

Vienna Circle Institute Yearbook

Friedrich Stadler *Editor*

Wittgenstein and the Vienna Circle

100 Years After the *Tractatus*
Logico-Philosophicus



Vienna Circle
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Tel.: +431/4277 46504 (international) or 01/4277 46504 (national)
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Friedrich Stadler
Editor

Wittgenstein and the Vienna Circle

100 Years After the *Tractatus*
Logico-Philosophicus

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Editor

Friedrich Stadler
Institute Vienna Circle, University
of Vienna, and Vienna Circle Society
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Editorial

In 1921, Ludwig Wittgenstein's *Logisch-philosophische Abhandlung* was published for the first time in Wilhelm Ostwald's periodical *Annalen der Naturphilosophie*. This fact, together with Wittgenstein's death after 70 years, was commemorated in 2021 after 100 years. One year later, in 1922, the bilingual publication appeared under the title *Tractatus Logico-Philosophicus* (TLP), translated by Frank P. Ramsey (with C.K. Ogden) and introduced by Bertrand Russell. Since then, this small book remained a pathbreaking milestone in philosophy up to the present.

On the occasion of this centenary, a lot of conferences took place and many publications dedicated to the TLP and the lifework of its author followed. The Viennese conference "Wittgenstein and the Vienna Circle – after 100 Years," which was organized from June 10 to 12, 2021 (in a digital livestream format because of the pandemic) exclusively addressed Wittgenstein and his TLP in relation to the Vienna Circle between the wars. Its principal aim was the focus on

the origin and content of the TLP in context, and to critically deal with the influence and diverse reception of the TLP within the Vienna Circle, besides Moritz Schlick and Friedrich Waismann, but also to draw on mutual impacts. Additional important philosophers for Wittgenstein like Frege, Frank P. Ramsey and Bertrand Russell are taken into regard, too. All these topics will be addressed with reference to Viennese modernity and in the context of general intellectual and cultural history.

Accordingly, the lectures covered the unique interaction and communication between Wittgenstein and members of the Vienna Circle, which ran regularly for a decade (mainly between Wittgenstein, Schlick, and Waismann). This research on the philosophical and personal communication remains a controversial and complex topic with a lot of open questions and research perspectives. Therefore, it was on the agenda explicitly from *both* sides, based on the most recent research and primary sources. The topical Part I of this volume contains nearly all papers of the invited speakers on Wittgenstein and the TLP, and the relationship between Wittgenstein and the Vienna Circle. It is enriched by an economic case study on the Wittgenstein family before WW I, in addition to a contribution on Waismann and his communication with Wittgenstein based on primary sources, and Waismann's time in Vienna. The general Part II includes a study on Neurath's economy, by the way a strong

critic of Wittgenstein in the Schlick-Circle, and reviews are provided in Part III – as usual in this series Vienna Circle Institute Yearbook.

The conference “Wittgenstein and the Vienna Circle – After 100 Years” was organized at least for two reasons: First, on the occasion of the 30th anniversary of the “Institute Vienna Circle,” which was founded in 1991 as “Society for the Advancement of Scientific World Conception” (alluding to the subtitle of the so-called manifesto of the Vienna Circle published in 1929). Since 2011, this institution continues its activities as “Vienna Circle Society.”

Second, in 2021, the 10th anniversary of the Institute Vienna Circle as part of the Faculty of Philosophy and Education of the University of Vienna occurred: <https://wienerkreis.univie.ac.at/>. This establishment was possible only with the strong support of the Rectorate of the University of Vienna under the rectors Georg Winckler and Heinz Engl (together with vice-rector Jean-Robert Tyran), who also enabled the first exhibition on the Vienna Circle at the University of Vienna in 2015.

All these activities are documented with two brochures as by-products for the conference, both accessible on the website <https://vcs.univie.ac.at/>. Special thanks for the publication of these brochures go to the redaction team consisting of Sabine Koch, Martin Seiler, and Ella Berger. The scholarly results of our long-term activities became manifest with around 80 volumes in 3 publication series (with Springer), besides the edition projects on Ernst Mach, Moritz Schlick, and Otto Neurath. The teaching side is presenting the running master’s program “History and Philosophy of Science” (since 2013) in an annual summer school (since 2001). All these activities were and are embedded in the international context of analytic philosophy and philosophy of science like the huge ESF research network program “The Philosophy of Science in a European Perspective” and the founding of the European Philosophy of Science Association (EPSA) in Vienna as accompanying results. In the future, the further cooperation between the Institute Vienna Circle and the Vienna Circle Society promises a creative and productive continuity with the aim of both to critically reconstruct the history of the Vienna Circle and Logical Empiricism, and to further investigate and develop the research originating from the principles and themes of this tradition in the field of contemporary philosophy of science.

Thanks for enabling and supporting the conference and the proceedings go to:

- Co-organizers, the Institute Vienna Circle headed by Martin Kusch, the Austrian Ludwig Wittgenstein Society, and the Austrian National Library (owner of a valuable Wittgenstein archive, awarded as World Document Heritage and hosting the “Wiener Vorlesung” by Marjorie Perloff)
- All speakers, who accepted our invitation to deliver a lecture, even though under extraordinary circumstances
- The *Erste Stiftung* represented by Ursula Dechant and the *Sekyra Foundation* initiated by Ludek Sekyra, for their generous support of the conference and the proceedings
- The City of Vienna, Cultural Division, conducted by Daniel Löcker and his team for organizing the “Wiener Vorlesung” as part of the conference – and for supporting the Vienna Circle Society in general

- The media partner, the newspaper *Wiener Zeitung* with a running Wittgenstein dossier, organized by Wolfgang Renner: <https://www.wienerzeitung.at/dossiers/ludwig-wittgenstein/>
- The conference team directed by Sabine Koch, together with Josef Pircher, and Ella Berger
- Zarah Weiss for her professional redactorial work on behalf of the Institute Vienna Circle and the Vienna Circle Society, and Bastian Stoppelkamp as review editor
- Finally, we are grateful to Wilfried Datler, the Dean of the Faculty of Philosophy and Education, University of Vienna, who co-opened the conference and who, together with his predecessor Elisabeth Nemeth, facilitated the establishment of the Institute Vienna Circle as a department (subunit) of the faculty, currently headed by Martin Kusch and Iulian Toader, where it works in close cooperation with the Philosophy Department.

