

12 Wittgenstein, the Vienna Circle, and Physicalism

A Reassessment

INTRODUCTION: THE "STANDARD ACCOUNT" AND ITS LIMITATIONS

The precise nature of Wittgenstein's relationship to the Vienna Circle has been much debated, and there are deep disagreements about the strengths and weaknesses of the different positions attributed to the principal protagonists. However, there has been a widespread consensus about the overall character of the encounter: the early Wittgenstein was an important influence on the founders of logical empiricism, and the later Wittgenstein one of its leading opponents. In other words, the "standard account" of Wittgenstein's relations with the Vienna Circle is that the early Wittgenstein was a principal source and inspiration for the Circle's formulation of its positivistic and scientific philosophy, while the later Wittgenstein was deeply opposed to the logical empiricist project of articulating a "scientific conception of the world."¹

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¹ The first half of the standard account – concerning the influence of the *Tractatus* on the Vienna Circle – can be found in such canonical texts as the Circle's manifesto, first published in 1929, "The Scientific Conception of the World: The Vienna Circle" (Carnap, Hahn, and Neurath 1929), and Ayer's extremely influential expository account in *Language Truth and Logic* (Ayer 1936). For an authoritative recent exposition of the "standard account" from an orthodox Wittgensteinian perspective, see Hacker (1996, ch. 3) and Stern (1999) for a brief response.

In part, the success of the *Tractatus* as a canonical text for twentieth-century philosophy turns on the way it is open to such a wide variety of interpretations: as

However, this telegraphic summary of a complex and intricate relationship is at best only half-true and at worst deeply misleading. For it amounts to an oversimplified template that prevents our appreciating the fluidity and protean character of the philosophical dialogues that took place at the time, both between Wittgenstein and various members of the Vienna Circle, and among the logical empiricists over the value of Wittgenstein's contribution. Furthermore, Wittgenstein's own views changed rapidly and repeatedly during the 1920s and 1930s. Many of the participants in these discussions gave expression to a wide range of different views; taken out of context, their formulation of those views can easily strike a contemporary reader as clear anticipations of positions that are now standard items of philosophical terminology, such as physicalism, verificationism, or a use theory of meaning. Nevertheless, at the time those positions had not been articulated with anything like the degree of clarity that we now take for granted. In retrospectively identifying and attributing clear-cut positions, lines of influence, and axes of disagreement to Wittgenstein and his interlocutors in Cambridge and Vienna, it is very easy to read back our current understanding of familiar terminology and the associated distinctions into a time when those terms were used in a much more open-ended way.

A considerable distance separates contemporary discussion of physicalism from the use of this term in the early 1930s, despite the terminological similarities. While there is general agreement that physicalism requires that all significant languages are translatable into a physical language, there is considerable room for

the work of Russell's student, as a contribution to the philosophy of mathematics, or logic, as a work of positivist epistemology, as a contribution to ontology, as a book with an ethical point, as mystical, or as self-undermining nonsense. In Stern (2003), I argued for an alternative approach to the history of *Tractatus* reception, based on the proposal that we should attend to the conditions that made it possible for such a very wide variety of different approaches to *Tractatus* interpretation to have been in the forefront at different times since its publication in 1922. From that perspective, this chapter focuses on the initial reception of the *Tractatus* in Vienna. However, as soon as Wittgenstein began to talk to Schlick and his Circle, the relationship takes on at least two further dimensions: we have to consider the ways in which Wittgenstein responded to them, and we have to consider the ways in which their views changed over time. As soon as we zoom in to Vienna in the late 1920s, all of the issues that unfold piecemeal in the subsequent scholarly work on the topic are already in the air.

disagreement, both about what makes a language suitably physical as well as about what counts as a translation, or a reduction of one language to another. For present purposes, we need only consider the distance between contemporary views about the nature of the translation involved. First, most current treatments are in terms of supervenience, an approach that was first popularized by Davidson (1970); previous debate was usually framed in terms of one form of reductionism or another. However, even classic type-type reductionism, often taken as the starting point for contemporary exposition, is first set out in Smart (1959), whose work also provided a point of departure for the emergence of functionalist token-token reductionism in the 1960s. The form of midcentury reductionism that most closely corresponds to the approach advocated by Carnap is the relationship of intertheoretic reduction, which was given its classic formulation by Nagel (1961). However, Nagel's systematic program of logically deriving one theory from another by means of bridge laws is far more sophisticated than Carnap's 1932 proposal, which amounted to little more than a series of examples of proposed physicalistic translations of problematic protocol statements.² While Carnap's paper was much more argumentative than Neurath's previous work on the topic, there was very little detailed analysis of the relationship between protocol statements and physical language. Indeed, at one point in his paper Carnap says that "*pseudo-questions are automatically eliminated*" (Carnap 1934a, 83; 1932b, 456, italics in original) by using the "formal mode" of speech. This is a concise summary of a *Tractatus*-inspired approach, namely, dissolving philosophical questions by clarifying syntax, in contrast with Carnap's mature view, also present in the same paper: namely, solving philosophical problems by means of an analysis of the relevant syntax and semantics. In other words, the "standard account" is not only far too simple to do justice to the historical phenomena; it is also anachronistic.³

² For a good introduction to the current literature on physicalism, see Stoljar (2005). For an introduction to what has become known as the "Received View" of scientific theories, and its evolution from Carnap's early formulations over the next quarter century or so, see Suppe (1977, 3–61).

³ For further discussion of my objections to the "standard account," see Stern (2004, ch. 2) on the relationship between the *Tractatus* and the *Philosophical*

Published primary materials documenting the meetings, conversations, and correspondence from this period now provide us with a considerable quantity of information about Wittgenstein's contacts with the early logical empiricists; the last 20 years have seen a remarkable growth in the detail and sophistication of the philosophical and historical literature on this period.⁴ However, very little of this scholarship has reached an audience beyond the relatively narrow circle of experts on early analytic philosophy and the history of early-twentieth-century philosophy of science. Because most scholars of the period have assumed that the framework provided by the standard account can accommodate the mass of new information concerning Wittgenstein's relationship with the early logical empiricists, the extent to which the new archival materials provide compelling grounds for rejecting the standard account put forward by the first and second generation of interpreters has rarely been appreciated. Furthermore, the animosity, competitiveness, and mutual misunderstanding that were important aspects of the debates between the principal figures has frequently been reproduced in the literature on this topic, instead of providing a topic for critical analysis. Indeed, most recent work on the history of this encounter is clearly identifiable as a defense of one or another of the original protagonists. It is precisely because the philosophical debates that took place in Vienna 70 or 80 years ago concerned the initial formulation of positions that are still debated today that contemporary readers are so ready to argue about the history of those debates. Yet for that very reason, it is often extremely difficult for us to appreciate the distance that separates twenty-first-century philosophy from the issues that engaged the founders of logical

Investigations, and Stern (2005) for a more polemical approach to the difficulties generated by talk of "early" and "late" Wittgenstein.

