

# Carnap and Neurath on Truth, Meta-language, and Semantics

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## Abstract

The question of truth and semantics as an instrument for its solution is a repeatedly discussed topic within Vienna Circle and its upshot documenting fundamental disagreements among its members in genuine philosophical matters which go far beyond the often stressed left- vs. right-wing fractions of the Circle. While Carnap understands truth as a matter of logic and Tarskian inspired semantics including metalanguages as a means to handle it, Neurath principally refuses such a concept of truth and opposes semantics and hierarchies of languages. He only wants to allow acceptance as a pragmatical substitute – not as translation or synonym – for ‘true’ within a single universal jargon. The debate on truth between Carnap and Neurath lasted from the early '30s up to the mid '40s without a conclusive settlement. It is reconstructed here on the basis of their correspondence and with special respect to some unpublished papers they exchanged in the course of the Third International Congress for the Unity of Science in 1937 in Paris.

While in 1935 Hempel contrasted Schlick’s account of truth with that of Carnap and Neurath, one might receive the picture that – apart from some negligible details – the latter had both developed the authoritative theory of truth for the Vienna Circle and for modern philosophy too.<sup>1</sup> Nowadays the fact that Carnap and Neurath had conflicting opinions here and in other central questions of philosophy is broadly recognised as well as the fact that the Vienna Circle was not a uniform aggregation of like-minded scholars.<sup>2</sup> Thus the question of truth and semantics as an instrument for its solution form a more or less constant

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1 Cf. Hempel 1935, especially pp. 56ff. Something like that holds for Kraft too, who – more or less ignoring Neurath – focuses on Carnap and contrasts *the* Vienna Circle position to Russell, Wittgenstein or Popper, cf. Kraft 1968, chs., A.11.2 and B.11.1–3.

2 To mention just a few, I refer to Rudolf Haller, Friedrich Stadler and Thomas E. Uebel, cf. i.a. Haller 1979, ch. 6; Haller 1993; Stadler 1997, e.g. ch. 7.2.5.2–5; Uebel 1992a, ch. 1.3.

topic in the discussions within the circle and its upshot for more than a decade. It is this question that can be analysed as a paradigmatic case involving different opinions within the Vienna Circle in that the proponents interacted with one another to arrive at a joint solution while – out of respect for the movement as a whole – giving their interactions an air of secrecy. The controversy about truth and semantics has been examined several times<sup>3</sup> so another glimpse at it could be understood as carrying coals to Newcastle. But most of these analyses have exclusively examined published sources. Only recently A.W. Carus has dealt with the Carnap-Neurath-correspondence in a similar manner albeit focusing entirely on the later years. He defends Carnap against Neurath's attacks and concludes that the differences could be regarded as "largely terminological" and solvable in the end.<sup>4</sup> Similarly, Thomas Uebel speaks of "very different but not incompatible ways" referring to Carnap, Neurath and Frank.<sup>5</sup> Of course, such optimistic reconstructions are maintainable – a long lasting friendship, the common movement and the fact that both are philosophically much closer to each other than to Wittgenstein or even Heidegger do bolster these assertions. Nevertheless, they might still be too optimistic concerning the very fundamental discrepancies between Carnap's and Neurath's accounts of truth.

It is these discrepancies that I am trying to shed some light on. In doing so and in trying to avoid rehashing already well-established accounts, I shall concentrate on the direct exchange between them, i.e. by examining their correspondence and some unpublished papers they sent one another because in contrast to their publications – where they are more cautious and conciliatory – these documents advance their unvarnished views. I am going to omit issues, which have been examined in depth earlier, for instance, the discussions in the context of the 1935 conference in Paris. Instead I shall focus on the material in connection with the 1937 conference in Paris, which have been almost neglected up to now and which present their positions in a more elaborated and even sophisticated way. To start off, in the first part, I shall try to reconstruct their dispute about the name 'Semantics' as a superficial debate, substituting the deeper conflict regarding their fundamental philosophical positions, which will be subject of the second part.

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3 See e.g. Coffa 1991, ch. 16.; at length Hofmann-Grüneberg 1988, pp. 96–104 and ch. 7, esp. pp. 149–161; Mormann 1999, p. 174f.; Oberdan 1992.

4 Carus 2019, p. 339, see also p. 340f.

5 Uebel 2006, ch. 4.

## 1 The Debate about ‘Semantics’ as the Name of “Syntax”

Dear Neurath!

Gödel suggested the term ‘semantics’ to me, which also the Poles have used occasionally. Behmann happens to suggest me the same. I actually like it better than ‘syntax’. Please quickly write a line on what you think about it, because in continuing to write the text, I want to use the term. As a book title then perhaps ‘General Semantics’ with some subtitle.<sup>6</sup>

Thus Carnap asked Neurath for his opinion at the beginning of April 1932. Neurath replied immediately and expressed his displeasure wholeheartedly:

Dear Carnap!

Neither me nor Olga can make friends with semantics. A bad illustration, reminiscent of ‘mantics’, art of clairvoyance. Strange and scholarly in a bad sense. In addition, as the educated woman knows, semantics is wrong, moreover, it should read ‘semiotics’, semeion is the sign, thus semiotics – the study of the characteristics of diseases. As theory of signs per se in Leibnitz, Lambert, but in a very narrow, unpleasant sense. Sema, the sign, knows no semantics.<sup>7</sup>

And he suggested ‘syntax’ or ‘logical syntax’ as the better name:

6 Carnap to Neurath, April 4th, 1932. All translations are mine, for convenience I add the German passages in the footnotes. Orig.: “Lieber Neurath! Gödel hat mir Terminus ‘Semantik’ vorgeschlagen, der auch von den Polen gelegentlich schon verwendet worden ist. Zufällig schreibt jetzt Behmann mir denselben Vorschlag. Er gefällt mir eigentlich besser als ‘Syntax’. Schreib bitte schnell eine Zeile, was Du dazu meinst, weil ich im Weiterschreiben des Textes den Terminus schon gebrauchen will. Als Buchtitel dann vielleicht ‘Allgemeine Semantik’ mit Untertitel.”

7 Neurath to Carnap, April 9th, 1932. Orig.: “Lieber Carnap! Weder ich noch Olga können uns mit Semantik befreunden. Ein übles Wortbild, an ‘Mantik’, Seherkunst erinnern. Fremd und gelehrtenhaft im ungunen Sinne. Dazu kommt, dass, wie die gelehrte Frau weiss, Semantik überdies noch falsch ist, es heisst ‘Semiotik’, Semeion heisst das Zeichen, davon Semiotik – die Lehre von den Kennzeichen der Krankheit. Als Zeichenlehre schlechthin bei Leibnitz, Lambert, aber in sehr engem, wenig erfreulichem Sinn. Sema, das Zeichen, kennt keine Semantik.” It is impossible to reproduce this aspect of Neurath’s doubts in English, the correct translation of ‘Mantik’ would be ‘divination’, but the point is the similar acoustic representation of ‘Mantik’ and ‘semantics’ in German, therefore I use ‘mantics’ as makeshift. Cf. also below, fn. 11 and 16.

We both think that SYNTAX – Logical Syntax – General Syntax or the like sounds much better and might be popularised if necessary.

Logical syntax sounds familiar, semiotics old-fashioned and grave. Syntax sounds sharp and bright.<sup>8</sup>

In addition to Gödel also Tarski and Behmann appear in Carnap's correspondence as proponents of the term 'semantics' to be introduced as a new element in philosophical language. And even Neurath names a proponent, but remains depreciative himself:

Bühler just came to me to get systematic information on visual statistics, from the point of view of 'visual language' i.a. 'pedagogy' etc.

We talk a lot about his linguistic research. I think we should find a bridge to communicate with him.

