

Introduction

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The Vienna Circle used to be seen as a uniform group of naïve philosophers who had unsuccessfully tried to revive dogmatic sense data empiricism in a logicist setting. Decades later, the astonishing plurality and diversity of positions and strategies of these philosophers are widely appreciated and, in fact, no one today believes that the Vienna Circle was ever committed to any form of dogmatic empiricism at all. The common ground shared by the members of the Vienna Circle included a concern for unification and interdisciplinary integration, the linguistic turn, and a non-cognitivist approach to values. Beyond these very general principles, however, there was plenty of room for pluralism and dissent. Perhaps the most striking illustration of the coexistence of commonalities and tensions in the Vienna Circle is the philosophical and personal relationship between Otto Neurath and Rudolf Carnap to whom this volume is dedicated.

The considerable diversity of opinion within the Vienna Circle had already been attested to by its members:

How good was the title WIENER KREIS, partly because it says so little. In this way it was possible to give a name to rather different tendencies within a uniform togetherness, and as I had predicted, it became popular very quickly.¹

What is true of the Vienna Circle as a whole is also true of that part of it which is often referred to by the term “left wing”, a subgroup formed by Otto Neurath, Rudolf Carnap, Hans Hahn, Philipp Frank, and Edgar Zilsel.² The unique selling proposition of this group was supposed to be a more radical focus on unified science, physicalism, internationalism, and language planning, together with a strong tendency toward socialism. But do these alleged representations consistently belong to the group? At the least the case of Hans Hahn is

1 “Wie gut war der Titel WIENER KREIS, zum Teil, weil er so wenig aussagt. So konnten recht differenzierende Neigungen innerhalb eines doch einheitlichen Zusammenseins mit einem Namen versehen werden, der sehr rasch populär wurde, wie ichs prophezeite” (Neurath to Carnap, August 3, 1939, ASP-RC 102-53-04).

2 Cf. Uebel 2004.

questionable.³ Edgar Zilsel was sometimes not even considered a full member of the Circle.⁴ On the other hand, it seems difficult to find any clear disagreements between the alleged “rightists” like Friedrich Waismann and his leftist opponents; Waismann, who was not merely an interpreter of Wittgenstein, had obviously shared as much philosophical substance with the left wing as he had taken, so to speak, from Wittgenstein. It is also striking that left-right-wing talk was hardly used by the proponents of the Circle themselves – some of them explicitly rejected these designations.⁵ However, not only is it difficult to delineate a consistent group of left wingers, but it is also difficult to identify any consistent views that were either shared by all left wingers or rejected by all right wingers. Although it is certainly possible to identify features such as the very general ones mentioned above – a stronger emphasis on the Unity of Science movement combined with a rather explicit commitment to socialism – as unique to the somewhat underdetermined group around Carnap and Neurath, it is simply impossible to unequivocally associate any more specific philosophical positions with the left wing. This becomes remarkably clear when we look at the philosophical disputes between Carnap and Neurath themselves.

The correspondence between Carnap and Neurath began in 1923,⁶ and they first met in person in the following year on the occasion of Carnap’s trip to the International Esperanto Congress in Vienna. From the beginning, the relationship was intense on both the personal and the philosophical level. Philosophical and ideological similarities formed the basis for a deep friendship while the recurring crises on the personal level were also rooted in conflicts of a more philosophical nature. The tense and productive character of their collaboration is expressed with emotion by Carnap himself:

3 This is due not only to his premature death in 1934: Hahn remained sceptical about physicalistic protocols as well as the idea of Unified Science, a concept he made fun of by misspelling the German expression “Einheitswissenschaft” (Unified Science) as “Einheizwissenschaft” (einheizen = to heat something/to light a fire under someone); cf. Neurath to Carnap, June 16, 1945, ASP-RC 102-55-11.

4 Cf. Verein Ernst Mach (1929/2012), p. 103. Also later, Carnap adhered to this classification (Carnap 1932/33, p. 181). Beside this formal restriction, it is worth mentioning that Zilsel, in his contribution to the protocol sentence debate (Zilsel 1932/33), fits badly with the other “left-wingers” concerning his admission of the “ineffable”.