⁴ The principal primary source for information on Wittgenstein's conversations with the Vienna Circle is Waismann (1967), which is based on Waismann's shorthand notes of meetings with Wittgenstein from 1929 to 1932. We do not have a comparable record of the content of their earlier meetings. Wittgenstein and Waismann (2003) provides a collection of verbatim transcriptions of dictations and discussions with Wittgenstein together with Waismann's redrafting of material provided by Wittgenstein, dating from 1928 to 1939. Among the most prominent books in the literature on Wittgenstein's relationship with the logical empiricists are: Baker (1988), Coffa (1991), Friedman (1999), Hacker (1996), Haller (1988), Hintikka and Hintikka (1986), McGuinness (2002), Stadler (2001).

empiricism, or the interpretive pitfalls that can lead us to turn that complex and multifaceted engagement into a simple story of progress from crude beginnings to contemporary philosophical sophistication. Indeed, some of the most important developments in the recent scholarship on the history of this period have been studies that have mapped out the role of post-Kantian conceptions of logic and experience in Carnap's *Aufbau* and the role of early-twentieth-century physics and engineering in Wittgenstein's *Tractatus*. (On the *Aufbau*, see Coffa 1985; 1991; Friedman 1999; Richardson 1998. On the *Tractatus*, see Hamilton 2001; 2001a; 2002; Hide 2004; Lampert 2003; Spelt and McGuinness 2001; Sterrett 2002. For a critical review of this literature, see Nordmann 2002.)

The aim of this chapter, in the spirit of this recent work on the history of early analytic philosophy, is to provide a broader perspective on the nature of the overall debate between Wittgenstein and his interlocutors in the Vienna Circle, starting from their own understanding of their respective positions. Those positions emerge more clearly, I believe, if we attend closely to the details of what they had to say at the time about specific areas of agreement and disagreement. Too often, the programmatic statements about the nature of their work that are repeated in manifestos, introductions, and elementary textbooks have occupied center stage in the subsequent secondary literature. Consequently, after a brief survey of the principal stages of Wittgenstein's relations with the Vienna Circle, we turn to a more detailed examination of a turning point in their relationship. That turning point is Wittgenstein's charge, in the summer of 1932, that a recently published paper of Carnap's, "Physicalistic Language as the Universal Language of Science," made such extensive and unacknowledged use of Wittgenstein's own ideas that Wittgenstein would, as he put it in a letter to Schlick, "soon be in a situation where my own work shall be considered merely as a reheated version or plagiarism of Carnap's."⁵

⁵ Letter from Wittgenstein to Schlick, May 6, 1932; translation from Hintikka (1989/1996, 131): "Und nun werde ich bald in der Lage sein, daß meine eigene Arbeit als bloßer zweiter Aufguß oder als Plagiat der Carnapschen angesehen werden wird." While I will cite and make use of published translations of Wittgenstein's correspondence, the German text of all these letters is now available in Wittgenstein (2004), together with an extensive apparatus.

WITTGENSTEIN'S CONTACTS WITH
MEMBERS OF THE VIENNA CIRCLE:
A BRIEF CHRONOLOGY

We can distinguish three distinct phases in the development of Wittgenstein's influence on the early logical empiricists. First, the Vienna Circle repeatedly read and discussed the *Tractatus* in the early and mid-1920s. The second phase, Wittgenstein's informal conversations with Schlick and his friends in the late 1920s, began when Schlick and Wittgenstein met in early 1927, and ended with Wittgenstein's return to Cambridge at the beginning of 1929. Third, there was a series of more formal meetings with Schlick and Waismann during 1929–34, with the aim of producing a book setting out Wittgenstein's philosophy, which continued, in an attenuated form, until Schlick's death in 1936.

1919–1926

In 1919 Wittgenstein was discharged from the Monte Cassino prisoner-of-war camp and finished his work on the book he had written while he was a soldier in the Austro-Hungarian army. He returned home to Vienna, convinced that he would do no more philosophical work. After completing a teacher-training program, he spent the first half of the 1920s teaching in small village schools in the region. In 1921 the first edition of the *Tractatus Logico-Philosophicus* was published in German under the title *Logisch-philosophische Abhandlung* (Logico-Philosophical Treatise) in the last volume of Ostwald's journal *Annalen der Naturphilosophie*. The first Routledge edition, with the preface by Bertrand Russell and an English translation by C. K. Ogden and Frank Ramsey, was published two years later in 1923. Wittgenstein's career as a teacher ended in the spring of 1926; in the summer of that year, he began work as an architect on a house for his sister, Margarethe Stonborough, a project that was to occupy him for the next two years. (For a much fuller account of these years, see Monk 1990, chs. 8–10.)

In 1922 Moritz Schlick was appointed Professor of Natural Philosophy at the University of Vienna. That year, Hans Hahn, a mathematician at the University, held a seminar, primarily focused on Russell and Whitehead's *Principia Mathematica*, attended by

Schlick and Kurt Reidemeister, another mathematician, at which the *Tractatus* was discussed. In the fall of 1924, Schlick began an interdisciplinary discussion group, the Schlick Circle, which can, in retrospect, be seen as the beginning of the Vienna Circle. The group included Reidemeister, Hahn, Otto Neurath, his wife, Olga Hahn-Neurath, Felix Kaufmann, a legal theorist, Friedrich Waismann, Schlick's assistant and librarian, and Herbert Feigl, a student of Schlick's; it was joined by Rudolf Carnap during the second semester (Stadler 2001, 199). During the 1924–5 academic year, the Schlick Circle read a large part of the *Tractatus* aloud, discussing it "sentence by sentence" (Carnap 1963, 24). In December 1924 Schlick wrote to Wittgenstein, expressing his admiration for the *Tractatus* and asking for an opportunity to visit him and received a very friendly answer in January. (The letter is quoted in McGuinness's introduction to Waismann 1967, 13.) However, although Schlick wrote back a few days later, reaffirming his intention of visiting, it was not until April 1926 that he attempted to visit Wittgenstein, by which time Wittgenstein had given up his teaching position. Schlick's wife recalled that he approached the visit "as if he was preparing to go on holy pilgrimage ... he explained to me, almost with awesome reverence, that Wittgenstein was one of the greatest geniuses on earth" (letter from Blanche Schlick to Friedrich von Hayek, quoted and translated in Nedo 1983, 194 and 375). Subsequently, Schlick sent Wittgenstein some of his work and suggested a meeting with one or two other people to discuss logical problems, but did not receive a reply.

During this period, the Schlick Circle knew of Wittgenstein only as the author of the *Tractatus* and Russell's student. The principal ideas that they took from their readings of his book can be summed up under two headings. First, they were inspired by his focus on the nature of language, and the idea that the structure of language, and of the language of different areas of inquiry, could be analyzed by applying the tools provided by modern logic. Second, Wittgenstein's *Tractatus* offered an approach to logic which offered some hope of doing justice to the Kantian request that we give an account of the necessity of the truths of logic, and of the deep difference between truths of logic and truths about matters of fact, without giving up on a thorough-going empiricism, or invoking the problematic notion of synthetic a priori truth. One can read the *Tractatus* as proposing that

logical truths, and perhaps even parts of mathematics, are true in virtue of meaning, and so analytic, in a suitably accommodating understanding of that term.

