

Article

# Carnap and Wittgenstein: Tolerance, Arbitrariness, and Truth

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**Abstract:** This article discusses the relationship between Ludwig Wittgenstein's and Rudolf Carnap's philosophies of logic during the time of Wittgenstein's interactions with the Vienna Circle and up to 1934 when the German edition of Carnap's *The Logical Syntax of Language* was published. Whilst Section 1 focuses on the relationship between Carnap and Wittgenstein's *Tractatus*, including Wittgenstein's accusation of plagiarism against Carnap in 1932, Section 2 discusses the relationship between Carnap's principle of tolerance and Wittgenstein's similar principle of the arbitrariness of grammar. I argue that, although Carnap's claim in *Logical Syntax* to 'go beyond' Wittgenstein has certain justification in relation to the *Tractatus*, so does Wittgenstein's priority claim. The relationship between Carnap's philosophy of logic and the *Tractatus* is thus more complicated than is often recognized. If the reference point is Wittgenstein in the early 1930s, however, Carnap cannot be described as going beyond him, and by 1934, Wittgenstein had advanced further than Carnap would ever venture. Despite evidence that Carnap knew about Wittgenstein's principle of the arbitrariness of syntax well before his first articulations of his principle of tolerance, the extent of the influence of Wittgenstein's principle on Carnap remains unclear. What can be established with certainty is that Wittgenstein's principle predates Carnap's and that Carnap resisted acknowledging him despite being urged to do so. Arguably, Wittgenstein's account of syntax as both arbitrary and non-arbitrary is also superior in clarity to Carnap's misleading claim about a 'complete freedom' implied by the principle of tolerance, because such a freedom only exists for idle syntactical systems that are not put to work. In Section 3, I discuss the relationship between Carnap's notion of expediency and Wittgenstein's account of the correctness or truth of logical accounts. As my discussion of Wittgenstein's account brings out, Carnap's rejection of truth in logic for expediency as the goal of logical clarifications does not follow from the principle of tolerance and is not justified by it. It remains unclear what justifies Carnap's rejection of truth as the goal of logical clarification. Again, Wittgenstein's account seems preferable, given the vacuity of the claim that expediency constitutes the basis of choice between different logical languages and clarifications.

**Keywords:** Wittgenstein; Carnap; principle of tolerance; arbitrariness of grammar; history of analytic philosophy; philosophical method



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## 1. Carnap and the *Tractatus* on Logic and Philosophical Method

The 1932 priority dispute between Wittgenstein and Carnap is philosophically interesting only with regard to what it reveals about their respective accounts of logic and philosophy. Although it does seem revealing in this respect, much also depends on one's interpretation of the *Tractatus* when comparing the two, as will become evident. Having discussed the relationship between Carnap's and the early Wittgenstein's philosophies of logic in detail elsewhere, this section only summarises certain relevant points about the *Tractatus*, instead of giving text-based arguments for points already discussed (see Kuusela 2012 and 2019b, chapter 3 for discussion of Carnap's relationship with the *Tractatus*; cf. Kuusela 2023c) [1–3]. Moreover, I limit my discussion to only one of Wittgenstein's complaints in the context of the plagiarism dispute, although I believe this is the key issue for Wittgenstein. This is the claim that in his paper 'Die Physikalische Sprache als Universalsprache der

Wissenschaft<sup>1</sup>, Carnap presents as his own Wittgenstein's distinction between formal and material modes of speaking, the importance of which for Wittgenstein is indicated by his marginal comment 'Plagiarism L.W.' in his offprint of Carnap's paper<sup>2</sup>. (Other complaints relate to the notions of hypothesis, ostensive definition, and physicalism; see GB, letter to Schlick on 8 August 1932; cf. WVC, 209–211.) [8,9]. As I explain, this distinction is central to the *Tractatus* in that it constitutes the basis of its conception of philosophy as logical clarification and its rejection of substantial true/false metaphysical theses as nonsensical. (The distinction is similarly central to Wittgenstein's later philosophy, worked out in outline by 1932; see Section 2).