He uses the word 'semantic' plus 'sematology' etc. But I'm for 'syntax'.

Best regards to Ina

Yours

ON<sup>9</sup>

Carnap, in turn, made a few more attempts to change Neurath's mind.:

Couldn't you gradually make friends with the word "semantics"? It's linguistically okay, by the way. Its formation does not correspond to the common rules of word formation, but the spirit of language is as unpredictable as the counsel of God. Aristotle uses the adjective 'semantikós'; he says the statement is a 'phoné semantiké'; a beckoning sound. The Greeks later called their musical notation 'semantics'. The word sounds a bit strange and scholarly at first, but that can soon change. Today 'Arithmetic' would sound the same to us if we heard it for the first time. The advantage of semantics over 'syntax' is that it is clearer. If you use the

8 Ibid. Orig.: "Wir meinen beide, dass SYNTAX – Logische Syntax – Allgemeine Syntax oder dgl. viel besser klingt und zur Not popularisiert werden kann. Logische Syntax klingt vertraut, Semiotik altväterisch-gravitätisch. Syntax klingt scharf und hell."

9 Neurath to Carnap, April 20th, 1932. Orig.: "Augenblicklich kommt Bühler zu mir, um sich über Bildstatistik systematisch informieren zu lassen, unter dem Gesichtspunkt 'Bildersprache' u.a. 'Pädagogik' usw. Wir reden viel über seine Sprachforschung. Ich finde, man sollte eine Brücke finden, sich mit ihm zu verständigen. Er verwendet das Wort 'semantisch' und dazu 'Sematologie' usw. Aber ich bin für 'Syntax'. Herzliche Grüsse auch an Ina Dein ON".

word 'syntax' somewhere, you should always say 'not in the philological sense'.<sup>10</sup>

And from mid-1932 Carnap almost exclusively spoke of his semantics. Neurath, however, remained stubborn and, as we know, ultimately prevailed in this dispute: *The Logical Syntax of Language* is not called 'Semantics'. And he provided a few more reasons against choosing 'semantics':

'Semantics' does not become more palatable through this communication. Since 'mantics' is known to everyone as the art of divination, the less highly educated will think that 'semantics' is a variety of mantics. Please tell me right away what Frank thinks about it. I have already shown you that 'semantically' is in use. There is also semasiology – the theory of meaning. I deem 'logical syntax' already quite academic. I would probably not agree with your terminology, but try to bring 'logical syntax' through, which is still useful for half-educated people.

I would even find syntax quite good, there would then be a linguistic syntax, a logical syntax, etc. Bühler is writing a general linguistic syntax. The connection with that wouldn't be the worst. I fear the 'ideal language' as metaphysical anyway, the word syntax has something mild, human and common about it. Semantics is so Prussian-idealistic, demanding, it is, I think, not even entirely faithful in its meaning.

New words without reminiscences are questionable. For most people, semantics is completely alien, with no association. What kind of neologisms are there? Sociology. Understandable, albeit a mixed word. Behaviorism. Well. Individual psychology – representationally not very faithful. Psychoanalysis, good. Logistics, good. Do you know another

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10 Carnap to Neurath, April 28th, 1932. Orig.: "Könntest Du Dich nicht doch mit dem Wort 'Semantik' allmählich befreunden? Es ist übrigens sprachlich doch in Ordnung. Seine Bildung entspricht zwar nicht den sonstigen Wortbildungsregeln aber der Geist der Sprache ist so unberechenbar, wie der Ratschluß Gottes. Aristoteles verwendet schon das Adjektiv 'semantikós'; er sagt, die Aussage sei eine 'phoné semantiké'; ein zeichengebender Laut. Später haben die Griechen ihre Notenschrift 'Semantik' genannt. Das Wort klingt allerdings zunächst etwas fremd und gelehrtenhaft, aber das kann sich doch bald verlieren. 'Arithmetik' würde uns heute ebenso klingen, wenn wir es zum ersten Mal hören würden. Gegenüber 'Syntax' hat Semantik den Vorzug, dass es eindeutiger ist. Wenn man das Wort 'Syntax' irgendwo gebraucht, müsste man immer dabei sagen 'nicht im philologischen Sinn.'"

strange word formation as semantics? And we want to become popular, want our song to be sung!<sup>11</sup>

On May 25th, 1932, at a meeting in Prague, Neurath and Frank tried to soften Carnap and attempted to make 'syntax' palatable to him,<sup>12</sup> initially without any apparent success.

It is a pity that you use semantics with such preference and leave dear logical syntax aside.<sup>13</sup>

Subsequently, Neurath took note of the fact that he could not prevent Carnap from using 'semantics' and began to retract his concerns about the expression a little bit:

I still don't find 'semantics' pleasing. Logical syntax is more humane. But at least the reason Ina put forward about the formation of adjectives is one reason for it. Thus I can't defend myself against semantics entirely. It's just a bit 'academic; antique; schoolmasterly'. Well.<sup>14</sup>

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- 11 Neurath to Carnap, May 10th, 1932, p. 1. Orig.: "Semantik' wird durch diese Mitteilung nicht süffiger. Da die 'Mantik' jedem als Seherkunst bekannt ist, wird der nicht hochgebildete meinen, dass die 'Semantik' eine Abart der Mantik ist. Bitte schreib mir gleich, was Frank dazu meint. Semantisch habe ich Dir ja als gebräuchlich nachgewiesen. Semasiologie gibt es auch – Bedeutungslehre. Ich finde 'logische Syntax' schon reichlich gelehrt. Ich würde mich Deiner Terminologie wahrscheinlich nicht anschließen, sondern versuchen, die 'logische Syntax' durchzusetzen, die doch für Leute mit Halbbildung noch sinnvoll ist. Ich fände Syntax sogar ganz gut, es gäbe dann eine linguistische Syntax, eine logische Syntax usw. Bühler schreibt an einer allgemeinen linguistischen Syntax. Der Zusammenhang damit wäre nicht das schlimmste. Ich fürchte ohnehin die 'ideale Sprache' als Metaphysikum, das Wort Syntax hat so was mildes, menschlich-übliches an sich. Semantik ist so preussisch-idealistisch, fordernd, es ist, glaube ich, nicht einmal ganz sinngetreu. Neue Worte, ohne Anklang sind bedenklich. Für die meisten Menschen ist Semantik ganz fremd, ohne Assoziation. Was gibt es für Neubildungen? Soziologie. Verständlich, wenn auch ein Mischwort. Behaviorismus. Gut. Individualpsychologie – nicht sehr bedeutungstreu. Psychoanalyse, gut. Logistik, gut. Kennst Du noch eine so fremde Wortbildung wie Semantik? Und dabei wollen wir populär werden, wollen dass unser Lied gesungen wird!"
- 12 Cf. Carnap's diary entry from May 25th, 1932: "Frank suggests the title 'Logical Syntax of Language', Neurath: without 'der Sprache'; Subtitle 'Semantics'", orig.: "Frank schlägt als Buchtitel vor 'Logische Syntax der Sprache', Neurath: ohne 'der Sprache'; Untertitel 'Semantik'".
- 13 Neurath to Carnap, July 27th, 1932, p. 4, orig.: "Schade, daß Du mit solcher Vorliebe die Semantik verwendest und die liebe logische Syntax beiseite läßt."
- 14 Neurath to Carnap, September 23rd, 1932. Orig.: "Die 'Semantik' finde ich noch immer nicht glücklich. Logische Syntax ist menschlicher. Aber immerhin, der von Ina auch

But he still defends ‘syntax’ with everything that comes up:

Bühler explained to me in detail why ‘semantics’ is completely wrong. It means the doctrine of the seer signs, the interpretation of the seer signs. I think it should be called semeiology or the like. Hopefully you will change the term.<sup>15</sup>

