "our" (or "the") language: he asks whether "there are" material as well as formal[8] principles of inference in "the language," and goes about answering this question by listing possible answers, and eliminating them one by one as he finds that they conflict with facts of usage. Only the first option, in his view, survives this test – "(1) Material rules are as *essential to meaning* (and hence to language and thought) as formal rules" – while the options he eliminates see progressively weaker roles for material rules of inference: "(2) While not essential to meaning, material rules of inference have an *original authority* not derived from formal rules, and play an *indispensable* role in our thinking on matters of fact"; "(3) Same as (2) save that the acknowledgment of material rules of inference is held to be a *dispensable* feature of thought, at best a matter of convenience"; and "(4) Material rules of inference have a *purely derivative authority*, though they are genuinely rules of inference," down to the option that inference based on material rules are "*not inferences at all*" (ibid., pp. 261-65).

Carnap, in approaching such a question, would have wanted to establish a shared framework before advancing claims; he would have wanted to know what is meant by "language" or "the language." Sellars, in contrast, *assumes* an antecedently understood "philosophical" or "purely pragmatic" discourse within the manifest image. But it is just the antecedent availability and coherence of this "elucidative" discourse that Carnap (following the early Wittgenstein) doubted. Sellars seems unaware of such doubts within the analytic tradition. And he not only, as we saw, uses such key terms as "formal" and "psychologism" in ways incompatible with that tradition. He evidently is also not using "meaning" in the sense of the *Tractatus* or the *Aufbau*. These accounts of meaning do not require "material rules of inference." In them, meaning derives from the atomic sentences they take as their starting point (and ordinary language is assumed to be regimentable into logic on the model of Russell's theory of descriptions). Nor can Sellars have in mind a late-Wittgensteinian conception of "meaning," "language," or "thought" since, according to the rule-following argument in the *Philosophical Investigations*, meaning in ordinary natural language is not constituted by rules at all, so *neither* "formal" *nor* "material" rules could constitute meaning in such an account.

In any case it is not the *Philosophical Investigations* but the *Logical Syntax of Language* that Sellars calls in for help to make precise what he is saying, and

8. Not in the sense of "metalinguistic," as above, but now meaning just "logical"; see previous footnote.

even what he means by "material rule of inference."[9] The distinction between "formal" and "material" rules, he says, is just what Carnap describes more precisely as the distinction between L-rules and P-rules (Carnap 1934, pp. 133–39, §§51–52); indeed, Sellars generally refers to his "material rules of inference" henceforth as "P-rules." But now another misunderstanding is revealed. Sellars objects to Carnap's view that P-rules are dispensable and rather inconvenient; in Sellars's view, it is obvious that natural languages require P-rules. And Carnap *must*, he thinks, really (despite appearances) have natural languages in mind:

> To be sure, Carnap . . . is not discussing the syntax of natural languages, but rather the construction by logicians of artificial languages. Yet he is clearly conceiving of these artificial languages as candidates for adoption by language users. (Sellars 1953, p. 268)

Sellars goes on to discuss the conditions under which a constructed language "*becomes* a natural language" [my emphasis], which are "(1) the adoption of its syntactical rules by a language speaking community" and "(2) the association of certain of its descriptive terms with sensory cues." So by saying that P-rules are unnecessary and inconvenient, Sellars thinks, "Carnap is implying that natural languages need have no P-rules" (ibid.).

This badly misconstrues Carnap's view of the relation between constructed and "natural" languages, but before we disentangle it, let us see what Sellars does next. Material rules of inference, he suggests, are implicit in subjunctive conditionals (of the kind "if it were to rain, the streets would be wet"–i.e. implicit disposition concepts), which he says are not reducible to "formal" rules of inference.[10] And since "we are all conscious of the key role played in the sciences, both formal and empirical, in detective work and in the ordinary course of living by subjunctive conditionals," we are forced to acknowledge not only that "there are such things as material rules of inference" but also *that they are essential to any conceptual frame which permits the formulation of such subjunctive conditionals as do not give expression to logical principles of inference*" (ibid., p. 271; italics in original). Sellars then notes that although "we have shown that material rules of inference are essential to the language we speak, for we make constant use of subjunctive conditionals" (ibid., p. 273), the languages Carnap considers in the *Syntax* are extensional, precluding the formulation of subjunctive conditionals. And though the languages Carnap considers "are not natural languages in actual use, he clearly thinks they could be.

9. "We have not yet. . . given an account of what a material rule of inference is, or pretends to be. We have relied on dangerously vague historical connotations of the terms 'formal' and 'logical', as well as on the use of examples. Fortunately, help lies close at hand. Professor Rudolf Carnap, in his *Logical Syntax of Language*, draws a systematic contrast between two types of syntactical rule which . . . are exactly the formal and material rules of inference with which we are concerned" (Sellars 1950, p. 266).

10. "Testability and Meaning" (Carnap 1936/37), an obvious *locus classicus* for the analysis of disposition concepts, is ignored.

Carnap, then, is clearly convinced that subjunctive conditionals are dispensable" (ibid., p. 274).

We will shortly find this diagnosis highly implausible, but first let us go on with Sellars to consider the larger question what a rule of inference (whether "formal" or "material") *is*, in the first place. He accuses Carnap of failing to be clear whether his transformation rules belong to "the" object language or "the" metalanguage (ibid., p. 275).[11] This, he says, is "symptomatic of a carelessness with the term 'rule' which pervades his otherwise admirably incisive and patiently meticulous argument" (ibid., p. 276). But there is no such carelessness; the object of Sellars's criticism turns out, in the remainder of the above-quoted passage, to be Carnap's failure to acknowledge the supposed *normative* force of syntactic rules. Transformation rules cannot be formulated as Carnap suggests, by means of "direct consequence in S," Sellars argues, since rules are, and must be treated as, essentially normative. He again invokes his "naturalistic fallacy" argument here: "if a definition is, with any plausibility, to do the work of a rule, the definiendum must have the normative flavor characteristic of 'ought'," he says. "But when one turns to Carnap's thesis that transformation rules may be formulated as definitions of 'direct consequence in S', one finds no such flavor" (ibid., p. 276–77). And moreover, "a rule is always a rule for *doing* something. In other words, any sentence which is to be the formulation of a rule must mention a doing or action. It is the performance of this action (in specified circumstances) which is enjoined by the rule, and which carries the flavor of *ought*" (ibid., p. 277). "In short," Sellars concludes, "Carnap's claim that he is giving a definition of 'directly derivable in S' is a snare and a delusion" (ibid.).

We have reviewed three mistakes, in the last several paragraphs, that Sellars attributes to Carnap: the supposed doctrine of the "dispensability of P-rules in natural languages," the supposed "dispensability of subjunctive conditionals" (in natural languages), and the supposed "carelessness with the term 'rule'" that led Carnap to overlook the normative force of syntactic rules.[12] In all three of these cases, Sellars expects something of Carnap that Carnap does not supply, and these expectations imply a certain view of the proper relation between constructed languages and "natural" or "ordinary" language ("language in actual use"). This view may be sketched as follows: The manifest image *constrains* the choice of language. We are not confined, for all purposes, to the natural language we started from–we are capable of proposing and specifying new, artificial languages, as Carnap does, that are more adequate to the "scientific image" than those we have used traditionally. But such proposals must meet certain minimum conditions, since if they are adopted, the proposed artificial languages are to *become* natural languages; they are to be used, like Esperanto, in place of, or as sublanguages within, our existing

11. There is no hint of any such ambiguity in the passage he cites to support this allegation (Carnap 1937, p. 4).

12. We will see in sections II and III below that all three of these attributions are wildly off the mark.

natural languages. So for this adoption to be possible, the proposed artificial language must contain, or make provision for, the expressive resources of our *existing* natural language(s), the one(s) we employ at the moment. New proposals may be entertained, but to qualify for adoption they must fit the *existing* contours of the manifest image.

Sellars has an essentially static view of the manifest image, it seems; he regards it as fixed and invariant in certain basic respects. There are *facts* about the manifest image, in his view; "*there is truth and error with respect to it*" and "it has in its own way an objective existence in philosophical thinking itself and, indeed, in human thought generally" (Sellars 1962a, p. 14).[13] It is this entity which a certain tradition, the "perennial philosophy," he says, devotes itself to studying and refining. This perennial philosophy is "simply the manifest image endorsed as real, and its outline taken to be the large-scale map of reality to which science brings a needle-point of detail. . ." (ibid., p. 8). Now Sellars does not, as we shall see, endorse the perennial philosophy or its view that the manifest image *is* "reality." But he does think there is a certain subjective or intuitive framework that humans cannot escape from; "man," he says, "is *essentially* that being which conceives of itself *in terms of the image which the perennial philosophy refines and endorses*" (ibid.)—i.e. the manifest image.[14] Sellars saw the apparatus of traditional philosophy, then, as—ultimately, perhaps—*wrong*, but he did not follow the analytic tradition in viewing it as *incoherent*. He thought it still usable as a framework for describing the *Lebenswelt*, and thus for articulating our intuitive, prescientific conception of "reason."