Vienna, Austria
February 2022

Friedrich Stadler

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Part I
Wittgenstein and the Vienna Circle –
After 100 Years

Chapter 1

Wittgenstein and the Vienna Circle – The Vienna Circle and Wittgenstein. A Critical Reconsideration



Friedrich Stadler

Abstract Research and publications on Wittgenstein and on the Vienna Circle of Logical Empiricism have been steadily increasing in recent decades. Nevertheless, detailed comparisons between the single famous philosopher and the influential circle around Moritz Schlick are less often undertaken. To be sure, the reception and impact of Wittgenstein's *Tractatus* (TLP) on the Vienna Circle is a familiar topic as are the conversations Wittgenstein had with Schlick and Waismann. This introductory essay suggests that a broader focus be adopted. The first part provides an overview of the multi-faceted Vienna Circle based on recent historiography and primary sources; the second part offers a new perspective on the complex relations between Wittgenstein and the Vienna Circle. To this end, a case study of a central relevant document is provided, namely of Rose Rand's "Development of the Theses of the 'Vienna Circle'" (1932/33). A close reading of this unique source sheds new light on the central philosophical triangle of Wittgenstein-Schlick-Waismann and opens up new avenues for future analyses. These considerations are offered to provide a thematic frame for the papers contained in this volume documenting the international conference on "Wittgenstein and the Vienna Circle", held in Vienna, June 2021 to mark the centenary of the publication of Wittgenstein's *Logisch-philosophische Abhandlung* (1921) / *Tractatus Logico-Philosophicus* (1922).

Keywords Ludwig Wittgenstein · Vienna Circle · Logical Empiricism · *Wissenschaftliche Weltauffassung*, *Der Wiener Kreis* · *Logisch-philosophische Abhandlung* / *Tractatus logico-philosophicus* · Rudolf Carnap · Otto Neurath · Moritz Schlick · Friedrich Waismann · Rose Rand

F. Stadler (✉)

Institute Vienna Circle, University of Vienna and Vienna Circle Society, Vienna, Austria
e-mail: friedrich.stadler@univie.ac.at

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1.1 Wittgenstein and the Vienna Circle – The Vienna Circle and Wittgenstein

The steady increase of research on the life of Ludwig Wittgenstein is a global phenomenon, as is the growing list of publications about his work. The centenary of the publication of his *Tractatus Logico-Philosophicus* (TLP) was marked by many conferences, books and articles dealing with the origin, content and impact of this slender volume on contemporary philosophy. All these publications and other recent research are much aided by the new primary sources hosted at the Wittgenstein Archives in Bergen and in Cambridge and by the long-term *Wiener Ausgabe* (Wittgenstein 1994 ff.). The Wittgenstein collection at the Brenner-Archives of the University of Innsbruck as well as the partial *Nachlass* at the Austrian National Library (classified as World Document Heritage) in Vienna are important further resources (see the complete list at the end of this article). Last but not least, there are the two now standard biographies (McGuinness 1988; Monk 1990).

Nevertheless, all is not as well as it could be regarding the scholarship on the relationship between Wittgenstein and the Vienna Circle. This is so despite the availability of *Wittgenstein und der Wiener Kreis*, edited in 1984 by Brian McGuinness as volume 3 of the *Suhrkamp Werkausgabe* (preceded by the English edition in 1967) and its supplementation by the bi-lingual *The Voices of Wittgenstein. The Vienna Circle. Ludwig Wittgenstein and Friedrich Waismann*, edited by Gordon Baker in 2003. The historiography of the Vienna Circle finds further new resources in the Vienna Circle archives in Haarlem (Neurath, Schlick), the archives in the library of Pittsburgh University (Carnap, Feigl, Hempel, Rand), at Bodleian Library Oxford University (Waismann) and the Institute for Advanced Studies in Princeton, which already have informed some research and publication projects on Carnap, Gödel, Neurath, Schlick, and others.

It is surprising then that despite these flourishing scholarly activities the crucial interaction of Wittgenstein with members of the Vienna Circle (mainly with the Schlick and Waismann) in the decade between the two World Wars has still not been investigated in sufficient depth. (Of course, some underrated exceptions confirm this rule: Haller, McGuinness, Janik, Manninen, Stern.) There are two main reasons for this shortcoming. First, there is the exclusive focus on Wittgenstein as the dominant figure in the relationship (which threatens a kind of genius cult) and on the text of TLP without provision of its crucial context. Second, there is the complexity of the phenomenon of the Vienna Circle, a collective around Moritz Schlick which resists short descriptions and compression to the thought of individual philosophers. A more balanced account of relations between Wittgenstein and the Vienna Circle has to break through this asymmetry. To propose this is not to deny Wittgenstein's extraordinary status in the history of twentieth century philosophy, but to ask that awareness be raised of the seminal role that the Vienna Circle played in the interwar years, an awareness lost when all forms of positivism were discredited later in that century.

1.2 New Light on the Vienna Circle¹

The history of the Vienna Circle has been much researched during the last three decades. Since the 1990s we have the publications of the Institute Vienna Circle. *HOPOS*, the journal of the International Society for the History and Philosophy of Science, and the *Journal for the History of Analytic Philosophy*, edited by the Society for the Study of the History of Analytic Philosophy, have published many related studies with a focus on logical empiricism. In addition, we see entries on the Vienna Circle and its periphery in handbooks and encyclopedias like the *Stanford Encyclopedia of Philosophy*. As new primary sources we have the ongoing editions of Moritz Schlick, Rudolf Carnap, and Ernst Mach: the *Moritz Schlick Gesamtausgabe* (<https://www.iph.uni-rostock.de/forschung/moritz-schlick-forschungsstelle/>), the *Collected Works of Rudolf Carnap* (Creath 2019 ff.), the edition of Carnap's diaries (Damböck 2022), a study edition of the main works of Ernst Mach as a predecessor of the Vienna Circle (Stadler 2005 ff.), and the collected writings of Otto Neurath (now reprinted and reaching completion: Haller/Stadler 2021 f.). Then there was the first exhibition about the Vienna Circle which addressed a wider public (first in Vienna in 2015, then moving on to Karlsruhe in 2016, Prague in 2021, Warsaw in 2022, forthcoming in Belgrade and Paris), which was accompanied by books from the curators Karl Sigmund (2015), Limbeck-Lilienau and Stadler (2015). A volume by David Edmonds (2020) provided further exposition as popular intellectual history, like the recent biography of Gödel by Budiansky (2021). Inspired and informed by earlier accounts of the origins and transformation of the Vienna Circle and logical empiricism (Giere and Richardson 1996; Hardcastle and Richardson 2003; Richardson and Uebel 2007), new insights in the philosophical, cultural and political context of the Vienna Circle and Logical Empiricism have been provided. However, the relations of the Schlick Circle to Wittgenstein and *vice versa* remained a relatively marginal issue, the most recent *Handbook of Logical Empiricism* containing one contribution by Johannes Friedl (Uebel and Limbeck-Lilienau 2022).