Carnap was not particularly impressed with this, he replied: “Bühler: Semantics on prophetic signs? He probably confused that with mantics!”<sup>16</sup> So even the testimony of Karl Bühler did not prove as fruitful. At least Carnap at the time renounced the expression ‘philosophy’, which Neurath fought even more vehemently albeit not really consistently.<sup>17</sup> Neurath acknowledged this – partly with praise, partly with gritted teeth:

I am very, very glad that you finally threw out this disgusting ‘philosophy’ and didn’t label the uptight creature we begot with this dirty name of a disgusting old person who might have had her merits when she was young. ‘Semantics’ is noted wailingly.<sup>18</sup>

The debate only seems to take a turn when Neurath himself developed plans to publish a series of publications under the title “Einheitswissenschaft”, for which he would like to win over Carnap’s book:

So the Semantics in the collection. It’s a shame, it has such a bad name.<sup>19</sup>

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vorgebrachte Grund von der Adjektivbildung ist ein Grund dafür. Ich kann mich gegen Semantik nicht so voll wehren. Es ist halt etwas ‘akademisch; antik; lehrerhaft’. Na ja.”

15 Neurath to Carnap, October 22nd, 1932, p. 3. Orig.: “Bühler hat mir ausführlich erklärt, warum ‘Semantik’ ganz falsch ist. Es bedeutet die Lehre von den Seherzeichen, die Deutung der Seherzeichen. Es müßte, glaube ich, Semeiologie oder sowie heißen. Hoffentlich änderst Du noch den Terminus.”

16 Carnap to Neurath, October 24th, 1932. Orig.: “Bühler: Semantik über Seherzeichen? Das hat er wohl mit Mantik verwechselt!”

17 Cf. Carnap, diary entry from September 27th, 1932: “Semantics V worked through; at Neurath’s suggestion ‘theory of science’ instead of ‘philosophy’”. Orig.: “Semantik V durchgearbeitet; auf Neuraths Anregung anstatt ‘Philosophie’ ‘Wissenschaftslehre’”.

18 Neurath to Carnap, October 1st, 1932, p. 1f. Orig.: “Ich bin sehr, sehr froh, daß Du endlich diese eklige ‘Philosophie’ hinausgeschmissen hast und nicht dem strammen Lebewesen, das wir gezeugt haben, diesen verdreckten Namen einer eklen alten Person gegeben hast, die ja, als sie jung war, ihre Meriten gehabt haben mag. ‘Semantik’ wird heulend zur Kenntnis genommen.”

19 Neurath to Carnap, November 3rd, 1932, p. 5. Orig.: “Also die Semantik in der Sammlung. Schade, daß sie so übel heißt.”

The final decision about the name of the book is likely to have been made sometime around the turn of the year 1932/33; the details of this cannot be found in the correspondence, in Carnap's diaries nor the autobiography. In any case, in November 1932 Neurath mentioned Carnap's "Logische Syntax der wissenschaftlichen Sprache" as the possible 4th volume in a list of the planned first titles of the series *Einheitswissenschaft*.<sup>20</sup> Eventually, the *Logische Syntax der Sprache* did not appear in this series, curated by Neurath together with Carnap, Frank and Hahn, but as Volume 8 of *Schriften zur wissenschaftlichen Weltauffassung* edited by Frank and Schlick. In exchange Neurath received *Die Aufgabe der Wissenschaftslogik* as the 3rd issue of the *Einheitswissenschaft* Series.<sup>21</sup> Both titles were published in 1934. In his diaries until autumn 1932, Carnap consistently used the expressions 'semantics' or 'sem.' when recording his activities. Then, in fall, there is a break due to illness, among other things, but before his illness Carnap had meetings with Neurath and others in Vienna during the second week of November. And very likely it must have been these meetings, where Carnap may have sealed the name change.<sup>22</sup> From February 1933 onwards, Carnap only recorded work on the 'syntax', beginning with the entry of February 3rd: "Holidays! After 2 months finally working on MS Syntax again. Revision of the typed MS started".<sup>23</sup>

As a result, Carnap himself asked Neurath in mid-1933 whether he could arrange a lecture for him on "Questions of syntax in scientific language" in the Verein Ernst Mach.<sup>24</sup> Neurath takes notice of this with delight and irony and writes with a teasing undertone:

I'm looking forward to your logical syntax, called semantics; I dread that you burden your mouth or your pen with the disgusting words exact philosophy, scientific philosophy and the like!<sup>25</sup>

20 Cf. Neurath to Carnap, November 22nd, 1932.

21 The main reason for this rearrangement was the length of *Logical Syntax* which exceeded the intended extent of the *Einheitswissenschaft* volumes by far.

22 Cf. Carnap, diary entries from December 10th–19th, 1932.

23 Cf. Carnap, diary entry, Feb. 3rd, 1933. Orig.: "Ferien! Nach 2 Monaten endlich wieder MS Syntax gearbeitet. Umarbeitung des fertig getippten MS begonnen". On the change of the name see also Tuboly 2017, pp. 65f.

24 Cf. Carnap to Neurath, June 9th, 1933.

25 Neurath to Carnap, June 18th, 1933. Orig. "Ich freue mich auf Deine logische Syntax, Semantik genannt, daß Du das ekelhafte Wort exakte Philosophie, wissenschaftliche Philosophie und so ähnlich überhaupt in den Mund und in die Feder nimmst, graust mir!"

Thereupon semantics is not mentioned at all in the correspondence during the following two years. Carnap reported to Neurath at the end of 1933 that he had completely reworked and finally finished his MS “Logische Syntax der Sprache” and had sent it to Springer on December 14th.<sup>26</sup> And Neurath is obviously satisfied with the change of the name.

This provisional end to the debate about semantics marks the only superficial compromise: Neurath enforced the abandonment of the term ‘semantics’, but regarding content, form and methods, Carnap does in his book exactly what he intended to do from the beginning. Much more than the name of the book this should have attracted Neurath’s very displeasure. Carnap introduced a theory of several languages or several layers of language, whereas Neurath did not want at this time – and *cum grano salis* at any time – to get involved in more than one universal scientific language, a single universal jargon: Rather, whatever we want to say about sentences or languages, according to Neurath, must remain expressible within this universal jargon.<sup>27</sup> Obviously, the last paragraphs of the introduction to *Logical Syntax*, where Carnap explains his terminology and almost literally reproduces what Neurath told him about Bühler, are to be understood as an answer addressed to Neurath.<sup>28</sup> There he sketches the meanings and connections of some of the new terms, e.g. ‘syntax’, ‘metalogs’, ‘semantics’, ‘sematology’ etc., but the passages above leave no doubt that what he is going to do will be something meta-logical, meta-mathematical or meta-linguistical.