In order to avoid the influence of hearsay about Wittgenstein's person on the historiography of philosophy, the following seems worth stating. Wittgenstein is notably careful in his first letter to Schlick (on May 6) where he raises the issue about having found his thoughts 'anonymously stated' by Carnap, requesting Schlick to tell him if he thinks he is 'inappropriate' or 'unfair' (GB, letter to Schlick 6.5.1932) [9]. That Schlick did not think Wittgenstein was unfair is evidenced by his trying to help Wittgenstein to clear up the matter with Carnap. In their correspondence, Wittgenstein also emphasized to Schlick that his concern is not priority or plagiarism but being read as a 'reheated Carnap' or as plagiarising Carnap, i.e., in Carnap's rather than his own terms. (To describe the affair as a priority dispute is therefore slightly misleading.) This concern is also indicated by the wish Wittgenstein expressed to Schlick that the revised account of his philosophy co-written with Waismann would soon be published. Having been sharing his thoughts orally with the Vienna Circle without publishing anything, Wittgenstein felt, had put him in an odd position (GB, letter to Schlick 6.5.1932) [9]. Wittgenstein's concerns thus seem reasonable enough. Schlick in turn assured Wittgenstein that Carnap would not have intentionally failed to acknowledge his work (Kienzler 2008, 69)<sup>3</sup> [7]. Given this background, let us turn to the philosophical issues.

Upon reading Carnap's reply to Schlick, where Carnap denied any need for acknowledgment, maintaining that his difference from Wittgenstein was more significant than the agreement (Kienzler 2008, 70–71) [7], Wittgenstein comments to Schlick:

That Carnap does not take a single step beyond me, when he is for the formal and against the 'material mode of speaking', you know well yourself; and I cannot imagine that Carnap should have so completely misunderstood the last sentences of the *Tractatus*—and so the fundamental idea of the whole book (GB, Wittgenstein to Schlick 8.8.1932; my square brackets) [9].

I return shortly to the debatable issue that Carnap does not take a single step beyond Wittgenstein. First, however, let me state certain basic points regarding the *Tractatus*' approach in order to have a clear basis for comparing Carnap's and Wittgenstein's views. This also explains Wittgenstein's disbelief that Carnap would not have understood the last sentences of the book and its fundamental idea, whilst he simultaneously took for granted that this was evident to Schlick.

As Wittgenstein states in the *Tractatus*, 'the results' of philosophy are not philosophical true/false theses or doctrines, but our 'propositions becoming clear' (TLP 4.112) [6]. Accordingly, whenever one encounters someone making substantial true/false metaphysical statements, the philosopher's task is to make it apparent that they have not given meaning to certain words in their sentences. In other words, instead of entering into a discussion about the truth/falsity of their theses, the philosopher's task is to engage in logical clarification or analysis in order to demonstrate to the metaphysician the problem(s) with what they say. As Wittgenstein explains:

The right method of philosophy would be this. To say nothing except what can be said, i.e., the propositions of natural science, i.e., something that has nothing to do with philosophy: and then always, when someone else wished to say something metaphysical, to demonstrate to him that he had given no meaning to certain signs in his sentences. This method would be unsatisfying to the other—he would

not have the feeling that we were teaching him philosophy—but it would be the only strictly correct method (TLP 6.53) [6].

Plausibly, this is what Wittgenstein refers to as ‘last sentences’ of his book in the quoted letter. (There are only four more sentences after 6.53.) Moreover, whilst some Tractarian remarks are notoriously difficult to understand and open to different interpretations, it is hard to see how the points in 4.112 and 6.53 could be stated more clearly. To recap, rather than engaging in discussion of the true/false substantial claims about the putative objects of metaphysics, i.e., speaking in the material mode, the correct method of philosophy is logical clarification or analysis. This is to speak in the formal mode in that such clarifications (typically but not exclusively given by translating relevant expressions into a logical notation) focus strictly on the use of relevant expressions, aiming to clarify their logical features. Hence, eschewing putting forward substantial statements, i.e., from speaking in the material mode, the strictly correct method of philosophy limits itself to the formal mode and focuses on the clarification of the logical-syntactical features of relevant expressions, just as Carnap describes the formal mode in his paper (Carnap 1932, 435–436) [5].