His dismissal of the motivation behind the *Logical Syntax* is symptomatic, then, of a wider gulf between Sellars and the analytic tradition. One of the central defining motifs of early analytic philosophy—culminating in Wittgenstein's *Tractatus*—was a wide-ranging assault on the very possibility of a Kantian or post-Kantian notion of "reason" as something distinct from, or going beyond, its explication by Frege and Russell as logic. Logic, so explicated, is all the "reason" we are entitled to, in this critique. The consequent rejection of "first philosophy" brought with it a more critical attitude toward

13. Though it is possible that Sellars may have allowed local variants of the manifest image, it seems clear that in essentials he regarded it as having at least a stable common core; "there is a correct and an incorrect way to describe this objective image which we have of the world in which we live, and it is possible to evaluate the correctness or incorrectness of such a description" (ibid.). Similar views are still present in later works, e.g. Sellars 1975, p. 301; and in Sellars 1968 he speaks of "truth with respect to CSO," i.e. with respect to the "common-sense framework" which he also calls "*our* conceptual structure" or "CSO" (p. 148). Also, in all these places and others, he uses the definite article to refer to the manifest image.
14. This basic and inescapable intuitive view Sellars sometimes calls "Aristotelian" (Sellars 1975, pp. 301, 316), and also mentions the ordinary-language philosophers and the later Wittgenstein, who, though not fully "endorsing" the manifest image, have contributed to its "refinement" ("isolating it in something like its pure form") and have thus established a continuity with the "perennial philosophy" (Sellars 1962a, pp. 8, 15). While this may be true of Austin, it is probably a misunderstanding of Wittgenstein; see Reck (1997) and section V below.

the apparatus of the philosophical tradition more widely, especially toward the "perennial philosophy" that assumes a stable, objective order of non-empirical concepts and objects accessible through abstract reasoning or introspective contemplation. Though Sellars does not himself endorse this "perennial philosophy," he nonetheless regards its stable, objective order of concepts—the manifest image—as a clearly defined and objective binding constraint on the acceptability of languages proposed for science. In assuming the coherence and straightforward availability of such a constraint, Sellars reveals himself, in this respect, a *pre-analytic* philosopher. He had bypassed (or not assimilated) Wittgenstein's doubts about the availability of a vantage point from which "elucidations," metalinguistic or philosophical statements, are *possible*—the doubts, that is, that anything like the "perennial philosophy" is even capable of coherent articulation.

II. Explication

Carnap would never have used terms like "scientific image" and "manifest image." Nonetheless, a view about what Sellars adumbrates within these terms *can* be reconstructed within Carnap's philosophical program. It will, of course, be a somewhat different view from that of Sellars; as we have seen, Carnap's conception of philosophy has an entirely different genealogy. Like Wittgenstein, though, Carnap successively held two rather different views on these issues. The *Logical Syntax* was written just at the fulcrum between these two major periods; it initiated a transition from one kind of view to another. The earlier "rational reconstruction" view (which he held until about halfway through 1932, when the first draft of the *Syntax* was already complete) had been put forward rather stridently during the Vienna Circle period, e.g. in the notorious critique of Heidegger (Carnap 1932). This view was characterized by a search for *the* (single) language of science, the "system language," which could both make transparent that all the transformation devices for getting from atomic sentences to scientific concepts and theories and back again are empty tautologies, mere artifacts of the chosen language itself, *and* make clear that there are therefore no specifically mathematical concepts or axioms, as all of mathematics can be generated from logic. The identification of such a language would thus achieve a primary goal of the Vienna Circle: It would obviate the need for Wittgenstein's "elucidations"; it would make evident (it would "reveal") what can be said without using words and statements that were not themselves well-formed expressions within the scientific language (Carnap 1930).

Ordinary language could and would still be used, according to this "rational reconstruction" view, as it possessed enormous practical advantages for certain heuristic (even scientific) purposes. But our genuine knowledge was

what could be conveyed by and traced back to atomic sentences within the scientific system language. Our intuitive feelings of knowledge and understanding, articulated within ordinary language and reinforced by its necessarily vague categories, had no independent cognitive authority. Insofar as such thoughts and feelings could be approximately translated into the system language, they could be more or less relied on – but not trusted too far, as the translation could never be precise. The categories of ordinary natural language are everywhere beset by indeterminacies, ambiguities, fuzzy boundaries, Sorites paradoxes.

As science progresses, though, ordinary language begins to defer to it. By the twentieth century, even in ordinary language a whale was not a fish, diseases were caused by germs, and concepts occurred (electric currents, atomic fission, cholesterol) that would have been incomprehensible not long before. The intuitive concepts of ordinary language are *displaced*, then, progressively, by their practical equivalents in, or (approximate) translations into, the scientific system language – their rational reconstructions.

The *Syntax* had still been conceived in the service of this single-language rational reconstruction. But after completing the first draft within this program, Carnap changed direction rather drastically. He abandoned the single-language idea, and instead adopted the thoroughgoing language pluralism expressed in his "principle of tolerance."[15] The full consequences of this momentous turn were not immediately clear even to Carnap himself;[16] one could say that he spent the rest of his career assimilating it. His view of the relation between constructed and informal languages changed accordingly; it was increasingly characterized (especially after his move to the US) by a radical pragmatism. The criteria by which one language is preferable to another can no longer invoke any sort of "correctness," as they had in the critique of Heidegger; Carnap accepts that the criteria for choosing a language can only be practical. There is no tribunal above the success of a language as a tool for specified human purposes – which are so many and various they are often not relevantly specifiable in isolation from an entire system of human values. The relation between the cognitive and the normative is one of mutual feedback or dialectic (in the Platonic sense of dialectic as the search for first principles). And this dialectic, an appropriate task for the philosopher, is not a mechanical task, whose solution can be cranked out according to some formula; it is a constructive and creative task, which Carnap liked to call "language engineering" or "conceptual engineering."

15. The story of this drastic change is too complex to summarize here, but is the subject of a forthcoming paper by Steve Awodey and myself (Awodey and Carus, forthcoming). Gödel played a role in the story, whose outcome, though, he failed to understand or acknowledge fully; see our chapter in the present volume, pp. 203–23.
16. And have not until very recently been apparent to the larger philosophical community; popular expositions of "logical positivism" like Ayer's (1936) passed over it entirely. Stein (1992), Goldfarb and Ricketts (1992), Jeffreys (1994), and Ricketts (1994), among others, have now begun to make clear how radical Carnap's pluralism was.

This new conception is obviously incompatible with the pre-1932 single-language program of rational reconstruction. It was some years, though, before Carnap began to formulate the successor program of *explication*, which reflects the dialectical structure of his new, radical pragmatism.[17] In this program we still have the goal, on the one hand, of replacing the vague, loose, concepts of ordinary language by more precise equivalents or analogues in a constructed language; we want to upgrade our loose talk and pull ourselves up by our bootstraps. We want to understand the world better and get it under our control, physically and imaginatively. To see more clearly, we need better instruments, cleaner and less cluttered concepts. But on the other hand, human ingenuity oversupplies us with candidate instruments, among which we have to choose. Different ones are suited for different purposes; we have to trade their costs and benefits off against each other. This choice *among* precise explications cannot, therefore, be settled internally *within* the language of any particular precise explication. It is what Carnap called an "external" problem (and Plato a "dialectical" one). So this choice is neither purely cognitive nor purely practical; it is an *engineering* matter that requires the mutual adjustment of cognitive and practical. Our knowledge shapes our values and our values shape our knowledge.

Carnap's conception of what Sellars calls the "manifest image," then, is quite different from Sellars's own. Carnap does *not* see it as a static, single, or even well-defined system about which there could be stable facts, with respect to which there could be "truth and error."[18] He gave no account how he *did* conceive of it, of course, but a late-Carnapian version of the manifest image is not hard to extrapolate.[19] It would stress the *ill-defined* nature of languages-in-use (or "natural languages").[20] Not only the concepts within such languages, but the languages themselves, as entities, are not clearly defined or sharply individuated conceptual systems. In Carnap's view they are nevertheless representable as generated from rules, just like the constructed languages of science. There is an important practical difference between the two kinds of rule systems, though; the rules of a language-in-use have to be discovered, as the language is already in existence, while in constructed languages the rules can be stipulated. The discovery and codification of the rules of a natural language requires extensive *empirical* investigation (though it also requires some idealization because any particular rule system in real life has fuzzy boundaries; usage varies locally and even individually, as well as diachronically). Such a

17. The program of explication is pervasive in Carnap's late works. It is described most extensively in the opening sections of *Logical Foundations of Probability* (Carnap 1950).
18. Except third-person facts about the manifest image treated as a part of nature; but in this perspective it becomes just another part of nature, and is no longer the manifest image as the location of "external" choices about languages and explications.
19. The following extrapolation obviously goes far beyond anything Carnap himself ever spelled out; it can be regarded as indicating a range of alternatives.
20. As Carnap often did, most explicitly in the 1952 manuscript "Quine on Analyticity" (Creath 1990, pp. 427–32), esp. pp. 427–28.

rule system is very complex, as natural languages are full of vague and incompletely-defined terms, as well as many other irregularities and inconveniences. These features result from their adaptation to the demands of everyday social and practical life, but also make them quite unsuitable as languages of science. The terminology is a little misleading, as both "languages-in-use" and "constructed languages" can be, and are, *used*; they are learned by their users in different ways, but this is an accident of their respective histories (and, consequently, of the institutional circumstances under which we learn them). They could, as Carnap (1963, p. 938) pointed out, both be learned the same way. The difference between them lies in what we use them for, their ranges of application. As a first approximation, the "languages-in-use" are employed for practical matters (questions of practical, ethical, aesthetic, and political choice), while constructed languages are used for theoretical knowledge. This crude division maps straightforwardly onto Sellars's distinction between the manifest image, organized around the "conceptual framework of persons," and the scientific image, consisting of theoretical knowledge.