## 2 Truth or No Truth in Scientific Language

The actual beginning of Carnap’s preoccupation with semantics was marked by his encounter with Alfred Tarski, who visited Vienna in February 1930 and with whom he met repeatedly for discussions. Carnap, who had already started thinking about a metalogic in 1929 and was currently venturing a “branched type theory”,<sup>29</sup> was strongly inspired by Tarski and his remarks on meta-mathematics. He also reported on this in the Schlick Circle, initially without any real echo:

26 See Carnap to Neurath, December 18th, 1933.

27 See e.g. 3 years later Neurath 1936b, p. 697.

28 Cf. Carnap 1934, p. 9, cf. also p. 191f.

29 See Carnap, diary entries from December 29th, 1929 and February 11th, 1930.

8 [o'clock] Circle: Me on Tarski and the meaning of metamathematics. I only wanted 5 min[utes], then I speak for half an hour because some, especially Schlick, underestimate its importance. I said that we must also make the explanatory language exact and symbolize it, but have not done so until now, because we always have a bad conscience, because of Wittgenstein.<sup>30</sup>

This passage very well documents the starting point for further developments within the Vienna Circle. Here, at a first stage, Wittgenstein is dominant, with his thesis, presented in the *Tractatus*, that it is not possible to speak about language within language. For Wittgenstein language about language is inadmissible, this holds e.g. for the sentences of his own *Tractatus*, they only serve as a nonsensical crutch, which, as indicated in the famous ladder-metaphor, somehow help us to gain insight without having any meaning on their own. But we also have nothing besides language with which we could scientifically investigate language (“The limits of my language mean the limits of my world”),<sup>31</sup> thus inadequacies and paradoxes are pre-programmed. This, of course, is an unsatisfactory situation and Carnap’s idea is more or less obvious, namely to develop a precisely formalised system-language as a supplement to ordinary language, to which the ordinary language (and of course this only means a cleaned subset of it) can be translated, but which, due to its formal structure, can avoid the shortcomings of the former. It should allow – from top to bottom, as it were – to analyse and solve problems, to clarify, and the like. Earlier models for this are, among others, the type-theoretical approach in Russell and Whitehead, Hilbert’s axiomatic calculus for mathematics and Tarski’s metamathematics. So, on the one hand, we have the option of Wittgenstein’s silence – which, for both Carnap and Neurath, was not an option at all – respectively, making the best of it, trying to make speakable though as much as possible, with an impending restriction to a considerable area of some remaining unspeakable. This was attempted by Schlick, Gödel and others. On the other hand, one could introduce a Tarskian hierarchy of two or more languages or levels of language,

30 Carnap, diary entry from February 27th, 1930, cf. also the entries from February 16th–26th. Orig.: “8 [Uhr] Zirkel: Ich über Tarski und Bedeutung der Metamathematik. Ich wollte nur 5 Min., spreche dann ½ Stunde, weil einige, besonders Schlick, die Bedeutung unterschätzen. Ich sagte, wir müssen auch die Erläuterungssprache exakt machen und symbolisieren, haben das bisher unterlassen, weil stets mit schlechtem Gewissen, infolge Wittgenstein.”

31 Wittgenstein, TLP, 6.54 and TLP 5.6.

that is metalanguage(s), which was later favored by Chwistek and Carnap and noted by Russell in his preface to the *Tractatus*.

Neurath was not happy with either option and blamed them for metaphysics or likewise metaphysical tendencies. It soon became clear to both of them that Neurath was also in opposition to his friend Carnap. So he wrote to Carnap in mid-1932:

My opinion is that there is a profound difference between our basic attitudes, which is hardly noticeable only because we are creating growing areas of conformity in the realm of scientific precision. But with you, at least it seems to me, there always remains a clear remnant of an intense, idealistic basic attitude that you are not even become aware of.<sup>32</sup>

Even in a letter before that, Carnap had tried to specify where their opinions were diverging and – here still in the context of the protocol sentence debate and long before the appearance of *Logical Syntax* – brought Neurath's concerns to the point as follows:

But apart from the details, I think I have understood the main ideas more or less correctly. Is it correct that the following are the two main theses?: 1) We do not want to use 2 forms of language (protocol-language and system-language), but only *one*; indeed the protocol-sentences are different from the other sentences (?), but still belong to the same language form as the others. 2) A protocol-sentence can be confirmed or refuted by other protocol-sentences just like any other sentence; that is, starting from a certain set of protocol-sentences, we can eventually arrive at a sentence which is the negation of one of the original sentences. The starting sentences do not need to be protocol-sentences of only one subject (?).<sup>33</sup>

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32 Neurath to Carnap, July 27th, 1932, p. 1. Orig.: "Meine Meinung ist, daß zwischen unseren Grundeinstellungen eine tiefgehende Differenz besteht, die nur dadurch wenig zu bemerken ist, weil im Bereich der wissenschaftlichen Präzisierung wir wachsende Gebiete der Gemeinschaft erzeugen. Aber bei Dir, so scheint mir wenigstens, bleibt immer ein deutlicher Rest intensiver idealistischer Grundhaltung bestehen, der Dir gar nicht zum Bewußtsein kommt."

33 Carnap to Neurath, July 18th, 1932, p. 2. Orig.: "Ich glaube aber, abgesehen von den Einzelheiten, doch die Hauptgedanken ungefähr richtig verstanden zu haben. Stimmt es, dass Folgendes die beiden Hauptthesen sind?: 1) Wir wollen nicht 2 Sprachformen (Prot.Spr. und Systemspr.) machen, sondern nur éine; die Prot.Sätze sind zwar von den andern Sätzen verschieden (?), gehören aber doch derselben Sprachform an wie die übrigen. 2) Ein Prot.Satz kann ebenso durch andere Prot.Sätze bestätigt oder widerlegt

This is exactly what Neurath then wrote in his essay “Protokollsätze”, where he calls for a single universal jargon for unified science, which contains tautologies and real sentences, the real sentences in turn being divided into protocol-sentences and non-protocol-sentences, but both of which are “of the same linguistic form as the other real sentences”.<sup>34</sup> This means that the meta-language has to be the same language as the object-language – that is meta-language is reduced to object-language in the end. Truth and falsehood only occur on this level, i.e., actually, they do not occur at all: in the case of truth, sentences are distinguished by their being element of the set of accepted sentences in universal jargon, but that – here we should directly refer to Duhem – always provisional and without any guarantees. Negativity, on the other hand, is reduced to the existence of contradictions between sentences requiring a decision, namely that at least one of the sentences has to be rejected and eliminated from the set, or that the entire system as such is to be rebuilt. Rejected sentences would then, in a certain sense, be considered incorrect. Neurath illustrates this at the end of his article with the picture of a machine that can be fed with sentences, strictly speaking protocol-sentences, by any person and signals when a contradiction occurs.<sup>35</sup>

Neurath and Carnap discussed the connections between ‘wrong’, ‘contradictory’ and ‘pointless’, among other things, before the publication of the “Protokollsätze”. Sounds like Heidegger’s ‘Nichten’ are not words at all and cannot be inserted into the language. Sentence-like formations including those sounds are consequently not to be considered as sentences – both of them emphasise this. On the other hand, contradictions are logically wrong for Carnap, while Neurath sees them rather as “logically senseless” and what Carnap calls “empirically wrong” actually has no place in Neurath and is temporarily called “half contradiction”.<sup>36</sup> Carnap also entertains a certain connection between sentences contrary to syntax and contradictory sentences, in particular, that both are to be excluded, but emphasizes that they naturally have different characters.<sup>37</sup> An empirically incorrect proposition as such is for Carnap

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werden, wie irgend ein anderer Satz; d.h. wir können, von einer bestimmtem Menge von Prot.Sätzen ausgehend, unter Umständen schliesslich zu einem Satz gelangen, der die Negation eines der Ausgangssätze ist. Die Ausgangssätze brauchen nicht Prot.Sätze nur eines Subjekts zu sein (?).”

34 Neurath 1932/33, p. 579.

35 See *ibid.*, p. 584.

36 Cf. Neurath to Carnap, November 3rd, 1932, p. 4f.

37 See Carnap to Neurath, October 31st, 1932.

logically sound, it is only rejected with regard to the other propositions; on the other hand, a contradictory proposition is rejected by itself, for logical [...] reasons, without having to consider other propositions.<sup>38</sup>

Hence, with Carnap, we have in logic meaningless, contradictory and wrong sentences as well-established components expressing negativity, whereas Neurath only knows meaningless and unaccepted sentences for which contradictions function as the indicator. We thus have to take notice of a quite early and profound divergence with regard to the central semantic concepts of the pair truth-falsehood.

