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Pragmatisms and Logical Empiricisms: Response to Misak and Klein

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This paper responds to the generous comments by Alexander Klein and Cheryl Misak on my "American Pragmatism and the Vienna Circle: The Early Years". First, besides offering some clarification of my original thesis, I argue that Jerusalem was not liable to the anti-Spencerian criticisms by James that Klein adduces in the course of defending James against the charge of psychologism. Then I investigate the impact of Wittgenstein's Ramsey-derived pragmatism, importantly foregrounded by Misak, on the Vienna Circle and argue that it was mainly limited to Schlick but not recognized as pragmatist, also leaving unaffected the impact of James's pragmatism on Frank, Hahn and Neurath specified in my original paper. That said, Klein's and Misak's comments add significantly to our understanding of long-neglected transatlantic philosophical connections in the early twentieth century.

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1. Introduction

Let me say first of all that I am very grateful for the generous way in which Cheryl Misak and Alexander Klein have responded to my essay "American Pragmatism and the Vienna Circle: The Early Years" (2015, hereafter "APVC") and joined forces in exploring further important aspects of the long-neglected *early* twentieth century cross-Atlantic interactions that my essay dealt with.[1] So we learn that even a populist pragmatist is no more straightforward to interpret than early logical empiricists and that a pathway of influence into Viennese philosophy was forged even for a more concise pragmatist thinker who otherwise had been largely neglected in the first decades of the last century.

Klein focuses on the American pragmatist at the center of the story I tell, William James. It was the translation of his *Pragmatism* in 1908 that prompted a wide-ranging discussion among German-language philosophers in the years before World War I while Peirce and Dewey were almost entirely ignored. Important exceptions to the mostly hostile reaction to James were the young Philipp Frank, Hans Hahn and Otto Neurath, later members of the Vienna Circle, and APVC set out to trace this long-neglected connection between pragmatism and logical empiricism and begin to tease out some of its significance. Apart from instructive explorations of James, Klein's comments alert me to two potential misunderstandings of the case I tried to make:

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[1] I am equally grateful to Sandra Lapointe for arranging this exchange.

first, concerning the role that the reading of pragmatism as afflicted by psychologism played for its reception by Frank, Hahn and Neurath; second, concerning the role that verificationism played especially in Frank's reception of Carnap's *Aufbau*. The question arises whether reaching, as Klein does convincingly, a different conclusion concerning James's failings than Frank, Hahn or Neurath did, has significant effects on the story told in APVC.

The American pragmatist at the center of Misak's account is Charles Sanders Peirce. Misak focuses on a different path of transmission of American pragmatist thought to Vienna, telling a parallel story of how Peircean pragmatism made its way, via Frank Ramsey's assimilation of his posthumous essay collection *Chance, Love and Logic* (1923) and his criticism of the conception of thought and language developed in Wittgenstein's *Tractatus Logico-Philosophicus* (1922) into the thought of Ludwig Wittgenstein himself and on from there. Misak's fascinating story raises anew the question whether and to what extent there is a need to distinguish different factions in the Vienna Circle in the 1930s and therefore to differentiate between the impact that pragmatism had upon them, and on logical empiricism as a whole in the long run.

2. Pragmatism, Psychologism, Verificationism

The version of psychologism at issue is the view according to which, as Wilhelm Jerusalem, the translator of *Pragmatism* into German put it, "even the most universal propositions of logic and mathematics are regarded only as sedimentations, as condensations of earlier experience" (1909, 809). The charge against it holds that whatever its merits as a casual-genetic account, the view has none as a normative one, namely as justifying the truth claims of logic and mathematics. As regards the leveling of such a charge against James, it is important to distinguish (a) what

the case was, (b) what the case was thought to be, and (c) when the case was considered by whom.

When Klein speaks of "Uebel's contention that William James advocated a form of pragmatism that was (or should have been) attractive to the so-called 'left wing' of the Vienna Circle, *but for* James's psychologism" (2016, 1), the suggestion seems to be that I claimed—very much along line (a) and, as Klein's citations indicate, in pretty distinguished company—that James's pragmatism was psychologistic. Elsewhere Klein is more cagey about this attribution but, in any case, I tried to remain non-committal about what James's own position really was. Thus I briefly documented the psychologism of Jerusalem and of the British pragmatist F. C. S. Schiller, indicated the neglect at the time still suffered by Peirce, and noted a passage or two from *Pragmatism* that *could* be read as indicating a psychologistic stance. More importantly, the story I tell only suggests that pragmatism—very much along lines (b)—was *perceived* as psychologistic by Frank, Hahn and Neurath. I am happy, therefore, to learn from Klein that matters here as elsewhere are far more complicated than it first appears (more on this below).