But this first approximation is too simple, in view of Carnap's envisaged dynamic feedback relation between theoretical and the practical. Theoretical science is a practice like any other, and requires practical decisions, some at the very heart of the enterprise, such as decisions about which constructed languages to adopt for theories. And theoretical scientists necessarily employ some form of modified and tidied-up language-in-use as their metalanguage when discussing or applying the theories expressed in the constructed language. This language used by scientists in their work may be regarded as a dialect or local variant of the standard language-in-use of their society (e.g. English). Many of its basic categories inevitably derive from that standard language-in-use. But it also differs from that standard language in the degree to which it is upgraded and informed by scientific theory; it strives to be as clear and precise – i.e. as explicated – as possible. It is the concepts of this dialect (dialect group, which varies somewhat from science to science) that are the prime candidates for explication. In each science the critical concepts are different, and theoretical explication proceeds according to local needs. In the philosophical metatheory (the syntax, semantics, and pragmatics of scientific theories), the most likely candidates for explication are those concepts that are used in common by many sciences, and are relevant across many areas of knowledge: concepts like evidence, confirmation, testability, probability, meaning, truth, coherence, consistency, and the whole familiar crowd that has kept philosophers busy for the past few generations. But unlike many of those currently engaged in this business, and unlike Sellars, Carnap did not think that the original use or embeddedness of a concept in a standard language-in-use should be a binding constraint on the possible explications offered as a replacement for it.

Not only the manifest image, then, but the relation between it and the scientific image is also conceived rather differently by Carnap. He envisaged the

convergence of the increasingly precise and integrated systems of scientific language into a single system, so he could have spoken of "the" scientific image just as Sellars did. But in a late-Carnapian view, the scientific image does not simply *displace* the manifest image; they have different purposes. The scientific image can influence – upgrade, purify, cognitively enrich – the practical language of certain local subcultures (e.g. the scientific professions), which may then diffuse further into parts of everyday life. By joining (learning the language of) one of the more scientifically-influenced subcultures, we replace some of our local vague concepts by the precise ones of the scientific image. On the other hand, no local subculture, even a monastic community of mathematicians or physicists, could adopt *only* the scientific image as its language, since a human community has practical needs, it requires a language of practice – if only as a metalanguage to decide which language of knowledge to use. As we saw above, knowledge and values are mutually indispensable in a late-Carnapian view, but they are distinguishable.

Carnap rejects not only a single, well-defined manifest image about which there could, as in Sellars, be well-defined "truth and error," then, but any sort of fixed, stable set of component sub-languages or sub-images. These are conceived, rather, as involved in a constant process of interchange, of upgrading themselves – parasitic ultimately on the scientific image, which supplies the more precise categories that progressively replace their looser, vaguer ones. But the interchange goes in both directions. As science develops and expands its scope, changes are needed in the scientific language(s), often in details of vocabulary but sometimes in fundamentals of categorial grammar. These intra-scientific changes cannot themselves be decided on scientifically; they are *practical* decisions, tantamount to deciding which tool is best for a given task.[21] So we have to make such "external" decisions – subject to the constraints of what we already know in the sciences – within our local subculture(s), preferably in cooperation or collaboration with as large a common subset as possible of those cosmopolitan subcultures that have been most influenced and upgraded by the scientific image.

After even this brief sketch of a late-Carnapian view of the relation between scientific language and language-in-use, it should be obvious how the demands we saw Sellars making of Carnap (in section I) fall very wide of the mark. Carnap has no doctrine about the superfluity of P-rules or subjunctive conditionals in natural language; his preference for an extensional language of science without P-rules, in the *Syntax*, is irrelevant to questions about natural language, since he does not (as Sellars assumes) envisage the adoption of his

21. "In my view," Carnap wrote, " the choice of a certain language structure and, in particular, the decision to use certain types of variables is a practical decision like the choice of an instrument; it depends chiefly on the purposes for which the instrument – here the language – is intended to be used and upon the properties of the instrument. I admit that the choice of a language suitable for the purposes of physics and mathematics involves problems quite different from those involved in the choice of a suitable motor for a freight airplane; but, in a sense, both are engineering problems. . ." (Carnap 1956, p. 43).

proposed languages "as natural languages"; this would be tantamount to the category mistake of adopting a language of knowledge to serve as a language of practice. Carnap equally rejects the reverse mistake of regarding syntactic or semantic rules as *normative*; for him scientific language is the realm of the *cognitive* (with which the practical/normative realm is in continuous *interchange*).[22] Such rules might, certainly, be regarded as normative from a standpoint *internal* to the language they govern, just as the operating instructions for a tool are normative for me if and when I decide to use that tool. But Carnap considers his languages of science from the viewpoint of the language (or tool) shopper, who is kicking tires and comparing technical specifications. From this perspective only the cognitive content of proposed sets of rules is relevant; any normativity they may acquire down the road, upon adoption of a particular language, is conditional on that practical choice of language.

Regarding language, then, the later Carnap was a voluntarist (Jeffrey 1994); the choice, he thought, was in our hands. Our conceptual tools are at our disposal; it is not for them to prescribe our categories. If our inherited conceptual framework – some local dialect or version of a "manifest image" – contains items like Sellars's material rules of inference or subjunctive conditionals, or requires syntactic rules to be considered normative, that's as may be. But it is irrelevant to the question what conceptual framework we *want*, and especially to the question what framework we want *for our knowledge* (i.e. for science). *This* question is, rather, to be answered within the enterprise of "conceptual engineering" – the realm, to use an expression of Cantor's and Dedekind's, of "free creation." We build our conceptual framework in the course of building science as well as the cultural and physical worlds around us (using our knowledge and our values). There could be no greater contrast to Sellars's picture of a well-defined manifest image constraining the acceptability of the tools generated by the ingenuity of the conceptual engineer.

III. Meaning and Designation

We are now in a position to follow the somewhat baffling course of the only published debate between Sellars and Carnap, in the *Library of Living Philosophers* volume on Carnap (Schilpp 1963). Sellars's contribution, "Empiricism and

22. As Carnap stresses in his reply to Sellars in the Schilpp volume: "I wish to emphasize that not only pure syntax and pure semantics, but also descriptive syntax and descriptive semantics, as I understand them and intend to construct them, do not contain any kind of prescriptive components. . . . Sellars' belief that my descriptive syntax and descriptive semantics contained prescriptive conceptual components is perhaps due to the fact that I used the word 'rule' both in syntax and semantics. Perhaps he understood this word in its everyday sense, i.e. as referring to prescriptive rules, prescriptions, prohibitions, or permissions. However, I use the word 'rule' in this field only to conform to the customary

Abstract Entities," is a companion piece to the better-known "Empiricism and the Philosophy of Mind" written at about the same time. Both papers are long and prolix, and argue for a position they call "psychological nominalism," characterized as "the denial of the claim. . . that a 'perception' or 'awareness' of abstract entities is the root mental ingredient of mental acts and dispositions." And "the psychological nominalist argues that it is in principle possible to describe and causally account for the episodes and dispositions singled out by such sentences as 'John believes it is raining' without positing a 'perception' or 'awareness' of abstract entities" (Sellars 1963b, p. 445).[23]

Despite some doubts about the suitability of the term, Carnap concurs with "psychological nominalism" insofar as it rejects Platonist assimilation of statements like "John is aware of (thinks of, apprehends) the number 13" to those like "John perceives this table," regarding them as "two different but nevertheless similar cases of the *same relation* of awareness between a person (or a mind) and a concrete or abstract object." And Carnap says, "I agree with Sellars in rejecting this Platonistic conception."[24] But what seems Platonistic to Carnap about this assimilation is its invocation of specifically *causal* relations "(called 'commerce' or 'intercourse' or the like) as holding between physical objects (or persons or minds) and abstract entities" (Carnap 1963a, p. 925). Carnap sees no point in rejecting a merely *logical* relation between a physical object or person and an abstract object:

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usage in logic. The so-called rules are meant only as partial conditions for a definition" (Carnap 1963, p. 923). Of course Carnap also recognized that the pragmatics of scientific language could and should be studied. But he thought it important to distinguish pragmatics from syntax and semantics; see sections III and IV below.

23. In "Empiricism and the Philosophy of Mind," this doctrine is given a more positive content: "according to [psychological nominalism,] *all* awareness of *sorts, resemblances, facts*, etc., in short, all awareness of abstract entities – indeed, all awareness even of particulars – is a linguistic affair. According to it, not even the awareness of such sorts, resemblances, and facts as pertain to so-called immediate experience is presupposed by the process of acquiring the use of a language" (Sellars 1956 §29, p. 160). In "Empiricism and Abstract Entities," this "positive" formulation also occurs, but is regarded as an *extension* or "not quite analytic" *consequence* of the "negative" formulation (Sellars 1963b, pp. 447–48). This formulation indicates the connection between "psychological nominalism" and his larger, quasi-Wittgensteinian view in which the gradual, holistic socialization into the use of a language is prior to concepts and all recognition of particular experiences as falling under concepts. However, the computational nature of language comprehension, its mental components, the degree to which consciousness is or is not involved in its various aspects for human understanders, and related issues are lively subjects of research within computational psycholinguistics (Kintsch 1998, Ram and Moorman 1999). As it seems unwise to pre-empt results from this fast-moving field with armchair philosophizing, I will restrict attention here to the negative characterization of psychological nominalism.