The fact that Neurath did not attack the *Logical Syntax* more violently under these conditions is probably due to the further concession that Carnap, in addition to dispensing with the name 'semantics', also refrained from using the predicate 'true':

'True' and 'false' are not genuine syntactic concepts. In general, one cannot tell from the formal properties of a sentence alone whether it is true or false.<sup>39</sup>

That could already trigger Neurath's anti-metaphysics alarm in that it could easily be read as a reference to something extra-linguistic. Carnap prudently does not operate with truth at any point in the *Syntax* and, thus, seems to have provided Neurath – at least for some time – with the building-plans for precisely the machine mentioned above, which manages our real sentences and sounds the alarm in the case of contradictions.

However, there is a problem in the construction of *Logical Syntax* that Neurath might have missed at least initially. If you want to introduce the terms 'true' and 'false', you can only do this syntactically in logical languages, provided that 'true' and 'false' coincide with 'analytical' and 'contradictory'. In other languages they have to be formed with substituting terms, e.g. with 'analytical in S', but this is not possible without contradictions if the language is to contain its own syntax. Correspondingly, in the two languages of *Logical*

38 Carnap to Neurath, November 4th, 1932. Orig: "[Ein empirisch falscher Satz ist] logisch einwandfrei, er wird nur verworfen mit Rücksicht auf die andern Sätze; dagegen wird ein kontradiktorischer Satz schon für sich allein betrachtet verworfen, aus logischen [...] Gründen, ohne daß man die andern Sätze berücksichtigen müßte."

39 Carnap 1934, p. 164. Orig: "[W]ahr' und 'falsch' sind keine echten syntaktischen Begriffe. Aus den Formeigenschaften eines Satzes allein ist ja im allgemeinen nicht zu ersehen, ob er wahr oder falsch ist."

*Syntax*, it is only possible to define ‘analytical in I’ or ‘provable in I’ with the richer language II, and for ‘analytical in II’ a richer language III is required,<sup>40</sup> and so on. Therefore, we have to assume metalanguages or even hierarchies of metalanguages in *Logical Syntax* if one wants to achieve certain results such as completeness, coherence or provability while maintaining consistency. Carnap sums it up succinctly: “Mathematics requires an infinite number of increasingly rich languages.”<sup>41</sup> – The same holds for logic, without a doubt.<sup>42</sup>

If this result is transferred to other areas of science, then it is obvious of course that these, should they be formalised – and such endeavours were entirely in line with the Vienna Circle – also will be in need of metalanguages. (I only refer to Joseph Henry Woodger with whom Carnap and Neurath were in contact since 1934, and who worked on an axiomatic biology, published *The Axiomatic Method in Biology* together with Tarski in 1937 and was an important contributor to the *International Encyclopedia of Unified Science*).

It is therefore not very surprising that the debate about semantics and the semantic concept of truth revived relatively soon, in the context of the Congresses in Prague (1934) and in Paris (1935).<sup>43</sup>

Subsequently Neurath has apparently somehow come to terms with metalanguages, so he wrote, historically recapitulating to Carnap in 1936:

There was a difference between those who declared ‘language about language’ permissible and those who did not allow language about language (Wittgenstein) but engaged in comparing e.g. the complexity of ‘reality’ and ‘language’. I remember that I turned against this point of view very early and rejected any ‘pre-legitimate’ discussion about language and reality, so to speak. I believe that for Hahn and also for you, under the influence of type theory, the opinion was not so implausible that language about language is legitimate. All this was clear and decidedly determined before the acquaintance with the Warsaw-people.

40 See *ibid.* p. 164f., see also Carnap’s remarks on quasi-syntactic sentences, p. 179ff.

41 *Ibid.*, p. 165. Orig.: “Die Mathematik erfordert eine unendliche Reihe immer reicherer Sprachen.”

42 Among others, Adam Tuboly has already pointed to the fact, that semantical traits are to be found in *Logical Syntax*, cf. Tuboly 2017, p. 67ff.

43 Cf. in detail Woleński 2018, with a concise listing of the controversial positions, p. 208; or Mancosu 2008. And Neurath himself, e.g. Neurath 1936a, p. 706f., with mild potshots against Carnap, Tarski et al. when he diagnoses a “lurking danger [...] of lapsing into metaphysics” in connection with truth, correspondence and sentences about sentences, though strictly avoiding going into details. Carnap later on reports only some misunderstandings by Neurath, Naess and others, see Carnap 1963, p. 95ff.

The Warsaw people were, so to speak, an example of the fact that this can be done with the help of METALANGUAGE. They are protesting against 'the' language. Therefore, they have reservations about standardised science and its standardised language.<sup>44</sup>

And a short time later a little bit more precisely:

[U]nder the influence of Gödel the opinion arose that one could speak about one part of the language with another one, as I explicated in the SCIENTIA. What the Warsaw-people developed is the series of METALANGUAGES. [...] Different things do cross each other here. One is the thesis that one can legitimately talk about language with language, just like about other things. I would consider that to be pre-Warsaw. And then the thesis that one should carefully separate the LANGUAGES. That probably also influenced your *Logical Syntax*. But I think that you have supported the legitimacy of the discussion about language similarly to the way I did before.<sup>45</sup>

Here the thrust of Neurath's line of argument can already be seen: he obviously wants to go to a point earlier than the influence of Tarski and the group in Warsaw. He only wants to tolerate metalanguages as an isolated phenomenon, for example in questions about the theoretical foundations of mathematics.

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44 Neurath to Carnap, April 30th, 1936, p. 2. Orig.: "Es war eine Differenz zwischen denen, die 'Sprache über Sprache' zulässig erklärten, und die, welche Sprache über Sprache nicht erlaubten (Wittgenstein) dabei aber z. B. Komplexität von 'Wirklichkeit' und 'Sprache' verglichen. Ich erinnere mich, daß ich sehr früh mich gegen diesen Standpunkt wandte und jede sozusagen 'vorlegitime' Diskussion über Sprache und Wirklichkeit ablehnte. Ich glaube, daß für Hahn und auch für Dich unter Einfluß der Typentheorie die Meinung nicht so fern lag, daß Sprache über Sprache legitim sei. Dies alles war doch deutlich und entschieden festgelegt vor der Bekanntschaft mit den Warschauern. Die Warschauer waren sozusagen das Exempel dafür, daß man das mithilfe der METASPRACHE machen kann. Sie protestieren ja gegen 'die' Sprache. Daher haben sie Bedenken gegen die Einheitswissenschaft und ihre Einheitsprache."

45 Neurath to Carnap, July 1st, 1936, p. 3f. Orig.: "[U]nter dem Einfluß Gödels entstand wohl die Meinung, daß man mit einem Teil der Sprache über den anderen sprechen könne, wie ichs in der SCIENTIA ausführte. Was die Warschauer entwickelten ist die Serie der METASPRACHEN. [...] Es durchkreuzen sich da verschiedene Dinge. Das eine ist die These, daß man legitim mit der Sprache über die Sprache reden könne, wie über andere Dinge. Das würde ich für vor-warschauerisch halten und dann die These, daß man sorgsam die SPRACHEN trennen müßte. Das hat dann wohl auch Deine logische Syntax beeinflusst. Aber ich meine, daß Du die Legitimität der Diskussion über die Sprache ähnlich wie ich schon vorher vertreten hast."

This endeavour is well documented with unpublished material of both, especially in the context of the Paris Conference in 1937. Carnap launched the debate suggesting a discussion

1) on semantic concepts ('true' and others). 2) about probability, degree of confirmation and many-valued logic [...] but both are probably better only in a smaller circle of about 15 people, not publicly (in order not to make public the differences in opinion (1) with you and (2) with Reichenb[ach] concerning these questions).<sup>46</sup>

For this purpose, Carnap and Neurath formulated papers, these were exchanged and later on discussed; both of them have been preserved.