Moreover, my story suggests—now addressing line (c)—that it was so perceived by them first as members of their early discussion group in the years from about 1907 to 1910, in the so-called "first" Vienna Circle. In later years, when they were members of the Vienna Circle proper around Schlick and constituted its so-called "left wing" (with Carnap), only Frank seems to have returned to reading James's *Pragmatism* while Hahn read Dewey's *Studies in Logical Theory* (1909). (It was not until in his American exile Frank appears to have read still more widely in the pragmatist literature.) As the Feigl and Carnap quotations I adduced in APVC make clear, in the years of the Vienna Circle proper the doctrines of American pragmatism were not studied by other members before the mid-1930s at best (with the limited exception of Schlick and the then-already emigrated Feigl himself).[2] It was Frank's, Hahn's and Neurath's *early* exposure to pragmatism—a largely-positively received exposure that distinguished them in the Vienna Circle (in his 1910 habilitation dissertation Moritz Schlick only criticized the pragmatic theory of truth)—that helps to account, so I claim, for the pragmatist strain one can discern in the thought of mainly Frank and Neurath throughout their philosophical careers.[3]

Thus Klein gives me undeserved credit when he attributes to me "the excellent question why it took so long for the logical positivists to recognize commonalities with American pragmatism" (2016, 2). That was not my question. It is true that for Frank it took reading the *Aufbau* to realize that what the Vienna Circle was developing may count as a logical sharpening of pragmatist ideas, but my story does not place Hahn's, Frank's and Neurath's recognition of their own (partial) affinity with American pragmatism into the later 1920s. My question—besides the over-arching one of whether there was before 1934 any non-negligible impact at all of pragmatism on the logical empiricism of Viennese provenance (note that I left the Berlin group out of my considerations)—was rather why it took so long for those logical positivists for whom such influence held true to *acknowledge* their commonalities with American pragmatism publicly and in print. This is where, for better or worse, the psychologism-charge plays its role.

My claim is also not that Wittgenstein's conception of logic helped Frank, Hahn and Neurath to recognize their pragmatist affinities—as Klein seems to have understood me (2016, 3)—but that it helped them indirectly to consolidate their sympathies by showing how the perceived difficulty that pragmatism faced could be overcome. The importance of Wittgenstein's

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[2]On Schlick and Feigl on C. I. Lewis, see note 4 below.

[3]Hahn, being concerned mainly with logic and mathematics and their epistemology, had fewer occasions to display his pragmatist sympathies, but see the quotes in APVC.

conception of logic as tautologous complements that of Carnap's *Aufbau* which showed Frank how to make "logically precise" James's suggestive talk about meaning and so allowed the philosophers of the Vienna Circle to articulate what for Frank amounted to what might be called "pragmatism on their own terms". After all, the problem that had prevented (according to APVC) their earlier acknowledgment of pragmatism also had been their own as empiricists (given the inadequacy of Mill's epistemology of mathematics). Indeed, just as ultimately the left wing of the Vienna Circle was less interested in following Wittgenstein than in developing their own understandings, so Frank, Hahn and Neurath already early on were less interested in the development of pragmatism than in that of their own ideas. (As I noted in APVC, they also did not care for the *Weltanschauung* that James promulgated.) Not surprisingly, therefore, C. I. Lewis's development of a pragmatic *a priori*, which Klein rightly points to, does not seem to have been noted by them by the time they were happy to sport their theoretical allegiance with pragmatism publicly and in print. (Schlick also made no reference to Lewis in print before his own response to "Experience and Meaning" which Lewis had sent him in 1934.[4])

The mention of Carnap's *Aufbau* (1928a) brings me to the second important issue raised by Klein (2, 17) that needs clarification. On Frank's own account (1949, 33), reading Carnap's *Aufbau* (and *Scheinprobleme*, 1928b/2003: see APVC, 7) "reminded [him] strongly of William James' pragmatic requirement that the meaning of any statement is given by its 'cash value', that is, by what it means as a direction for human behavior." I also stated that "Frank's 'pragmatist' reading of the *Aufbau* is, in fact, a verificationist-positivist one" (APVC, 8). My footnote 29 then commented on the multifaceted question of the interpretation of Carnap's *Aufbau*, unfortunately too cryptically. Let me try to do better.

Of the many ways in which the term "verificationist" can be understood, Klein picks up the one that has bedeviled the interpretation of Carnap's *Aufbau*—indeed, of all Vienna Circle philosophies for far too long—namely its supposed attempt to put empiricism on a foundation of certainty. Having long argued against this reading myself, that is not the understanding of "verificationism" I have in mind. Indeed, footnote 29 asserts that "this positivist reading of the *Aufbau* did not adopt the strict or complete verificationism promoted by Wittgenstein" and explicitly contradicts Carnap's own retrospective account of the *Aufbau* as having aimed at certain foundations.[5] I take it that Carnap's recollection in his autobiography reflects the foundationalist way the *Aufbau* was thought of temporarily in the Circle following the report of Wittgenstein's pronouncements of 22nd December 1929 (and I provided textual support). Footnote 29 does not, however, foreground the Kantian theme of concern with the possibility of objectivity as a (partial) motivation for Carnap, but claims that "Frank's verificationist reading of the *Aufbau* discounts its Kantian *origins* and puts its reduc-

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[4]In light of Klein's remarks on C. I. Lewis it may be noted that in December 1930 Feigl wrote to Schlick from Cambridge, MA, that he "took part" in his seminar on truth and thought his *Mind and the World Order* (1929) "the best theory of knowledge within English literature", adding: "What Lewis means by pragmatism is hardly distinguishable from our positivism" (quoted from Haller 2003, 123). It would seem that Schlick did follow up Feigl's implicit suggestion to have a look at Lewis's book for he referred to it in his posthumously published 1932 London lectures "Form and Content" (1938/1979, 336)—albeit only in relation to a notion of possible significance over and above what can be expressed structurally; Lewis's pragmatic *a priori* was not mentioned. On the other hand, one can see emerging here with Feigl yet another avenue of receptivity to pragmatist thought among Vienna Circle thinkers—beyond the ones pointed to by Misak and me and the still different one that holds for Carnap (on these see section 3 below)—which reached maturity with his magisterial (1950).