While parts of the *Tractatus* struck the Circle as very promising, and were seized upon for members' own work, other parts could not easily be accommodated to their positivistic program. Indeed, the *Tractatus* is open to a number of very different readings, depending on which parts of the text one regards as central, and which parts one considers peripheral.⁶ From the first, Neurath was deeply suspicious of the ontology of facts with which the book begins, which struck him as a relic of traditional metaphysics, and the mysticism with which it concludes. Schlick and Waismann, who were enormously impressed by Wittgenstein, would soon take on the role of his representatives and interpreters within the Circle. Other members of the group, including Carnap, occupied the middle ground, prepared to learn from Wittgenstein, yet critical of many of his ideas, and especially what they considered to be the leading, yet deeply suspect, role of the "unsayable" in the *Tractatus*.

1927-1928

In February 1927 Mrs. Stonborough wrote to Schlick, explaining that while Wittgenstein felt unable to meet with a group to discuss the topics Schlick had proposed, he did think that "if it were with you alone ... he might be able to discuss such matters. It would then become apparent, he thinks, whether he is at present at all capable of being of use to you in this connexion" (quoted by McGuinness in the introduction to Waismann 1967, 14). Subsequently, Schlick was invited to lunch; his wife reported that he once again had the "reverential attitude of the pilgrim. He returned in an ecstatic state, saying little, and I felt I should not ask questions" (ibid.). While Wittgenstein told Engelmann, with whom he was collaborating on the building of his sister's house, that "each of us thought the other must be mad" in that first conversation, a series of meetings between the two of them soon followed at which they established a good mutual understanding (McGuinness, in the introduction to Waismann 1967, 15).

⁶ For further discussion of the variety of different ways of reading the *Tractatus*, see Stern (2003).

By the summer of 1927, Waismann had become a regular participant in these meetings, and Carnap joined them on five occasions that summer; Herbert Feigl and his fiancée, Maria Kaspar, were also regular participants. Before their first meeting, Schlick warned Carnap that he should be very restrained, avoiding debate and direct questions: "the best approach, Schlick said, would be to let Wittgenstein talk and then ask only very cautiously for the necessary elucidations" (Carnap 1963, 25).⁷ When Carnap met Wittgenstein, he saw that "Schlick's warnings were fully justified. ... His point of view and his attitude towards people and problems, even theoretical problems, were much more similar to those of a creative artist than to those of a scientist; one might almost say, similar to those of a religious prophet or a seer. ... [It] was as if insight came to him through a divine inspiration, so that we could not help feeling that any sober rational comment or analysis of it would be a profanation" (Carnap 1963, 25-6). At that first meeting, Schlick, despite the advice he had given Carnap beforehand, unfortunately brought up the topic of Carnap's enthusiasm for Esperanto. Carnap was not surprised that Wittgenstein was opposed, but he was surprised by his vehemence. "A language which had not 'grown organically' seemed to him not only useless but despicable" (Carnap 1963, 26). Afterwards, Carnap described Wittgenstein in his diary as "a very interesting, original, and attractive person."⁸

Wittgenstein had a number of further meetings with Schlick, Waismann, and Feigl during 1927-8, although Carnap was away from Vienna in the winter and did not rejoin the group. While we do have some brief reports of what went on at the meetings that took place between Wittgenstein, Schlick, "and a few carefully chosen members of Schlick's Circle" (Monk 1990, 243), there is no detailed record of what was said in their discussions, which covered topics

⁷ Carnap's discussion there of Wittgenstein's influence on him and the Vienna Circle (Carnap 1963, 24-9) is remarkably judicious.

⁸ Carnap also characterized Wittgenstein as having an "artistic nature" (*Künstlernatur*), which McGuinness wryly observes implies that he "has to be handled with care" (McGuinness 1991/2002, 189). McGuinness's particularly informative account of Wittgenstein's "Relations with and within the Circle" (1991/2002, ch. 17) is unusual for the extent to which the author gives even-handed attention to the views of the various parties involved. Carnap's diary notes for three of the meetings in the summer of 1927 are quoted at greater length in Stadler (2001, 428).

such as the foundations of mathematics and of Ramsey's work on identity. Wittgenstein also read to them, once from Wilhelm Busch and another time from Rabindranath Tagore, with his back to the group "because he did not want to see their expressions as he read" (Feigl, quoted in McGuinness 2002, 189). Perhaps the principal lesson that the members of the Vienna Circle learned from these meetings was that Wittgenstein was not as unambiguously opposed to religion and metaphysics as they were. Carnap reports that prior to their meeting, "when we were reading Wittgenstein's book in the [Vienna] Circle, I had erroneously believed that his attitudes to metaphysics were similar to ours. I had not paid sufficient attention to the statements in his book about the mystical, because his feelings and thoughts in this area were too divergent from mine. Only personal contact with him helped me to see more clearly his attitude on this point" (Carnap 1963, 27).

Wittgenstein never attended a formal Thursday night meeting of the Schlick Circle. However, he did go to a lecture given by L. E. J. Brouwer, an eminent Dutch mathematician, on "Mathematics, Science, and Language" in March 1928 that was attended by other members of the Circle. According to Feigl, who spent several hours with Wittgenstein and Waismann in a café after the lecture, Wittgenstein had until then been reluctant to discuss philosophy, and had to be persuaded to go, but "it was fascinating to behold the change" that evening: "he became extremely voluble and began sketching ideas that were the beginning of his later writings ... that evening marked the return of Wittgenstein to strong philosophical interests and activities" (Feigl, quoted in Pitcher 1964, 8, n. 8).

1929–1936

In the autumn of 1928, Wittgenstein's work on his sister's house ended. In January 1929 he visited John Maynard Keynes in Cambridge and decided to stay on to do some further philosophical work. The eight-week academic terms allowed plenty of time for extensive visits to Vienna during the vacations. Early that year, Wittgenstein decided that he would meet only with Schlick and Waismann; with Wittgenstein's encouragement, Waismann planned to write a popular exposition of Wittgenstein's philosophy based on these discussions. Wittgenstein's own views were constantly changing and

developing during these years, and with the possible exception of Waismann, most of his interlocutors were primarily interested in making use of his ideas for their own work. Each of these ideas takes on a wide variety of different forms, and formulations, in the hands of the figures who took part in this discussion. For instance, in his conversations with members of the Vienna Circle in the late 1920s, Wittgenstein introduced the notion of a principle of verification: the idea, roughly speaking, that the meaning of an empirical claim consists in what would confirm, or provide evidence for, that claim. Carnap's memoir speaks of "Wittgenstein's principle of verifiability" (Carnap 1963, 45); in 1930 both Moore and Waismann recorded Wittgenstein as saying that "the sense of a proposition is the way in which it is verified" (Moore, in Wittgenstein 1993, 59; Waismann 1967, 79), and further development of the view can be found in the contemporaneous *Philosophical Remarks*.⁹ Later on, Wittgenstein would say that questions about verification are just one way of talking about how words are used (see, e.g., Wittgenstein 1953, I, § 353), but his earlier pronouncements are much more dogmatic.