New approaches and perspectives on the Vienna Circle emerged. We may mention the influential activity of the so called “first Vienna Circle” (1907–1912) with Philipp Frank, Hans Hahn, Otto Neurath in the context of the “Philosophical Society of the University of Vienna” (1888–1938) (Uebel 2000; Fisette 2014). This research focused on the “proto-circle” before WW I, especially on the function and role of

¹For publications and research projects of the Institute Vienna Circle / Vienna Circle Society since the 1990s see: <https://vcs.univie.ac.at/> and <https://wienerkreis.univie.ac.at/en/>. In addition, there appeared numerous books and articles by scholars as Christian Bonnet, Anastasios Brenner, Jordi Cat, A.W. Carus, Richard Creath, Hans-Joachim Dahms, Massimo Ferrari, Michael Friedman, Rudolf Haller, Rainer Hegselmann, Michael Heidelberger, Don Howard, Elisabeth Nemeth, Alan Richardson, Thomas Ricketts, Thomas Uebel, Pierre Wagner, and many others. A younger generation continued with contributions by Christian Damböck, Johannes Friedl, Christoph Limbeck-Lilienau, Alexander Linsbichler, Matthias Neuber, Flavia Padovani, Esther Ramharter, Donata Romizi, Günther Sandner, Georg Schiemer, Anne Siegetsleitner, Michael Stöltzner, Bastian Stoppelkamp, Adam Tuboly and others.

the Viennese empiricist and naturalist philosophers since Mach, Boltzmann, Jerusalem, and French conventionalism. The Mach Centenary Conference 2016 (Stadler 2019a) provided a comprehensive overview of research related to his work which transcended the boundaries of many disciplines, while Mach's specific role as a pioneer for logical empiricism was characterized in greater detail also in *Interpreting Mach* (Preston 2021). The reception of Mach as a "scholar of nature" by individual Vienna Circle members shows great variety (Stadler 2019b). At stake was not only Mach's empiricism and pragmatism in the context of "Late Enlightenment", but also his methodological impetus for a monistic world-view covering both the natural and social sciences.

Related research addressed the foundation of the Verein Ernst Mach (Ernst Mach Society) in 1928 and its activities as an extra-university manifestation of the Vienna Circle. Not only was it deeply rooted in the socio-cultural movement of "Red Vienna" between socialism and liberalism (Stadler 2022), but it also represented an institutional manifestation of the then flourishing international modernist movement (Schwarz et al. 2019; Stadler 2021b). It must be stressed, moreover, that the foundation of the Mach-Society was the result of several initiatives originating *outside* the Schlick Circle (mainly the Viennese Monists and Freethinkers) and not of a spontaneous decision of its members to establish a second external discussion group for scientific philosophy. This shows once more the Circle's embeddedness not only in international science but also local culture.

We thus arrive at a new bottom-up perspective on the Vienna Circle which reveals a pre-existing intellectual climate for the philosophers and scientists around Schlick and the Mach Society. What becomes clear – and confirms Philipp Frank's memoir (1949) – is that the formation of Schlick's discussion circle in 1924 was preceded by relevant activities already in the Austro-Hungarian Monarchy (Limbeck-Lilienau and Stadler 2018; Uebel 2022). In other studies, the influence of Boltzmann and Mach was addressed again, following up on Wittgenstein's own reference to Boltzmann, Hertz, Schopenhauer, Frege, Russell, Kraus, Loos, Weininger, Spengler, Sraffa (Wittgenstein 1978, 43).

One side effect of these investigations that may be noted is the insight that there existed a specific Central European pragmatism in parallel and in interaction with American pragmatism around Peirce, James, and Dewey; this partial confluence of ideas was continued in the cooperation with North-American pragmatists in the period of exile (Pihlström et al. 2017; Maddalena and Stadler 2019). The convergence of the thought of the later Wittgenstein with pragmatism can be considered to be part of this development as well (Misak 2016, 2020).

What also has been brought into the foreground by the new research is the creative interaction of three generations, including women philosophers, as well as the networking with European groups in Prague, Berlin, Warsaw, Paris, and England (Cambridge and Oxford). The forced migration of logical empiricists started already at the beginning of the 1930s and contributed to the modification of some of the core doctrines of the Vienna Circle significantly (for instance, of its verificationism and emotivism). This development ultimately led to the huge *International Encyclopedia of Unity of Science* project under the direction of Neurath, Carnap and Morris,

supported by a large international committee, as well as to Carnap's turn from rational reconstruction to explication (Carus 2007; Stadler 2010). But already in the Vienna period we can diagnose a pluralization and diversification of philosophical positions, partly inspired by Wittgenstein, even by the emergence of Karl Popper, by the other discussion groups then existing, like the Heinrich Gomperz circle and Karl Menger's "Mathematical Colloquium".