[5]Compare Carnap (1963, 57) with Creath (1982). In rejecting Carnap's retrospective account in Uebel (1992, chap. 2) and Uebel (2007, chap. 2), I also agree, e.g., with Friedman (1992).

tionist architecture at the service of positivist epistemology". I now realize that these last two words mislead: rather than prepare readers for Mach's slogan "Where neither confirmation nor refutation is possible, science is not concerned" (1883/1960, 587), discussed in the next section of APVC, they put Klein and perhaps others in mind of the traditional foundationalist project misleadingly associated with the *Aufbau*. My point, rather, is that Frank's pragmatist cash-value reading places the reductionist analysis of scientific discourse into its basic, logically atomic constituents into the foreground, not the latter's supposedly foundationalist status. That the *Aufbau* pursued a hitherto-unseen—even hitherto-unimagined: even individual sense-data were constructed entities for Carnap—reductionism will not be disputed even by readers who see in that book an attempt to delineate the structural conditions that make scientific objectivity as much as possible. (That structuralism was essential to intersubjectivity was a point stressed in the Circle since Schlick 1926.)

Thus understood, no "irony" (Klein 2016, 17) lurks in the confrontation of James's quasi-conventionalism about *a priori* principles with the reductionism of the *Aufbau* as seen by Frank in a pragmatist light: the confrontation of Neo-Kantian framework-theory with foundationalist empiricism should not be projected onto them. But this is not to say that my story is without irony. For instance, here in 1929 we see Frank saving pragmatism from vagueness by rendering the pragmatic maxim logically precise, but little more than twenty years later the very same Frank responded to the troubled history of attempts to give necessary and sufficient conditions for the concept of cognitive significance by recommending that it be understood informally and "pragmatically"! (For more details see Uebel 2011.) Nor do I wish to deny that Frank, Hahn and Neurath did not get the full measure of James. (The same seems to be true, incidentally, of their reading of Duhem which simply disregarded his meta-

physics: like the young men on a mission that they were, they only picked up what they found useful for their cause.)

Klein's argument that regarding James as a psychologistic thinker amounts to misreading him is well supported. I must note, however, that it takes Klein's considerable exegetical expertise to make the case. Apart from passages from *Principles of Psychology* (1890), which they may have read earlier, Klein relies to a large extent on texts of James's that Frank, Hahn and Neurath are most unlikely to have read. (James's arguments against Spencer's unacknowledged naturalistic fallacy would seem to belong to these.) Klein himself also noted (16, note 36) that James's proto-conventionalism in the last chapter of *Principles of Psychology* missed "what would become a hallmark of mature conventionalism", namely the recognition that stipulative definitions cannot be true. As one can also see from Klein's quotations, this omission still features in the less than straightforward *Meaning of Truth* (1909), indeed was compounded there by the denial of the objectivity of truth. While this does not render the diagnosis of psychologism correct, it nevertheless shows that discerning James's proto-conventionalism (and his implicit response to the psychologism issue) would have been no easy task even for readers who, unlike Frank, Hahn and Neurath, looked beyond his *Pragmatism* itself and so makes arriving at their diagnosis at least understandable.[6]

Klein's exegesis of James's actual attitude is highly instructive then, but apart from correcting Frank's, Hahn's and Neurath's attribution leaves my story unaffected. That Jerusalem and Schiller on one side and James on the other should have disagreed about psychologism despite surface similarities gains support from Klein's analysis of James's stance towards Herbert

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[6]It may also be noted that it remains difficult to see just how James's quasi-conventionalism manages to account for the validity of logic and mathematics, especially so since Poincaré himself did not so extend his own fully blown conventionalism and Carnap's logical pluralism still belonged to the distant future.

Spencer's evolutionism. Yet matters get more complicated even here. Jerusalem also criticized Spencer. While he was deeply impressed by what he called Spencer's "biological method", the principle to consider psychological phenomena in their functional role for survival, and employed it widely in his own psychological theorizing, Jerusalem also came to criticize Spencer's one-sidedness:[7]

> Our psyche is not merely an adaptation to the environment. Our minds possess a creative force which is capable not only to respond to the impression from outside with suitable measures for the maintenance of life, but also to work on them within itself and to build from them new structures that live their own life. In this, however, the social life of humans also plays an exceedingly important role. (Jerusalem 1923, 23)

There is little reason to think therefore that Jerusalem must have regarded the most general propositions of logic and mathematics as sedimentations of "perceptual" experience (Klein 2016, 17). Jerusalem saw himself as working along anthropological lines of thought introduced by Durkheim's concept of collective representations and later explored by Levy-Bruhl. With his evolutionism being as much cultural as it was genetic, he had much greater leeway in understanding how "experience" justified logic and mathematics than Spencer. (A similarly culturalist point, but without reference to Durkheim and his school, would seem to hold, incidentally, about Mach's evolutionist psychologism.[8]) In consequence, Frank's, Hahn's and Neu-

rath's rejection of psychologism did not have to depend on taking its proponents to be more or less naïve Milleans—already Jerusalem does not qualify—but rather depended on the implausibility of accounting for the validity of logic and mathematics in empirical terms at all.