24. As an example of which Sellars (1963b, p. 445) cites a quotation from Church (1951): ". . . just as an opaque body may be seen, so a concept may be understood or grasped. And the parallel between the two cases is indeed rather close. In both cases the observation is not direct but through intermediaries – light, lens of the eye or optical instrument, and retina in the case of the visible body, linguistic expressions in the case of the concept." Carnap agrees with Sellars in rejecting the view represented in this quotation (1963, p. 924).

I would not reject, as Sellars seems to do, all factual or descriptive relations between material objects and abstract entities, at least not if "relation" is understood in the wide sense which is customary in modern logic. In the latter sense, any sentence of arbitrary form containing the names of two entities a and b (of arbitrary, possibly different, logical types or semantic categories) may be said to state that a certain relation holds between a and b. (For example, the sentence "John has a car with four doors" says that a certain relation holds between John and the number four, namely the relation $(\lambda x, n)(x$ has a car with n doors).) Relations between material objects and numbers occur in science whenever measurable magnitudes are applied. If we define:

(1) $M(x,u) =_{Df}$ the material body x has the mass (in grams) u,

then the physical concept M is a relation between bodies and numbers. This relation is descriptive or factual in the sense that the predicate "M" is a descriptive (i.e. non-logical) constant, and a full sentence, e.g., "$M(a,5)$" is a factual sentence. (ibid., p. 924)

Moreover, Carnap finds non-causal but descriptive *psychological* relations between a person (or mind) and an abstract object unobjectionable for essentially the same reason, especially in a theoretical language.[25] It is just this apparently profligate permissiveness that annoys Sellars, however; he regards such uses of abstract entities as obvious hypostatizations, and as beholden to the "Myth of the Given." It is precisely against this aspect of Carnap's view of semantics, in fact, that "Empiricism and Abstract Entities" is directed. Sellars reiterates and elaborates his previous criticism of Carnap's semantics, e.g. in "The Language of Theories," where he had sketched "a coherent treatment of basic semantic categories which may throw light on questions of meaning and existence pertaining to theoretical discourse." He had specifically avoided any attempt, in that paper, to "provide a formalized theory of meaning elegantly reduced to a minimum of primitive notions and propositions," since such attempts are "premature and dangerous in any area if they are based on misinterpretations of the initial explicanda." And: "Nowhere, in my opinion, have these dangers been realized more disastrously than in some recent theories of meaning." Which disastrous theory he meant was revealed in a footnote:

25. "My reason for regarding the two sentences 'John observes the table' and 'John observes (is aware of) the number 13' as not being analogous is just this: the first sentences states a causal relation between the table and John (mediated by light rays, the retina, etc., as Church indicates) but the second does not. Only spatio-temporal objects, not numbers, can have a causal effect on John. On the other hand, it seems to me that some psychological concepts may be regarded or reconstructed as relations (in the wide sense of the logical terminology, not the causal sense) between a person and an abstract entity; e.g., believing may be taken as a relation between a person and a proposition... and thinking-of as a relation between a person and a concept (intension or sense) and the like. In particular, there seems to be no objection to the use of relations of this kind *in a theoretical language...*" (Carnap 1963, p. 925).

I have in mind. . . Carnap's formalization of semantical theory in terms of a primitive relation of designation which holds between words and *extralinguistic* entities. This reconstruction commits one to the idea that if a language is meaningful, there exists a domain of entities (the *designata* of its names and predicates) which exist independently of any human concept formation. (Sellars 1961, p. 109)

This is the fundamental objection to Carnap's project that Sellars expounds at great length in "Empiricism and Abstract Entities." So the task of this paper is conceived as providing a positive account of the meaning relation since, as Sellars spells out:

(1) The core of the Platonic tradition lies in a blurring of the distinction between empirical and ontological categories. It denies their mutual exclusiveness on the ground that the phenomena of *meaning* (aboutness or reference) involves some sort of commerce (usually spoken of in terms of "intuition," "apprehension," or "awareness") between persons and abstract entities. Platonism, therefore, is, in essence, a thesis in the psychology of the higher processes; and to reject it. . . is to be what I shall call a "psychological nominalist." (2) The key to the clarification of the "relation between thought and its objects" (and hence of the Platonism issue) is the correct analysis of the semantical form "(in L) '——' means * * *" (thus, "(in German) 'rot' means red"). (Sellars 1963b, p. 442)

This "correct analysis," for Sellars, amounts to an elaboration of his "naturalistic fallacy" argument (ibid., esp. pp. 451ff. and 459ff.) to establish the normative (or "non-natural") force of syntactic and "semantic" statements, and thus the irreducibility and indispensability of the "semantic" as constituting a distinct "logical space of reasons." He realizes, of course, that Carnap's treatment of meaning and designation is a matter of *pure* semantics, but he points out that Carnap also discusses *descriptive* semantics, as well as the *relation* between pure and descriptive semantics. Carnap's understanding of this relation is disputed by Sellars, who believes that "descriptive" semantics is only *partly* empirical, in the way that a prescriptive statement with both empirical and prescriptive premises is only partly empirical, not wholly empirical like a scientific statement (ibid., pp. 450ff.). But this is a misunderstanding of Carnap's proposed scientific languages (section II above). Carnap sees descriptive semantics as descriptive in the same sense as other empirical statements; for him, as we have seen, descriptive semantics is essentially a part of empirical linguistics. Sellars objects, citing a passage in the *Introduction to Semantics*:

Both in semantics and in syntax, the relation between the descriptive and the pure field is perfectly analogous to the relation between pure or mathematical geometry, which is a part of mathematics and hence analytic, and physical geometry, which is a part of

physics, and hence empirical. (Carnap 1942, p. 12, quoted by
Sellars 1963b, p. 462)

Now this *is* in fact somewhat misleading.[26] But what disturbs Sellars about it
shows again that he had not assimilated the logical and mathematical discussion
of the early twentieth century. He objects to Carnap's comparison of pure and
descriptive semantics with mathematical and physical geometry because

> ... whereas a sub-set of the expressions which, when a pure
> geometrical calculus is interpreted become geometrical expressions
> in a physical geometry are primitive signs of the calculus, if one of
> Carnap's pure semantical systems is construed as a calculus, the
> expressions which, when the calculus is appropriately interpreted,
> would, as he apparently sees it, become semantical expressions of
> descriptive semantics, *are without exception defined expressions of
> the calculus.* (Sellars 1963b, pp. 462–63)

But of course a purely formal calculus is in itself neither geometrical nor seman-
tic (nor anything else), as Hilbert had already made clear, and the fact that the
values of certain variables might be called "points" in purely formal geometry
is entirely arbitrary. That the same word "points" is *also* used to refer to certain
physical locations in a physical model of the calculus is of no significance, and
says nothing about the relation between the formal calculus and its model as a
physical geometry. What bothers Sellars is not that Carnap's analogy between
geometry and semantics breaks down (which it does not, in the way Sellars sug-
gests), but, once again, that the interpretation of a pure-semantic calculus as a
descriptive-semantical theory contains relations between physical objects
(sign-tokens or sign-events) and abstract objects:

> The *undefined* expressions of the system construed as a calculus
> would be on the one hand, expressions, e.g. "'F'," "'Y'," "'a'" etc.
> which, when interpreted become the names of sign designs, and on
> the other, expressions, e.g. "red," "blue," "Chicago," etc. which,
> interpreted, mention non-linguistic entities (individuals, properties,
> and relations). Consequently, this account of the relation between
> pure and descriptive semantics presupposes that semantical expres-

26. The disanalogy lies not in the logical relationships, which are in both cases that of
theory to model, but in the *purposes* for which the theory is developed. In geometry, only
empirically interpreted theories are put forward as theories to explain and account for
phenomena. In syntax and semantics, pure theories, or theories with only logical mod-
els, may be put forward as *explications* of vague concepts in ordinary language. Quite sep-
arately from (and irrelevantly to) this, *empirically* interpreted semantic theories may be
put forward to *account for* the *empirical phenomena* of ordinary language, just as in the
case of geometry. These theories may succeed or fail as empirical hypotheses, but this has
no bearing on their corresponding purely logical theories as candidates for *explicating*
vague concepts of ordinary language. So while in the geometry case there is only one prac-
tically relevant relation between theory and model, in the semantics case there are two
quite different (and only tangentially related) ones.

sions in actual usage are definable in terms of sign designs and non-
linguistic entities. ... (ibid.)

The interpreted word "means" in descriptive semantics reduces then, for a par-
ticular language, to a list of translation pairs. Sellars objects to this, as before,
because it does not do justice to the manifold uses of "means" in ordinary lan-
guage. The pure-semantics "theory" does not account for enough of the ordi-
nary-usage "phenomena" (ibid., pp. 463–67). Once again, as in section I above,
he is holding the development of logical and scientific languages hostage to an
existing manifest-image conceptual scheme. This is what his objection to
Carnap's definition of "means" boils down to: "Nowhere ... does Carnap give
an *independent* defense of the idea that semantical expressions in ordinary
usage are thus definable (or explicable)" (ibid., p. 463).

