Matthias Neuber

Feigl, Sellars, and the Idea of a “Pure Pragmatics”

1 Introduction

In the “Personal Postscript” to his seminal essay “Existential Hypothesis”, Herbert Feigl declares:

In a series of brilliant essays, Wilfrid Sellars has outlined a new version of a realistic epistemology on the basis of pure syntax, semantics and pragmatics. What I had only dimly perceived, particularly in connection with the distinction between evidential base and factual reference […] has since been independently and much more systematically elaborated by Wilfrid Sellars. In my estimation, he holds greater promise than any other contemporary thinker for doing justice to, and to provide a new synthesis of, the justifiable claims of realism and positivism, as well as of rationalism and empiricism. (Feigl 1950a, p. 60)

Sellars himself, in his “Autobiographical Reflections”, reported 25 years later:

The relevant fact is that Feigl and I shared a common purpose: to formulate a scientifically oriented, naturalistic realism which would ‘save the Appearances’. He was familiar with the general outline of my father's [Roy Wood Sellars] Critical Realism and Evolutionary Naturalism, and when an opening occurred in the University of Iowa Department where he had been teaching since 1931, he suggested that I be invited for an interview. We hit it off immediately, although the seriousness with which I took such ideas as causal necessity, synthetic a priori knowledge, intentionality, ethical intuitionism, the problem of universals, etc., etc., must have jarred his empiricist sensibilities. Even when I made it clear that my aim was to map these structures into a naturalistic, even a materialistic, metaphysics, he felt, as many have, that I was going around Robin Hood's barn. (Sellars 1975, p. 282)

Obviously, the relation between Feigl’s and Sellars’s views was a special one. Astonishing enough, there is hardly any literature on this issue. But this does not mean that the issue is not worth exploring. On the contrary, by examining the relation between Feigl’s and Sellars’s views significant light will be shed on a remarkable episode in mid-twentieth-century analytical philosophy and philosophy of science.

What I will attempt in the following is to determine to what extent Feigl might have been inspired by Sellars’s idea of a “pure pragmatics.” It will be shown that this idea played an essential role in Feigl’s defense of what he called “semantic realism,” but that Feigl in the last analysis did not succeed in fully exploiting the potential of Sellars’s ingenious conception. Nevertheless, it can be argued that Feigl, by taking seriously the idea of a pure pragmatics, enriched the debate over realism in a constructive and fruitful way.

2 Feigl on Semantic Realism

So let us first have a look at Feigl’s approach toward the realism issue. The first contribution to be mentioned in this connection is his “Sense and Nonsense in Scientific Realism” from 1936. In this short paper (based on a talk given at the 1935 International Congress for the Unity of Science in Paris), Feigl attempts to show that a “cautious empirical realism” can be upheld against the various forms of antirealism within the philosophy of science. In his 1943 programmatic essay “Logical Empiricism,” Feigl argues more offensively in that direction, attacking the “*reductive* fallacies of a narrowminded positivism” ([1943] 1949, p. 4) as well as the “*seductive* fallacies of metaphysics” (*ibid.*). In constructive terms, Feigl in that essay conceived of the real as part of the “spatio-temporal-causal system,” thereby implying that real is that which “is located in space-time and is a link in the chains of causal relations” (*ibid*., p. 16). Consequently, atoms and forces are – ontologically – on the same footing as rocks and trees. And Feigl specifies: “As long as we do not forget that existential assumptions must be in principle capable of test, though most of these are indirect, we remain within the range of the factually-meaningful.” (*ibid.*)

It was in “Existential Hypotheses” that Feigl elaborated this point to a considerable extent. The essential clue of this paper was a principled distinction between two meanings of ‘meaning’ (see Feigl 1950a, pp. 48-49). Thus, according to “radical empiricism,” Feigl claimed, meaning is understood to consist in “epistemic reduction,” that is, in the translatability of theoretical statements into statements about observable events. Consequently, theoretical statements such as “Electrons have spin” are supposed to be reducible to sentences concerning the respective observational data, e.g. sentences describing tracks in a Wilson cloud chamber. Feigl rejected this radical empiricist account of meaning and argued for another – as he thought: “more commonsensical” – conception of meaning. According to the latter, meaning had to be conceived of as “factual reference.” Consequently, theoretical statements were invested with “surplus meaning” (*ibid.*, p. 51), or, to put it more precisely, the theoretical *terms* they contained were supposed to refer to independently existing unobservable entities (like, for instance, electrons). Feigl called the position associated with this theory of meaning “Semantic Realism” (*ibid.*, p. 50) and explained: “The factual reference of not directly verifiable statements is to be construed in such a manner that it is semantically perfectly on a par with the factual reference of directly verifiable statements. The difference between the two may be dealt with in *pure pragmatics* […].” (*ibid.*, p. 49-50) Feigl, in this very passage, refers the reader to three writings by Sellars (namely Sellars 1947a, 1947b and [1948] 1949), thereby indicating that he does not intend to go into the details of this construct of a ‘pure pragmatics.’ However, he at least comments on the systematic background for introducing it. Feigl writes:

It should be noted that the apparatus of pure semantics, as it has been elaborated by Tarski [see Tarski 1944] and Carnap [see Carnap 1942], would by itself in this issue [the language-world relation] not yield any but trivial results. Whether a descriptive term of the object language has a designatum, obviously depends upon the presence of a “translation”-equivalent in the corresponding metalanguage. If our metalanguage is rich enough to contain translations of such terms as “the magnetic field of the earth” then this term has a designatum. – Only when we impose the requirements of pure pragmatics do we attain the desired scope of genuinely designating terms. (Feigl 1950a, p. 50)

Thus the systematic weight of pure pragmatics can hardly be overestimated. It furnishes semantic realism with the necessary link of theoretical terms to what Feigl calls their “evidential base” (*ibid.*). To be sure, the referential relation as such could be explicated within a purely semantic framework (‘Pegasus’ refers to Pegasus, if our meta-language is rich enough…). However, in order to make sure that theoretical terms really have *factual* reference, something more is needed, namely their connection with the observational evidential base.

This at least is Feigl’s view, and his motivation is still the same as the one expressed in “Logical Empiricism:” to establish a position that resists both the “reductive fallacies” of radical positivism as well as the “seductive fallacies” of speculative metaphysics. Or, in Feigl’s own words:

The semantic conception of reference does not justify (demonstrate) realism. It merely *explicates* what a cautious empirical realism can legitimately mean by “reference,” “independent existence,” etc. If we handle our concepts responsibly, we can avoid metaphysical perplexities. No concrete existential hypothesis of ordinary life or of science is factually meaningful unless it is confirmable. The essential requirement of empiricism is thus safeguarded. But the very adoption of the *confirmability* criterion (in preference to the narrower *verifiability* criterion) allows as much realism as we are ever likely to warrant. (*ibid*., p. 51)

Thus, by way of weakening the positivist criterion of verifiability in favor of ‘confirmability,’ Feigl thinks to be able to reach a form of logical *empiricism* which is strong enough to integrate the central features of a realist approach to science and scientific theory construction.[[1]](#footnote-1) Pure pragmatics must be located in this programmatic context.

However, given the alleged importance of the idea of a pure pragmatics, Feigl says astonishingly little about its details. As Ernest Nagel correctly observed, “Feigl’s account of the nature of pure pragmatics is regrettable meager” (Nagel 1950, p. 178). So what else can be said about this issue? The best plan seems to be, in the first instance, to take a closer look at Sellars’s original articulation of the idea of a pure pragmatics. Afterwards, it will be possible to readdress Feigl’s appropriation of this Sellarsian conception in a more substantive manner.

3 Sellars On the Idea of a Pure Pragmatics

So what exactly was Sellars’s idea? First of all, it must be seen that philosophy, for Sellars, was “the formal theory of languages” (Sellars 1947a, p. 181). This is what he states in his essay “Pure Pragmatics and Epistemology” which appeared in the 1947 volume of *Philosophy of Science.* As Sellars points out at the very beginning, the formalist approach he takes is directed against psychologism (and all other ‘factualistic’ accounts). While the former is concerned with meta-linguistic rule systems, the latter confines the perspective to empirical facts of language use (or “symbol-behavior”). According to Sellars, this demarcation of formalism from psychologism amounts to a distinction between “*deducibility as norm*” and “*inference as fact*” (*ibid.*, p. 182) Furthermore, Sellars distinguishes between three areas of philosophical analysis: pure syntax, pure semantics, and pure pragmatics. These three areas are ‘pure’ insofar as they belong to the study of meta-linguistic rule systems. Thus pure syntax deals with the formal structure of ‘calculi’ (which, according to Sellars, are opposed to empirical languages), while pure semantics strives for a formal analysis of the concepts of meaning and truth. The task of pure *pragmatics*, on the other hand, consists in the formal analysis of concepts such as ‘verifiable,’ ‘confirmable,’ ‘verified,’ ‘confirmed,’ ‘meaningful,’ etc. Astonishing enough, Sellars sees here a close connection both to Kant and to Carnap’s project in the *Der logische Aufbau der Welt* (1928). Sellars writes:

[I]t is in pure pragmatics […] that the lingering ghost of naïve realism (as a *philosophical* perspective) is finally exorcized, and Kant’s Copernican revolution receives its non-psychologistic fruition. […] The mention of Kant is intended to suggest that the linguistic tools shaped in pure pragmatics will make possible, indeed necessitate, a return to the *Aufbau* stage of Logical Empiricism, but with a conception of *Aufbau* which is as much richer than that of the early thirties, as the psychologism of Kant is richer than that of Hume.” (*ibid.*, p. 185)

 Given that pure pragmatics is concerned with purely formal aspects of meta-linguistic rule systems, a thorough formalization of the entire logical empiricist conception seems immediately to follow. And indeed, according to Sellars, “the thesis of empiricism is a *formal* rather than a *factual* truth” (*ibid.*).[[2]](#footnote-2)

How, then, is pure pragmatics built up? Its basic machinery rests on the assumption that a pure pragmatics embraces a formal calculus consisting of symbol tokens, rules, and the designation relation in a meta-language. The essential elements are the following (see *ibid*., pp. 186-200):