This, I take it, is the ‘fundamental idea’ of the *Tractatus* mentioned in the letter.<sup>4</sup> Accordingly, Wittgenstein had pointed out to Russell by the time of the completion of the book that his account of logical necessity as tautologous was ‘only a corollary’ of his point about philosophy not making substantial claims (WC, 98; 19.8.1919; see Kuusela 2019b, 59–62; cf. Carnap 1963, 25) [2,14,15]. Why the point about tautologies is only a corollary, i.e., a direct consequence or a proposition proved by proving another, is because it is merely a more specific formulation of Wittgenstein’s key point that logical necessity is structural to thought and language. Logical necessity thus pertains to the form rather than the content of thought and is not a possible object of true/false substantial, contentful, or material assertions, because any such assertions already assume relevant necessities or logical determinations. Hence also Wittgenstein’s main criticism of Frege’s and Russell’s philosophies of logic: any substantial/material true/false propositions, such as their axioms, already assume what they are meant to clarify and therefore cannot clarify the principles of logic. When Carnap then later writes in the *Logical Syntax of Language* that:

It was Wittgenstein who first exhibited the close connection between the logic of science (or “philosophy”, as he calls it) and syntax. In particular, he made clear the formal nature of logic and emphasized the fact that the rules and proofs of syntax should have no reference to the meaning of symbols [. . .]. Further, he has shown that the so-called sentences of metaphysics [. . .] are pseudo-sentences (LSL, 282) [16].

He seems to be belatedly providing the acknowledgment whose need he denied in his reply to Schlick in 1932. As this indicates, Wittgenstein was right to be dissatisfied with Carnap’s reply to Schlick. It also explains why he concluded (rightly or wrongly) that Carnap had not acted ‘decently’ (GB, letter to Schlick 8 August 1932) [9]. From this point onwards, Wittgenstein’s tone becomes devastatingly critical and even hostile towards Carnap. However, as I argue next, Carnap continues to exaggerate the differences of his position from Wittgenstein’s in the *Logical Syntax*. Even the just-quoted acknowledgement is only partial, and Wittgenstein would have had reasons for dissatisfaction with it too. None of this makes Wittgenstein blameless, however. He failed to consider the possibility that Carnap’s exaggeration of the differences in his view from Wittgenstein’s might have been due to misunderstanding. Perhaps Carnap simply failed to recognize that his conclusions from the *Tractatus*, and the thoughts it stimulated in him, were just what Wittgenstein intended the reader to get out of his book (see Stern 2007, 327–328; Kienzler speaks of understanding through misunderstanding; 2008, 76) [7,17]). Judging from Carnap’s mischaracterization of the differences between his approach and Wittgenstein in the *Logical Syntax*, this seems to me the likely explanation for his failure to acknowledge Wittgenstein.<sup>5</sup> Let us turn to this.

Whether Wittgenstein is right that ‘Carnap does not take a single step beyond me’ is genuinely debatable (although only in relation to the *Tractatus*; see Section 2). As for the

interpretation of Wittgenstein's claim about this to Schlick, it is important to note that in this connection, Wittgenstein considers inessential the possibility, emphasized by Carnap, of formulating statements about logic or syntax, and the identification of philosophical statements with such statements. Although Carnap had not developed the method of logical syntax in 1932 to the extent he would do in the *Logical Syntax*, the view that philosophical statements proper are 'metalogical sentences' that speak about 'the forms of language' is part of Carnap's explanation of the distinction between material and formal mode in the 1932 article too (p. 435) [5]. Since Wittgenstein evidently had read the pages where Carnap explains the distinction, he must have been aware of Carnap's view that there are statements about logic/syntax.<sup>6</sup> How could Wittgenstein consider this inessential?