Having mentioned Mach I should also emphasize what APVC only mentioned in passing, namely that the pragmatic strand in the thought of Frank, Hahn and Neurath owes much to his ideas as well, as did James's own views early on, as his first biographer noted (Perry 1936, 463). But one can go still beyond calling Mach "an important forerunner of pragmatism" (Perry 1936, 579). From *History and Root of the Principle of the Conservation of Energy* onwards Mach characterized scientific theories as economical representations of an otherwise unsurveyable multitude of singular facts, directly or indirectly conditioned by practical interests. For him even "the choice of fundamental facts is a matter of convenience, history and custom" (Mach 1872/1911, 57). By the time James visited him in Prague, Mach, in lectures (1882) and the then forthcoming *The Science of Mechanics* (1883/1960), had begun to stress the evolutionary origin of this interest-relativity, and in his last book, *Knowledge and Error* he summarized his view as follows: "Scientific thought arises out of ordinary thought, and so completes the continuous series of biological development that begins with the first simple manifestation of life" (1905/1976, 1). (Like Jerusalem, Mach avoided fallacious Spencerian shortcuts by stressing the need for social cooperation; see Mach 1905/1976, 61.) Elsewhere I argued that "Mach's 'positivism' was indeed a 'pragmatism' as

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[7]This comment does not yet appear in the first edition of 1899, but the first two sentences express convictions basic to his explorations in psychology since the early 1890s. The necessary social background for cognitive evolution was first mooted in 1897 and extensively explored since 1909. For more detail, see Uebel (2012). Incidentally, Jerusalem also criticized Spencer's "too narrow version" of the concept of life (1923, 126), echoing James's criticism of his definition of mind.

[8]If it be asked, reasonably enough, why Mach's psychologism did not lead Frank, Hahn and Neurath to disown their Machian heritage, the an-

swer would be that that would have left them without a local scientific-philosophical tradition to build on. (Boltzmann fared no better on the psychologism issue: see Uebel 2014.) That the standard bearers of the tradition they saw themselves building on were themselves so afflicted may also account for their silence on the entire matter until they had their Wittgensteinian solution to offer.

far as science was concerned".[9] It is not surprising therefore that what I called Mach's "slogan" above—which Mach apparently arrived at on independent grounds—came close to what James called "Peirce's principle" and further explicated as "the pragmatic maxim". "Having been brought up in a Machian tradition" (Neurath 1946/1983, 230), Frank, Hahn and Neurath were therefore well prepared for their early encounter with James's *Pragmatism*; indeed, without having been so primed they might well have disregarded his views altogether, like so many of his academic readers in Central Europe at the time.

As the reception of American pragmatism by Frank, Hahn and Neurath was neither unconditioned nor unconditional, it may be wondered why it should be considered newsworthy at all. Here too I agree with Klein that it can only help to realize that there was greater interaction between the different schools of early twentieth century philosophy than is commonly presumed. One upshot of my story is that in looking for influences on logical empiricism we must not only look, as tradition has it, to positivism and empirio-criticism or, as has been urged more recently, to different Neo-Kantianisms still flourishing at the time, but also to American pragmatism, and in addition realize that Mach's positivism was strongly pragmatist as well.

3. Pragmatism, Logical Atomism and Hypotheses

Misak centers her story of pragmatism's route to Vienna on the logical atomism of Wittgenstein's *Tractatus* and Ramsey's Peirce-inspired critical reaction to it. The crucial point is Ramsey's account of open or universal generalizations which, he claimed, were not to be analyzed as potentially infinite sets of conjunctions of singular statements but rather express, when

affirmed, the adoption of mental habits, of expectations of how objects that fall under the subject term will behave on future occasions. "This is a kind of pragmatism: we judge mental habits by whether they work" (1931/1990, 93). Ramsey's pragmatism focuses on beliefs as tools for action, as opposed to vehicles of ideal representation of the sort pursued by logical atomists, like Wittgenstein in the *Tractatus*. Wittgenstein's later and often commented-upon references to the criticisms Ramsey made of his early work find their proper focus here, Misak argues convincingly.

Wittgenstein's notebooks from 1929–1930 indicate—it may be added: with much greater depth than the remarks available in Waismann's notes of Wittgenstein's conversations with Schlick and himself—that already at that time the *Tractatus*-project was shaking at its very foundations. The truth-functional analysis of molecular propositions in terms of their atomic constituents was coming increasingly under attack. Universal propositions turned out to be not propositions at all but "hypotheses": their being strictly unverifiable demanded an altogether different conception of what makes for meaningfulness in language. What was required was not the analyzability of underlying deep structures so as to bring the truth conditions of atomic propositions to bear on our everyday speech, but an account that explicated the openness of our linguistic understanding of universal statements by the idea that they induce expectations for the future. Ramsey's criticism can thus be seen as, in so many words, starting off Wittgenstein on his path to think of meaning as use. This, Misak argues, is a deeply pragmatist conception not merely in terms of content but also in its provenance.