It is to this confusion that Carnap (leaving aside the wider issues I have
tried to sketch in above) devotes most of his reply to Sellars in the Schilpp vol-
ume. In *pragmatics* (as he defines it), "the relation of designation is a psycho-
logical concept, analogous to the concepts of believing and thinking-of. . .
and presumably definable on the basis of these and similar psychological con-
cepts." Thus the sentence "(In German) the word '*blau*' designates Blue" as
a sentence in the descriptive semantics of German "is based on the following
sentence of pragmatics: 'In the German language community, the German
word 'blau' is mostly used as designating Blue'" (Carnap 1963, p. 925). This
relation of designation is as we saw not Platonistic, in Carnap's view, since it
involves no *causal* relation between persons or other physical objects and
abstract objects. Next, we construct in pure semantics a language system G
"which in a certain way corresponds to a selected part of the German lan-
guage," with a relation of "directly-designates-in-G" defined by enumeration
of pairs, among which – motivated by the above empirical finding in descrip-
tive semantics – we include the pair "'*blau*,' Blue." Defining designation on
the basis of direct designation, we then have, "as an analytic theorem in the
pure semantics of language G: 'The word '*blau*' designates-in-G Blue'" (ibid.,
p. 926). Carnap then explains:

> Sellars is right that there is a radical difference between the meaning
> of the term "designates-in-G" in pure semantics and that of the term
> "designates" in pragmatics and descriptive semantics; this is evident
> from the nature of their definitions. The two terms have at best the
> same extension, provided the rules for G are chosen in a suitable
> way; this fact can be expressed by an if-and-only-if sentence [such as
> those Sellars had used to exhibit the absurdity, as he thought, of
> Carnap's proceeding]. It should be noted, however, that this situa-
> tion does not indicate a defect of the concept of designation in pure
> semantics. As Sellars aptly expresses it, pure semantics is nothing
> but a combinatorics of sign designs and extra-linguistical entities. It
> is therefore impossible to define in this field a relation of designation

just like the pragmatical, psychological concept of designation; only a corresponding concept can be defined. (ibid.)

Carnap then gives an example to illustrate the nature of such a correspondence.[27] By virtue of this correspondence, pure semantics can *represent* the "logical connections among various facts involving the relation of designation in any language" as well as "the connections between these facts, on the one hand, and truth-conditions for the sentences of the same language on the other." But the representation is only structural; the actual, empirical nature of designation cannot be captured by it; ". . . in pure semantics we cannot give an analysis of the concept of designation in its ordinary sense because for this purpose psychological concepts are required" (ibid., p. 927).

Designation and truth in pure semantics are put forward, then, as *explications* of the vague terms "meaning" and "truth" in ordinary language, and can be regarded as *taking the place* of those informal concepts, where there is a reason for greater precision than everyday discourse ordinarily affords. There is no need for them to fit with or reflect the multitude of uses for "meaning" or "designation" in our existing ordinary language. That is not their point.

IV. Analyticity and Other Categories of Sentence

It is sometimes thought that Sellars's critique of Carnap approximates or complements Quine's, or is at least compatible with it. Some things do point in that direction: Sellars's emphasis on ordinary language, and his insistence that "the primary value of formally elaborated semantical systems lies in their contribution to the analysis of semantical concepts in actual usage" (1963b, p. 462); his objection to Carnap's apparent insouciance about the "Myth of the Given" and willingness to countenance relations between physical and abstract objects – i.e. Carnap's tolerance of a calculus that, when interpreted, "commits one to the

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27. Assuming that "'Der Mond ist blau' designates-in G the proposition that the moon is blue" is an "analytic sentence in the pure semantics of G," and assuming a standard truth-definition, "The sentence 'der Mond ist blau' is true-in-G if and only if the moon is blue" is also an analytic theorem. We can then characterize the correspondence between the pure semantics of G and the descriptive semantics of any ("ordinary") language L: "If in any language L the relation of designation holds in those pairs which are enumerated in the definition of 'directly-designates-in G', and if in L the relation of designation satisfies the general conditions stated in the rules for 'designates-in-G', then the relation of designation holds in all cases in which 'designates-in-G' holds, and a truth-condition for any sentence in G is a truth-condition for the same sentence in L." In particular, if L satisfies these conditions, "the sentence 'Der Mond ist blau' in L designates (means, expresses) the proposition that the moon is blue" and "the sentence 'Der Mond ist blau' in L is true (in the ordinary sense) if and only if the moon is blue" (Carnap 1963, pp. 926–27).

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idea that if [that] language is meaningful, there exists a domain of entities (the *designata* of its names and predicates) which exist independently of any human concept formation" (Sellars 1961, p. 109).[28] This seems motivated by worries similar to Neurath's rejection of semantics in the 1930s because of its apparent attribution of "objective reality" to the items in a universe of discourse, and thus to Quine's subsequent ontological concerns (Quine 1948).

The more fundamental similarity to Quine, though, might appear to be Sellars's insistence on "material rules of inference," which seems consistent with Quine's denial that a principled distinction between analytic and synthetic sentences is possible. In this spirit Sellars also objects, as we saw, to Carnap's use of the word "descriptive" – it is a remnant, he says, of the "Procrustean convictions of early logical positivism" to regard "descriptive" and "logical" as "jointly exhaustive as well as mutually exclusive" (1963b, p. 451). But these appearances deceive. Sellars did in fact accept an analytic-synthetic distinction, and "Empiricism and Abstract Entities" opens with a long defense of Carnap against Quine's critique.

Sellars organizes this discussion around a distinction between two different kinds of analytic and synthetic; he distinguishes a narrower and a broader sense of "analytic." In the broader sense, a sentence is analytic if it is stipulated as part of the language, or derivable from such a sentence by stipulated transformation rules; in the narrower sense a sentence is analytic if the stipulated meanings require no justification involving empirical considerations (Sellars 1963b, p. 438). A sentence is analytic in the broader sense if it is analytic by virtue of both Carnap's L-rules and his P-rules (as Sellars understands these terms), analytic in the narrower sense if analytic solely by virtue of L-rules. The P-rules themselves are thus, in Sellars's sense, analytic only in the broader sense, as their justification has recourse to empirical considerations.

But this criterion does not in fact distinguish P-rules from L-rules; for Carnap, empirical (and practical) considerations enter into the question which L-rules to adopt as well as the question which P-rules (if any) to adopt. The distinction between L- and P-rules is based not on their justification but on their scope; roughly, if a rule governs the transformation of logically true sentences into equivalent logically true sentences, it is an L-rule, and if it governs the transformation of descriptive sentences into other descriptive sentences that are not their L-consequences, then it is a P-rule (Carnap 1934, pp. 133–35). For Carnap, then, Sellars's distinction between a narrower and a broader sense of "analytic" is not a distinction.

But Sellars argues, on the basis of this distinction, that Quine's denial of the analytic-synthetic distinction depended on using "analytic" only in the

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28. This passage continues: "Of course, Carnap's semantic theory involves no commitment as to what this domain includes, but if one adds the premise that the physical thing language is meaningful, one is committed to the idea that the framework of observable physical things and their properties has an absolute reality which [my argument involving the Myth of the Given shows] they do not have" (Sellars 1961, p. 109).

broader sense. If we stick to the narrower sense, "the exciting idea that 'There are propositions' belongs in a 'continuum' with 'There are particles' is seen to be a dangerous half-truth" (Sellars 1963b, p. 440). Sellars's larger point is that the use of abstract entities is not to be justified as a Quinean "super-theory," comprising both logical framework and empirical theories, "in terms of its power to save appearances" (ibid., p. 441). The narrow-sense analytic sentences are not justified directly by empirical considerations, though their adoption was *motivated* by the desire to have a language rich enough to formulate broad-sense analytic sentences (i.e. P-rules). "Thus, the fact that there are, in a perfectly legitimate sense, scientific reasons for using certain [narrow-sense] analytic sentence forms, when examined, lends no aid or comfort to Quine's continuum" (ibid.).

Sellars seems, then, to have missed the point of Quine's critique of analyticity, which is rooted in the same tradition of logical and philosophical debate as Carnap's work (Ricketts 2004). Quine's critique was waged on two broad fronts, one logical and one linguistic. The logical one responded to Gödel's first incompleteness theorem, by which there are (under certain conditions) true sentences of a language not provable from its axioms. Provability, then, or analyticity in Frege's sense (deducibility from the basic axioms of logic) is no longer coextensive with mathematical truth. Carnap realized that a criterion of mathematical truth or analyticity other than provability would thus be required to uphold the distinction – which he regarded as indispensable in science – between logico-mathematical sentences (mere artifacts of the chosen framework) and genuine empirical information about the extra-linguistic world. Quine, noting that Carnap's shifting characterizations of this distinction over the years never quite succeeded in capturing what he intended, suggested that we give up on it. This genuine disagreement never developed into a debate (as many commentators have noted), since neither party grasped what the other meant (Creath 1990, Ricketts 2003). Sellars does not touch on this strand of Quine's critique.

Its other strand was quasi-empirical and linguistic. Outside of first-order logic, Quine maintained, an analytic-synthetic distinction is arbitrary and uninformative, particularly in ordinary language. From the behavioristic standpoint of the "field linguist," he said, the distinction cannot be antecedently *discerned* in ordinary usage, no explicit *criterion of analyticity* can be specified. And what could be the point of drawing such a boundary artificially, by fiat, across the fluid and fuzzy boundaries of evolved languages? Analytic sentences are so by virtue of rules, and Quine here reinforces Wittgenstein's argument that language-in-use not only *is* not constituted by rules, but *could* not be (Quine 1936, pp. 105–6). This part of Quine's challenge was *also* addressed primarily to Carnap and, as has now been sufficiently discussed (Creath 1990, Isaacson 1992, Stein 1992, Bird 1995), it largely misses its target.