At the latest by 1927, the Schlick Circle attained self-consciousness as a genuine movement. Their participation in the Philosophical Society of the University of Vienna by Circle members like Hahn, Feigl, Kraft, Juhos, and Schlick was not judged to be sufficiently representative anymore, given the marginalization of empiricism there and the dominance of Kant and Neo-Kantianism (Stadler 2018). The efforts undertaken from 1923 onwards to establish their own periodical have to be understood in this context. The first issue of *Erkenntnis* appeared in 1930 under the editorship of Rudolf Carnap and Hans Reichenbach acting respectively for the Mach Society and the Berlin Society of Empirical/later Scientific Philosophy. (The Mach Society also published under its aegis the manifesto *Wissenschaftliche Weltauffassung. Der Wiener Kreis* [1929], which introduced the Neurath-inspired name of Schlick's group to the public [Stadler and Uebel 2012].) In parallel to *Erkenntnis*, two book series issued from the Vienna Circle: "Schriften zur wissenschaftlichen Weltauffassung," edited by Philipp Frank and Moritz Schlick from 1928 to 1937 (nine volumes), and "Einheitswissenschaft," edited by Otto Neurath from 1933 to 1938 (seven slim volumes). The international and interdisciplinary intentions of the Circle found their first expression in their co-organization of the "First International Conference for Epistemology of Exact Sciences" in Prague, September 1929, where the manifesto was presented. It also marked the beginning of the public phase of the Vienna Circle. (Later they organized the International Congresses for the Unity of Science from 1934 to 1941.) Yet the officially ordered closure of the Mach Society in 1934 marked the beginning of the end of the Vienna Circle which was accelerated by the unexpected death of Hans Hahn in 1934 and the assassination of Moritz Schlick in June 22, 1936. By then the Gomperz circle, which some members of Schlick's group had also attended, had folded as well. Edgar Zilsel continued to lead a small group until the *Anschluss*, as did Frank in Prague until 1938, albeit with a weaker frequency and intensity given the competing presence of the Brentano Society (Binder 2019; Fisette et al. 2020).

1.3 Wittgenstein in the Manifesto 1929

It is important to note that in the already mentioned manifesto Ludwig Wittgenstein was introduced as one of the "Leading representatives of the Scientific World Conception", together with Einstein and Russell (Stadler and Uebel 2012, 64–68). In the manifesto's annotated bibliography we find a short characterization of his *Tractatus logico-philosophicus* (TLP, 1922), written by Waismann with the

agreement of Wittgenstein, who later together with Schlick would criticize the programmatic style of the manifesto (Mulder 2012).

This book discusses the logical foundations of our language, the foundations of any symbolic system capable of expressing thoughts. There exists a fundamental relation between the state of affairs of the world and the sentence of language. It is this: our statements are logical pictures of states of affairs. All thought, speech and communication is nothing but such a logical picturing. What cannot be pictured cannot be expressed by language and cannot be represented, formulated, communicated in any way whatsoever. This book wants to draw a limit to thinking or rather – not to thinking but to the expression of thought. To be sure, there exists what cannot be expressed, but this ‘shows itself’ in language (in the logical construction of the symbols). The clear separation of what can be spoken of and what cannot constitutes the most important result of this book. This insight is applied to a number of issues in logic and epistemology which are solved in a surprisingly simple way once one has understood the nature of symbolic representation. In this fashion the nature of logic is elucidated and it is proved that there is only one logic, the inner nature of probability is uncovered, etc. This perspective leads to a new conception of the nature of philosophy. There is no philosophical knowledge that could be expressed and formulated. ‘Philosophy is not a theory but an activity. The result of philosophy is not a number of ‘philosophical propositions’, but to make propositions clear. It should limit the thinkable and thereby the unthinkable’ ... The correct solutions of philosophical questions consist in correcting the language such that in the corrected language the question can no longer be posed. In this sense this book does not offer a theory but gives the way for a reader to go beyond the stage where philosophical questions are still being asked. Whoever understands these sentences correctly will see that in the end they are nonsensical. They must be overcome, then the world is viewed aright. This essay is difficult to understand. An accessible account is given by Waismann. (Quoted after Stadler/ Uebel 2012, 54)

One can assume that the signatories of the manifesto (Carnap, Neurath, Hahn) accepted this interpretation of Wittgenstein’s *Tractatus logico-philosophicus* (TLP) as mainly providing what has come to be known as his “picture theory”. Wittgenstein expressed his intention differently in his Foreword and in related letters where he claimed that the most important part for him was the realm of the ineffable demanding silence about ethics, aesthetics and the religious side of life.

The last sentence of the description refers to Waismann’s *Logik, Sprache, Philosophie. Kritik der Philosophie durch Logik*, which was described in the bibliography as follows:

This book is for the most part a discussion of the ideas of Wittgenstein ... The logical ordering and structuring of these ideas is what is new and important. Contents: I. Logic (sense, meaning, truth; truth functions; nature of logic). II. Language (analysis of statements; atomic propositions; logical representation; limits of language). III. Philosophy (application of results to problems of philosophy) (Ibid., 164).

Announced as the initial volume of the series “Schriften zur wissenschaftlichen Weltauffassung”, Waismann’s book never was published in his lifetime because Wittgenstein rejected several drafts due to his own changing ideas. It was published only posthumously, first in English entitled *Principles of Linguistic Philosophy* (1965), in German as *Logik, Sprache, Philosophie* (1976) according to this preview (Waismann 1977).

Ironically, the Foreword by Schlick, who had tried in vain to mediate between his two colleagues, had been written in advance of the book itself and was only

published in the German edition of Waismann's book and later in the Schlick *Gesamtausgabe*, translated into English in Schlick's *Philosophical Papers* (1979). There Schlick recommended Waismann's book as a representative for the book series it was to start off.

The discussions in the work now before us, the first volume of our series, also proceed upon this line. They are essentially an exposition and elucidation of the ideas of Ludwig Wittgenstein, as set forth by him in his *Tractatus Logico-Philosophicus* (London 1922). This book, which in my firm conviction is the most significant philosophical work of our day, cannot be assigned to any particular 'tendency'. But it likewise contends for the fundamental truth on which all empiricism is founded, since it demonstrates the impossibility of synthetic a priori judgements ... The claim that such statements are impossible is, indeed, the way to define empiricism ... The proposition of logic and pure mathematics are a priori, but not on this account synthetic. ...

Now the inestimable significance of Wittgenstein's work lies precisely in this, that in it this nature of the logical is completely elucidated and established for all time to come. This happens in that, for the first time, an entirely clear and rigorous concept of 'form' is provided, which banishes at a stroke those difficult problems of logic which have lately given so much trouble to serious investigators.

The lapidary presentation in Wittgenstein's book ... makes it so difficult to understand that it has yet been little studied ... and an estimate of its significance has not been feasible. The attempt had therefore been made at presenting its ideas in a more easily accessible form. Friedrich Waismann has undertaken this attempt. And with outstanding success, in my opinion, so that we may hope the new discoveries will now begin to produce the effect that every friend to philosophy must wish them (Schlick 1979, 136 ff.).