Importantly so for present purposes, the alternative conception of universal generalizations as laws for constructing propositions was then transmitted further to Schlick and Waismann and the Vienna Circle generally. To be sure, Wittgenstein's path

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[9]I also added, for better or worse, that in just this respect, James's version had little to add; see Uebel (2014). See Ferrari (2016) for a stronger reading of James's influence.

from the point of the initial impact of Ramsey's criticism onwards was not straightforward and Misak warns about this.[10] But what's crucial here is not only how much Wittgenstein "wavered", but also what his Viennese interlocutors were able to make of the changes he was initiating. Moreover, there is the question of which members of the Circle could appreciate the developments for reports of which, being excluded from the conversations, they depended exclusively on Schlick and mostly Waismann. Some like Neurath were suspicious of Tractarian metaphysics from the start, others like Carnap found themselves alienated by an unfortunate priority dispute.[11] But even of Schlick and Waismann it can be doubted that they understood themselves to be led into pragmatist territory. Let's consider this matter more closely as it will point to a partial resolution of a difficulty Misak's story faces with regard to the third step of the importation of Peircean pragmatism into Europe.

Misak grounds her case for Wittgenstein's pragmatism by refering to passages from MS 107 dating from 25th November 1929 and 20th January 1930 that are highly revealing and worth repeating. On the first of these dates Wittgenstein writes:

> All that's required for our propositions (about reality) to have sense is that our experience *in some sense or other* either tends to agree with them or tends not to agree with them. That is, immediate experience need confirm only something about them, some *one* facet of them.

On the second of these he writes:

> Sentences—that is, what we ordinarily call so: the sentences of our everyday use—seem to me to work differently from what in logic is meant by propositions, if there are such things at all.

And this is due to their hypothetical character. Events do not seem to verify or falsify them in the sense I originally intended—rather there is, as it were, still a door left open. Verification and its opposite are not the last word.

When I say "There is a chair over there", this sentence refers to a series of expectations. ... If some of these expectations are disappointed, I will see it as proof for retaining that there was no chair there.

Here one sees how one may arrive at the pragmatist conception of true and false: A sentence is true as long as it is useful.

Every sentence we utter in everyday life appears to have the character of an hypothesis.

The point of talking of sense-data and immediate experience is that we are looking for a non-hypothetical representation.

But now it seems that the *representation* loses all its value if the hypothetical element is dropped, because then the proposition does not point to the future any more ...[12]

Here Ramsey's pragmatist challenge is clearly borne out. Note that, as Misak points out, Wittgenstein extended it beyond open generalizations to "hypotheses in general", that is, to be precise, to all statements about the external world in general.[13]

Yet in between, on 22nd December, Waismann recorded Wittgenstein at Schlick's house as follows. Following comments that echo part of his manuscript notes of 25th November (i.e. "essentially we have only one language, and that is the everyday

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[10]See also footnote 8 in McGuinness (1967/1979, 45).

[11]For an assessment of the misnamed priority dispute between Wittgenstein and Carnap, see, e.g., Stern (2007).

[12]Quoted from Misak (2016, 10, 8–9), orig. emphasis. Wittgenstein used "Satz" throughout: see MS 107, 205 and 247–48 in Wittgenstein (1999, 118, 174). The first passage and the last sentence of the second one can also be found in the typescript that Wittgenstein left with Russell in early May 1930, known to posterity as *Philosophical Remarks*: see (1964/1974, 282–83).

[13]Epistemologists take note: here Wittgenstein is most clearly still beset by the conception of the priority of experiential knowledge over knowledge of the world, an assumption the abandonment of which is essential to his (much) later contextualism. For the wider implications of this, see Williams (1991).

language") he also says, under the subheading "The Sense of a Proposition is its Verification":

> There are two conceptions here. One of them says that however I set about it, I shall never be able to verify the proposition completely. A proposition always keeps a back-door open, as it were. Whatever we do, we are never sure that we were not mistaken. The other conception, the one I want to hold, says, "No, if I can never verify the sense of a proposition completely, then I cannot have meant anything by the proposition either. Then the proposition signifies nothing whatsoever." (McGuinness 1967/1979, 45, 47)[14]

Clearly, according to the conception which Wittgenstein says he wants to hold, hypotheses would be utterly meaningless, contrary to what only weeks before and weeks after he stated our mastery of the ordinary everyday language demands![15]

During his next visit to Vienna, on 22th March 1930, Wittgenstein affirmed to Schlick his continued preoccupation with the immediately given in so far as it provides "the ultimate point beyond which you cannot advance" (McGuinness 1967/1979, 97). But at least now he was able to offer what could be taken as a bridge between what is strictly verifiable and hypotheses: "An hypothesis is not a statement but a law for constructing statements." (The claim "a hypothesis is a law for constructing propositions" first emerged in a manuscript entry dated 4th February 1930.[16]) This was explained to Schlick as follows: "A natural law cannot be verified or falsified. Of a natural law you can say that it is neither true nor false but 'probable,' and here 'probable' means: simple, convenient. A statement is true or false, never probable. Anything that is probable is not a statement." And once again Wittgenstein concluded: "The equations of physics can neither be true or false. It is only the findings in the course of a verification, i.e. phen⟨omenological⟩ statements that are true and false" (McGuinness 1967/1979, 100–101, orig. amend.).[17] Unfortunately, Wittgenstein left it utterly unclear how both everyday hypotheses and the equations of physics could be understood so that the instructions implicit in them could be followed. Moreover, again it is clear that Wittgenstein had not yet abandoned the Tractarian conception of language.