1. token rule: If (in a given meta-language) sentence ‘p’ designates state of affair p, and state of affair p is a token of sentence ‘q,’ then all the meta-linguistic predicates which apply to ‘q’ apply also to p.[[3]](#footnote-3)
2. P-restrictions: conformation rules which specify how expressions are to be combined to form larger units by setting down restrictions on which (relational and non-relational) predicates can combine with the same individual constants to participate in sentences.
3. the predicate ‘coex:’ a (irreflexive, symmetrical, and transitive) relation being modeled on the common-sense expression ‘is-present-to-consciousness-along-with’ (or, in short, ‘is co-experienced with’), to the effect that ‘p coex q’ has as its ‘factual correlate’ (is true of) ‘aRb,’ so that (sentence) ‘p’ is true of state of affair *a* and (sentence) ‘q’ is true of state of affair *b*.
4. the meaning base of a language: a ‘world story’ formulated in that language, to the effect that – with the help of ‘coex’ – the predicate ‘verifiable sentence’ can be put as follows: ‘p’ is a verifiable sentence in world story W, if p (the *designatum* of ‘p’ in W) stands in the coex-relation to a state of affairs (sensory event) which is a token of ‘p,’ or, in more complex terms, if W includes a sentence ‘q’ and a sentence ‘r’ such that ‘q’ designates r coex p, and r is a token of ‘p.’

Technical details aside, two things should be noted. First, in Sellars’s view, the coex-relation – according to which, as he writes at another place, a ‘verified’ sentence is one “a token of which is co-experienced with its designation” (1947b, p. 650) – forms the essential element of the ‘realism’ allegedly implied by pure pragmatics. Second, for Sellars, it is the (purely formal!) conformation rules by which the meaning of empirical languages is ultimately determined. It is for this reason that he thinks semantics is dependent on or, more cautiously, must be supplemented by pragmatics (see *ibid.*, p. 184). At any rate, what he is obviously striving for is some sort of ‘coherence theory of meaning’.[[4]](#footnote-4)

Both points can be made clearer by examining Sellars’s paper “Realism and the New Way of Words,” which appeared in 1948 in *Philosophy and Phenomenological Research*. In that paper, Sellars stresses the *normative* aspect of pure pragmatics (or formal epistemology) and, at the same time, completely exempts the concept of *experience* from any empirical (especially psychological) connotation. Sellars writes:

The New Nominalism takes ‘means’ or ‘designates’ to be a purely formal term, that is to say, a term which as little stands for a feature of the world as ‘implies’ or ‘and’. It has nothing to do with psychological acts, intuitions, or, indeed, with experience of any kind. It refers to no psychological act, intuition or transaction of any sort. (Sellars [1948] 1949, p. 431)

By way of an important supplementary – explicative – remark, Sellars continues:

If this is the case, then the *limitations of meaning* can no more be settled by an “appeal to experience,” than can the limitations of (mathematical) *addition* or *logical deducibility*. To say this, however, is not to say that experience imposes no limitations on the meaning of empirically meaningful language, so that we have magically been saved from a solipsistic account of such language. It is merely to say that if epistemology has anything to say about the relation of *meaning* to *experience*, then the term ‘experience’ as used by the epistemologist must belong to the same frame as ‘meaning’ and ‘implication.’ ‘Experience’ in this use must be contrasted with ‘experience’ as a term of empirical psychology, just as we have already contrasted ‘language’ as an epistemological term with ‘language’ as an expression in socio-psychological-historical linguistics. Our discussion will lead us to the conception of a type of meta-language in which a family of expressions among which are ‘experience’ and ‘meaningful’ supplement customary semantical and syntactical predicates in such a way that the theory of such meta-languages is the pure, *a priori*, in short non-empirical, theory of empirically meaningful languages. (*ibid.*, pp. 431-32)

Thus Sellars’s ‘coherentism’ in the theory of meaning is the direct outcome of this purely formalist (apriorist) approach toward the concept of experience. It might be wondered how such a conception should lead to anyform of *realism*.

This brings us to the second point, namely to Sellars’s claim that realism and pure pragmatics come, as it were, in a package. The key to an adequate understanding of this claim is, I contend, the following *principle of ontological indifference*:

*The pure theory of empirical languages as formally defined systems which are about worlds in which they are used, has no place for THE world; but only for the world designated by the story which is the meaning base of a language*. A given set of conformation rules defines a family of empirical languages, *or, which is the same thing, a family of possible worlds which have the same laws*. An understanding of the completely non-factual character of epistemological statements rests on the insight that not even the predicates ‘verified’ and ‘confirmed’ have an intrinsic tie with any single world, with “the REAL world”. They are purely formal predicates and no properly constructed world-story stands in a privileged position with respect to them. This principle of indifference could be discarded only if something akin to an ontological argument could be formulated in the pure theory of empirical languages; if it could be shown, for example, that only one set of conformation rules is possible which enables a story to be constructed in the language form of which they are the rules; and if only one story could be constructed in that language form. (Sellars [1948] 1949, p. 443)