Waismann's extensive and carefully dated notes of their meetings, the manuscripts based on his work with Wittgenstein, and the book that he ultimately wrote based on this collaboration provide us with a detailed record of various stages of their relationship (Waismann 1967; 1997; Wittgenstein and Waismann 2003; Baker 1979 is an extremely informative introduction to their relationship). The earlier material, a systematic digest of Wittgenstein's ideas, presumably provided the basis for Waismann's regular reports on Wittgenstein's views at the Vienna Circle's meetings, which, we are told, were prefaced by the disclaimer "I shall relate to you the latest developments in Wittgenstein's thinking but Wittgenstein rejects all responsibility for my formulations. Please note that" (Janik and Veigl 1998, 63).¹⁰

⁹ See Wittgenstein (1964, §§ 59, 150, 160, 225, 232). For a valuable essay on Wittgenstein and the Vienna Circle on verification, which includes an appraisal of the previous literature on the topic, see Hymers (2005).

¹⁰ Waismann also played the role of a representative of Wittgenstein's views in the papers he presented at international conferences in Prague (1929) and Königsberg (1930). This chapter of Janik and Veigl's book provides an informative discussion of how class and social status influenced the outcome of the subsequent controversy.

Waismann's work on the book can be divided into several distinct phases. During the first phase, from the late 1920s to 1931, he planned to write a comprehensive introduction to Wittgenstein's philosophy, incorporating the leading ideas of the *Tractatus* and Wittgenstein's more recent work into a systematic exposition. In 1930 Waismann's projected volume, *Logic, Language, Philosophy*, was advertised in *Erkenntnis* as the first volume in a series of books setting out the views of the Vienna Circle. However, Wittgenstein became increasingly unhappy with the plan, writing to Schlick on November 20, 1931, that he was "convinced that Waismann would present *many* things in a form *completely* different from what I take to be correct" (quoted by Baker in the preface to Wittgenstein and Waismann 2003, xxvii). Matters came to a head on December 9, when Wittgenstein met with Waismann to discuss "Theses," a summary of Waismann's interpretation of his philosophy. (The "Theses" are Appendix B of Waismann 1967, 233–61; they are discussed on pp. 182–6.) Characteristically, Wittgenstein repudiated not only the details of Waismann's exposition, but also its very title, insisting that none of his philosophy consisted in formulating theses (Waismann 1967, 183). It is this fundamental disagreement, or misunderstanding, that was to be the single biggest obstacle in Wittgenstein's attempts at collaboration with Waismann on a systematic exposition of his ideas, even when no more than a restatement of what Wittgenstein had said (Waismann 1967) or an arrangement of what Wittgenstein dictated to Waismann (Wittgenstein and Waismann 2003), for it still failed to capture the point of what Wittgenstein was trying to do with these ideas.

Wittgenstein criticized both the *Tractatus* and the "Theses" for their "dogmatism": they claim that a logical analysis of ordinary language into elementary propositions is possible, but do not carry it out.¹¹ Instead of conceiving of philosophy as a matter of searching for an analysis of our language, Wittgenstein now characterized it as a matter of clarifying our current grasp of language, in terms that anticipate some of his most famous later statements about the

¹¹ For further discussion of Wittgenstein's response to the *Theses* and "dogmatism," see Stern (1995, 101–4) and Stern (2004, 48).

nature of philosophy,¹² and connect them with the method recommended towards the end of the *Tractatus*:

As regards your Theses, I once wrote, If there were theses in philosophy, they would have to be such that they do not give rise to disputes. For they would have to be put in such a way that everyone would say, Oh yes, that is of course obvious. ... I once wrote, The only correct way method of doing philosophy consists in not saying anything and leaving it to another person to make a claim.¹³ That is the method I now adhere to. (Waismann 1967, 183–4)

This breakdown led to a second phase, roughly from 1932 to 1934, during which Wittgenstein became a co-author of a book that would no longer provide an account of a modified Tractarian approach, but rather set out his new philosophy, largely in his own words, as dictated to Waismann. During this period Waismann also had access to much of Wittgenstein's work in progress, and they met frequently. However, this plan ultimately foundered towards the end of 1934, because Wittgenstein was, as Waismann put it in a letter to Schlick written in August of that year, "always following up the inspiration of the moment and demolishing what he has previously sketched out."¹⁴ This led to a third phase, in which Wittgenstein withdrew from the project, leaving Waismann and Schlick to proceed with the book as they wished, and Waismann's regular meetings with Wittgenstein ceased. Subsequently, Wittgenstein broke off contact with Waismann, warned his students about Waismann's interpretation of his work, and even advised them not to attend Waismann's courses (Janik and Veigl 1998, 66). While Wittgenstein's connection with the Vienna Circle came to an end only with Schlick's murder in June 1936, it is unlikely that the other members of the Circle learned much about the development of Wittgenstein's work after the end of 1934.

¹² "If one wanted to establish *theses* in philosophy, no debate about them could ever arise, because everyone would be in agreement with them" (Wittgenstein 2005, § 89, 309). Cf. Wittgenstein (1953, § 128).

¹³ McGuinness, who translated this passage, notes that this is a rough statement of *Tractatus* 6.53.

¹⁴ Cited in Baker's introduction to Wittgenstein and Waismann (2003, xxvii); the preface provides more detailed information about the various stages of the book project.

WITTGENSTEIN AND CARNAP ON PHYSICALISM

In early May 1932, Wittgenstein received an offprint of Carnap's paper "Die physikalische Sprache als Universalsprache der Wissenschaft" (Physical Language as the Universal Language of Science; Carnap 1932b). Carnap's paper was translated into English by Max Black and published in 1934 as a small book under a new title: *The Unity of Science*. The shorter, more accessible, title was clearly a better choice for a popular book than the original scholarly title. However, Black did translate and rephrase the title of the paper inside the book, turning the original's talk of "physical language as the universal language of science" into "Physics as a Universal Science" (Carnap 1934a, 31). This choice of words is doubly flawed. First, the translation turns a title in the formal mode of speech – a claim about the grammar, or syntax, of our language – into one in the material mode – a claim about the world. Second, a crucial question left open by the talk of "physical language" – whether physical language is to be narrowly identified with the language of physics, or to be understood more broadly as any language that refers to physical objects – is resolved by the new translation in favor of the narrow reading.