Note also that, at least according to Waismann's notes, Wittgenstein did not explain to him or Schlick that hypotheses created expectations: he did not spell out how "physics" expressed what he called "its relation to the future", unlike in his manuscripts where the claim that "a hypothesis is a law for constructing propositions" was immediately followed by "One could also say: An hypothesis is a law for constructing expectations. A proposition is, so to speak, a section of a hypothesis at a certain point".[18] Only on 4th January 1931 Wittgenstein elaborated for Schlick his bare hint in a previous discussion on 22nd March—"What we observe are always merely 'sections' through the connected structure of the law"[19]—by explaining

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[14]Again, Wittgenstein used "Satz".

[15]It will not do to suppose that Waismann made a mistake: the demand for strict ("definitive") verification was reiterated by Wittgenstein in MS 107, 250 on 21st January 1930: see Wittgenstein (1999, 176). This remark appears also in Wittgenstein (1964/1974, 283).

[16]Wittgenstein used "Sätze"; see MS 107, 283 in (1999, 193); the passage can also be found in (1964/1974, 285). This phrase does not occur in Waismann's notes of the discussions with Wittgenstein during December 1929 and January 1930. Misak (2016, 9) cites two occurrences of the phrase from Wittgenstein's lectures in Cambridge, Easter Term 1930.

[17]Waismann used "Aussage" and "Aussagen".

[18]MS 107, 283 in Wittgenstein (1999, 193). For the role of expectations (in connection with hypotheses), compare McGuinness (1967/1979, 101) with MS 107, 248–253 in Wittgenstein (1999, 175–77). Talk of expectations is also much reduced in the typescript for Russell and even more so in all three versions of the so-called "Big Typescript" (T 213), but the addition "One could say . . . " is preserved in all of them; see (1964/1974, 285), (2000, 87) and (2003, 94/94e).

[19]McGuinness (1967/1979, 100). Compare MS 107, 253 in Wittgenstein (1999, 177), and (1964/1974, 284) as well as (2000, 87) and (2003, 94/94e): "If our experiences produce points on a straight line, the proposition that these experiences are various sections of a straight line is a hypothesis."

that "[t]he hypotheses of physics are constructed in such a way that they connect a very great number of experiences of different kinds. ... Phenomena are different 'aspects' connected by an hypothesis" (McGuinness 1967/1979, 160–61).[20]

By 9th December 1931 matters seem to have settled. "I used to believe", he said to Waismann about the *Tractatus*, "that it is the task of logical analysis to discover the elementary propositions, and that was quite correct too. It was clear to me that here at any rate there are no hypotheses ... Yet I did think that the elementary propositions could be specified at a later date." Just that "dogmatism" of analyzing language so that later "we can hit upon something that we today cannot yet see" Wittgenstein now rejected:

> The truth of the matter is that we have already got everything, and that we have got it actually present; we need not wait for anything. We make our moves in the realm of the grammar of our ordinary language and this grammar is already there. Thus we have already got everything and need not wait for the future. (McGuinness 1967/1979, 182–83)

Depth analysis was replaced by "perspicuous representation". The contrast between propositions and hypotheses was recast: no longer was it a case of one belonging to language proper and the other one not. As Wittgenstein put it on 1st July 1932: "An hypothesis differs from a proposition in virtue of its grammar. It is a different grammatical structure" (McGuinness 1967/1979, 210). But importantly, both belonged to the same language.

The overall trajectory of Wittgenstein's development is well known. I recall the related stages of his distinction between hy-

potheses and propositions here for two reasons. First, to note what an eye-opener Misak's account of the pragmatic Wittgenstein can be. Second, to note that a complication arises for her account of the transmission of American pragmatism to the Vienna Circle which requires an amendment.

Note that, as recorded by Waismann, in his conversations with him and Schlick, Wittgenstein never mentioned any pragmatist provenance of his ideas (as he did at least once in MS 107 on 20th January 1930) nor elucidated the pragmatist point of his account of hypotheses in terms of the action-oriented formation of expectations they afford. Importantly therefore, for the members of the Vienna Circle the very phenomenon addressed by Wittgenstein—the impossibility to verify hypotheses conclusively—told a deficit story. The demotion of universal generalizations, however empirically grounded, from the domain of cognitively significant statements represented a rather embarrassing price to be paid for Wittgenstein's strict verificationist theory of meaning (as he articulated it to Schlick in 1929–30, see above). Indeed, it was the rejection of the, for them, unnecessary imposition of such limitations that constituted the beginning of the so-called left wing of the Circle and motivated their self-conscious attempt to "liberalize empiricism" (Carnap 1963, 57). About the very same phenomenon, however, Wittgenstein had entirely different ideas. For him, hypotheses opened the path to an altogether different conception of meaning from that of the *Tractatus*, ultimately to meaning as use. Now if we stand far enough away from it, we can even see a similarity in intent or direction between Wittgenstein and the left wing of the Circle, but close up none was discernible. Put overly crudely, while for Wittgenstein Carnap and his colleagues appeared simply to switch from one formalism to another whereas the point was get beyond formalisms altogether, for them in turn, Wittgenstein seemed to lose himself in vagaries of phenomenology and the refusal to theorize. Schlick

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[20]There do not seem to be parallels to this passage in the manuscript volumes, but two entries of 18th and 21st August 1930 speak to the idea here expressed (and link back also to the comment of 25th November 1929): "It's always facets of a hypothesis that are verified." "When this facet of a hypothesis is laid alongside reality, the hypothesis turns into a proposition." See MS 109, 19 and 26 in Wittgenstein (1999, 13, 16) as well as (1999, 88-89) and (2003, 96/96e).

came to respond differently in the end but he started out in a similar position.