First, a point that historiographies of analytic philosophy almost always pass over in silence is that Carnapian syntactical sentences do not contradict the Tractarian distinction between saying and showing, i.e., its distinction between true/false substantial or material statements and formal logical clarifications, and the associated rejection of true/false substantial propositions about logic (TLP 4.122–4.126) [6]. As Carnap himself emphasizes, sentences of pure syntax, as opposed to empirical statements of descriptive syntax, are not material true/false sentences (LSL, 6–7, 283) [16]. Carnapian syntactical sentences are thus not in the target area of Wittgenstein's criticisms of substantial philosophical propositions/theses about logic, and not anything the *Tractatus* explicitly rejects. Nevertheless, in the *Logical Syntax*, Carnap claims to introduce syntactical sentences in a sense that Wittgenstein would not accept, thus misrepresenting the matter as a disagreement rather than a proposal for the further development of Wittgenstein's view. 'In opposition to this view [of the *Tractatus*], our construction of syntax has shown that it can be correctly formulated and that syntactical sentences do exist' (LSL, 282, my square quotes; for Carnap's criticisms of Wittgenstein, see 282–284) [16]. Maybe Carnap really was confused about the relation of his view to Wittgenstein's, odd as this seems given his own emphasis on the difference of syntactical sentences from substantial true/false propositions about logic or metaphysical sentences, which he rejected following Wittgenstein (LSL, 282; cf. Carnap 1963, 45) [14,16].

Perhaps even odder, however, is the failure of the scholars of the historiography of analytic philosophy to keep track of relevant definitions and distinctions, as exemplified by Pierre Wagner's claim that Carnap's approach is in 'outright contradiction' with Wittgenstein's (Wagner 2009, 190; cf. Awodey and Carus 2009, 88) [11,19]. Although this trend of taking Carnap's word for his advance over Wittgenstein started already with Ernest Nagel's and W.V.O. Quine's reviews of the *Logical Syntax* in 1935 [20,21], historiographers have the benefit of time and distance.

Secondly, as I have argued in more detail elsewhere, Carnap is wrong that Wittgenstein has no way to distinguish the Tractarian elucidations from metaphysical statements (Kuusela 2012 and 2019b, 91–95) [1,2]. In short, the sentences of the *Tractatus* can be readily understood as quasi-syntactical or pseudo-object sentences in Carnap's sense. As Carnap explains, although such sentences are sentences in the material mode, their purpose is to mark logical or syntactical notions (LSL, 285–287) [16]. But this is exactly the function of the sentences of the *Tractatus*. Rather than constituting paradoxically nonsensical metaphysical theses about language and logic, their function is to introduce the logical principles and formal/syntactical concepts constitutive of Wittgenstein's logical language into whose structure his account of logic is codified.<sup>7</sup> This is exemplified by the sentences 'Every proposition possesses the general propositions form' (cf. TLP 4.5, 5.471–5.4711) (cf. [6]), 'A name refers to an object' (cf. TLP 3.202–3.221) (cf. [6]), and 'An elementary proposition consists of names' (TLP 4.22) [6], all of which ascribe formal/syntactical properties to their respective 'objects'.<sup>8</sup>

As Carnap also emphasizes, both in the 1932 paper and *Logical Syntax*, the material mode of speaking is '*frequently expedient*' (LSL, 312, original italics; cf. 285, 288, 301, 308–309; 1932, 456) [16]. But this means that the *Tractatus*' method of using natural language to introduce the principles and formal/syntactical concepts of its logical language is perfectly acceptable by Carnap's own criteria, contrary to his misleading claims (LSL, 282–284) [16].



Indeed, provided the failure of Carnap's principle of translatability into syntactical sentences as the criterion for demarcating logic from metaphysics, any basis falls away from his criticisms that the *Tractatus*' sentences cannot be distinguished from metaphysical statements (LSL, 283) [16]. For, as Wagner points out, Carnap's criterion is only satisfied by languages with explicitly stated rules of syntax and is therefore not applicable to natural language (Wagner 2009, 197) [19]. Whilst this, in effect, renders Carnap's criterion trivial, Wittgenstein's way of distinguishing his elucidations from the propositions of metaphysics in terms of their logical function does not suffer from this problem.