1.4 Personal Meetings, Informal Conversations, Priority Disputes

In retrospect we can see that Schlick did justice to only half of Wittgenstein's intentions. In 1928 Wittgenstein returned to philosophy, prompted by the Vienna lectures of the Dutch mathematician L.E.J. Brouwer which he had been invited to attend by Menger, Waismann and Feigl (Menger 1994, 129–140). At the same time, he also gradually distanced himself from his TLP philosophy but agreed to have permanent conversations with Schlick and Waismann. (Wittgenstein's *Denkbewegungen* [Wittgenstein 1999] characterizes this gradual change well.) After 1934, Wittgenstein preferred to meet with Schlick alone, although Waismann continued to work on his book on Wittgenstein in parallel. Some of Waismann's manuscripts like his "Thesen" (around 1930) were discussed in the Vienna Circle but never appeared in print before being published with his record of discussions with Wittgenstein (McGuinness 1984, 233–263). Waismann's sole monograph *Einführung in das mathematische Denken* (1936) was strongly inspired by Wittgenstein and appreciated by Karl Menger, who wrote the Foreword. The last meeting between Waismann and Wittgenstein took place during Easter time in 1934. After Waismann's emigration to Cambridge in 1937 and his move to Oxford in 1939 Wittgenstein refused to meet him again for conversations – a tragic end to their relationship after a promising

start. This split was preceded by Wittgenstein's accusation that Waismann made unauthorized use of his ideas in his "Über den Begriff der Identität" (On the Concept of Identity, 1936).

Another harsh priority dispute took place between Carnap and Wittgenstein in 1932. They had met five times in 1927; in his diaries (Damböck 2022) Carnap noted:

20-06-27: Met for the first time, at Schlick's; Waismann also. Very interesting, original, sympathetic man. Strongly against Esperanto because not grown (it was probably Schlick who mentioned I was an advocate). Artistic nature. On identity, his objections to Ramsey.

04-07-27: With W. at Schlick's. Again about Esperanto. Then about intuitionism, finally he reads Wilhelm Busch to us.

06-08-27: Schlick has already left. In the afternoon Waismann at my place; in the evening also W. W. sharply against the popularization of science; Waismann for it on account of his experience at the adult education center. Afterwards both against occultism, W. very heatedly.

Here the personal and philosophical differences become apparent: on the one side, the conservative anti-Enlightenment philosopher affronted by the artificial Esperanto language, on the other the internationalist and social reformer claiming a scientific world-view. Despite these conflicts and differences Carnap wrote in his autobiography (1963) that Wittgenstein, together with Russell and Frege, exerted the strongest influence on his own thinking. And Herbert Feigl remarked that already the first meetings between Wittgenstein and the Vienna Circle led to a basic divide in modern analytic philosophy, namely between rational reconstruction and ordinary language philosophy (Feigl 1969, 638 f.).

The priority dispute of 1932 can be reconstructed through the correspondence of Carnap, Schlick, and Wittgenstein. The context is marked by Carnap's transition from his phenomenalist *Aufbau* to a physicalist version of a unity of science in order to enable intersubjectivity (Carnap 1934a, 1934b), and Wittgenstein's gradual distancing of himself from his TLP philosophy (as becomes manifest in his *Philosophical Remarks* and *Philosophical Grammar*). Wittgenstein took offense at Carnap's "Die physikalische Sprache als Universalsprache der Wissenschaft" (Carnap 1932), translated as *The Unity of Science* in 1934) which was part of the as yet unresolved protocol-sentence debate between members of the Vienna Circle (Uebel 2007). It seems puzzling that Wittgenstein felt annoyed due to not being mentioned there in connection with the notion of physicalism which, after all, is not invoked as such in TLP (Stadler 2015, 224–230). He claimed that these topics were already (indirectly) formulated there, something which Carnap consciously obscured. Previously, Neurath had also charged Carnap with insufficient acknowledgement of his part in the inception of physicalism in response to which Carnap had added a footnote (Carnap 1932, 452; cf. 1934/1937, 321) which only annoyed Wittgenstein further.

The unhappy Schlick tried to mediate between Carnap and Wittgenstein, who addressed Carnap with letters via Schlick. Apart from physicalism, the issues Wittgenstein raised were ostensive definition, natural law, hypotheses, and the

formal mode of speech. Carnap wrote to Schlick on July 17 explaining and defending his position while conceding that Wittgenstein's writing provided the general background. Unlike Schlick, Wittgenstein was not satisfied by Carnap's reply and sent another letter to Schlick forcefully repeating his concerns and reproaches. Carnap's final reply via Schlick was short and cool. In an unpublished portion of his autobiography Carnap later recalled this strange episode as follows:

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 something remotely similar to this hatred directed against me. I have no adequate explanation; probably only a psychoanalyst could offer one. ... But that in no way alters the fact that he was a spirit with genuine creative genius, to whom philosophy is greatly indebted.

In his letter to Schlick Carnap wondered about Wittgenstein's oversensitivity and vehemence. Certainly, the reasons for this conflict lay in two different personalities with incompatible commitments to philosophy and science, which became manifest in the two thought styles of a team worker and an individualist. But the triangle Schlick-Wittgenstein-Carnap also represents the different stances taken in the Vienna Circle towards non-academic outsiders. A similarly controversial constellation can be detected with regard to Neurath and Schlick in the case of the latter's refusal to publish the first draft of the former's *Empirische Soziologie* (Empirical Sociology, 1931), this time with Frank as mediator (Stadler 2021c).

1.5 Wittgenstein and the Vienna Circle Reconsidered: The Wider Context

What then do we know about the relation between Wittgenstein and the Vienna Circle from the already published literature?² Most of the studies focus on the influence of Wittgenstein's TLP on the Vienna Circle, but this is only one side of the relationship. There is also the complementary perspective from the Vienna Circle members and their views of Wittgenstein's significance (Stadler 2015, 228–234).