It is highly plausible to assume that Sellars saw no way of how his principle of indifference be effectively discarded.[[5]](#footnote-5) And it is extremely interesting to observe that he, at least to a certain extent, anticipated ideas later advanced by Hilary Putnam (1977) and Nelson Goodman (1978). Especially Putnam’s ‘internal’ realism (and the corresponding ‘model-theoretic argument’) is pretty close to Sellars’s pluralist, ‘story-relative’ conception. However, to investigate this fully would require a detailed study that is beyond the scope of this paper.[[6]](#footnote-6)

So what exactly is entailed by the severely relativized, non-metaphysical, account of ‘realism’ that goes along with Sellars’s idea of a pure pragmatics? The essential point is that, according to Sellars, a distinction must be drawn between verification and *confirmation* (not to be confused with ‘conf*o*rmation’!).[[7]](#footnote-7) While verifiable sentences are ‘basic’ in the sense of being co-experienced with their *designata* (sensory events), confirmable sentences are merely indirectly tied to the coex-basis, *but nevertheless are meaningful*. That is, according to Sellars the coex-relation should be interpreted as liberally as possible. Or, in his own words: “The concept of an empirically meaningful language rests on that of a verification base, but by no means presupposes that every sentence in the story which is its meaning base is to be found in that verification base.” (Sellars [1948] 1949, p. 447). Since it is a “theorem of pure pragmatics” (*ibid.*) that a meaningful language be defined in terms of conformation rules, the borderline between ‘realistic’ and ‘non-realistic’ languages is represented by the respective arrangement of *predicates*. Predicates which appear in the verification base of a story Sellars calls ‘datum predicates,’ those that do not he calls ‘non-datum predicates’. Accordingly, non-realistic languages are those in which all sentences are verified sentences and all predicates are datum-predicates; whereas realistic languages are those in which some sentences are merely confirmed and some predicates are non-datum predicates. As Sellars points out at the very end of “Realism and the New Way of Words,” his preference is with *realistic* languages:

Formally, all languages and worlds are on an equal footing. This is indeed a principle of indifference. On the other hand, a reconstruction of the pragmatics of common sense and the scientific outlook points to conformation rules requiring a story to contain sentences which are confirmed but not verified. In this sense the ideal of our language is a realistic language; and this is the place of Realism in the New Way of Words. (Sellars [1948] 1949, p. 456)

So much for Sellars’s idea of a pure pragmatics. Is it an attractive idea? As we saw in the previous section, Feigl thought it was. However, there were other opinions. In the view of Ernest Nagel, for example, Sellars’s entire formalist conception was doomed to failure. In a devastating review of Sellars’s papers, Nagel demurred:

The present reviewer is far from certain that he has grasped the general intent of these papers […]. It is […] puzzling how, if ‘coex’ is specified only with respect to some of its formal properties, either it or the definitions based on it are any more relevant for clarifying the issues of epistemology than is any other arbitrarily constructed abstract calculus. On the other hand, if a meaning is associated with ‘coex’ which does make its use clearly relevant for handling philosophic problems, it is by no means obvious that psychological and other factual considerations can be swept aside. Moreover, in the absence of explicit reasons for the assumption that the verified sentences must entail the remaining true statements of language, both the assumption and the problem to which it gives rise in Dr. Sellars’s hands appear as entirely arbitrary and gratuitous” (Nagel 1948, p. 223)

It might have been objections like this that led Sellars to a change of view in the course of the 1950s. Suffice it to note that Sellars began to take *psychology* more seriously and that he explicitly criticized Carnap for being *too formalist*, that is, too much devoted to “the technical elaboration of lemmas and corrolaries” (Sellars 1963, p. 468) in his approach to reconstructing languages (for the details of this critique, see Carus 2004). After all, Sellars *gave up* the idea of a pure pragmatics (and subsequently became the ‘famous Sellars’ being the celebrated author of highly influential writings in metaphysics, epistemology, and the philosophy of mind).

4 Feigl’s Broadening of Perspective (and an alternative to it)

Coming back to Feigl, the first thing to notice is that, for him, the idea of a pure pragmatics remained mandatory (and fully valid) even after Sellars’s abandonment of it. Yet the problem is that Feigl, as already indicated, never became very explicit about the detailed reasons for his adoption of that Sellarsian idea. To be sure, in “Existential Hypotheses” he stressed the need of pure pragmatics for the establishment of nomological relationships between theoretical concepts and their observational evidence base (see Feigl 1950a, p. 50). But he never went as far as to examine the respective technical details. In reaction to critiques by, among others, Nagel, Carl G. Hempel, and Philipp Frank, Feigl merely repeated his indebtedness to Sellars. “I readily conclude,” he admitted, “that pure pragmatics has not been developed to the extent that its indispensability or fruitfulness is as obvious as is (to my mind at any rate) the value of pure syntax and pure semantics.” (Feigl 1950b, p. 192) And he immediately added: “Fortunately, I can here again refer to the articles by Wilfred Sellars (listed in the biography of my essay) in which the basic ideas of pure pragmatics are set forth.” (*ibid.*)

Moreover, Feigl reaffirmed the significance of pure pragmatics for the justification of ‘semantic realism.’ By installing pure pragmatics, Feigl maintained, a viable alternative to Hans Reichenbach’s attempt at a *probabilistic* justification of the realistic point of view (see Reichenbach 1938) was available. Feigl argued that