As already mentioned, Neurath took a pre-Warsaw point of view, on the one hand he legitimised speaking about language: since sentences are usually related to objects and objects can be anything, it is equally possible to utter sentences about non-sentences (things, facts) as to formulate sentences about sentences. In doing so, he provides a version of Mach's theory of elements and complexes developed in the "Antimetaphysische Vorbemerkungen" to *Die Analyse der Empfindungen*<sup>47</sup> that is turned into language. Instead of Mach's *elementa* – disregarding obvious differences as the ontological characterisation of *elementa*, e.g. – we have propositions or sentences, all on a par. These sentences can be contrasted with one another, compared with one another, etc., which is the real everyday business of the logic of science. On the other hand, Neurath avoids the use of a metalanguage in this way: it does not matter how high or low the degree of complexity of the objects which our sentences are about happens to be – when only sentences are considered. Neurath calls this a "trick" and it should make it possible to eliminate questions about the relationship between language and reality, simply by not comparing sentences and facts, but only sentences, namely sentences about non-sentences and sentences about sentences. Thus the things, the facts, that is, the imminent metaphysical reference to reality, disappear, according to Neurath, from consideration.<sup>48</sup>

46 Carnap to Neurath, February 14th, 1937, p. 1. Orig.: "[Zwei Probleme sind ausführlich zu diskutieren,] beide aber wohl besser nur im engeren Kreise von 15 Leuten, nicht öffentlich (um die in diesen Fragen bestehenden Meinungsverschiedenheiten (1) mit Dir und (2) mit Reichenb[ach] nicht in die Öffentlichkeit zu bringen): 1) über die semantischen Begriffe ("wahr" u. a.); 2) über Wahrscheinlichkeit, Bestätigungsgrad u. mehrwertige Logik."

47 Cf. Mach 1922, p. 10ff.

48 See Neurath 1937a, p. 2f.

Applying this trick Neurath now proposes a paraphrase of Tarski's sentence (4) for the definition of truth:<sup>49</sup>

If I am given some encyclopedia-sentence: Here is an expression that is formed with the following letters [I, T I, S S, N, O, W, I, N, G] [...], then this expression should be called "true statement", if and only if, I have been given a second encyclopedia-sentence: It is snowing.<sup>50</sup>

Neurath now uses the term 'encyclopedia-sentence' to refer to what he called "akzeptierter Realsatz" (accepted real-sentence) a few years earlier. Truth is thus assigned to expressions that represent or designate sentences, and truth is present if there are at least two sentences accepted in universal jargon. One of these expresses the existence of such a designating expression in some suitable form of physical representatives, and the other is the sentence named exactly in this way. So Neurath interprets the sentence "p' is true" as equivalent to the conjunction of the encyclopedia-sentences "'p' occurs in the place *xyzt*" and "p". For Neurath, this construction has the advantage that it remains within the framework of the logic of science, i.e., it does not require a metalanguage. And at the same time it maintains the naming-relation by packing the relation between designans and designatum into the realm of the objects or the content of sentences: So truth becomes a matter of sentences only; meaning, referring, the relation language-world are matters of the content of sentences and any metaphysical correspondence of language and reality should be avoided. At this point, Neurath cannot refrain from taking a swipe at Carnap here when he notes that he considers "relations between expressions of language and designated objects not to be entirely harmless",<sup>51</sup> with explicit reference to Carnap's documents for his research seminar in 1937/38. Neurath then suggests trying out his construction and seeing how far one could go with it. And by the way he indulges in violent attacks against Tarski and Lutman, whom he accuses of metaphysics and claims to absoluteness and repeats his often-recounted metaphysical genealogy via Kotarbiński (who atypically is not mentioned at this point), Twardowski, Brentano and Aquinas tracing back to Aristotle. At least, Neurath is ready for a concession to the extent that he emphasizes that his

49 See Tarski 1935, p. 270.

50 Neurath 1937a, p. 3f. Orig: "Wenn mir der Enzyklopädiesatz gegeben ist: Hier steht ein Ausdruck, der aus folgenden Buchstaben [E, S S, C, H, N, E, I, T] gebildet ist [...] dann soll dieser Ausdruck 'wahre Aussage' heissen, dann und nur dann, wenn mir ein zweiter Enzyklopädiesatz gegeben ist: Es schneit."

51 Ibid., p. 4.

construction is only a proposal for discussion. Its viability is a matter of practical testing, it should be evaluated in terms of feasibility and usefulness strictly within scientific logic and thus be limited to the syntactical level.<sup>52</sup>

In his answer to Neurath, Carnap first sharpened Neurath's remarks to the "main question" of whether "the semantic terms can always be eliminated", namely "by translating semantic into non-semantic sentences".<sup>53</sup> At this point, one can ask whether such a "sharpening" is fair to Neurath or is simply an exaggeration, as Neurath does not at all claim general eliminability and moreover, as for example in 1932, actually does not have the term 'true', but only 'accepted sentence'. Unsurprisingly, Carnap's answer is flatly negative:

This question must be answered in the negative. There are semantic sentences for which neither a translation into syntactic language nor into object language is possible. (In fact, this is the general case, while the translatable sentences are certain special cases, although perhaps most of the semantic sentences that appear in our books and articles belong to these special types of translatable sentences.)<sup>54</sup>

Having said that, Carnap starts a more detailed analysis of Neurath's "Trick der Wissenschaftslogik", which in his terminology is "the translation of an (not essentially) semantic sentence into syntactic language", in many cases this should be possible as well.<sup>55</sup> With essentially and non-essentially semantic sentences Carnap takes up the distinction between syntactic and quasi-syntactic sentences or concepts from the *Logical Syntax* in reverse order.<sup>56</sup> In his earlier view, terms like "true" were not purely syntactic because they could not simply be defined in the syntax. Now – precisely for this reason – they are essentially semantic, while not essentially semantic terms are those that can be defined solely on the basis of syntactic language. With this tool Carnap tries to demonstrate that Neurath's trick is not viable in the case of 'true', since the

52 See *ibid.*, p. 9f.

53 Carnap 1937, p. 3.

54 *Ibid.*, p. 3f. Orig.: "Diese Frage muss verneint werden. Es gibt semantische Sätze, für die weder eine Uebersetzung in die syntaktische Sprache noch in die Objektsprache möglich ist (Dies ist sogar der allgemeine Fall, während die übersetzbaren Sätze gewisse Spezialfälle darstellen, wenn auch vielleicht die meisten der semantischen Sätze, die in unseren Büchern und Aufsätzen vorkommen, zu diesen speziellen Arten der übersetzbaren Sätze gehören.)"

55 *Ibid.*, p. 4. Orig.: "[Neurath's] 'Trick der Wissenschaftslogik' [ist] die Uebersetzung eines (unwesentlich-) semantischen Satzes in die syntaktische Sprache".