These two points explain how Wittgenstein could have reasonably maintained (without being unfair or failing to understand Carnap) that in his 1932 article, Carnap is not taking a single step beyond him, and assumes this to be obvious to Schlick too. More specifically, the two points suggest that Carnap's introduction of the method of logical syntax and syntactical sentences as statements about logic/syntax is best understood as a technical methodological innovation, and a further development of the *Tractatus*' view in this sense. Whilst such innovations may certainly have very important philosophical consequences, as illustrated by the very notion of a logical language itself, this brings out the sense in which it is debatable whether Carnap makes any philosophical advances over the *Tractatus*, as he claims to do. 'If I am right, the position here maintained is in general agreement with [Wittgenstein's], but goes beyond it in certain important respects' (LSL, 282) [16]. The point is that claims about such advances ought to be justified with reference to specific advances that the employment of the method of logical syntax brings about, whilst the introduction of a new method or a modification to a method by itself cannot justify such claims. (Quite a few programmatic claims have been made in philosophy without the results ever materializing.) Although Carnap seems to recognize this point when he says 'The difference of opinion here indicated is not merely theoretical; it has an important influence on the practical form of philosophical investigations' (LSL, 283) [16], as far as I'm aware, neither Carnap nor any historiographers have put forward any such specific comparative arguments. Instead, the latter seem to have limited themselves to general assertions like Carnap himself, as exemplified by Awodey and Carus's claim that Carnap's metalogical approach 'represents a radically different basis for the critique of metaphysics from the one Carnap had previously adopted from Wittgenstein', whereby Carnap liberated himself from 'Wittgenstein's prison', and 'went from slave to master' (2009, 92–93) [11].<sup>9</sup> Given that Carnap's introduction of sentences about logic cannot alone support such claims, the question about his advance over Wittgenstein remains in principle open to debate.

Here I must emphasize the qualification 'in principle', given how the method of the employment of metalanguages to introduce logical notions has amply justified itself since the 1930s through its applications. My point concerns specifically arguments in the historiography of analytic philosophy. I should also emphasize that, given Wittgenstein's focus from the early 1930s onwards on the development and employment of non-calculus-based logical methods, such as the method of language games, Carnap deserves credit for his technical innovations and their philosophical benefits.

With all the preceding said, it remains the case that the *Tractatus* gives no role to statements about logical syntax. Neither does its account of the general propositional form, according to which all propositions are contingent true/false representations, leave any room for syntactical statements as genuine propositions (TLP 4.5, 5.47–5.471) [6]. Carnap, therefore, is not wrong to think his view differs from Wittgenstein's, even though Wittgenstein's view might still be preferable to Carnap's talk of syntactical sentences as 'genuine statements' in order to keep syntactical sentences clearly distinct from substantial/material propositions (LSL, 41) [16]. Moreover, of course, syntactical statements have important uses that the *Tractatus*' austere view does not acknowledge, as indicated by Wittgenstein's talk of such sentences from 1929 onwards (see below). It is also notable that Carnap himself (contrary to Wagner) describes his position as being in 'general agreement' with Wittgenstein's, even though he also speaks of his introduction of syntactical statements as being

‘in opposition to’ Wittgenstein (see LSL, 282 quoted above) [16]. A fair and accurate way for Carnap to describe his relation to the *Tractatus* would have been to say something like: ‘Agreed, but I want to develop this view further by introducing non-material syntactical sentences.’ Thus, the misleading impression of Carnap saying something in opposition or even in contradiction with the *Tractatus* would have been avoided.

In conclusion, the relationship between Carnap’s and the *Tractatus*’ philosophies of logic is more complicated than usually recognized. Arguably, Carnap is best seen as further developing Wittgenstein’s position rather than going beyond it, except in a technical sense. Besides arguments such as the preceding, this view is further supported by the fact that when Wittgenstein, in 1929, started speaking of statements of syntactical rules, this did not require him to revise the key point of the *Tractatus* that statements of logic are not substantial propositions/theses (see Section 3).

## 2. The Principle of Tolerance and the Principle of the Arbitrariness of Grammar

Another way in which Carnap’s *Logical Syntax* has been taken to go beyond Wittgenstein, besides its introduction of sentences about syntax, relates to Carnap’s principle of tolerance. As I argue in this section, matters are again more complicated.<sup>10</sup>

As Carnap explains in the Foreword (from 1934), the principle of tolerance, which relates ‘not only to mathematics, but to all questions of logic’ (LSL, xv) [16], constitutes a rejection of the view that new forms of language employed in logic “must be proved to be ‘correct’ and to constitute a faithful rendering of ‘the true logic’” (LSL, xiv) [16]. He continues:

To eliminate this standpoint, together with the pseudo-problems and wearisome controversies which arise as a result of it, is one of the chief tasks of this book. In it, the view will be maintained that we have in every respect complete liberty with regard to the forms of language; that both the forms of construction for sentences and the rules of transformation [. . .] may be chosen quite arbitrarily (LSL, xiv–xv) [16].