[t]he customary probabilistic realism in trying to justify “transcendent” hypotheses on the basis of experimental findings has put the cart before the horse. Only after the introduction of the realistic frame can we legitimately argue inductively either from the theory to the outcome of as yet unperformed experiments; or vice versa from the results of experiments to *specific* postulates of the theory. Butthe presupposed introduction of the realistic frame, i.e., the semantic-realistic interpretation of the theory, is a step that can be justified only instrumentally: It furnishes the very possibility of a theory that is inductively fruitful. (Feigl 1950b, p. 195)

Accordingly, semantic realism is dependent on a foregoing decision concerning the choice of a language form. It is, in other words, justifiable only in terms of pragmatics, and it is for exactly this reason that Feigl, in his 1954 paper “Scientific Method without Metaphysical Presuppositions,” makes recourse to the “*relative* or *pragmatic a priori*” (Feigl [1954] 1981, p. 97) thereby referring the reader to the works of C. I. Lewis, Victor Lenzen, Arthur Pap, and – not surprisingly – Sellars.

Now what is striking is that by invoking Sellarsian pure pragmatics, Feigl completely ignores the formal dimension in Sellars’s original conception. This in turn involves a broadening of perspective insofar as the pragmatic level of formally reconstructing languages turns into a pragma*tist* justification of the realistic language form. What is thereby intended is a coherent ‘pragmatization’ of the scientific realist position, which in turn shall guarantee the *compatibility* of the logical empiricist with the scientific realist agenda (see in this connection also Neuber 2014a). Yet, Sellars himself was rather skeptical about the attempt of turning pragmatics into pragmatism:

“Are you saying that, after all, the pragmatist has the last word?”, I shall be asked. In a sense this is true. But the pragmatist must take the bitter along with the sweet; for the ‘last word’ is not a philosophical proposition. Philosophy is pure formalism; pure theory of language. The recommendation of formalisms for their utility is not philosophy. (Sellars 1947a, p. 202)

Since Feigl thought that the realistic language form could be justified only instrumentally (and thus in terms of utility), he would, according to Sellars’s standard, not have counted as a philosopher.

Fortunately, a second, more charitable interpretation is available. As has been pointed out in section 2, Feigl’s semantic realism is committed to the factual reference of theoretical concepts (like, for instance, ‘electron’). Understood that way, they have the status of, to quote it again, “genuinely designating terms” (Feigl 1950a, p. 50). Now in order to be empirically meaningful, theoretical concepts must in some way be connected to the observational evidence base. And this is where – for Feigl – the idea of a pure pragmatics *initially* comes into play. Its broadening application to the question of choosing the proper language form is *derivative* from this primary understanding and thus, I dare say, less important.

That being clarified, it still needs to be considered how the integration of pure pragmatics into a realistic understanding of science can be accomplished. Note that it is the context of verification, or better still, confirmation, where the machinery of pure pragmatics is located to work. In the ideal case, the criterion of confirmability is met by *measurement statements*, which in turn are quantified, i.e., based on the (non-arbitrary) assignment of numerals to objects or events. These objects or events might be observable or unobservable, the crucial point is that measurement statements always include *indexicals* such as ‘here,’ ‘now,’ ‘that,’ etc.[[8]](#footnote-8) But how, it might be asked, can indexicals and their use in scientific measurement by adequately analyzed? A possible answer is: by pure pragmatics.

And indeed, there is a passage in the 1967 Postscript to Feigl’s seminal *The “Mental” and the “Physical”* (published first in 1957) where Feigl argues in exactly that direction. The passage begins as follows:

A rigorous explication of the role of indexical terms should be provided in the semiotic (metalinguistic) discipline of pure pragmatics. But if this is going to be analogous to the explications of pure syntax and pure semantics, it will have to be formulated in an intersubjectively intelligible metalanguage; and hence again the “existential uniqueness” will be relegated to the limbo of emotive significance and supplanted by the neutral “sober and colorless” objective characterization. (Feigl 1967, p. 147)

The mentioned “existential uniqueness” has to do with the fact that indexicals are always speaker-relative. At the meta-level of pure pragmatics their use will be described in an objective way. Nevertheless, in actual practice, their ‘egocentric’ character cannot be circumvented. Feigl explicates:

Now, while I think that a world description (à la Minkowski) can be given that is – necessarily – devoid of indexical terms, such a world description can neither be fully understood nor practically used without being *linked* – with the help of indexical terms – to the experience of a sentient and sapient (i.e., human) being. This becomes evident if the Minkowski representation is viewed as a map of “all there is” in space-time. If I am to find the “picture” of myself-at-a-given-time on this map, I would have to scrutinize it in its (possibly) infinite extent in order to find just that particular skein (or segment of the set) of world lines which uniquely characterizes me-at-that-time. […] In actual practice I would, of course, *point* to that small region of the map. This is one way of illustrating the use of indexical terms […]. (*ibid.*)