The paper proved to be a turning point in the movement away from phenomenalist analyses of scientific language: one of the first, and one of the most influential, papers arguing for the physicalist thesis that any significant language must be translatable into an entirely physical vocabulary. While the paper is a defense of physicalism, the terms "physicalism" and "*Physikalismus*," first used in print by Otto Neurath during the previous year, do not occur in Carnap (1932b), except in a footnote where he cites some of these works of Neurath's (Carnap 1934a, 74n; Carnap 1932b, 452n).¹⁵ Although the thesis of physicalism is already stated in papers of Neurath's published in 1931, he provides very little by way of an argumentative defense of the thesis (Neurath 1931a; see also Neurath 1931c and 1931b). In the papers Neurath published that year, Neurath advocated materialism without metaphysics: "unified

¹⁵ The former term occurs in the title of Neurath (1931b), the latter in the titles of (1931a) and (1932a). Because of an oversight, corrected in the English translation, Neurath (1931a) is not cited in the German original. Indeed, the citations were included only after Neurath complained to Carnap that an earlier draft did not acknowledge his contribution.

science on a materialistic basis," as Haller puts it (Haller 1989, 20). In other words, Neurath puts forward the view that there is only one kind of object: physical objects, the objects that are studied by the sciences. Carnap's main aim in his 1932 paper on physicalism was to put that view on a firm philosophical foundation, by showing how it could be articulated within a program of analysis of the structure of our language – what would soon be called "logical syntax," but which Carnap also spoke of as "metallogic."

Carnap makes extensive use of the distinction between the "material" and "formal" modes of speech: "The first speaks of 'objects,' 'states of affairs,' of the 'sense,' 'content' or 'meaning' of words, while the second refers only to linguistic forms" (Carnap 1934a, 38; Carnap 1932b, 435). A footnote attached to the end of that sentence promises that "A strictly formal theory of linguistic forms ('logical syntax') will be developed later." A sentence added to the footnote in the 1934 translation identifies "the book here announced" as *The Logical Syntax of Language*. However, the original German for the parenthetical phrase is not "logische Syntax," but "Metalogik," more naturally translated as "metallogic." In 1932 Carnap used the two more or less interchangeably and had not yet settled on "logical syntax" as his preferred term; thus while the translation is linguistically odd, it does have a certain consistency.¹⁶ Both terms would have attracted Wittgenstein's attention. Logical syntax is the Tractarian term for the rules of a sign-language that is "governed by logical grammar" (*Tractatus* 3.325; the expression is also used in 3.33, 3.334, 3.344, and 6.124), Wittgenstein's proposed replacement for Frege and Russell's goal of a *Begriffsschrift*, or "conceptual notation." The term "metallogic" does not occur in Wittgenstein's earliest writing, but during 1931–3 he repeatedly speaks of it in dismissive terms: the first page of the *Big Typescript* states that "just as there is no metaphysics, there is no metallogic" (Wittgenstein 2005, 2; see also 3, 13, 158, 220, 223, 305). While it is debatable precisely what Wittgenstein meant by that term, it is clear that Wittgenstein rejects the very idea of metallogic, treating it as an expression of the idea that one can take up a "sideways on" stance

¹⁶ Talk of "logical syntax" highlights the idea that Carnap proposed a systematic study of the structure of language; talk of "metallogic" draws our attention to the "second order" character of the project.

from which one can appraise the relationship between language and the world.¹⁷

Throughout the paper, Carnap draws our attention to the distinction between the material and the formal mode of speech, using a double column layout to simultaneously set out problematic claims in both "modes." The paper proceeds by identifying a number of different languages. "Protocol language," or "primary language," is used to describe "directly given experience of phenomena" (material mode) or more carefully speaking, "statements needing no justification and serving as foundations for all the remaining statements of science" (formal mode) (Carnap 1934a, 45; 1932b, 438). The simplest statements in physical language are initially introduced as those that specify a "quantitatively determined property of a definite position at a definite time" (material mode) or attaching to "a specific set of co-ordinates ... a definite value or range of values of a coefficient of physical state" (formal mode) (Carnap 1934a, 52-3; 1932b, 441). Carnap qualifies this by acknowledging that future developments in physics may well lead to modifications, but maintains that all that matters for present purposes is that however it is modified, statements in protocol language will remain translatable into physical language. Most of the remainder of the paper is devoted to arguing that "every scientific statement can be translated into physical language" and responding to objections to his claim that "statements in protocol language ... can be translated into physical language" (Carnap 1934a, 76; 1932b, 453).

On May 6, 1932, very shortly after he had received Carnap's off-print, Wittgenstein wrote to Schlick, setting out his initial response. He expressed his concern that Carnap's use of his own unpublished work was so extensive that others would regard his own work, when it was eventually published, as no more than "a reheated version or plagiarism of Carnap's" (letter from Wittgenstein to Schlick, May 6, 1932; translation from Hintikka 1989/1996, 131). He went on to

¹⁷ Hilmy (1987, ch. 2) argues that the rejection of "the metalogical" plays a central role in Wittgenstein's turn towards ordinary language in his post-*Tractatus* writings. Hilmy conjectures that Wittgenstein's principal target in his critique of metalogic is work written after the *Tractatus*, but before the first surviving post-*Tractatus* manuscripts, which date from the beginning of 1929.

express a strongly proprietorial approach to what he clearly regarded as the fruit of his own labor:

I see myself as drawn against my will into what is called "the Vienna Circle." In that Circle there prevails a community of property, so that I could e.g. use Carnap's ideas if I wanted to but he could also use mine. But I don't want to join forces with Carnap and to belong to a circle to which he belongs. If I have an apple tree in my garden, then it delights me and serves the purpose of the tree if my friends (e.g. you & Waismann) make use of the apples; I will not chase away thieves that climb over the fence, but I am entitled to resent that they are posing as my friends or alleging that the tree should belong to them jointly. (Letter from Wittgenstein to Schlick, May 6, 1932; translation based on Hintikka 1989/1996, 131)

For half a century, this controversy was not discussed in the literature on Wittgenstein and the Vienna Circle. Carnap did include a discussion of it in a draft of his intellectual autobiography, but it was not included in the published version. There he wrote that

Years later, some of Wittgenstein's students at Cambridge asked him for permission to send transcripts of his lectures to friends and interested philosophers. He asked to see the list of names, and then approved all but my own. In my entire life, I have never experienced anything similar to this hatred directed against me. I have no adequate explanation; probably only a psychoanalyst could offer one. (Carnap, quoted in Stadler 2001, 433-4)

After substantial excerpts from Wittgenstein's correspondence in 1932 with Schlick and Carnap on the topic were published in Nedo and Ranccheti (1983, 254-5, 381-2), Wittgenstein's accusations received the attention of a number of leading experts on the history of early analytic philosophy, including Coffa (1991, 407-8), Haller (1988a; 1989; 1990), Hintikka (1989), Hintikka and Hintikka (1986, 145-7), McGuinness (1985, 1991), Monk (1990, 324), Pears (1988, 302-3, 316), Stadler (1992; 2002, 429-48), and Uebel (1995). (For a longer list of authors who have discussed this priority dispute, see Uebel [1995, 348-9]; the paper provides a thorough review of the literature on the topic up to the mid-1990s.) However, Wittgenstein's *Prioritätstreit* with Carnap is far less well known than his falling out with Popper (Edmonds and Eidinow 2001), despite the fact that we know far more about the positions on either side in the Wittgenstein-Carnap controversy. Indeed, a couple of recent pieces on the origins of physicalism not only take it for granted that "the word *physicalism*,

when introduced into philosophical conversation by Neurath and Carnap, seemed theirs to define" (Gates 2001, 251) but do not even mention Wittgenstein's claims (Gates 2001; Manninen 2003).