5 This is not only true of publications: in the whole correspondence between Carnap and Neurath there are only a very few mentions to be found. Among those who rejected this classification is – unsurprisingly – Moritz Schlick, who disallowed this terminology flatly, calling it “ridiculous”; cf. Friedl 2013, p. 171, n. 8.

6 The first letter handed down is Neurath to Carnap, October 19, 1923 (RC 029-16-07). The contact was mediated by Franz Roh, a mutual close friend.

For me, the friendship with Neurath is one of the most meaningful and indispensable points in my life. I owe him a great deal, both personally and factually; above all, I owe him for having taught me to see the historical function of what I would otherwise have worked out only as an isolated scholar “on the icy slopes of logic”. My dream for the future is to collaborate productively with you on a much larger scale than before. One day, our names should stand side by side on the same page of history.⁷

At the beginning of their philosophical relationship, the focus was, of course, on *The Logical Structure of the World* (henceforth: *Aufbau*), a book that Carnap had written before coming to Vienna and used as his habilitation thesis at the University of Vienna. This book (along with Wittgenstein 1922/1961) set the stage for the discussions in the Vienna Circle. In Neurath’s view, the great merit of the *Aufbau* was that it established connections between all scientific concepts in a strictly logical manner, demonstrating that “there is only one domain of objects and therefore only one science”.⁸ The unity of science was no longer a vague methodological principle, but became a reality. But the *Aufbau* did not correspond to Neurath’s philosophical views in every respect. In fact, he found two serious flaws in Carnap’s work: First, “methodological solipsism” which Neurath blamed on “a weakened residue of idealistic metaphysics”⁹ that treated the self as privileged and opposed to the rest. Second, the construction of the *Aufbau* was limited to well-defined concepts and therefore had nothing to offer for the crucial task of dealing with those scientific and semi-scientific concepts that had not yet been fully analysed. The *Aufbau* failed to be applicable to all those ambiguous concepts and “agglomerations” that the Machian Neurath saw as indispensable components of the ever-changing boat of science and culture.¹⁰ At first, Carnap acknowledged only the second part of this critique and took it as a vital stimulus for further work;¹¹ in the 1930s, however, he abandoned methodological solipsism and finally embarked on the

7 “Die Freundschaft mit Neurath ist für mich einer der ganz bedeutungsvollen Punkte im Leben und mir unentbehrlich. Ihr verdanke ich menschlich und sachlich viel. Besonders, daß ich gelernt habe, die historische Funktion dessen zu sehen, was ich sonst nur als isolierter Gelehrter ‚auf den eisigen Firnen der Logik‘ erarbeiten würde. Produktive Kooperation mit Dir in weit größerem Maßstab noch als bisher ist mein Traum für die Zukunft. Unsere beiden Namen sollen einmal auf einem Blatt der Geschichte nebeneinander stehen” (Carnap to Neurath, February 10, 1932, ASP-RC 029-12-63).

8 Carnap 1928/2003, § 4; cf. Neurath 1930/1983, p. 47.

9 Neurath 1931/1983, p. 65.

10 Neurath 1928/1981, p. 296.

11 Carnap to Neurath, October 7, 1928, ASP-RC 029-16-01.

riverbank of Mach-Neurath-style monism when he introduced his own version of physicalism. Nevertheless, there remained a swelling source of disagreement with Neurath's initial points of criticism that could not be eliminated by Carnap's agreement. Although he conceded to Neurath the basic legitimacy of the sociological standpoint, Carnap often felt that Neurath simply failed to commit himself properly to a value-free scientific attitude. Neurath's notoriously pragmatic and spontaneous style often led to an alleged mixing of theory and personal attitude, to the displeasure of Carnap and other members of the Vienna Circle:

[Neurath] went further and often presented arguments of a more pragmatic-political rather than of a theoretical nature for the desirability or undesirability of certain logical or empirical investigations. [...] We in turn insisted that the intrusion of practical and especially of political points of view would violate the purity of philosophical methods.¹²

In principle, Carnap did not reject the sociological approach at all, and even considered the "scientific world conception" to be a fundamentally political undertaking.¹³ Still, he tried to keep theoretical knowledge and practical-political attitude separate. Consequently, he disagreed with Neurath on at least two levels: First, on a more methodological level, Carnap found some of Neurath's writings poorly constructed, unfounded, charged with unnecessary polemics and careless amalgamations of theoretical assertions and mere opinion. These methodological weaknesses could largely be corrected in the editorial process. But there was also a second level of much stronger disagreement. Carnap, who had changed his earlier views under the influence of Tarski, demanded a serious commitment to (semantic) objectivity, a conception that Neurath always viewed with suspicion.