Interestingly enough, this explication comes very close to what Feigl’s academic teacher Moritz Schlick, in his *General Theory of Knowledge*, called the “method of coincidences” (see Schlick [1918] 1974, § 31).[[9]](#footnote-9) This method served for Schlick as the basis of all theory of measurement.[[10]](#footnote-10) In Feigl’s hands, it turned into an essentially linguistic theory of ‘getting linked to reality.’ Thus in *The “Mental” and the “Physical,”* he paralleled measurability and indexicality as follows:

It seems to me that what holds of indexical (or egocentric) particulars holds – *mutatis mutandis* – analogously of indexical (egocentric) universals. I cannot even begin to “get a public language going” unless I understand the private (egocentric) language whose predicates (monadic, dyadic, etc.) designate experiential qualities or relations. I must be able to know (by “acquaintance”) some phenomenal qualities and relations (redness, between-ness, etc.) in order to “hook” (i.e.) connect my private language to the intersubjective language of science. To the extent that, for example, pointer readings belong to the confirming or disconfirming evidential data of physics, I must be able to “recognize” the position of a pointer on a scale “when I see it.” In my proposed reconstruction it is my private impression, e.g., the shapes and colors in my visual field, which constitute “ultimate” data of observation. (*ibid.*, pp. 147-48)

All of this presupposes a peculiar (both Russellian- and Schlickian-inspired) facet of Feigl’s famous ‘double-language theory’ (for the details of this theory, see Stubenberg 1997, Heidelberger 2003, Neuber 2014b). Accordingly, it must be seen that it is qualia or “raw feels” (Feigl 1967, p. 80) that are, for Feigl, the – epistemologically – *basic reality*. On this conception, we have privileged access to this basic reality, so that (as Feigl points out in the Postscript to *The “Mental” and the “Physical”*) the “egocentric account” (*ibid*., p. 155) must be regarded as the most immediate mode of getting into contact with reality, whereas “all scientific accounts […] deal with Being only indirectly and structurally” (*ibid.*; see also Feigl [1971] 1981, p. 351). At the same time, though, Feigl sees no problem in describing mental states by intersubjective scientific (neurophysiological) terms. “Privacy,” Feigl writes, “is capable of public (intersubjective) description, and the objects of intersubjective science can be evidenced by data of private experience” (Feigl 1967, p. 81). After all, Feigl is convinced of the “indispensability of a subjectivistically understood conception of immediate (first person) experience” (Feigl [1971] 1981, p. 353), which, on the one hand, entails a clear rejection of Ludwig Wittgenstein’s arguments against the possibility of a private language (see *ibid.*, p. 355), and, on the other hand, marks a significant contrast to the strategy of ‘explaining away’ the phenomenal properties of mental states (see, in this connection, Stubenberg 1997, pp.135-36). The possible objection that Feigl, by epistemologically privileging qualia, runs into the trap of panpsychism can be countered by the argument that all reality is, in fact, “at bottom qualitative” (Stubenberg 1997, p. 143). Thus, not only mental states, but also the diverse physical magnitudes (like mass, pressure, gravitational field intensity, etc.) are distinguishable only by their qualitative peculiarities (see Feigl 1967, pp. 43-44: see also Schlick [1918] 1974, pp. 283-285). But this does not imply that all reality is, like panpsychism would have it, intrinsically psychic. The point is that qualia (raw feels) are, for Feigl, epistemologically privileged as compared to ordinary objects and the entities posited by science. “Reference to one’s own immediate experience” Feigl (in an overtly Schlickian manner) writes, “is the (epistemological) prototype of all designation to objects, properties or relations by the words of our language” ([1971] 1981, p. 355).

One might wonder if this both indexicality- and first person-focused perspective is the adequate medium to account for the factual reference of *theoretical terms*. If it all, a ‘constructivist’ conception seems to recommend itself as a fitting frame. But then we would end up with a *consistent* empiricist rather than a *hybrid* realist-empiricist approach to science and scientific theory construction. Bas van Fraassen’s ‘constructive’ empiricism (see van Fraassen 1980) seems to be the closest and most natural ally, all the more so as, in more recent writings, van Fraassen has repeatedly stressed the significance of indexicals in their function as our primary “’link’ to reality” (van Fraassen 2008, p. 257). However, as is well known, van Fraassen, in his view of science, is not committed to the factual reference of theoretical terms (although, to be sure, he does not *deny* it). A merely instrumental interpretation of their use would suffice, in order to ‘save the phenomena,’ i.e., to make sure that the theories in which they are embedded are “empirically adequate” (van Fraassen 1980, p. 12). Consequently, the assumption of the factual reference of theoretical terms is rather endangered than secured by putting indexicality in the focus.

I do not intend to go into the details of this discussion. At any rate, a comprehensive analysis of indexical terms and their significance for science (and scientific measurement) still remains a desideratum. Important groundbreaking work concerning their *formal* analysis can be found in the writings of David Kaplan (see esp. Kaplan 1989). A reconstruction within the philosophy of science was prepared by Sellars and intended by Feigl. On the whole, the idea of a pure pragmatics waits to be reconsidered.[[11]](#footnote-11)

References

Ajdukiewicz, Kasimir (1949). “The Scientific World-Perspective.” In: H. Feigl and W. Sellars (eds.), *Readings in Philosophical Analysis*. Appleton-Century-Crofts, New York, pp. 182-188.