But it does apply, with full force, to Sellars's "space of reasons" *within the manifest image*. Sellars claimed, as we saw, that the "logical space of reasons" cannot be analyzed away into a space of causes, of facts, or of merely logical

inferences.[29] This argument was based on the premise that P-rules (or "material rules of inference") are indispensable for any language containing empirical sentences; inference cannot all be accounted for by logic. "Everyone would admit," he says, in this spirit,

> . . . that the notion of a language which enables one to state matters of fact but does not permit argument, explanation, in short *reason-giving*. . . is a chimera. It is essential to the understanding of scientific reasoning to realize that the notion of a language which enables one to state empirical matters of fact but contains no material moves is equally chimerical. (Sellars 1954, p. 355)

And although Sellars equates "material rules of inference" with Carnap's P-rules, he thought of them not (as Carnap did) in the hypothetical or merely proposed context of formalized languages of science but in the context of instantiated languages-in-use. And the prospect of such instantiation constrains proposed languages, for Sellars (as we saw in section I above), to reflect the principal features of our existing conceptual scheme, our inherited manifest image: "Human knowledge," he says, is "the sort of thing that finds its fitting expression in the *ordinary usage* of expressions in *natural languages*" (Sellars 1953, p. 303).

The Quinean objection to this idea is simple and devastating: if it is difficult to find ready-made even an analytic-synthetic distinction in natural languages,[30] it is *more* difficult, *more* arbitrary, to find a *threefold* analytic-synthetic-*semantic* distinction there. Even a distinction between "is" and "ought" is not obviously or unproblematically available in ordinary language.[31] The demand for a behavioral criterion of semanticity or normativity would encounter precisely the same obstacles as Quine's demand for a behavioral criterion of analyticity. What the Wittgenstein/Quine argument points to is the inescapable underdetermination of meaning by ordinary language – the phenomenon that Davidson (1986, p. 446), for instance, responds to by abandoning the idea of a common language altogether, and confining himself to an account of people's ability to make each others' *idiolects* understood.[32] Historically and anthropologically, the response

29. "But if 'means' is not a *prescriptive* term," he says, "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" (Sellars 1963b, p. 460).
30. Though see Grice and Strawson (1956), as well as Carnap's own notorious attempt (Carnap 1955).
31. R.M. Hare (1952) develops an account of moral language that programmatically, at least, follows ordinary usage. In Chapter 2 he analyzes sentences of ordinary language into regimented prescriptive and indicative components, and on this basis develops a method of prescriptive inference (Chapter 3). There can be no objection to this procedure, of course, if it is understood as *introducing* a certain framework *into* ordinary language; indeed, Carnap (1963, pp. 999–1013) suggests a strikingly similar framework. But Hare hardly attempts to show how one might *discern* such a structure as empirically already *present within* ordinary language.
32. As Dummett (1986) points out, though, this move hardly dispenses with the idea of a "common language," which is essentially *built in* to the concept of "idiolect" – we still

of human societies to this underdetermination has been the evolution and institutional establishment of languages with more precise categories, like the languages of law or of commerce (and, later, of science), in which specialists are uniformly trained so that their use of critical words converges more closely than meanings can in ordinary unregimented language. And these specialists are given social *authority* regarding the uses of these words in the contexts reserved to them (whose precise specification remains a permanent – cognitive and political – boundary problem).

This underdetermination problem also cuts off arguments of the kind Sellars adduces for the "existence" of, say, subjunctive conditionals or material rules of inference. We require these devices for many everyday purposes, his argument runs, therefore these devices must *exist* in ordinary language; they are an *indispensable* component of "our language." But even to *formulate* such claims, Sellars must resort to regimented metalinguistic tools like the term of theoretical grammar "subjunctive conditional" or the idea of a *rule* governing certain inferences. Quine's point is that we cannot obtain such regimented categories by unaided induction from instances of linguistic behavior. So his argument against analyticity in ordinary language generalizes to an argument against *all* precisely defined categories of sentence within a used language.

Where does this leave Sellars's fundamental move, his application of Moore's "naturalistic fallacy" argument to "semantics"? Doesn't Carnap himself, after all, subscribe to a sharp distinction between cognitive and normative – and thus accept at least the *conclusion* of Moore's argument? How then can he (or Quine) resist the application of this argument to a different category of sentences? Well, there are other routes to a cognitive-normative distinction than Moore's argument. The "naturalistic fallacy" argument depends on the *compound* (and therefore, at the limit, inextricable) embeddedness of the language under consideration in a context of action, a context in which *decisions* (about courses of action) must be made. There is an elementary sense in which *any* language is necessarily so embedded: The inference rules for even the simplest formal language cannot be fully expressed within that language itself; this was Lewis Carroll's point in "What the Tortoise Said to Achilles" (Carroll 1895). It has been suggested that this gap in the self-sufficiency of formal languages applies much more widely, or even across the board, and prevents *any* knowledge claim from having a meaning outside an action context. Wittgenstein is sometimes held to have shown this (Brandom 1994, pp. 21–22). But in Lewis Carroll's case of modus ponens, nearly all users of ordinary first-order logic *do* learn, by socialization in logic classes, to apply the rule in the standard way. The same holds for practically all formal language systems employed to codify knowledge.[33] Ambiguity from this source (lack of self-sufficiency) is far more pervasive in ordinary language, where there is little uniform socialization to constrain the

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have to explain why two idiolects of English are mutually comprehensible while two of different "common languages" (e.g. English and Swahili) are not.
33. Carnap acknowledged that even here the socialization does not necessarily succeed in

uses of particular words and rules. In ordinary language, then, such ambiguity is not confined to a single gap, as in first-order logic, but compounded, so that it is difficult (at the limit impossible) to extricate the meaning of any single sentence from the action context in which it is embedded.

This compounded ambiguity underlies the effectiveness of the "naturalistic fallacy" argument for normative statements in ordinary language. Ethical words are at perhaps the opposite extreme from inference rules for formal languages, regarding the uniformity of use into which their users are socialized. In ethical language, the ambiguity due to embeddedness (lack of self-sufficiency) is not confined to a single, precisely-specifiable gap, as in the case of inference rules for formal languages; on the contrary, their embeddedness is compounded to a maximal degree. So if someone defines "good" as coextensive with a particular ("natural") property, it is always reasonable in ordinary language to retort by asking of a particular instantiation of this *property*, so substituted, whether it is, after all, *good*.

Carnap does not employ this argument. He makes the cognitive-normative distinction, as we have seen, for quite different reasons. He seeks, first, a precise characterization of the *cognitive* – this motivation goes back to the "rational reconstruction" framework of the 1920s Vienna Circle (in that context it gave rise, for instance, to ethical emotivism). But he later added to this the radical pragmatism of the explication framework, which now also required, in principle, a precise characterization of the *pragmatic* (including the normative). It also required, as we saw (section II), a mutual feedback relation between the cognitive and the normative, which in turn requires that they be distinguishable. As in the case of abstract entities or other linguistic choices, Carnap accordingly regards the decision to adopt a language containing "pure optatives" (normative statements not derivable from empirical or logical premises) to be justifiable only on practical grounds – in this case, their utility in considering alternative courses or programs of action or in discussing the consequences of values (Carnap 1963b, p. 1003). The "naturalistic fallacy" argument would only in very special circumstances be a ground for adopting such a language (e.g. in a case where a more precise language of ethics is specifically being designed to capture the intuitions embedded in a particular vernacular).

V. Reason and the Weight of the Past

It is hard, then, to imagine a critique more at cross-purposes with its object than Sellars's critique of logical empiricism. It does not get off the ground, as it lacks

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every case; there can be exceptions, individuals who are "logically blind" and simply cannot or will not accept the standard interpretation of the inference rules (Carnap 1968, p. 266; cf. Haack 1976, p. 84).

the necessary starting point – a recognizable portrayal of the position to be crit-
icized. Even a caricature, to be successful, requires some degree of recogniz-
ability. But the Carnap portrayed by Sellars, for all his painstaking persistence,
is unrecognizable. "Empiricism and Abstract Entities," in which his critique
culminates,[34] is no improvement, as his final summary makes glaringly evident:

> [Carnap] 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. And he undoubtedly thinks of his seman-
> tical 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. (Sellars
> 1963b, p. 462)

Sellars not only misses the point of "explication (in his [Carnap's] sense)" as
discussed in section II above;[35] he also, once again, misconstrues the particular
explication of semantic words involved in Carnap's account of the relation
between pure and descriptive semantics. As to the point of "semantics" itself,
it might after all seem that, despite his misunderstandings, Sellars has room for
Carnap's very different point of view, as he allows *two* aspects to "semantical
theory," the internal formalization of semantical rules and their external