56 See above, notes 37 and 38, Carnap 1934, pp. 164f. and 179ff.

translation of 'true' into 'encyclopedia-sentence' (or 'accepted', i.e. 'accepted encyclopedia-sentence'), as Neurath would have to do, does not work properly for Carnap, even if 'true' and 'accepted' are often regarded as synonymous by others. He justifies this with the remark that expressions such as 'encyclopedia', 'believed', '(scientifically) recognised' or 'accepted' always require the specification to a person or a group of persons and at least a chronological location. And so it is immediately clear that, according to Carnap, these are terms of the behavioristics of science, therefore empirical, and that corresponding sentences can be syntactically analysed. In the case of 'true', on the other hand, details about some person and time never are necessary and not even possible<sup>57</sup> – why so, however, he leaves unfounded. In any case, with Carnap, 'true' is an essentially semantic term, while 'encyclopedia-sentence' etc. are not essentially semantic. In the following, he tries to clarify his position with examples, initially with the sentence (1) "Goethe died in Weimar in 1832' is true". In terms of their common understanding, this can be translated into the sentence of the object-language (2) "Goethe died in Weimar in 1832". However, the person-related and time-related object-language sentence (3) "Goethe died in Weimar in 1832' has been a sentence in the encyclopedia of Japanese historians since 1873" is not a correct translation. From Carnap's point of view, Neurath's syntactic trick does not produce satisfactory results in the case of the translation of 'true', because the sentences obviously have different meanings – (2) and (3) are completely different sentences in object-language. Neurath could counter this by saying ad hoc that such a postulated relation to person and time of 'encyclopedia-sentence' etc. could also be understood very broadly, in the sense of 'encyclopedia-sentence from any person at any time' (which he does not in fact), whereby the result could be extensionally the same. Thereupon Carnap again could object that it might be so, but that the meanings of the two translations are nonetheless very different.

In order to strengthen his position, Carnap gives further examples, each with the same result. His counter-trick is that by translating the semantic (system-language) sentence into one of the object-languages, the expression "true" is effectively truncated. This corresponds to Neurath's basic attitude as well as to Carnap and Tarski, who all accept that to say "p' is true" is nothing else than to say "p".<sup>58</sup> This allows Carnap to get from object-language "p" to "p' is true" with the very same meaning in syntax-language. In presenting Neurath's views, however, Carnap holds that Neurath has to add something

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57 See Carnap 1937, p. 4.

58 Explicitly stated e. g. *ibid.*, p. 1.

to the “p” in order to be able to express “p’ is true” in his sole object-language, namely something like “is accepted”: Neurath thus does not arrive at “p” but at “p’ is accepted”. This indicates that the meanings of the respective translations are different and if the meanings of the two translations are different, then, if “p” is supposed to keep its meaning, the two concepts of truth must also be different.<sup>59</sup> Hence, Carnap concludes that Neurath’s procedure fails at least for the term ‘true’ and consequently, among others, for the term ‘to know’, which Carnap regards to be essentially semantic too, since in its classical wording as true belief relying on good reasons, it contains the term ‘true’ as an indispensable condition in the definition.

In response to this we may fall back on three documents by Neurath in which he as well replied to Carnap as he made concessions too. First, he wholeheartedly recognised the importance and fertility of semantics for “calculus languages” and emphasised that he has no suspicion of the formal correctness of the proposed calculi,<sup>60</sup> but at the same time warned of a dangerous tendency to abandon empiricism. He agreed with the view that sentences of semantics cannot always be translated into syntactic sentences or into real-sentences in the manner outlined by Carnap.<sup>61</sup> But in all three texts Neurath questions the practical importance of the concept of truth in everyday life and in science and even claims the possibility of “writing an encyclopedia of the total knowledge without having to include the term ‘true’ or a related term”.<sup>62</sup> He points out that in his paraphrase of Tarski’s sentence (4) there are two encyclopedia-sentences, of which “entirely in the sense of the semantic suggestions, one encyclopedia-sentence is called the carrier of a true expression if a second encyclopedia-sentence is accepted”, and he emphasizes that the term ‘encyclopedia-sentence’ is added twice, so to speak, for both sentences and not, as Carnap claims, the expression ‘true’ is translated into the expression ‘encyclopedia-sentence’ or ‘accepted’.<sup>63</sup> Neurath therefore explicitly refuses to identify Carnap’s term ‘true’ with his term ‘accepted’, which is in line with his basic negative attitude towards ‘true’ that occupies a prominent place on his *index verborum prohibitorum*, is deemed to be dispensable and

59 See *ibid.*, p. 5.

60 See Neurath 1937c, p. 1; or later, pretty analogously, in a letter, Neurath to Carnap, September 25th, 1943, p. 13.

61 See Neurath 1937b, p. 1.

62 *Ibid.*, p. 3.

63 See *ibid.*, p. 2. Orig.: “ganz im Sinne der semantischen Vorschläge [wird] ein Enzyklopädiesatz als Träger eines wahren Ausdrucks bezeichnet, wenn ein zweiter Enzyklopädiesatz anerkannt wird”. Neurath also emphatically repeats this in Neurath 1937d, a kind of letter of complaint to Carnap, p. 1.

accordingly avoided by him in contrast to the harmless ‘accepted’. And when Neurath wrote:

I once said that ‘is true’ could be replaced by: ‘is an encyclopedia-sentence that we accept’. I still think so today.<sup>64</sup>

then this is only to be understood in such a way that in practical usage the expression ‘true’ should be dispensed with in favour of ‘accepted’ and not, as Carnap puts it, ‘true’ and ‘accepted’ are synonymous and sentences with them are equivalent or equipollent.

### 3 Conclusion

Concluding, it is quite clear that the views of the two now, 1937 and later, just as in 1932, differ deeply from one another and are basically incompatible. In contrast to Wittgenstein both welcome speaking about language and stress the importance of it. But Carnap additionally wants the concept ‘true’ and wants metalanguages in order to deal with object languages. He understands truth as a matter of logic only. Whereas Neurath does not want such a concept of truth – on the one hand, because he always senses a claim of absoluteness in it, on the other hand, because he esteems this meagre logical version of truth of severely limited use in science. His alternative, acceptance, rather is a pragmatical matter within epistemics or philosophy of science and bears a distinct emphasis on social sciences. Carnap again does not invalidate such an insinuated absoluteness-claim in any way but obviously strengthens it by the decided rejection of person-relatedness and time-relatedness. Neurath in contrast holds the tentativeness and replaceability of encyclopedia-sentences accepted at some time *t* an extremely important point. And Neurath wants the standardised science to be implemented as far as possible in one single universal jargon without superordinate hierarchies of metalanguages, with the exception of special cases such as the foundation of mathematics in order to avoid paradoxes. Neither of them changed their views; Carnap kept working hard on semantics and Neurath affirmed his opinion regarding the dispensability of the concept of truth and metalanguages in some publications.<sup>65</sup> These motifs

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64 Neurath 1937d, p. 1. Orig.: “Ich habe früher einmal gesagt, dass man ‘ist wahr’ ersetzen könne durch: ‘ist ein von uns anerkannter Enzyklopädiesatz.’ Das meine ich auch heute noch.”

65 See e.g. Neurath 1941a and Neurath 1941b.

popped up again in their discussions about Popper and especially on Russell's *Meaning and Truth*<sup>66</sup> and they also played an important role in the big row<sup>67</sup> between the two of them in 1944.

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### References

The quoted letters and manuscripts of Carnap and Neurath are held either by the University of Pittsburgh, Rudolf Carnap Papers (online available in the main parts) or in Noord-Hollands Archief, Haarlem, NL, as part of the Wiener Kreis Archief. The quoted documents of 1937 are also preserved in the Carnap collection at Los Angeles, UCLA Library Special Collections, CM20.

Carnap, R. (1934) *Logische Syntax der Sprache*, 2nd edition, Vienna: Springer 1968.

Carnap, R. (1937) 'Ueber den semantischen Wahrheitsbegriff', unpublished typescript, Nachlass Otto Neurath, Wiener Kreis Archief, 196, K.30.

Carnap, R. (1963) 'Rudolf Carnap: Intellectual Autobiography', cit., *Mein Weg in die Philosophie*, Stuttgart: Reclam, 1993.

Carus, A.W. (2019) 'Neurath and Carnap on Semantics', in Cat, J. and Tuboly, A.T. (eds.), *Neurath Reconsidered*, Cham: Springer, pp. 339–361.