The main components of the philosophical and personal relationship between Carnap and Neurath emerged at the very beginning of their interaction, namely mutual stimulation and criticism, as well as the common goal of promoting the scientific world conception, while at the same time deep differences crystallized around the tension between logic and the sociology of science. This mixture of strong convergences and significant but subtle points of disagreement proved inspiring and, in the end, explosive. During their interaction in Vienna, the volatile setting of their relationship unfolded mostly

¹² Carnap 1963, p. 22–23.

¹³ See Damböck 2022.

positively; they were united in the common fight against the enemies of science. Indeed, Carnap became Neurath's best student during his Vienna years, especially when he published his antimetaphysical writings and developed his physicalism. When Carnap went to Prague in the fall of 1931, Neurath felt somewhat lost, as Olga Neurath (Neurath's second wife) observed: "At present, Otto Neurath has no like-minded opponent with whom to spar."¹⁴

For Carnap, the intense interactions in Vienna, with a multitude of personal encounters and discussions, were followed by a more secluded way of life on the outskirts of Prague. He largely maintained a more "academic" lifestyle, with little or no further involvement in public intellectual discourse, even after his relocation to the United States in late 1935. Neurath, on the other hand, increasingly expanded his activities and promoted "visual education" far beyond Vienna.¹⁵ Facing a difficult time after his forced emigration to the Netherlands in 1934, Neurath managed to re-establish an institute for visual education, modelled on the highly successful *Gesellschafts- und Wirtschaftsmuseum*, which made him an integral part of Red Vienna (and a bogeyman for the Austrofascists). This episode ended abruptly, when the Nazis invaded the Netherlands in 1940. Neurath managed to escape to England at the last moment and was forced to start all over again. Irrepressible as he was, he soon resumed his research and initiated many activities until his untimely death in 1945.

The physical separation did not however mean a loosening of the relationship. In some ways, the collaboration even deepened after Carnap and Neurath had left their common Viennese ground. Their extensive correspondence documents the intense and highly productive, but also somewhat tragic and unfulfilled, relationship of two strikingly complementary personalities.¹⁶ Their joint work covered important organisational matters: work on the *International Congresses for the Unity of Science*, the *International Encyclopedia of Unified Science*, and other editorial work, e.g. for the journal *Erkenntnis*. They coordinated their publications on several occasions, often revising their manuscripts in the light of each other's (always quite direct and sometimes furious)

14 "Otto Neurath hat derzeit keinen gleichgesinnten Gegner, mit dem er sich herumraufen könnte" (Olga Neurath to Carnap, January 12, 1932, ASP-RC 029-12-72).

15 These activities are documented in Sandner 2014, e.g. Neurath's engagement in Moscow between 1931 and 1934 (pp. 227–233).

16 All in all, there are about 500 letters known (plus several postcards and telegrams), now held by the *Archive of Scientific Philosophy* in Pittsburgh respectively the *Vienna Circle Archive* at the *Noord-Hollands Archief* in Haarlem. Publication of a substantial selection (edited by Christian Damböck, Johannes Friedl, Ulf Höfer) is in preparation. For a preliminary survey on the topical main points, see Heggelmann 1985.