Schlick applied Wittgenstein's pronouncement that meaningfulness demands complete verification straight away to scientific discourse, to singular and to general causal claims. Thus he wrote in an important paper of his from 1931: from the fact that "final verification is impossible … we gather that a causal claim by no means has the logical character of an *assertion*, for a genuine assertion must allow of verification" (Schlick 1931/1979, 187, orig. emphasis).[21] Schlick glossed over the difficult question now arising concerning the semantic status of universal statements by quoting Wittgenstein to the effect that a law of nature represents "a prescription for the making of assertions" (Schlick 1931/1979, 188) and then sought to render harmless this rather puzzling doctrine by reminding his readers: "As we know, it is possible to test only the individual statements that are derived from a law of nature" (Schlick 1931/1979, 188). Note that for this to be true testing must be understood to require strict verifiability, and then the claim not only loses its common sense appeal but also conflicts with Wittgenstein's view that all external world statements (and so all causal claims) are to be regarded as hypotheses. But let that go. What's notable most of all is that Schlick, representative in this for the whole of the Circle, interpreted Wittgenstein's claims solely in the framework of (natural) science. That Wittgenstein, as recorded by Waismann, did not speak of "expectations" raised by hypotheses but only that they allow different "aspects" of their subject matter to be illuminated explains why the members of the Circle found barred their access to the psychological dimension of hypotheses that made for the link with pragmatism.

Now the left wing of the Circle, as noted, quickly changed direction. By 1931, when he was writing "The Elimination of Metaphysics by the Analysis of Language", Carnap had abandoned strict verificationism and returned to the more liberal version he had outlined earlier in *Pseudoproblems*; in lectures of 1932 Hahn followed suit and Neurath, Carnap remembered, "had always rejected the alleged rock bottom of knowledge".[22] Note here that these moves were made in direct *opposition* to Wittgenstein: not only did the members of the left wing not recognize the pragmatism behind Wittgenstein's pronouncements about hypotheses, but they actually rejected the position to which it had led him. In fact, their "liberalization of empiricism" was part of the far-reaching reconceptualization of the role of philosophy in unified science that was demanded by Neurath's forceful criticism of the *Aufbau's* methodological solipsism (and of the epistemic priority thesis of experiential over physical knowledge generally), a reconceptualization at least partially achieved over the course of the so-called protocol sentence debate with Carnap and Schlick throughout the first half of the 1930s.[23] But the origins of Carnap's pragmatism, while aided and abetted in its Viennese development by Neurath's naturalism, lie still elsewhere, in his youthful fascination with the fictionalism of Hans Vaihinger, but that is another story.[24] As regards the pragmatism of Frank, Hahn and Neurath, of course, its independence from the line of transmission via Ramsey and Wittgenstein is plain. Frank's 1929 Prague conference address which gave such unusual prominence to James (see APVC) was given in September, two months *before* Wittgenstein recorded his response to Ramsey's pragmatist challenge in MS 107 and more than half a year before Wittgenstein communicated his resultant views on hypotheses to Schlick and Wais-

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[21]Schlick used "Aussage".

[22]Compare Carnap (1932/1959, §2) with (1928b/2003, §7), and see Hahn (1933) and Carnap (1963, 57).

[23]For a detailed account of the protocol-sentence debate, see Uebel (2007).

[24]For Carnap's pragmatism, see Richardson (2007); for Carnap's relation to Vaihinger's philosophy of as-if, see Carus (2007).

mann. Frank's (and Neurath's and Hahn's) pragmatism was independent of Wittgenstein's.

Schlick, as noted, reacted differently and went along with Wittgenstein. Though by 1934 he (and Wittgenstein) seem to have given up on the conception of hypotheses as instructions for making assertions, it was not until his reply to Lewis that Schlick made this change public.[25] In retrospect it is clear what happened. Schlick followed Wittgenstein in effecting a paradigm change in the theory of meaning by excising the picture theory and embracing the conception of meaning as use. What distinguished Schlick from the left wing of the Circle— and, of course, from everybody else in the Circle apart from Waismann—is that he had access to Wittgenstein's manuscripts, apparently also to the "Big Typescript" (T 218).[26] And in that typescript Wittgenstein did give, as we saw, the "liberating word" that did not fall in their conversations: "A hypothesis is a law for forming expectations".[27] I conclude that Schlick (and Waismann) in the end were indeed deeply affected by what Misak points out was Wittgenstein's pragmatist turn. So pragmatism did enter the Vienna Circle via the Ramsey-Wittgenstein line as well. What must be stressed, however, is that at the terminus of this route the pragmatist elements were not recog-

nized as such, neither by Schlick or Waismann nor were they advertised as such by Wittgenstein. Both the transmission and the result remained "subterranean".