Carnap, Rudolf (1928). *Der logische Aufbau der Welt*. Bernary, Berlin.

Carnap, Rudolf (1936/37). “Testability and Meaning.” In: *Philosophy of Science* 3: pp. 419-71 and 4: 1-40.

Carnap, Rudolf (1942). *Introduction to Semantics*. Harvard University Press, Cambridge MA.

Carus, André (2004). *Carnap and Twntieth-Century Thought: Explication as Enlightenment*. Cambridge University Press: Cambridge.

Feigl, Herbert ([1943] 1949). “Logical Empiricism.” In: H. Feigl and W. Sellars (eds.), *Readings in Philosophical Analysis*. Appleton-Century-Crofts, New York, pp. 3 -26.

Feigl, Herbert (1950a). “Existential Hypotheses.” In: *Philosophy of Science* 17, pp. 35-62.

Feigl, Herbert (1950b). “Logical Reconstruction, Realism and Pure Semiotics.” In: *Philosophy of Science* 17, pp. 186-195.

Feigl, Herbert ([1954] 1981). “Scientific Method without Metaphysical Presuppositions.” In: *Inquiries and Provocations: Selected Writings, 1929-1974*, edited by R. S. Cohen. Reidel, Dordrecht, pp. 95-106.

Feigl, Herbert (1967). *The “Mental” and the “Physical”: The Essay and a Postscript*. University of Minnesota Press, Minneapolis.

Feigl. Herbert ([1971] 1981). “Some Crucial Issues on Mind-Body Monism.” In: *Inquiries and Provocations: Selected Writings, 1929-1974*, edited by R. S. Cohen. Reidel, Dordrecht, pp. 351-365.

Goodman, Nelson (1978). *Ways of Worldmaking*. Hackett, Indianapolis.

Heidelberger, Michael (2003). “The Mind-Body Problem in the Origin of Logical Empiricism: Herbert Feigl and Psychophysical Parallelism.” In: P. Parrini, W. S. Salmon, M. H. Salmon (eds.), *Logical Empiricism: Historical and Contemporary Perspectives*. University of Pittsburgh Press, Pittsburgh, pp. 232-262.

Hempel, Carl G. (1950).”Problems and Changes in the Empiricist Criterion of Meaning.” In: *Revue International de Philosophie* 4, pp. 41-63.

Howard, Don (1999). “Point Coincidences and Pointer Coincidences: Einstein on Invariant Structure in Spacetime Theories.” In: H. Goenner, J. Renn, J. Ritter, T. Sauer (eds.), *The History of General Relativity IV: The Expanding Worlds of General Relativity*. Birkhäuser, Boston, pp. 463-500.

Kaplan, David (1989). “Demonstratives.” In: J. Almog, J. Perry, H. Wettstein (eds.), *Themes from Kaplan*. Oxford University Press, Oxford, pp. 481-563.

Nagel, Ernest (1948). Review: Wilfrid Sellars, “Epistemology and the New Way of Words,” “Realism and the New Way of Words.” In: *Journal of Symbolic Logic* 13, pp. 222-223.

Nagel, Ernest (1950). “Science and Semantic Realism.” In: *Philosophy of Science* 17, pp. 174-181.

Neuber, Matthias (2011). “Feigl’s ‘Scientific Realism’.” In: *Philosophy of Science* 78, pp.165-183.

Neuber, Matthias (2014a). “Is Logical Empiricism Compatible with Scientific Realism?” In: M. C. Galavotti, E. Nemeth, F. Stadler (eds.), *European Philosophy of Science: Philosophy of Science in Europe and the Viennese Heritage*. Springer, Dordrecht/Heidelberg/New York/London, pp. 249-262.

Neuber, Matthias (2014b). “Herbert Feigl.” In: E. Zalta (ed.), *Stanford Encyclopedia of Philosophy*. http://plato.stanford.edu/archives/sum2014/entries/feigl.

Putnam, Hilary (1977). “Realism and Reason.” In: *Proceedings and Addresses of the American Philosophical Association* 50, pp. 483-498.

Reichenbach, Hans (1938). *Experience and Prediction: An Analysis of the Foundations and the Structure of Knowledge*. The University of Chicago Press, Chicago.

Schlick, Moritz ([1917] 1979). “Space and Time in Contemporary Physics.” In: Philosophical Papers Vol. 1 (1909-1922), edited by H. L. Mulder and B. van de Velde-Schlick. Reidel, Dordrecht, pp. 207-269.

Schlick, Moritz ([1918] 1974). General Theory of Knowledge, translated by A. E. Blumberg. Springer, Wien/New York.

Sellars, Wilfrid 1947a. “Pure Pragmatics and Epistemology.” In: *Philosophy of Science* 14, pp. 181-202.

Sellars, Wilfrid 1947b. “Epistemology and the New Way of Words.” In: *The Journal of Philosophy* 44, pp. 645-660.