criticism. These controversies, however, have hardly been made explicit in their published work;¹⁷ only mild criticism can be found here and there. There are several reasons for this conspicuous lack of public conflict: First, both Carnap and Neurath felt a strategic need to present the emerging Logical Empiricism as a consistent movement. The opponents, including the whole of traditional philosophy, had to be countered by a united force; no inconsistencies or internal disputes were allowed to make the scientific world conception vulnerable to attack. Second, the discussion became particularly heated whenever a new field was entered, in which there was no clear position in sight. Neurath was always quick to present an extremely innovative account, full of potential but also full of ambiguities and inconsistencies. After endless discussions things usually calmed down, and the finally published results, though still often controversial, were no longer seen as provocative. A third reason for not arguing in the public sphere was simply that Carnap, as he often complained, found it notoriously difficult to understand Neurath's writings, especially in their early stages. Carnap often encouraged Neurath to find clearer expressions for his arguments, otherwise it would be impossible to continue discussions. On at least one occasion, Carnap directly asked Neurath to publish fewer papers. While Neurath understandably took offense,¹⁸ he occasionally conceded that there was room for improvement:

And now, overburdened with other work, I am lagging behind because I cannot carve out as well as you or Frank or Schlick. Everything comes out a little rough. *And I know that.*¹⁹

As mentioned above, major differences between Carnap and Neurath are discernible from the beginning. Nevertheless, until 1935, Neurath not only welcomed the *Aufbau* as a foundational text for the new philosophical movement, but he also fully appreciated the “syntactic period” of Carnap's work, which had culminated in *The Logical Syntax of Language* – the achievements of which Neurath regarded as the final building block of Logical Empiricism, leaving behind meaningless Wittgensteinian “elucidations”.²⁰ In Carnap's turn

17 The important exception is the discussion on protocol sentences: Neurath 1932/1983, resp. Carnap 1932/1987.

18 Carnap 2022b, entry from March 22, 1934.

19 “Und nun bin ich, überlastet durch andere Arbeit, im Hintertreffen, da ich nicht so gut ziselieren kann wie Du oder Frank oder Schlick. Alles kommt etwas grob heraus. *Und ich weiß das*” (Neurath to Carnap, October 9, 1932, ASP-RC 029-12-24).

20 Cf. Neurath 1936/1981, p. 697.

to semantics, however, Neurath saw a relapse into “absolutism”, a gateway for a revival of metaphysics in new clothes. In his characteristic style, he diagnosed Carnap as “Tarskized with some Aristotelian flavour”.²¹ Carnap, in turn, empowered by his newly invented “principle of tolerance”, insisted more than ever before that logical construction was an essential creative and innovative task of the philosopher-scientist, where philosophy was simply replaced by “logical analysis of language”. Amplified by divergences being caused by a clash of cultures between the highly esteemed professor at the University of Chicago and the much less successful private scholar at Oxford, the conflict reached its climax after Carnap’s extremely critical reaction to Neurath’s long-awaited contribution to the *International Encyclopedia of Unified Science* (Neurath 1944). In this monograph, all the major weaknesses of Neurath’s writing about which Carnap had so often complained – lack of clarity and comprehensibility – allegedly erupted again with full force. Carnap’s refusal to sign as an editor for this volume caused the deepest crisis in their relationship, which tragically could not be reconciled until Neurath’s sudden death in December 1945.

After a long period, in which scholars talked about Logical Empiricism only in order to criticize the alleged shortcomings of this tradition – radical foundationalism and reductionism that fell short of all kinds of empiricist “dogmas” –, the 1980s brought a wave of renewed interest and led to a thorough historization and development of more balanced accounts of the Vienna Circle, starting with pioneering collections such as Dahms 1985, Rescher 1985, Uebel 1991, and Bell and Vossenkuhl 1992. This reassessment is still in full swing, both in terms of philosophical-historical embedding and systematic discussion of individual approaches. In Europe Rudolf Haller and his collaborators were a driving force in the first phase of the rediscovery;²² the *Vienna Circle Institute*, co-founded by Friedrich Stadler and directed by him for many years, became a centre of research after 1991.²³ On the other side of the Atlantic, J. Alberto Coffa’s major monograph was a kind of initial spark, followed by works by Michael Friedman, Richard Creath, Alan Richardson, and others.²⁴

21 Neurath to Carnap, April 1, 1944, ASP-RC 102-55-08. Neurath identified another source of bad influence (beside Tarski) in Popper.

22 In addition to the publication of the first volumes of Neurath’s *Gesammelte Schriften* (see below): Haller 1986, Haller 1993, and Haller and Stadler 1993.