According to Menger (1979, 1994) the TLP was first read by several (future) Circle members independently and met with a rather skeptical reception. This changed after a presentation about it by Kurt Reidemeister, a junior colleague of Hahn, which incited great interest. Subsequently Schlick contacted Wittgenstein, who then worked as a primary school teacher in Lower Austria. In a letter of December 12, 1924, he asked him for a personal meeting in Vienna which received a friendly reply. After this first attempt, Schlick travelled to Otterthal in April 1926

²A selection of relevant literature: Mulder 1968, McGuinness 1968 ff., 1985, 1991, 2010, Baker 2003, Janik and Toulmin 1973, Hacker 1997, Haller 1979, 1986, 1993, Nedo/Ranchetti 1983, Haller and McGuinness 1989, Gálvez and Baldrich 1998, Stadler 2015, Sluga and Stern 1996, Stern 2018, Reck 2002, Uebel 2015, Engelmann 2021, Friedl 2002. Wittgenstein Initiative 2018.

but did not meet Wittgenstein, who had resigned from his position there. Wittgenstein returned to Vienna and engaged himself as an architect with his friend Paul Engelmann in building the house of his sister Margarethe. In the meantime, his TLP was discussed extensively in the Schlick Circle: according to Carnap, it was “read aloud and discussed sentence by sentence” (Carnap 1963, 24). But only in February 1927 the first personal meetings took place, organized by Wittgenstein’s sister Margarethe Stonborough, to which Wittgenstein had invited also the psychologists Karl and Charlotte Bühler. Carnap’s diary records several encounters with Wittgenstein together with Schlick and Waismann in the summer of that year, in which also Herbert Feigl and his fiancée Maria Kasper participated.

After the first meeting Schlick expressed his enthusiasm about Wittgenstein who reciprocated. Their personal and professional relationship of mutual respect lasted until Schlick’s death in 1936. This is remarkable given their differences concerning the status of ethics and aesthetics and Schlick’s commitment to a “consistent empiricism”. (After all, Wittgenstein distanced himself from several former personal friends like Russell and Ramsey on account of philosophical differences alone.) On Schlick’s part, his admiration obscured to himself that in his *General Theory of Knowledge* (1918/2009) he had adopted positions which he later ascribed to Wittgenstein. Yet the Circle’s relation to Wittgenstein was by no means wholly adulatory. While there emerged a faction of followers with Schlick, Waismann, and Josef Schächter (1935), there also developed a group of critics around Neurath, Menger and Gödel, partly Hahn, Carnap and Feigl.

From the beginning of 1929 onward Wittgenstein agreed to meet only with Schlick and/or Waismann; their discussions can be reconstructed as follows (Stadler 2015, 231 ff.).

Conversations between Wittgenstein, Schlick, and Waismann: An Overview

1929

18-12-1929 On mathematical proofs

What does seeking mean in mathematics?

(Example: tripartition of an angle, analogy: unraveling of a knot)

Geometry as syntax I

Non-contradiction I

22-12-1929 “The whole” I (objects, what does “the whole” signify?)

Solipsism

(The meaning of a proposition is its verification)

Idling wheels

(“I cannot feel your pain”)

Speech and world

25-12-1929 “The whole” II

Time

(External-internal)

Optical space

30-12-1929 (Supplement to 25-12)

Geometry as syntax II

Physics and phenomenology

Color-systems

(Does every proposition lie within a system? I)

(The world is red I)

Anti-Husserl

30-12-1929 On Heidegger

Dedekindian definition

Real numbers I

Supplement to 30-12

1930

02-01-1930 (Elementary propositions)

(“The present state of mathematical knowledge on Hermann Weyl ‘s article”)

05-01-1930 Positive and negative propositions

The color blue in memory

“The world is red” II

Does every proposition lie within a system? II

Conclusion

Talk on ethics

Probability I

22-03-1930 (Verification and the directly given)

(Verification and time)

Probability II

Hypotheses I

(The double meaning of geometry, misc. concerning hypotheses)

19-06-1930 (What might be said in Königsberg)

(Formalism, analogy, and tautology I)

25-09-1930 (Misc.)

Variable

Proof

Real numbers II

Idealization

Interpretation

17-12-1930 On Schlick ‘s ethics

Value

Religion

Obligation

Noncontradiction III

(The discovery of Sheffer)

(Rules of play and configurations of play)

(What does it mean to use a calculation?)

(Independence I)

30-12-1930 (Noncontradiction IV. Frege and Wittgenstein I)

Hilbert 's proof

1931

01-01-1931 America. The institution of college

Independence II

(Noncontradiction V)

(Independence II)

(Summary)

(*Hilbert* 's axioms)

(Calculation and prose)

(*Frege and Wittgenstein* II)

04-01-1931 (Analogy and replacement-rules I)

(Analogy and tautology II)

Verification in physics

(Hypotheses II)

(Geometry as syntax III)

Supplements: chess, on Königsberg, definition of a number

21-09-1931 Intention, opinion, signification

(Calculation and application)

(Examining a calendar)

The construction of a boiler

Proof of existence

(Noncontradiction vs. hidden contradiction)

Contradiction (analogy and replacement rules II, indirect proof I)

09-12-1931 On dogmatism

On infinity

On Ramsey 's definition of identity

Noncontradiction VII

Noncontradiction VIII

(Analogy: the extension of π)

(The concept of calculation)

(Proof in geometry and arithmetic)

Partition of an angle

Generalization in geometry

Indirect proof II

1932

01-07-1932 (Proposition and reality)

Hypotheses III

If we compare this incomplete list with the topics of discussions in the Circle meetings we can identify significant overlaps, especially with the presentations by Waismann, whose “Theses” were debated extensively. Consider this period covering 5 years, with the overlaps marked in *italics* (Stadler 2015, 73f.):

The Schlick Circle: Overview of the Discussions 1927–1932

Date, speakers, and topics

1927

7 July 1927 Discussion by Carnap and Hahn about Carnap’s arithmetic and *Wittgenstein’s* objections against Ramsey’s definition of identity