Sellars, Wilfrid ([1948] 1949). “Realism and the New Way of Words.” In: H. Feigl and W. Sellars (eds.), *Readings in Philosophical Analysis*. Appleton-Century-Crofts, New York, pp. 424-456.

Sellars, Wilfrid (1963). “Empiricism and Abstract Entities.” In: P. A. Schilpp (ed.), *The Philosophy of Rudolf Carnap*. Open Court, La Salle, pp. 431-468.

Sellars, Wilfrid (1975). “Autobiographical Reflections.” In: W. Sellars and H.-N. Castañeda (eds.), *Action, Knowledge, and Reality: Critical Studies in Honor of Wilfrid* Sellars. Bobb-Merrill, Indianapolis, pp. 273-299.

Stubenberg, Leopold (1997). “Austria vs. Australia: Two Versions of the Identity Theory.” In: K. Lehrer and J. C. Marek (eds.), *Austrian Philosophy: Past and Present*. Kluwer, Dordrecht, pp. 125-146.

Tarski, Alfred (1944). “The Semantic Conception of Truth: And the Foundations of Semantics.” In: *Philosophy and Phenomenological Research* 4, pp. 341-376.

Uebel, Thomas (2007). *Empiricism at the Crossroads: The Vienna Circle’s Protocol-Sentence Debate*. Open Court, Chicago/La Salle.

van Fraassen, Bas C. (1980). *The Scientific Image*. Oxford University Press, Oxford.

van Fraassen, Bas C. (2008). *Scientific Representation: Paradoxes of Perspective*. Oxford University Press, Oxford.

1. For an extended discussion of Feigl’s attempt at a reconciliation of realism and empiricism, see Neuber 2011. [↑](#footnote-ref-1)
2. There is little doubt that someone like Otto Neurath (himself a self-declared defender of the logical empiricist idea) would not have accepted this purely formalist point of view; but this would be a discussion for another day. [↑](#footnote-ref-2)
3. Or, as Sellars writes at another place: “‘[T]oken’ is a meta-linguistic predicate, and is used properly when it is said that the state of affairs designated by one expression in a language is a token of another (perhaps the same) expression in the language.” (Sellars [1948] 1949, p. 440) [↑](#footnote-ref-3)
4. At one place, he explicitly declares: “Not that coherence is the *definition* of truth. The point is rather that the Idealistic conception of coherence has its contribution to make to the theory of meaning, confirmation, and truth.” (Sellars [1948] 1949, p. 443) [↑](#footnote-ref-4)
5. Thus in “Pure Pragmatics and Epistemology,” Sellars writes: “[W]hat can be clarified is the notion of one item in *a* world being in a formal sense about another item in the *same* world, which in turn has some direct or indirect relation to the *same* world. It is a matter of *the same world as*, and not of *the* world *tout court*.” (Sellars 1947a, p. 201). Moreover, in “Realism and the New Way of Words,” Sellars introduces the fictional character of an omniscient being (called ‘Jones’) that has, by definition, knowledge of THE (one and only) world, but which according to Sellars serves only as an illustrative contrast to the – only relevant – common empirical language user. [↑](#footnote-ref-5)
6. Let it be noted, though, that Sellars’s conception of a ‘world story’ bears strong similarities with Kasimir Ajdukiewicz’s notion of a “world-perspective.” Ajdukiewicz had introduced this notion in an article for the journal Erkenntnis in 1939 and Sellars had translated that article for the volume *Readings in Philosophical Analysis*, which he and Feigl published in 1949 (see Ajdukiewicz 1949). [↑](#footnote-ref-6)
7. It is pretty clear that Sellars takes his bearings here from the logical empiricist agenda in its post-verificationist (liberalized) stage. See, in this connection, Carnap (1936/37) and especially Hempel (1950). See further the reconstruction in Uebel 2007, ch. 10. [↑](#footnote-ref-7)
8. It might be objected that there are many cases in which indexicals do not occur. Take, for example, the measurement statement ‘The temperature rises from 24, 37 °C to 29, 53 °C in the bomb calorimeter’. Here, we find no explicit use of indexicals. However, *implicitly* it is *this* specific bomb calorimeter in which at a specific point of time *now* at a specific place *here* the temperature rises from 25, 37 °C to 29, 53 °C.  [↑](#footnote-ref-8)
9. In his seminal *Space and Time in Contemporary Physics*, Schlick characterized this method as follows: “In order to fix a point in space, one must somehow, directly or indirectly, *point* to it […], that is, one establishes a spatio-temporal coincidence of two otherwise separate elements. And it now turns out that these coincidences always occur in agreement for all intuitive spaces of different senses and all individuals; precisely so is an objective ‘point,’ independent of individual experiences and valid for all, thereby defined.” (Schlick [1917] 1979, pp. 262-63) For an excellent discussion of Schlick’s method of coincidences (and its – Einsteinian – scientific context), see Howard 1999. [↑](#footnote-ref-9)
10. See Schlick [1918] 1974, p. 275: “[A]ll measurement, from the most primitive to the most sophisticated, rests on the observation of spatio-temporal coincidences.” [↑](#footnote-ref-10)
11. Thanks to Thomas Uebel for a very helpful comment concerning the main idea of this paper. [↑](#footnote-ref-11)