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34. Some two decades after "Empiricism and Abstract Entities," Sellars returned to the
subject, saying that he had "since come to realize" that he had "failed to grasp certain key
features of [Carnap's] argument" (Sellars 1974, p. 288). He does not specify which fea-
tures he means, though, and it is not easy to guess, as he still attributes to Carnap many
of the same doctrines as before. But now the focus of attention has shifted to the alleged
failure, by Carnap's method of introducing abstract entities (in "Empiricism, Semantics,
and Ontology"), to secure genuine "ontological commitment" to such entities; "the
appearance of 'introducing' a framework of new entities is a snare and a delusion" (ibid.,
p. 307). Readers familiar with Carnap will recognize that this charge is as much as cross-
purposes with Carnap's intentions as the earlier instances discussed above. To show this
in detail would, however, require a separate paper.
35. Nor is this an isolated instance; Sellars often uses "explication" in a way that is clearly
different from Carnap's while evidently supposing (as in this passage) that he accords
with Carnap's intent. Another example is a passage where he attacks Carnap, just as we
saw above, for regarding a list of translation pairs as a definition of "means"; such a list-
ing, he says, "is not an *explication* of 'Word *W* means *x*' as it occurs in ordinary usage,
and, needless to say, it is the ordinary sense of 'means' that is bound up with the ordinary
sense of 'true', which it is the task of philosophy to explicate." And since "we find that
expressions that occur as substituends for '*x*' in 'Word *W* (in German) means *x*' as it is
actually used do *not* have their ordinary sense," Sellars concludes that "Carnap's formula
[Tarski's truth-definition] cannot be regarded as an explication of 'true' as this term is
ordinarily used" (Sellars 1962b, pp. 201–2).

rationale or point. The way he describes these two aspects, though, again
betrays his incomprehension:

> (1) There is the business of making explicit and systematizing the
> grammar of meaning and truth talk. This involves, among other
> things, distinguishing between various semantical concepts, and
> showing that some can be defined in terms of others. (2) There is
> the business of sizing up the point of meaning talk, of locating
> semantical discourse in the intellectual economy. And while the
> distinction between these tasks can be pressed too far, it is abun-
> dantly clear that a person may make significant contributions to the
> former, while bringing darkness rather than light to the latter. A
> similar situation obtains in the field of ethics. A person may achieve
> wonders in the way of disentangling the internal syntax of obligation
> talk, and yet be hopelessly confused when it comes to seeing what
> obligation talk is about. (ibid., p. 450)

Both of these putative tasks of "semantical theory" have a place in Carnap's
view, but they do not, for him, exhaust the scope of semantics. For Carnap both
are part of *descriptive* semantics, which does not belong to pure semantics (his
own main interest), but is actually part of pragmatics, the study of language in
relation to its use and its users. Carnap was notoriously cryptic on the subject of
pragmatics, but he would certainly have assigned Sellars's two tasks to different
sectors within it. In Carnap's view task (1) has two aspects, which Sellars con-
flates. On the one hand, there is a straightforwardly empirical aspect which
could be seen as part of linguistics; this is the task of discovering what "meaning
and truth talk" some defined population actually uses, and what other behaviors
are associated with it. But on the other hand, this empirical investigation has
nothing to do with what Carnap would regard as "the business of making explicit
and systematizing the grammar of meaning and truth talk." This business is not,
for him, a matter of *finding* something *already there* (and *then* making it explicit,
systematizing it), but rather a matter of *explicating* the vague "meaning and
truth talk" of ordinary language, i.e. proposing a more precise *replacement* for it.
Like Sellars's task (2), this involves the making of a choice or decision, in
Carnap's conception, and thus implicates normative, practical questions.

And task (2) itself, "the business of sizing up the point of meaning talk, of
locating semantical discourse in the intellectual economy," depends even more
obviously on one's *purpose* in so "sizing up" or "locating"; Carnap would of
course have rejected the idea that one could speak of "the" point of semantics,
independently of any practical purpose. For this reason Carnap also did not pur-
sue anything like what is today discussed, following Davidson or Dummett,
under the rubric of a "theory of meaning." And he would have been taken aback
that questions like "wherein does a speaker's mastery of his language consist?"
(Dummett 1976, p. 74) or "what do I know when I know a language?"
(Dummett 1978) are discussed from the armchair in an age when computational

modelling of language comprehension is making such considerable strides (e.g. Ram and Moorman 1999).

Sellars failed, then, to grasp Carnap's enterprise of explication. In itself this is banal; many philosophers misunderstand the work of others. What makes this case so exasperating and ironic is not only that Sellars devoted such painstaking effort, in paper after paper over twenty years, to his critique of Carnap, but that, in fact, Carnap's architectonic is almost perfectly suited to the realization of Sellars's own stated ideal of a "synoptic view" or "stereoscopic vision" that would integrate the scientific image with the manifest image, giving the scientific image cognitive pride of place, but retaining room for normative reflection within the categories of the manifest image:

> ... to complete the scientific image we need to enrich it *not* with more ways of saying what is the case, but with the language of community and individual intentions, so that by construing the actions we intend to do and the circumstances in which we intend to do them in scientific terms, we *directly* relate the world as conceived by scientific theory to our purposes, and make it *our* world and no longer an alien appendage to the world in which we do our living. (Sellars 1962a, p. 40)

Sellars admits that "as matters now stand," we can "realize this direct incorporation of the scientific image into our way of life only in imagination," i.e. that he himself had no concrete proposal how to effect the integration he recommended. But Carnap's program of explication is a concrete proposal of exactly the kind Sellars is looking for – an *explication* (in Carnap's sense!) of Sellars's vague but suggestive ideal of the "stereoscopic vision"!

How could Sellars have missed this? Part of the blame goes to Carnap, no doubt, and his often misleading rhetoric, e.g. his reliance on expressions like "cognitively meaningless" as applied to normative sentences long after he was in fact willing to countenance the attribution to them of a *different* sort of "meaning" (Carnap 1963, pp. 999-1013). But Carnap at least took initiatives to build bridges, particularly with Sellars himself,[36] so part of the blame must also be laid at Sellars's own door. To bring his predicament into perspective, it may be helpful to locate his philosophical aspirations within a rough, two-dimensional coordinate system of philosophical positions – one axis representing the degree of priority given the cognitive (at one end) or the practical/normative (at the other), the other axis representing the degree of willingness to depart from our inherited practices and the conceptual schemes embedded in them. Both axes require some commentary; for easy reference I will call them, respectively, the "knowledge ↔ practice" axis and the "radical ↔ conservative" axis.

Regarding the "knowledge ↔ practice" axis, one might regard Quine as conveniently embodying the extreme point at the "cognitive" end. For him, as for the original Vienna Circle program of "rational reconstruction," practical (e.g. ethical, prudential, or political) decisions are taken within the sin-

gle over-arching conceptual scheme of science and enlightened common sense. Quine recognized an is-ought distinction (Quine 1974, p. 50; 1978, p. 55), but whatever "oughts" one adopts, the decision to act one way or another on its basis will depend overwhelmingly on the "is" component; the framework is one of means-end rationality in which the means tightly constrain the feasible ends, and can even displace the original ends, with learning (Quine 1974, pp. 49-52; 1978, p. 57ff.). Besides, the ends are themselves analyzable and predictable within the scientific framework (Quine 1954, p. 234); in Quine's naturalistic framework values are just as much part of nature as our knowledge. Naturalism in ethics, despite a nominal is-ought distinction, flows easily and intuitively from a thoroughgoing naturalistic epistemology (Quine 1974, pp. 51-52).

In this view, one might say that the normative realm of practice is almost entirely dominated by, or reducible to, the cognitive realm of knowledge. At the opposite extreme one might situate a view resembling that held by Rorty or Brandom. In this view, the cognitive realm is, conversely, dominated by or reducible to the normative realm of social practices. Though Sellars is now often drafted into the service of the latter view, he himself rejected it unequivocally. He articulated the distinction between cognitive and normative, as we have seen, in terms of his distinction between the scientific image and the manifest image, and never accepted the reduction of the scientific to the manifest image; he never succumbed to the temptation, as he puts it,

> ... to retreat into the position that reality is the world of the manifest image, and that all the postulated entities of the scientific image are "symbolic tools" which function (something like the distance-measuring devices which are rolled around on maps) to help us find our way around in the world, but do not themselves describe actual objects and processes. On this view, the theoretical counterparts of *all* features of the manifest image would be *equally* unreal, and that philosophical conception of man-in-the-world would be correct which endorsed the manifest image and located the scientific image within it as a conceptual tool used by manifest man in his capacity as a scientist. (Sellars 1962, p. 32)

Sellars emphatically rejects this idea, which he calls a "peninsular view" of scientific language, in which science is regarded as "a mode of discourse which is,

36. As is evident from a number of documents in Carnap's papers in the Hillman Library, University of Pittsburgh, e.g. the item ASP/RC 086-06-02, a 12-page typescript entitled "Remarks on Physicalism and Related Topics (Discussions with Wilfrid Sellars, December 1954)," which reports a series of conversations in something like dialogue form, and was clearly intended to promote mutual understanding and stimulate further discussion. Given Sellars's preoccupations and Carnap's willingness to engage in dialogue with him, it is one of the great missed opportunities of twentieth-century philosophy that Sellars failed to engage with Carnap's actual doctrines (rather than the not-even-caricature he invented for himself).

so to speak, a peninsular offshoot from the mainland of ordinary discourse" whose study is "conceived to be a worthy employment for those who have the background and motivation to keep track of it, but an employment which is fundamentally a hobby divorced from the perplexities of the mainland" (Sellars 1956, p. 174). He insisted that "science is the measure of all things, of what is that it is, and of what is not that it is not" (ibid., p. 173), and was even prepared to admit that there is "a sense in which the scientific picture of the world *replaces* the common sense picture; a sense in which the scientific account of 'what there is' *supercedes* the descriptive ontology of everyday life" (ibid., p. 172). So Sellars, like Carnap, rejected the extremes along this axis and wished to retain a "stereoscopic" or "synoptic" vision *coordinating* the cognitive and normative, without reducing either of them to the other (though unlike Carnap he lacked even a sketch of a framework for implementing such a vision).