23 Of Stadler’s extremely numerous publications, we confine to Stadler 1997. The two series *Publications of the Vienna Circle Institute* and *Vienna Circle Institute Yearbook*, founded by Stadler, are still central organs of relevant research today.

24 Coffa 1991, Giere and Richardson 1996, Richardson 1998, Friedman 1999, Hardcastle and Richardson 2003, Friedman and Creath 2007, Richardson and Uebel 2007; also worth

In the meantime, research in this field has flourished and taken on dimensions that make it difficult for the individual to keep track.²⁵ In line with the state of research, most recent publications no longer deal with the Vienna Circle as a whole, but concentrate on individual thinkers or specific problem areas.²⁶ The present volume also follows this approach, focusing on the relationship between Carnap and Neurath. The conception of this volume gained momentum through the editors' work on philosophical editions that had already begun, or at least been planned, some time ago. In the case of Neurath, these are, on the one hand, the long-awaited completion of Neurath's *Gesammelte Schriften*; the early volumes of this edition provided the basis for the rediscovery of this thinker.²⁷ On the other hand, the publication of the correspondence between Carnap and Neurath was already planned in the 1980s by Rainer Hegselmann²⁸ and is now being pursued jointly by the editors of the present volume.²⁹ Another current project is the edition of Carnap's diaries, the first two volumes of which have just been published by Christian Damböck.³⁰ The activities of the editors have not only provided the immediate impetus for the organisation of the conference on which this volume is based, but have also, in the course of these projects, made available the unpublished materials to which almost all the contributions in this volume refer.

The present volume is divided into three parts. The papers in the first part deal with aspects of the prehistory and the influences on both Carnap and Neurath before their first meeting in Vienna. It is now well known that, in addition to the work of Frege and Russell, Carnap was influenced by Neo-Kantian and other German philosophical currents. Recently, the perspective

mentioning are Cartwright, Cat, Fleck and Uebel 1996, Parrini, Salmon and Salmon 2003, Uebel 2007.

- 25 The most up-to-date overview is provided by Uebel and Limbeck-Lilienau 2022.
- 26 Publications focussing on Carnap and/or Neurath: Awodey and Klein 2004, Carus 2007, Wagner 2009, Symons, Pombo and Torres 2011, Creath 2012, Cat and Tuboly 2019, leaving aside publications that deal with non-philosophical aspects of the extremely versatile Neurath, especially his work on visual education (Isotype), economics, and sociology.
- 27 The first five volumes of this edition, long out of print, have been reprinted and supplemented by three newly edited volumes. The whole series is now available as *Otto Neurath – Gesammelte Schriften*, Vienna, LIT Verlag, 2021–2022. Carnap 2019 is the long-awaited first volume of his *Collected Works*.
- 28 Cf. Hegselmann 1985.
- 29 A selection of this correspondence is to appear with Meiner Verlag, Hamburg. A first draft of the complete correspondence is available online in the *Virtual Archive of Logical Empiricism* (VALEP): <https://doi.org/10.48666/872268>.
- 30 Carnap 2022a and 2022b; further volumes are in preparation. Also in preparation is an edition of the entire scientific correspondence of Carnap.

on these philosophical influences has been supplemented by a closer look at the German Youth Movement.³¹ Michael Heidelberger adds another element to these “archeological vestiges”, namely the influence of Herbartianism and Pietism transmitted by Carnap’s grandfather, the influential pedagogue Friedrich Wilhelm Dörpfeld. As Heidelberger shows, these views clearly shaped Carnap’s noncognitivism, but they also left their mark on his philosophy of science. Carnap mentions reading his grandfather’s work *On Ethics* several times in his correspondence. In his diaries, as late as 1964, Carnap notes the discovery of strong convergences between his noncognitivism and his grandfather’s philosophy.³² There can be no doubt, then, that we have here another important, though hitherto almost unexplored, influence on Carnap’s thought.