While Wittgenstein's initial letter to Schlick expressed his immediate outrage at what he considered the wholesale appropriation of his ideas, he did not further specify what he considered Carnap had stolen. Instead, Schlick took on the task. (See the discussion of this chronology in Hintikka 1989/1996, 134–5.) A little over two months later, Schlick wrote to Carnap, saying that he considered it "necessary to mention Wittgenstein by name, time and again when it comes to points specific to him and characteristic of his way of thinking, especially as he has himself published nothing for quite awhile and instead circulated his ideas orally" (letter from Schlick to Carnap, July 10, 1932; translation from Hintikka 1996, 134). Schlick listed the following points on which he considered an acknowledgement appropriate:

1. top of p. 433 (the nature of philosophy); [Carnap 1934a, p. 33]
2. bottom of p. 435 and following (ostensive defining does not lead us outside language); [Carnap 1934a, p. 39ff.]
3. top of p. 440 (the character of laws of nature, where hypotheses are characterized by means of their peculiar logical form, which differs from ordinary propositions); [Carnap 1934a, pp. 48–9]
4. furthermore the passages where pseudo-problems are eliminated by means of the "formal mode of speech" (p. 452, note, p. 456), for in fact this is after all W[ittgenstein]'s basic idea. [Carnap 1934a, footnote on p. 74; pp. 82–4] (Letter from Schlick to Carnap, July 10, 1932; translation from Hintikka 1989/1996, 134. I am responsible for adding the numbering and the cross-references to the English text.)

This list is our best evidence as to which parts of the paper Wittgenstein regarded as "stolen apples," as Hintikka puts it. But if we go back to Wittgenstein's first letter to Schlick, we can add a number of further charges to these particular points of alleged indebtedness:

5. the claim that physicalism is in the *Tractatus*;
6. the allegation that Carnap's work is so similar to Wittgenstein's that Wittgenstein would look as if he had taken his ideas from Carnap

Perhaps what is most striking about Wittgenstein's dispute with Carnap is the last item on this list: Wittgenstein's insistence that Carnap's work was so close to his own. For Wittgenstein's usual response to those who made use of his ideas in print, including Waismann's explicitly expository project, was to complain that his work had been misrepresented, or misunderstood.

However, assessing such a charge of unacknowledged intellectual indebtedness is a much more complex matter than it is in any case of petty theft or plagiarism. The criteria of identity for a conception of ostensive definition, the laws of nature, physicalism, or the nature of philosophy, are legitimate topics of philosophical debate in their own right. Given a suitably coarse-grained summary of Wittgenstein's and Carnap's positions on each of these topics, they are strikingly similar; given a suitably fine-grained reconstruction, the differences between them may seem much more important. Wittgenstein's defenders have highlighted the similarities; Carnap's defenders have emphasized their differences.

Not only is it extremely difficult to establish when one person has taken an idea from another, but even if one assumes, for the sake of argument, that those facts have been settled, the standards of appropriate behavior are much less clear-cut than they are in the case of taking an apple from someone else's tree, or using another's words without citation. Indeed, in this case, one could well argue that Wittgenstein, despite his protestations to the contrary, had effectively invited the Vienna Circle to make use of his ideas. For he had agreed to provide a steady stream of expository material to Waismann and Schlick, on the explicit understanding that Waismann would serve as his representative and devote his energies to writing a book setting out Wittgenstein's work. Thus, there is good reason to maintain that even if Wittgenstein's claims about the extent of Carnap's indebtedness had been entirely correct, his vehement request for a detailed acknowledgment would have been unjustified.

Furthermore, it is not unusual for a philosopher to be extremely sensitive about others using his work, yet much less ready to acknowledge his own use of another's ideas. Wittgenstein rarely referred to other philosophers' work in his own writings, and expressed a positively cavalier attitude towards such matters in the Preface to the *Tractatus*, where he wrote that the book gave no

sources "because it is indifferent to me whether what I have thought has already been thought by another."¹⁸ Surely, Carnap was equally indifferent about his sources when he sent his paper to Wittgenstein. Indeed, it was only after Neurath read an earlier draft of the paper and complained that his prior work on physicalism should be cited, work that he and Carnap had discussed at length for several years, that Carnap inserted the footnote referring to Neurath's previous publications on physicalism.¹⁹

Because the six complaints of Wittgenstein's listed above range from points of detail to very general questions of method, it will be helpful to arrange them into three broadly related groups. First, there are quite specific ideas which Wittgenstein alleges were taken from his own work (items 2 and 3). Second, there are very broad methodological considerations (items 1, 4, and 6). Finally, there is the intermediate-level claim that Carnap's physicalism is already in the *Tractatus*.

Consider first items 2 and 3, which are both relatively small and specific. Hintikka has little trouble showing that the passages on these topics in Carnap's paper, cited in Schlick's letter, are very close to a summary statement of Wittgenstein's own ideas at the time about ostension and hypotheses, as set out in his meetings with Schlick and Waismann at the time. Furthermore, Carnap could have heard such ideas summarized by Waismann in his presentations to the Vienna Circle (Hintikka 1989/1996, 139-41).²⁰ So it is not difficult to see how Wittgenstein could have taken umbrage over those passages. However, that hardly shows that Carnap did develop his own views out of what he had gleaned from Waismann rather than working out something like those ideas for himself, drawing on

¹⁸ Wittgenstein's thoughts about influence and originality are much more complicated, and interesting, than this overly brief summary can convey. For further discussion of Wittgenstein's discussion of originality and talent, see Monk (1990), Stern (2000), McGuinness (2002).

¹⁹ For a more detailed discussion of Neurath's priority claim, and its relationship to Wittgenstein's, see Uebel (1995, 334, 341-4).

²⁰ Hintikka's interpretation of the controversy is an exception to the generalization (see above) that Wittgenstein's defenders have stressed broad similarities between his work and Carnap's, while Carnap's defenders have pointed to detailed differences. Hintikka's reading of Wittgenstein's philosophy in the early 1930s is unusually Carnapian, and thus he finds more similarities in points of details than other interpreters.

related work by Poincaré and Reichenbach. It is precisely because what Wittgenstein had to say about the relationship between hypothesis, evidence, experience, and ostension in the years from 1929 to 1931 is not only a plausible development of the *Tractatus*, but is also a rational and plausible view, that it is unsurprising that others working on these questions might independently arrive at strikingly similar views. In a later letter to Schlick, Wittgenstein addressed these concerns: "Carnap has got his conception of hypotheses from me and again I have found this out from Waismann. Neither Poincaré nor Reichenbach could have the same conception, because they do not share my conception of propositions and grammar" (letter from Wittgenstein to Schlick, August 8, 1932. Nedo and Ranccheti 255, n. 20; Hintikka 1989/1996, 140).²¹ Wittgenstein maintains here that Carnap's conception of hypotheses is the same as his own, because he claims that Carnap's conception of hypotheses is dependent on Wittgenstein's broader conception of the nature of language.²² This leads us back to the methodological considerations we initially put to one side. Wittgenstein's more specific charges cannot be separated from broader concerns.