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66 The reproach of metaphysics – precisely “Aristotelian metaphysics” – Neurath brought forward against Russell can easily be understood as addressed against Carnap too. Neurath challenges Carnap in a series of letters, cf. e.g. Neurath to Carnap, July 17th, 1942, p. 3ff.; January 15th, 1943, p. 1f.; March 15th, 1943, enclosure, final paragraphs; September 25th, 1943, pp. 11–18. Whereas Carnap only answered late and somehow reluctantly and in the end annoyed, i.e., that he was not happy with defending Russell's positions against Neurath's, positions he himself would not really agree with on the whole. Cf. Carnap to Neurath, November 7th, 1942, p. 2; February 4th, 1944, pp. 1–5.

67 In the end neither of them changed their opinion significantly. In his posthumously published “After Six Years” Neurath repeated the accusation of Aristotelian absolutism directed against Carnap and Tarski and called Nagel and Strauss as witnesses (cf. Neurath 1946, p. 314). While Carnap speaks in retrospect about misunderstandings of his critics without showing any particular concessions (see Carnap 1963, p. 95f.).

- Coffa, A. (1991) *The Semantic Tradition from Kant to Carnap. To the Vienna Station*, edited by L. Wessels, Cambridge: Cambridge University Press.
- Haller, R. (1979) *Studien zur Österreichischen Philosophie*, Amsterdam: Rodopi.
- Haller, R. (1993) *Neopositivismus. Eine historische Einführung in die Philosophie des Wiener Kreises*, Darmstadt: Wissenschaftliche Buchgesellschaft.
- Hempel, C.G. (1935) 'On the Logical Positivist's theory of truth', *Analysis* 2, pp. 49–59.
- Hofmann-Grüneberg, F. (1988) *Radikal-empiristische Wahrheitstheorie. Eine Studie über Otto Neurath, den Wiener Kreis und das Wahrheitsproblem*, Wien: Hölder-Pichler-Tempsky.
- Kraft, V. (1968) *Der Wiener Kreis. Der Ursprung des Neopositivismus*, 2. Aufl., Vienna/New York: Springer.
- Mach, E. (1922) *Die Analyse der Empfindungen*, Nachdruck der 9. Auflage, Jena 1922, Darmstadt: Wissenschaftliche Buchgesellschaft 1985.
- Mancosu, P. (2008) 'Tarski, Neurath, and Kokoszyńska on the Semantic Conception of Truth', in Patterson, D. (ed.): *New Essays on Tarski and Philosophy*, Oxford: University Press, pp. 192–224.
- Mormann, T. (1999) 'Neurath's Opposition To Tarskian Semantics', in Woleński, J. and Köhler, E. (eds.), *Alfred Tarski and the Vienna Circle (Vienna Circle Institute Yearbook, vol. 6)*, Dordrecht/Boston/London: Kluwer, pp. 165–178.
- Neurath, O. (1932/33) 'Protokollsätze', *Erkenntnis* 3, pp. 204–214, cit.: Otto Neurath, *Gesammelte philosophische und methodologische Schriften*, vol. 2, edited by R. Haller and H. Rutte, Vienna: Hölder-Pichler-Tempsky 1981, pp. 577–585.
- Neurath, O. (1936a) 'Einzelwissenschaften, Einheitswissenschaft, Pseudorationalismus', *Actes du Congrès International de Philosophie Scientifique, Sorbonne, Paris 1935*, vol. 1, cit.: Otto Neurath, *Gesammelte philosophische und methodologische Schriften*, vol. 2, edited by R. Haller and H. Rutte, Vienna: Hölder-Pichler-Tempsky 1981, pp. 703–709.
- Neurath, O. (1936b) 'Le développement du Cercle de Vienne et l'avenir de l'Empirisme', Paris: Hermann & Cie 1936, cit.: Otto Neurath, *Gesammelte philosophische und methodologische Schriften*, vol. 2, edited R. by Haller and H. Rutte, Vienna: Hölder-Pichler-Tempsky 1981, pp. 673–703.
- Neurath, O. (1937a) 'Wahrheitsbegriff und Empirismus' (Vorbemerkungen zu einer Privatdiskussion mit Carnap im Kreis der Pariser Konferenz 1937), unpublished typescript, Nachlass Otto Neurath, Wiener Kreis Archief, 196, K.30.
- Neurath, O. (1937b) 'FUER DIE PRIVATSITZUNG 30. Juli 1937 NACHMITTAG. CARNAP-NEURATH. WAHRHEITSBEGRIFF UND EMPIRISMUS', unpublished typescript, Nachlass Otto Neurath, Wiener Kreis Archief, 196, K.31.
- Neurath, O. (1937c) 'Diskussion Paris 1937 Neurath-Carnap', unpublished typescript, Nachlass Otto Neurath, Wiener Kreis Archief, 196, K.32.
- Neurath, O. (1937d) 'Bemerkungen zur Privatdiskussion', unpublished typescript, Nachlass Otto Neurath, Wiener Kreis Archief, 196, K.33.

- Neurath, O. (1941a) 'Universal Jargon and Terminology', *Proceedings of the Aristotelian Society*, New Series (vol. 40), pp. 127–148, cit.: Otto Neurath, *Gesammelte philosophische und methodologische Schriften*, vol. 2, edited R. by Haller and H. Rutte, Vienna: Hölder-Pichler-Tempsky 1981, pp. 901–918.
- Neurath, O. (1941b) 'The Danger of Careless Terminology', *The New Era* 22 (7), pp. 145–150, cit.: Otto Neurath, *Gesammelte philosophische und methodologische Schriften*, vol. 2, edited by R. Haller und H. Rutte, Vienna: Hölder-Pichler-Tempsky 1981, pp. 919–924.
- Neurath, O. (1946) 'After Six Years', *Synthese* 5 (1/2), May-June 1946, pp. 77–82, cit.: Otto Neurath, *Ergänzungsband. Varia – Verstreute Schriften* (= Otto Neurath, *Schriften*, vol. 8), ed. by U. Höfer, C. Burke and G. Sandner, Vienna: LIT-Verlag 2022, pp. 311–316.
- Oberdan, T. (1992) 'The Concept of Truth in Carnap's *Logical Syntax of Language*', *Synthese* 93 (1/2), pp. 239–260; available at: <http://www.jstor.org/stable/20117714>.
- Stadler, F. (1997) *Studien zum Wiener Kreis*, Frankfurt a. M.: Suhrkamp.
- Tarski, A. (1935), 'Der Wahrheitsbegriff in den formalisierten Sprachen', *Studia Philosophica* 1, pp. 261–405.
- Tuboly, A.T. (2017) 'From *Syntax* to *Semantik* – Carnap's Inferentialism and Its Prospects', *Polish Journal of Philosophy* XI (1), Spring 2017, pp. 57–78.
- Uebel, T. (1992a) *Overcoming Logical Positivism from within*, Amsterdam/Atlanta: Rodopi.
- Uebel, T. (1992b) 'Neurath vs. Carnap: Naturalism vs. Rational Reconstructionism before Quine', *History of Philosophy Quarterly* 9 (4), pp. 445–470; available at: <http://www.jstor.org/stable/27744037>.
- Uebel, T. (2006) 'Vienna Circle', in Zalta, E.N. (ed.): *The Stanford Encyclopedia of Philosophy* (revised version, summer 2020 edition); available at: <https://plato.stanford.edu/archives/sum2020/entries/vienna-circle/>.
- Woleński, J. (2018) 'The Semantics Controversy at the 1935 Paris Congress', *Philosophia Scientiae* 22 (3), pp. 199–211; available at: <http://journals.openedition.org/philosophiascientiae/1624>.