1928

10 May 1928 *Waismann*: Foundations of mathematics

24 May 1928 Discussion of *Waismann’s* view of mathematics

21 June 1928 Carnap: Axiomatics

5 July 1928 Carnap: Axiomatics II

8 Nov 1928 On Reidemeister’s “Exaktes Denken” (Exact Thinking)

13 Dec 1928 Gomperz: Realism

1929

24 Jan 1929 Carnap: Reading of Ramsey

7 Feb 1929 Discussion with Neumann on the reality of other minds

21 Feb 1929 *Carnap* on real numbers and the foundations of mathematics

7 Mar 1929 *Carnap* on correspondence with Reidemeister

16 May 1929 Discussion with Kaila on the concept of probability

30 May 1929 *Waismann*: Probability

6 June 1929 *Waismann*: Probability II

13 June 1929 *Waismann* on the nature of language

21 June 1929 *Waismann* on atomic sentences

27 June 1929 Kaufmann on decidability

9 July 1929 Hahn: Essay on empiricism; Schlick on America

7 Nov 1929 Carnap: Independence of axioms, system of truth functions, letter of Kaila to Carnap and Feigl

14 Nov 1929 Dr. Gut (?) on quantum mechanics

21 Nov 1929 Discussion with Dr. Gut on the indeterminacy relation

2 Dec 1929 Carnap (?) on terminology

1930

23 Jan 1930 “Inofficial Circle”: Neurath on Marxism (with among others Kaufmann and Neumann)

30 Jan 1930 *Menger*: Intuitionism

3 Feb 1930 “Inofficial Circle”: Neurath on Marxism

6 Feb 1930 Carnap: Terminology II

13 Feb 1930 *Schlick*: internal/external relations, meaning in *Wittgenstein*

21 Feb 1930 Tarski: Metamathematics of the propositional calculus

27 Feb 1930 Carnap on Tarski and the importance of metamathematics

6 Mar 1930 Carnap (?) on "Orange lies between red and yellow"

13 Mar 1930 Carnap (?) on colors

20 Mar 1930 "Inofficial Circle" for Prof. Jacobson (Goeteborg): Carnap on the theory of constitution

8 May 1930 *Waismann* on *Wittgenstein*'s philosophy against Russell

15 May 1930 *Waismann* on numbers (against Russell)

22 May 1930 *Waismann*: (continuation)

12 June 1930 *Waismann* on the programme of the Königsberg conference

19 June 1930 (no further entry)

26 June 1930 *Waismann* (no further entry)

3 June 1930 *Waismann* (no further entry)

6 Nov 1930 Hahn: Foundations of mathematics (Königsberg lecture)

13 Nov 1930 Kaufmann on his main ideas

4 Dec 1930 Carnap on his visit to Warsaw, discussion of Schlick's essay "Kausalität" (Causality)

11 Dec 1930 Rand on Kaila's "Der logische Neu-Positivismus" (The Logical Neo-Positivism)

1931

5 Feb 1931 Schlick on Frank's Prague lecture; Carnap: Schrödinger's "Naturwissenschaft und Ethik" (Natural Science and Ethics); discussion of *Waismann*'s "Theses"

12 Feb 1931 Discussion by Hahn and *Waismann* on atomic sentences

19 Feb 1931 Discussion by Hahn and *Waismann* on atomic sentences (continuation), among others with Neumann and Kaufmann

26 Feb 1931 *Carnap*: Physicalism, construction of a syntax

28. 2. 1931 (no further entry)

5 Mar 1931 *Carnap* on physicalism (behaviorism)

12 Mar 1931 "Inofficial Circle": Carnap on the theory of constitution

7 May 1931 Carnap: Preface, on *Waismann*'s "Theses"

21 May 1931 On *Waismann*'s "Theses"

3 June 1931 Schlick reads Bavink and Weyl; *Waismann*'s "Theses" on identity

11 June 1931 Carnap: Metalogic

18 June 1931 Carnap: Metalogic II

25 June 1931 Carnap: Metalogic III

2 July 1931 Discussion of Carnap's Metalogic IV

1932

14 Jan 1932 Carnap, Frank partly on *Carnap*'s essay "Metaphysik" (Elimination of Metaphysics)

1.6 Rose Rand's "Thesen" Reconsidered

New insights regarding the relation between the Vienna Circle and Wittgenstein can be gained with reference to ongoing research projects and unpublished sources.

The available resources do not appear to have been taken account of fully with regard to the plurality of opinions held by members of the Schlick Circle, esp. regarding the influence of TLP. This is strongly suggested by what looks like a questionnaire put to members of the Circle between November 1932 and March 1933 by Rose Rand as well as by her minutes of meetings of the Circle from December 1930 to Juli 1931 which Neurath commissioned her in 1937 to provide copies of (Stadler 2015, 143–145). The facsimile of the original document from the Archives in Haarlem (NL) is appended at the end of this article. Here is a translated and transliterated formal version of the former document:

Development of the Theses of the Vienna Circle.

Ed. by Rose Rand, November 1932 to March 1933

Legend:

yes: +; no: –; meaningless: x; missing: o; indeterminate, no comment: (?).

b. TLP: before *Tractatus*; TLP: *Tractatus*; a. TLP: after *Tractatus*.

S.: Moritz Schlick; W.: Friedrich Waismann; C.: Rudolf Carnap; N.: Otto Neurath; H.: Hans Hahn; K.: Felix Kaufmann.

Theses			S.	W.	C.	N.	H.	K.
1. By specifying rules philosophy wants to clarify the concepts and rules of science.	b	TLP	○	○	○	○	○	?
		TLP	+	+	+	x	+	+
	a	TLP	–	–	+	x	+	+
2. Philosophy wants to clarify the concepts and sentences of science and everyday life, not by <i>prescribing</i> the rules for the use of words, but by <i>laying out</i> the rules of the use of a word and by drawing attention to the <i>logical consequences</i> of a rule. More precisely: philosophy does not <i>demand</i> a certain use of a word but it <i>prohibits</i> the confusion of the consequences of the rules adopted and the disregard of them.	b	TLP	–	○	○	○	○	○
		TLP	–	–	–	x	–	–
	a	TLP	+	+	–	x	–	–
3. Language pictures reality.	b	TLP	○	○	○	○	○	?
		TLP	+	+	+	x	+	+
	a	TLP	+	+	x	x	?	+
4. Language is a system of sentences which are compared with each other. It is impermissible to speak of picturing reality, for this would introduce a metaphysical concept.	b	TLP	○	○	○	○	○	–
		TLP	–	–	–	+	(?)	–
	a	TLP	–	–	+	+	?	–
5. A sentence is a configuration of words which is determined by its syntax.	b	TLP	○	○	○	○	○	○
		TLP	+	+	+	+	+	?
	a	TLP	+	+	+	+	+	?
6. A sentence pictures a state of affairs.	b	TLP	○	○	○	○	○	+
		TLP	+	+	+	x	+	+
	a	TLP	+	+	x	x	x	+