Because the question whether Carnap's conception of philosophy (1) and overall methods (4, 6) in the disputed paper is the same as (or similar enough) to Wittgenstein's is such a large one, it may well appear far more difficult to assess than the previous question about points of detail. Certainly, a full appraisal of the relationship between their respective philosophical programs is far beyond the scope of this chapter. However, the overall character of their relationship is actually considerably clearer than many of the details. For, as we have

²¹ Earlier in the same letter, Wittgenstein claims that Carnap has forgotten a conversation in which Waismann reported to him Wittgenstein's conception of ostensive definitions.

²² Hintikka supports Wittgenstein's charge by elaborating the analogies between the logic of Carnap's protocol sentences and Wittgenstein's treatment of elementary propositions circa 1929-31, and observes that there is a "remarkable similarity," because "for both of them, many singular propositions ... have to be confirmed indirectly by deriving them from directly verifiable propositions" (1989/1996, 141). However, one could well respond that the similarity is entirely unremarkable. Both philosophers were responding to the same predicament, which Ernst Tugendhat has called "veritative symmetry" and "epistemological asymmetry": my self-ascription of an experience and your ascription of that experience to me share the same truth-conditions, yet the grounds for our beliefs are radically different.

already seen, there can be no doubt that Carnap was deeply influenced by, and indebted to, Wittgenstein's overall approach to philosophy, a fact attested not only in his intellectual autobiography, but also in *The Logical Syntax of Language* (see Carnap 1934, xvi) and Max Black's introduction to the 1934 translation of the physicalism paper (Carnap 1934a, 16–20).²³ In particular, Carnap's project of setting out the logical syntax, or metalogic, of language is a direct descendent of the *Tractatus's* goal of clarifying logical syntax. Of course, there are also important dissimilarities between their conceptions of syntax, and of philosophy. In particular, Carnap's careful and measured discussion of his relationship to Wittgenstein in *The Logical Syntax of Language* highlights two related points of principled disagreement: Carnap's rejection of Wittgenstein's view that syntax is inexpressible (and so can only be shown, not said), and his rejection of Wittgenstein's conception of philosophy as an elucidatory activity that cannot be formulated (see Carnap 1934, 282–4). However, we do not need to resolve the question of whether it is the similarities or differences between their respective philosophical positions that are more significant to defend Carnap from Wittgenstein's objections. For it is clear, I believe, that while Carnap's work is deeply influenced by Wittgenstein's, his insistence that the nature of philosophy, and the nature of language, can be made explicit does amount to a fundamental and far-reaching methodological disagreement. Carnap's indebtedness to Wittgenstein is comparable to Wittgenstein's debt to Russell and Frege, or Russell's debt to Frege. While there is scope for legitimate scholarly debate over the extent and nature of the debt, there can be no doubt that the influence was extremely important, yet it is also undeniable that there were also fundamental disagreements between them.

Let us now return to the question of the relationship between Wittgenstein's philosophy and Carnap's physicalism. In his reply to Schlick's letter setting out Wittgenstein's complaints, Carnap treated this as the crucial issue, saying that he did not mention Wittgenstein because "he has after all not dealt with the problem of

²³ Black's discussion of Wittgenstein's work in the preface must have been approved by Carnap, if not actually prompted by him and, like the material cited in the previous and the next note, can be seen as a response to Wittgenstein's criticism of Carnap's lack of attribution in the original paper. Black reads the *Tractatus* as phenomenalistic and contrasts it with Carnap's physicalism.

physicalism" (letter from Carnap to Schlick, July 17, 1932; translation from Hintikka 1989/1996, 133). Schlick sent a copy of Carnap's letter on to Wittgenstein, who wrote back that "It is not true that I have not dealt with the question of 'physicalism' (albeit not under this – dreadful – name) and with the same brevity with which the entire *Tractatus* is written" (letter from Wittgenstein to Schlick, August 8, 1932; translation based on Hintikka 1989/1996, 137).

In his defense, Carnap's interpreters have reiterated the point that Carnap himself made briefly in his earlier letter to Schlick: Wittgenstein had "not dealt with the problem of physicalism," at least in the terms in which Carnap and Neurath understood that problem. For there is a strong *prima facie* case that Wittgenstein never discussed physicalism. The term does not occur in the *Tractatus*. Indeed, it is never used anywhere in the entire corpus of Wittgenstein's writings.²⁴ However, the absence of the word is no more relevant to the question whether Wittgenstein dealt with physicalism in the *Tractatus* than the absence of that word from Carnap's own paper. While "Did the author of the *Tractatus* deal with the topic of physicalism in that book?" sounds at first like a straightforward preliminary question, it is not. For it turns on how we are to understand not only the topic of physicalism, but also how we are to understand what it is for something to be "in" the *Tractatus*. Because the book is so compressed, we need to consider not only what is explicitly stated there, but also the conclusions that its author expected readers to draw for themselves.²⁵

In a recent discussion of these very questions, Cora Diamond rightly observes that the idea of a view's being "in" the *Tractatus* needs to be understood in a way that includes more than simply what is explicitly said there, while remaining distinct from the much broader category of

²⁴ A search for "physicalism," "physikalisch," and their variants yields no results in the Bergen electronic edition of Wittgenstein's *Nachlass*, which includes not only the typescripts and manuscripts on which all his published works are based, but also a great deal of preparatory work (Wittgenstein 2000; the correspondence quoted here, in which the term does occur, is part of a separate database, Wittgenstein 2004).

²⁵ Wittgenstein would later say that "every sentence in the *Tractatus* should be seen as the heading of a chapter, needing further exposition" (Drury 1984, 159–60). Nevertheless, he was extremely reluctant to provide such exposition, even in response to Russell's explicit requests, insisting that it was a task that should be left up to the reader.