Wittgenstein's pragmatist turn, his turn away from the logical atomist conception of language and thought and the corresponding distinction between primary and secondary language took nearly two years to complete. Not surprisingly, given the difference of perspectives, many of Wittgenstein's interlocutors in the Circle had difficulties in understanding the extent to which he did not just revise but abandon the logical atomism of the *Tractatus* and so failed to get the measure of his new philosophy. Of course, situational matters increased the difficulty: having been demoted to recipients of testimony from Waismann, some began to wonder. For his part, Wittgenstein clearly abhorred something he perceived in the Vienna Circle, especially in or about the theorists counted among the left wing. Just what he objected to in their "scientism" is hard to tell, but it seems that at least some of it was owed to a misperception: both parties were, after all, taking pragmatist insights on board, albeit each after their own fashion. In this respect they were close, and yet in others far apart. (Given all that, the unfortunate allegation of plagiarism was an accident waiting to happen.)

So whatever the left Vienna Circle received from Wittgenstein, it was not pragmatism. But also the reception on the part of Schlick was incomplete. Schlick did his best to try to take on board the new Wittgenstein, but he did not appreciate the pragmatist dimension of his new philosophy. In consequence we can see Schlick expounding the virtues of a meaning-as-use conception to the pragmatist C.I. Lewis as the best and latest flowering of empiricism. "More ironies!" one may be prompted to remark, but what must be remembered is that Wittgenstein himself does not seem to have understood himself as a pragmatist either. Once we look beyond such labels, however, we can see in any case that the relation pragmatism-logical em-

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[25]In a letter to Carnap of 5th June 1934, Schlick discounted Carnap's continued attribution of the contentious view of hypotheses to Wittgenstein and even downplayed its importance as a mere "terminological spleen" ("terminologische Marotte") on his part, leaving Carnap mystified.

[26]Schlick reported to Carnap on 10[th] May 1934: "Wittg[enstein']s own ms., of which I have large parts for safe keeping, is a true work of genius. It really clears up the philosophical problems without any formal preliminaries or special technical auxiliaries." ("Wittg[enstein]s eigenes MS, von dem ich einen großen Teil in Verwahrung habe, ist höchst genial; es räumt wirklich mit den philosophischen Problemen auf ohne jede formale Vorbereitung und besondern Hilfsmitteln.") (RC 029–28–17, Carnap Papers, Archive of Scientific Philosophy, Hillman Library, University of Pittsburgh, quoted with permission.)

[27]See note 18 above.

piricism is a many-many relation. Broadly speaking and sticking to the main protagonists here, the pragmatist sympathies of Frank, Hahn and Neurath were elicited by William James (and prepared for by Mach), the pragmatism of Schlick by Peirce as filtered through the middle Wittgenstein, and both logical empiricisms differed accordingly.

It also seems that we are left with three rather different outcomes of the interactions surveyed. No doubt matters will turn out to be considerably more complicated once they are looked into more closely, but at first glance these vistas open up. As just noted, the pragmatism that Schlick and Waismann imbibed from Wittgenstein remained unrecognized as such, but it also does not seem to have left a lasting legacy: Schlick's working life was cut short while Waismann's, after his break from Wittgenstein, lead into isolation. The pragmatist sympathies of the left wing of the Vienna Circle brought Charles Morris and, temporarily, John Dewey himself into the International Encyclopedia of Unified Science project and survived into the 1950s with Frank's continued but ultimately marginalized efforts to further similar cooperation.[28] (Carnap's pragmatism also remained much undercover, only recently receiving belated recognition—see Richardson 2007 and Carus 2007.) Wittgenstein's pragmatism, finally, seems to have done best though it also stayed unrecognized as such for the longest time. In any case, except perhaps for the field of philosophy of science, his later thought has proved a rich resource for some of the most interesting projects being pursued in current analytical philosophy, including those of some "new pragmatists" (see Misak 2010).

To sum up, I reiterate my gratitude to Klein and Misak for deepening, to start with, my own appreciation of the complexity of the interaction between pragmatism and logical empiricism and the latter's sometime muse, Wittgenstein, in the first

four decades of the previous century. My comments here via amendments and clarifications are meant to suggest one way in which all the different points can hang together. As regards Misak's fascinating narrative of how pragmatism entered Wittgenstein's thought via Ramsey, I am prompted to stress that that path seems entirely independent of the one that pragmatism took in entering the ideas of the members of the former first Vienna Circle. As regards Klein's instructive investigation of William James's own anti-psychologistic inclination, I'm prompted to stress that it is Frank's, Hahn's and Neurath's perception of James as a psychologistic thinker that I hold responsible for the long delayed acknowledgement of their pragmatist sympathies (not for a delayed recognition on their part of their affinities with pragmatism to start with). In consequence my agreement with Klein is wider than portrayed by him but that with Misak is somewhat narrower than suggested by her. None of these differences, however, should obscure the most notable fact of the matter at hand that we are fully agreed on: that there was considerable more to the interaction of pragmatism and logical empiricism than their more or less accidental cohabitation in North American academia in the time of the latter's exile there from its Central European home. That "more" is worth exploring also, I believe, into mid-century and beyond, but that too is another story.

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[28]For instances of this marginalization, see Reisch (2005, chap. 15).

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