The influence of Ernst Mach on most of the members of the Circle has long been acknowledged and was often stressed by Neurath himself.³³ It is also manifested in the name *Verein Ernst Mach*. Much less well known is the influence of Richard Avenarius, although Neurath occasionally refers to him. Mach himself described the affinity of his views to those of Avenarius as “as great as can possibly be imagined where two writers have undergone a different process of development, work in different fields, and are completely independent of one another”.³⁴ Lucas Baccarat examines the relation of Neurath’s criticism of the correspondence theory of truth to Avenarius’ criticism of “introjection”, with the result that the former can be seen as a linguistic version of the latter. This is not only a proof of ancestry, but also serves to elucidate the often misunderstood position of Neurath and is therefore a prerequisite for understanding the later debate on truth with Carnap: Neurath accused Carnap of making the “mistake of introjection” in adopting semantics.

Apart from philosophical influences, the main sources of Logical Empiricism were the newest developments in science, especially physics. Recent reconstructions of Logical Empiricism’s borrowings from physics tend to focus on Einstein’s theories of relativity and, to a lesser extent, quantum mechanics. As Jordi Cat’s paper points out, this limited focus loses sight of the various important commitments to Maxwell’s contributions to physics that can be found in both Carnap and Neurath. According to Cat’s insightful paper, since the establishment of connections to Maxwell was significantly different in each case, it

31 Cf. Damböck, Sandner and Werner 2022.

32 Carnap (in preparation).

33 Still in one of his last papers Neurath calls himself “a hard-boiled Machian” (Neurath 1946/1983, p. 237) and states that “[m]any of us, besides myself, have been brought up in a Machian tradition, e.g., Frank, Hahn, von Mises” (Ibid., p. 230).

34 Mach 1906/1959, p. 46f.

makes sense to speak of a plurality of “electromagnetic ways” of the scientific world conception.

Written mainly in 1925,³⁵ Carnap’s *Aufbau* marks the exact state of Carnap’s thought when he entered the Vienna scene. There is little doubt today that this massive endeavour has proven to be flawed in various ways, but the exact nature of the flaws is still a matter of debate. Touching on a crucial point in the debate, Thomas Uebel asks in his contribution to this volume whether a “structuralist” reading can save the *Aufbau* from the charge of reductive failure. Uebel answers the latter question in the negative, arguing that Carnap’s methodological solipsism, on any reading, is based on a faulty assumption about the epistemological order of human cognition. Uebel’s systematic approach corresponds to the historical course of events, since Neurath vehemently rejected methodological solipsism from the beginning.

Part 2 covers the most intense phase of philosophical collaboration between Carnap and Neurath, marked by the concerted publication of substantial papers on physicalism and the protocol sentence debate.³⁶ The popular narrative of the interaction between Carnap and Neurath sees Neurath in the role of the energetic inventor, pushing forward new ideas which were then clarified and elaborated in detail by Carnap. On closer inspection, this narrative appears to be oversimplified, for it obscures important areas of disagreement between Carnap and Neurath. Neurath, for example, tended to use the term “physicalism” to denote a comprehensive attitude (“Gesamthaltung”)³⁷ rather than the single, well-defined thesis of complete translatability of every proposition into a physical proposition. As Gergely Ambrus argues in his paper, for Neurath a purely phenomenal, private language would be meaningless in a strict sense. To support this claim, Neurath develops a “private language argument” (its relation to Wittgenstein’s famous argument is also discussed by Ambrus). Carnap, on the other hand, accepted the possibility of private languages as such, and based his argument on the uselessness of untranslatable phenomenal reports.

This leads directly to the problem of protocol sentences. Not only are they a crucial touchstone of physicalism (in the narrow sense), but the question of the nature and function of protocol sentences “comprises the questions dealt with under the terms ‘empirical foundation’, ‘testing’ and ‘verification’”.³⁸ The focus of Joseph Bentley’s paper is on the unfolding of Neurath’s theory, which

35 For the history of origins of the *Aufbau*, see Damböck 2021.

36 Carnap 1931/1934, Neurath 1931/1983.

37 Neurath to Carnap, June 21, 1935, ASP-RC 029-09-45.

38 Carnap 1932/1987, p. 457.

at its core consists of a seemingly strange, “interlaced” formulation of protocol sentences. It is not surprising that Neurath’s formulation provoked strong reactions from, e.g., Russell and Carnap. However, these criticisms are at least partly based on misunderstandings, as Bentley argues. Closely following the now classic interpretation of Thomas Uebel, Bentley points out that Neurath’s conception is not at all in conflict with Carnap’s mature view, but rather that they form complementary parts of a “bipartite meta-theory”.