whatever can be inferred from it (Diamond 2000, 263). Her very plausible proposal is that we use "in the *Tractatus*" to cover "the conclusions Wittgenstein wants his readers to draw for themselves, the lines of thought he wants his readers to work through for themselves" (ibid.). Diamond gives this potentially open-ended proposal some specificity by suggesting that we need to think about what Wittgenstein expected Russell, in particular, to work out from his reading of the book. The main aim of Diamond's essay is to argue that an early version of the private language argument is "in the *Tractatus*." However, she does connect her exposition of a Tractarian critique of Russell's views on our knowledge of others' inner states with Wittgenstein's claim that physicalism is "in the *Tractatus*." Roughly speaking, Diamond draws the connection in the following way. The *Tractatus*'s treatment of logic requires that we give up the Russellian conception of objects of acquaintance as belonging to subjects, for the *Tractatus* requires that all languages must be intertranslatable, and the Russellian conception, because it is committed to the privacy of another's mental contents, does not satisfy this requirement. Once we draw this conclusion, "[w]e are left with the translatability into each other of experience-language and ordinary physical-world language: they are not about different objects. It was Carnap's picking up *that* point from the *Tractatus*, and making it central in his 1931 physicalism, that underlay Wittgenstein's accusation of plagiarism" (Diamond 2000, 279).²⁶ Diamond is right to stress the centrality of the idea that all languages are intertranslatable in the *Tractatus*. The idea of "language as the universal medium" as Hintikka calls it, is a crucial Tractarian commitment with far-reaching consequences. Indeed, this is one reason why the emergence of physicalism and of arguments against the possibility of a private language are so closely interconnected. For if a private language, a "language which describes my inner experiences and which only I myself can understand" (Wittgenstein 1953/2001, § 256), is possible, then the physicalist thesis that all languages are intertranslatable must be false.²⁷

²⁶ Wittgenstein explicitly states the principle of intertranslatability at 3.343.

²⁷ For further discussion of the multitude of private language arguments in the air at the time, see Uebel (1995, § 7), where he argues that in the early 1930s, "*different private language arguments were in play to support different conceptions of physicalism*" (343, italics in original). Indeed, Dejnozka (1991) argues that Russell had already offered a number of related private language arguments.

Nevertheless, physicalism, however broadly conceived, requires more than bare intertranslatability: it also involves a claim about the priority, or the primacy, of the physical. For both a Tractarian solipsist and an *Aufbau*-inspired phenomenalist could accept the thesis of the intertranslatability of physical and phenomenal languages and take it to be a step on the way to arguing, against the physicalist, that "the world is *my* world" (*Tractatus*, 5.62). Furthermore, Diamond's defense of Wittgenstein does not do justice to the point that Wittgenstein and Carnap have very different conceptions of physicalism.²⁸ Wittgenstein's physicalism in the early 1930s amounts to a commitment to the primacy of the objects we discuss in our ordinary language, while Carnap's physicalism turns on the primacy of the objects posited by the physical scientist.²⁹ My own view is that Wittgenstein had not arrived at the physicalist position concerning the primacy of physical language over phenomenal language when he wrote the *Tractatus*, but this much-debated question of *Tractatus* interpretation need not detain us here. (For further discussion, see Stern 1995, 3.4, 4.2.) What matters for our purposes are the views Wittgenstein put forward in the late 1920s and the early 1930s, views that he regarded as a natural development of the *Tractatus*.

Indeed, the most promising starting point for a balanced understanding of the deep affinities and differences between Carnap and Wittgenstein is to recognize that each of them had been working out the consequences of the Tractarian view that all languages must be intertranslatable. In the 1920s each of them had been attracted to a phenomenalist, or phenomenological, analysis of both everyday and scientific language: the idea that one could specify a scheme of translation that would somehow enable one to translate everything

²⁸ For more detailed discussion of this point, see Uebel (1995). Uebel observes that McGuinness's Solomonic attempt to resolve the priority dispute by sharing the responsibility for developing physicalism between Wittgenstein, who "had given the impulse," Neurath, who "proclaimed the importance of the thing," and Carnap, who "began to work out the details" (McGuinness 1991/2002, 196) is untenable because "the thesis they sought to promote was not one but many" (Uebel 1995, 346).

²⁹ This is only a fast and loose material-mode summary; more careful exposition would call for use of the formal mode of speech. Note also that Carnap regarded physicalism as an empirical thesis, while Wittgenstein would presumably have treated it as a matter for philosophical elucidation.

one would ordinarily say about the world into talk of one's inner states. They both spoke of a primary language, for directly talking about immediate experience, and a secondary language, for talking about physical objects.

While the *Tractatus* has very little to say about the philosophy of mind and epistemology, a dualistic discussion of the relationship between "primary" mental world and a "secondary" physical world played a leading role in Wittgenstein's subsequent articulation of the book's main ideas. If we look at the first post-*Tractatus* manuscripts, begun almost immediately after his return to Cambridge in January 1929, we find him developing a whole metaphysics of experience, barely hinted at in the *Tractatus*. It was based on a fundamental distinction between two realms, the "primary" and the "secondary." The primary is the world of my present experience; the secondary is everything else: not only the "external world," but also other minds, and most of my mental life. He repeatedly made use of a cinematic analogy, comparing the primary, "inner" world to the picture one sees in the cinema, the secondary, "outer" world to the pictures on the film passing through the projector. However, by October of that year he decisively rejected this whole approach. He came to see that the primary and secondary were not two different worlds, but rather two different ways of talking, and he thought of philosophy as a matter of clarifying those uses of language. It was only after Wittgenstein repudiated the goal of a "primary language" or "phenomenological language" in October 1929 that he accepted the primacy of our ordinary physical language and so adopted a recognizably physicalist approach (for further discussion, see Stern 1995, 5.2).

As Wittgenstein had announced these physicalistic conclusions in his December 1929 meetings with Waismann and Schlick, it is easy to see why Wittgenstein was convinced that Carnap had taken his physicalism from Wittgenstein. However, there is good reason to believe that Neurath and Carnap had already taken the crucial steps towards the physicalistic standpoint earlier that year, because of conversations with Heinrich Neider, a student member of the Vienna Circle. Neider had argued that the two-language approach in Carnap's *Aufbau*, which gives equal weight to both phenomenal and physical language, is incoherent, because a solipsistic starting point cannot accommodate intersubjectively verifiable evidence

statements: only a physicalistic language can do that. Consequently, basic evidence statements must be formulated in the physical language (see Haller and Rutte 1977, 29–30; Uebel 1995, 335ff.). Indeed, while a critique along these lines may well have played a crucial role in showing both Carnap and Neurath that a phenomenistic language could not provide a satisfactory basis for a reconstruction of scientific knowledge, it was certainly not the first formulation of a physicalistic thesis by a member of the Vienna Circle. In fact, in 1935 Schlick persuaded Carnap, much to Carnap's embarrassment, that Schlick had already proposed, and argued for, a version of physicalism in his *General Theory of Knowledge* in 1918 (Schlick 1918, 295; see Uebel 1995, 345–6.). Of course, neither Neider's nor Schlick's physicalisms made use of the distinction between the material and formal modes of speech; but their attention to questions about mapping one mode of speech onto another does anticipate the more systematic approach to questions of translation one finds in Carnap and Wittgenstein's work in the early 1930s.

Oddly, while the leading parties in this dispute shared a basic commitment to the primacy of physicalistic language, and the view that all significant languages are translatable, there was a remarkable lack of mutual understanding between them, and deep disagreement about the nature of the doctrines they disputed. Three-quarters of a century later, we are so much more conscious of the differences that separated them than the points on which they agreed that it takes an effort of historical reconstruction to appreciate why Wittgenstein once feared that his own work would be regarded as a pale shadow of Carnap's.

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