Later in the book, Carnap also explains:

Everyone is at liberty to build up his own logic, i.e., his own form of language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments (LSL, 52; cf. 164) [16].

One of Carnap’s intended foils, if not *the* foil, is the *Tractatus*. Accordingly, Awodey and Carus describe the principle of tolerance as Carnap’s final step to freedom from Wittgenstein’s prison: ‘It represents the second and final step away from the meaning foundationalism of the *Tractatus*, to a kind of radical pragmatism, in which the only criterion for acceptance or rejection of a language form is its usefulness for a particular purpose’ (Awodey and Carus 2009, 99) [11]. This description seems to, again, exaggerate the difference between Carnap and Wittgenstein, however. As Carnap himself explains in the Foreword, Wittgenstein’s prison had been shut down already a while ago: ‘[. . .] in opposition to Wittgenstein’s former dogmatic standpoint, Professor Schlick now informs me that for some time past, in writings as yet unpublished, Wittgenstein has agreed that the rules of language may be chosen with complete freedom’ (LSL, xvi) [16]. More precisely, the prison had been closed since late 1929, and there are reasons to think that Wittgenstein opened the door to Carnap through Waismann’s expositions of his views to the Vienna Circle. Let us look into this.

Evidence suggests that Carnap’s phrase ‘Professor Schlick now informs me’ is misleading. As Christoph Limbeck-Lilienau argues, Carnap was aware of discussions regarding syntax within the Vienna Circle that had started in 1929, originally motivated by what is known as the colour-exclusion problem pertaining to the *Tractatus*’ account of logic (Limbeck-Lilienau 2023, 410)<sup>11</sup> [24]. This problem played an important role in Wittgenstein’s rejection of the *Tractatus* philosophy of logic, leading him to question and rethink his

approach to logic within only a few months. Given the significance of the *Tractatus* to the Vienna Circle, it is not surprising that Wittgenstein's new account of syntax was discussed in the meetings between Wittgenstein, Waismann, and Schlick, and in other meetings where Waismann reported Wittgenstein's views to others. An example is a meeting at Schlick's in December 1929 that appears to be the first time when Wittgenstein spoke to Waismann and Schlick about his view of the rules of syntax as arbitrary conventions: '[...] the axioms of geometry have the character of stipulations concerning the language in which we want to describe spatial objects. They are rules of syntax. The rules of syntax are not about anything; they are laid down by us' (WVC, 62; cf. 63–64) [8]. Carnap was not present in this meeting. However, as Limbeck-Lilienau points out, records show him as having attended and asked questions in a meeting on 12 February 1931, where Waismann outlined Wittgenstein's account of the arbitrariness of syntax in response to Hans Hahn's view that syntax can be derived from what is spoken of:

The syntax cannot be justified by means of language. The rules of syntax cannot be gained from experience or by derivation. The rules of syntax are conventions [Festsetzungen]. A rule of syntax can be postulated, demanded, fixed, like the axioms of mathematics. If one wanted to construct a language in the purely formal sense, then one could say that syntax is a game. The play becomes serious as soon as it is applied (Limbeck-Lilienau 2023, 413, quoting Waismann as reported in Stadler 2015, 82–83) [24,25].