7. The meaning [Sinn] of a sentence is the method of verification.	b	TLP	○	○	○	○	○	○
		TLP	+	+	+	+	+	+
	a	TLP	+	+	+	+	+	+
8. The method of verification consists in the definition of the words that occur in the sentence. Words in the definiens are to be defined further.	b	TLP	+	○	○	○	○	○
		TLP	+	+	+	+	+	+
	a	TLP	+	+	+	+	+	+
9. The verification is concluded when one has reached ostensive definitions, which define a word by ostension to the given.	b	TLP	+	○	○	○	○	+
		TLP	+	+	+	x	+	+
	a	TLP	+	+	x	x	?	+
10. There is only one kind of definition, namely definition by means of words. The definition by reference to experiences is impossible since it is impermissible to speak of experiences.	b	TLP	x	○	○	○	○	x
		TLP	x	x	x	+	–	x
	a	TLP	x	x	+	+	+	x
11. A definition is a convention.	b	TLP	+	○	○	○	○	○
		TLP	+	+	+	?	+	+
	a	TLP	+	+	?	–	?	+
12. A definition is a member of a causal nexus and nothing else. Either of a causal nexus between two word structures or between a word structure and a reaction or between a stimulus and a word structure.	b	TLP	○	○	○	○	○	○
		TLP	x	x	x	+	?	–
	a	TLP	x	x	?	+	?	–
13. There are sentences which cannot be analyzed and which contain words that can only be defined by means of ostensive definitions: these are the atomic sentences.	b	TLP	○	○	○	○	○	○
		TLP	+	+	+	x	–	–
	a	TLP	?	?	x	x	x	–
14. If an observation sentence describes a state of affairs, then it is true, otherwise false.	b	TLP	+	○	○	○	(?)	+
		TLP	+	+	+	x	+	+
	a	TLP	+	+	x	x	?	+
15. Truth is <i>only</i> freedom from contradiction; falsity is contradiction.	b	TLP	–	○	○	○	○	–
		TLP	–	–	–	+	–	–
	a	TLP	–	–	+	+	?	–
16. The atomic sentences have the form of a relation, e.g., the relation of memory between two names, which designate experiences.	b	TLP	○	○	○	○	○	○
		TLP	–	–	+	x	?	?
	a	TLP	–	–	x	x	?	?
17. The atomic sentences describe states of affairs, i.e., they represent by their structure the structure of the state of affairs. The state of affairs cannot be described by a name therefore and one also cannot speak about the relational form of atomic sentences, where the relation obtains between two names which designate states of affairs.	b	TLP	○	○	○	○	○	○
		TLP	+	+	–	x	?	?
	a	TLP	–	–	x	x	?	?
18. The form of atomic sentences is not and cannot be specified. (Here atomic sentence = simply ultimate sentence, without characterization, e.g., whether it concerns experiences or not.)	b	TLP	○	○	○	○	○	○
		TLP	–	–	–	–	?	?
	a	TLP	+	+	?	–	?	?
19. The singular sentences of empirical science are <i>truth functions</i> of the first sentences.	b	TLP	○	○	○	○	○	○
		TLP	+	+	+	+	+	+
	a	TLP	+	+	+	+	+	+

20. The singular sentences of empirical science are truth functions of protocol sentences. These are the first sentences of science. Their verification is not effected by a comparison with reality but only by comparisons with each other.	b	TLP	○	○	○	○	○	○
		TLP	–	–	–	+	–	–
	a	TLP	–	–	+	+	+	–
21. Laws are instructions for the formation of sentences.	b	TLP	○	○	○	○	○	○
		TLP	?	?	–	?	?	?
	a	TLP	+	+	+	+	+	?
22. Laws are truth functions.	b	TLP	○	○	○	○	○	○
		TLP	?	?	+	?	+	?
	a	TLP	–	–	–	–	–	–
23. Thesis of <i>physicalism</i> : all sentences contain spatiotemporal termini.	b	TLP	○	○	○	○	○	○
		TLP	–	–	–	+	–	–
	a	TLP	–	–	+	+	(?)	–
24. Only that is real which is described by true sentences.	b	TLP	○	○	○	○	○	○
		TLP	+	+	?	x	?	+
	a	TLP	+	+	x	x	?	+
25. To speak of “reality” is metaphysics. True sentences are sentences which agree with other sentences.	b	TLP	○	○	○	○	○	○
		TLP	–	–	–	+	–	–
	a	TLP	–	–	+	+	?	–
26. One cannot speak about language, because language is to picture states of affairs and the picturing function of language constitutes a state of affairs.	b	TLP	○	○	○	○	○	○
		TLP	+	+	+	x	–	+
	a	TLP	?	?	x	x	?	+
27. The pure metalogic speaks about language in analytical sentences, descriptive [metalogic does so] in empirical-synthetic ones. The “superlanguage” [Übersprache] belongs to language as well.	b	TLP	○	○	○	○	○	○
		TLP	–	–	?	○	○	○
	a	TLP	–	–	+	+	○	–

Obviously, important formal and philosophical questions arise. Who formulated the 27 theses? Most likely it was Rand herself who also took it upon herself to produce the aforementioned minutes. What does it mean exactly: “before TLP”, “TLP”, “after TLP”? I think it means a chronological order covering three periods: *before* the publication of the TLP in 1922, *during* its interpretation in the Schlick Circle at least until 1929 when Wittgenstein returned to philosophy, and the *last period from 1930 on* which witnessed increasing criticism, albeit in different ways. But some uncertainties remain concerning this periodization and the categorization of six options (e.g., the difference between “missing” and “undetermined” or “no comment”). Another issue is the choice of respondents: we can recognize six leading members of the Vienna Circle as representatives of different philosophical positions (e.g., the antagonism between Schlick and Neurath) and discern the dualism of the Wittgenstein faction (Schlick, Waismann, Schächter) and anti-Wittgensteinians (Neurath, Hahn, partly Carnap), with Kaufmann as the resident phenomenologist in between. Yet the skeptical mathematicians like Menger and Gödel seem represented only partially by Hahn (Lethen 2021).

In any case, a closer analysis of this unique document is revealing. Rand asked Schlick, Waismann, Carnap, Neurath, Hahn and Kaufmann to respond to the 27