The other, "radical ↔ conservative" axis is more difficult to describe in terms of stick-figure philosophers like those (Quine and Brandom) dragged in to mark the extremes of the other axis. The problem with the "radical ↔ conservative" axis is that conservatism is so deeply ingrained in the philosophical tradition that it is hard for us to grasp that there are alternatives to it, let alone that it might be an extreme point of an entire continuum of possible intermediate positions. The dominant assumption has usually been that our existing practices (and hence our languages) are either hardwired into us or too deeply ingrained, by culture or nature or both, to be escapable or malleable; we simply have *no choice* about the conceptual framework in which we articulate philosophical, scientific, and practical questions.

This assumption is so widely shared that it is hard even to recognize as an assumption. Take Henri Poincaré, for instance, who is often paradigmatically taken to have *rejected* it. Poincaré is known, of course, for the idea that we *choose* the free creations we need for science *according to our convenience.* The forms of intuition are not forced on us, as Kant had said; we can choose them according to our needs. This idea was immensely liberating for many subsequent thinkers. But in fact Poincaré understood "human convenience" in a very particular, rather narrow, sense. For him, human convenience was strongly influenced, or sometimes even completely determined, by the force of custom or habit. Humans are encultured into a particular set of preferences, among which, possibly more deep-seated than the rest, are such habits as Euclidean metrical assumptions about our physical environment. Though he did not think these assumptions *necessary* or "apodeictic" in Kant's sense, he thought that in practice, we have very little choice about them, because the force of habit and custom will generally, despite whatever attempts we may make to break out of them, prove dominant in the end (Poincaré 1902, p. 94).

In the early years of the twentieth century, one of Poincaré's best-known followers, now almost forgotten, was Hugo Dingler. Dingler had taken Poincaré's "conventionalism" to what must have seemed at the time an obvious, though perhaps extreme, conclusion. In place of Poincaré's conservatism about human

habit and custom, he had thought it preferable that humans should take matters into their own hands. Since we have to put up with a significant element of convention in our science anyway, he said, we should *maximize* that element, since that is the part of science that we have full control over ourselves, in contrast to the unruly facts, which are always turning out in unexpected ways (Dingler 1919, p. 10). Carnap was also very influenced, for a time, by this "*radical* conventionalism," as he called it. The position he himself adopted even in those early years, though, was neither Poincaré's "Tory conventionalism"[37] nor Dingler's "radical conventionalism," but a moderate liberalism somewhere between these two extremes.

Even that moderate position has, however, not been at all typical for twentieth-century philosophy, which tended to follow Poincaré's (or even Kant's) conservatism to the almost complete exclusion of other options. The later Wittgenstein can, for instance, be seen as a wide-ranging and subtle elaboration of this conservative conception of the fundamental axioms of our mathematics and science. Let us take Wittgenstein, then, as marking the "conservative" end of this axis, and Dingler the "radical" end.

Wittgenstein's conservatism about the foundations of science and mathematics is in harmony with a broader cultural conservatism (in his attitude to war, for instance: a passive acceptance rather than any thought of resistance or political participation). Carnap's entire orientation could not have been more different; but his view of the foundations of science was just as much in harmony with his own view of life, culture, and society as Wittgenstein's was with his. From his earliest writings, it was Carnap's deep conviction that human kind had a responsibility to choose and shape its own institutions – including its scientific language and scientific practices – rather than to accept them passively (Jeffrey 1994). Philosophy, for him, including especially the entire program of explication, was highest-level linguistic or conceptual engineering, the planning and optimization of the future of the species. Metaphysical arguments about "what really exists," or about the true "substance" or "ontology" of the universe, were to be discouraged precisely because they undermined such planning. They took for granted that the important choices are *not* choices; they are not a matter of what *we want* but of *what is*. To accept metaphysical terms was to capitulate to our existing, traditional language and the traditional institutions it supported; it was to be overwhelmed by the weight of the past.

Carnap's and Wittgenstein's philosophies of the foundations of science, then, were each consistent with, and perhaps reflected or expressed, their respective broader cultural and political views. They each had a deeply anchored personal commitment to their respective positions along the "radical ↔ conservative" axis. Sellars did not. He had impulses in both directions, and remained indecisive. In his basic cognitive values, as we saw, he sympathized more with Carnap; he did not share Wittgenstein's suspicions of science and technological civilization. But he was also immersed in

37. Howard Stein's phrase.

the philosophical tradition, and continued to view it with a kind of reverence that Carnap would have thought inappropriate. Sellars is well-known for his conviction that "philosophy without history of philosophy, if not empty or blind, is at least dumb" (Sellars 1974, p. 1). This attitude contrasts sharply with that of the Vienna Circle, which was notoriously intolerant of the philosophical tradition. Their attitude to the past was more like Nietzsche's in "Vom Nutzen und Nachteil der Historie für das Leben," they saw the present as groaning under the weight of the past, and they wanted to throw that burden off.

Sellars, in contrast to Carnap or Wittgenstein, did not take a stand at a particular place along this axis. He was torn by irreconcilable priorities. On the one hand he was drawn to Carnap's bold and forward-looking, voluntaristic spirit of free creation, the project of engineering our future. But on the other hand he seems to have had a kind of vertigo about abandoning a stable, well-defined manifest image in which the human imagination could feel at home and locate itself in the universe: "man is *essentially* . . . that being which conceives of itself in terms of the manifest image. To the extent that the manifest image does not survive in the synoptic view, to that extent man himself would not survive" (Sellars 1962, pp. 8, 18; italics in original). He wanted, in other words, to have his cake and eat it too; he appreciated the power of science continually to *change* the basis of our conceptions, but he also thought that those continually changing conceptions could somehow be constrained by the inherited manifest image.

Where does this leave the larger question about an idea of "reason" that, like Kant's, goes beyond the cognitive and scientific, that goes beyond the "instrumental" and embraces also rationality about goals and values? As we saw, Sellars and Carnap both rejected the extremes of *either* reducing the normative/practical to the cognitive/scientific (as Quine proposed) *or* reducing the cognitive/scientific to the normative/practical (as Brandom proposes). It is not enough, Carnap and Sellars both recognized, to insist that "reason can't be naturalized" (Putnam 1981); we must *combine* our scientific account of ourselves and the world with a framework that enables us to step back from it and judge its utility for our lives as a whole. And this, they both saw, requires a kind of mutual feedback relationship between the cognitive and the practical. We must adjust the framework of our knowledge so as to optimize its usefulness in our lives, but we must also be prepared to adjust our lives to accommodate our knowledge.

Carnap's ideal for implementing this delicate balance between, and mutual constraining of, knowledge and values – an ideal Sellars seems not to have understood – was *essentially* pluralistic, with respect to *both* knowledge-frameworks *and* value-frameworks. Carnap believed that, over an enormous range of philosophical, ethical, and political questions, many different paths should be pursued.[38] Still, he had his own preferences, and advo-

38. One small example among many is Carnap's (1944) suggestion, despite his own advocacy of Esperanto, that Basic English *also* be cultivated as an international language. We do not know which kind of language, an entirely artificial one or a simplified natural one, will ultimately be adopted, he argues, and both routes should be tried.

cated particular frameworks, *within* this pluralistic ideal. The knowledge-frameworks and value-frameworks he advocated took maximal account of each other: knowledge-frameworks whose utility as tools would be maximized, and value-frameworks that did maximal justice to our scientific knowledge. The cognitive and normative, he thought, should be considered jointly and inseparably. And here, too, there is a point of contact with Sellars, who believed that the task of philosophy was "synoptic": "It is. . . the 'eye on the whole' which distinguishes the philosophical enterprise" (Sellars 1962, p. 3).

Where Carnap differs fundamentally from Sellars (and most other philosophers) is along the other, "radical ↔ conservative" axis. He was much further to the "left" (the "radical" end) on this axis than Sellars, Quine, Wittgenstein, or their current followers. He believed that we can shrug off the weight of the past and create our own concepts. We can build our own human world, within the natural world that constrains it. And this voluntaristic, free-creation, engineering outlook requires a position different from Quine's on the other ("cognitive ↔ practical") axis as well, one that offers quite a different conception of human reason. Quine, as we saw, naturalizes reason. It is, he says, as much a part of nature as its objects. Carnap agrees whole-heartedly, but adds that we can *choose* the conceptual scheme by which we understand nature (including ourselves and our reason) – and that although this choice is not itself internal to a conceptual scheme, it can still be a *rational* choice. How? That is just what Carnap does not claim to be able to know or prescribe. Our knowledge of nature underdetermines the possible ways of rationally applying it to practical decisions and to the shaping of our human world. That it *respect* that minimal constraint was, for Carnap, the essential criterion of reason or reasonableness in choice and deliberation. But as to how or in what directions our scientific knowledge could or should be thus extended and extrapolated, he was emphatically a pluralist. He thought it foolish to suppose that we can, so early in the history of rational thought, establish a single framework of reason once for all, as Kant had imagined. We are in the infancy of our cognitive and practical capabilities, he thought, and we can hardly imagine from these inchoate beginnings what we might be able to create, once we raise our sights from the superstition that we can read the destiny of reason in the entrails of our inherited vernacular.

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