The emergence of Carnap’s conception from the *Aufbau* is examined in detail in Johannes Friedl’s contribution. The gradual development is initiated by the departure from the *Aufbau* and fuelled by the contributions of Neurath, Popper and Schlick as well as by the emergence of Carnap’s meta-philosophy. Examining this mature conception, Friedl concludes that Carnap was not entirely successful in getting rid of traditional epistemological problems.

The discussions between Carnap and Neurath on the different conceptions of physicalism and of protocol sentences never led to a state of mutual agreement; nevertheless, these issues were replaced as a hot spot of controversy by the debate on semantics, especially the notion of truth, which lasted from the early thirties until Neurath’s death. Ulf Höfer and Hans-Joachim Dahms examine this debate, which took place almost exclusively in the correspondence and other unpublished sources. Höfer focuses on the exchange surrounding the conference in Paris in 1937 (Carnap’s last visit to Europe for decades) as a first climax of the debate. It was at this time that both positions were first elaborated in some detail, leaving behind the somewhat superficial debate on the name “semantics”. Dahms focuses on the debate on Russell’s *Inquiry into Meaning and Truth*, much of whose exact wording is discussed in the correspondence. This exchange with Neurath as prosecutor and Carnap as reluctant defendant, is unique in its level of detail, and takes on added significance since Neurath’s accusations of Russell’s “Aristotelian metaphysics” could easily be understood as directed against Carnap as well. Dahms concludes by drawing lessons from the current controversy on “fake news”. Like Höfer, Dahms sees the controversy on semantics as revealing a deep discrepancy with far-reaching consequences.

Part 3 of this volume deals with several other contexts and controversies that framed the interactions between Carnap and Neurath from the 1930s onwards. Christoph Limbeck-Lilienau examines the reactions of Carnap and Neurath to the *Tractatus*. It is well known that Neurath was from the outset extremely negative about the “metaphysical-mystical” aspects of the *Tractatus*, but it is another matter to identify the exact points of disagreement. In the case of Carnap, the relationship is more complicated; on his way to *The Logical Syntax of Language*, he tried to hold on to central insights of the *Tractatus* while at

the same time overcoming unacceptable limitations. As Limbeck-Lilienau shows, there may have been some overlap between the “middle” period of Wittgenstein’s thought and Carnap’s attempts to get rid of what Carnap himself called the “absolutist” conception of language.

Another aspect of the relationship with Wittgenstein is explored by Christopher Burke and Günther Sandner. Far from being a mere means of subsistence, Neurath himself saw *Isotype* as complementary to philosophical work, reflecting on the educational, social dimension of the scientific world conception. As such, the close affinities with the theoretical, doctrinal side are explored by Burke and Sandner, including an examination of the similarities and dissimilarities between Neurath’s pictorial language and the *Tractatus*’ picture theory.

Based on a close study of Carnap’s diaries and the Carnap/Neurath-correspondence, Friedrich Stadler sheds light on Kurt Gödel’s role in the Vienna Circle and later in the United States and corrects the widespread view of Gödel as a strange outsider and lone thinker, connected to the Vienna Circle only by chance.

The political and pedagogical dimensions of the scientific world conception are also examined in the article by Adam Tuboly. In 1944, together with Joseph A. Lauwerys, Neurath published ideas on the re-education of Germany after the war. The thesis of totalitarian tendencies in Plato, as put forward by Neurath/Lauwerys, met with rejection from a broad front of the British intelligentsia – with the important exception of Bertrand Russell – in defence of Plato. Tuboly analyses this increasingly surreal debate and Neurath’s efforts to uncover the roots of totalitarianism, an enterprise that had always been a driving motive for this “undaunted fighter who dreamt of a better and more humane world”.³⁹

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39 Popper 1973, p. 56.

borrowed from a paper by Neurath. We hope that the first chronicler of the Vienna Circle would have been pleased to learn that his and his allies' visions are still in flux.

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