Here, Waismann outlines Wittgenstein's view of the arbitrariness of syntax in Carnap's presence. Although Waismann does not use the word 'arbitrariness', this is hardly essential since conventions are something one can freely fix. As the date shows, this meeting took place well before Carnap's first formulations of the principle of tolerance, which Awodey and Carus date to October 1932 (2009, 79) [11]. As Carnap also reminisces, Wittgenstein's influence on the Vienna Circle came in two phases: 'The thinking of our Vienna Circle was strongly influenced by Wittgenstein's ideas, first because of our common reading of the *Tractatus* and later by virtue of Waismann's systematic exposition of certain conceptions of Wittgenstein's on the basis of his talks with him' (Carnap 1963, 28) [14]. Although Carnap does not mention any examples of Wittgenstein's influence in the second phase, we can presume that Wittgenstein's principle of the arbitrariness of syntactical statements would have been of interest to him. As Carnap's questions in the meeting also indicate, he was paying attention. But this suggests that Carnap did not only hear about Wittgenstein's account of syntactical statements as arbitrary conventions from Schlick 'now' in 1934. He knew of it from Waismann roughly a year and a half before the priority dispute of 1932 (in May–August) and before his first formulations of the principle of tolerance in October of that year.

That Waismann's source in the meeting attended by Carnap was Wittgenstein is evident from the clear echo of Wittgenstein's words in Waismann's exposition, for Wittgenstein himself had explained the point to Waismann and Schlick on 19 June 1930 in preparation for the Königsberg conference of September 1930, where Waismann was to speak about Wittgenstein's views. In this meeting, Wittgenstein explained his view of syntax as follows:

The truth in formalism is that every syntax can be conceived of as a system of rules of a game. [...] I want to say not only the axioms of mathematics but all syntax is arbitrary. [...] If I am asked, then, what it is that distinguishes the syntax of a language from the game of chess, I answer: It is its application and nothing else. [...]

The essential thing is that syntax cannot be justified by means of language. When I am painting a *portrait of you* and I paint a black moustache, then I can answer to your question as to why I am doing it: Have a look! There you see a black moustache. But if you ask me why I use a syntax, I cannot point at anything as a justification. You cannot give reasons for syntax. Hence it is arbitrary. Detached from its applications and considered by itself it is a game, just like chess (WVC, 103–105; my square brackets)<sup>12</sup> [8].

As this shows, Waismann was indeed speaking about Wittgenstein's views in the meeting with Carnap. Additionally, there could have been other occasions for Carnap to hear about Wittgenstein's principle of the arbitrariness of syntax, but no evidence to this effect is known to me. For example, although Carnap did attend the Königsberg conference, the arbitrariness of syntax does not come up in Waismann's talk. Nevertheless, Carnap travelled to Königsberg together with Waismann and Gödel, and the three likely conversed about logic. . .<sup>13</sup> Be this as it may, naturally, Wittgenstein also discussed relevant points in his notebooks before communicating them to others. On 4 March 1930, almost a year before the meeting with Waismann and Carnap, Wittgenstein wrote:

The conventions of grammar cannot be justified through the description of what is represented. Every such description already presupposes the rules of grammar. That is, what counts as nonsense in the justifying grammar cannot count as sense in the sentences of the grammar of the justifying sentences (MS 108, 108) [27].

The key point here is the same as in the explanation at Schlick's in June of that year and in the meeting attended by Carnap in February 1931: syntax or grammar cannot be justified with reference to what is spoken about because the description of what is spoken about already assumes the syntax or grammar that the description would allegedly justify. The presumed justification would thus be circular. This, of course, is the point of the moustache example and of what later becomes Wittgenstein's standard example to explain the point: the grammar of our colour words cannot be justified by claiming that there really are four primary colours (MS 113, 33v; February 1932) [27]. Syntax or grammar is therefore arbitrary, and in this sense freely chosen or stipulated, in contrast to the truth/falsity of statements. Another standard comparison for the later Wittgenstein is from this latter notebook, i.e., the comparison of the choice of grammar with the choice of a unit of measurement (cf. PI §131) [28]. Likewise, his favourite contrast case first appears here: unlike the rules of syntax, the rules of cooking are not arbitrary but rather depend on relevant facts (MS 133, 34r) [27]. For example, one cannot stipulate how many minutes an egg must be boiled in order to be soft but not runny.

Now, regardless of what Carnap heard about Wittgenstein's views and when, the similarities between Wittgenstein's principle of the arbitrariness of grammar and Carnap's principle of tolerance are striking, including Carnap's almost verbatim restatement in the foreword to the *Logical Syntax* of Wittgenstein's point that this point of view does not only apply to mathematics but to all logic (see previous quote from WVC). Whilst it remains a possibility that Carnap somehow dodged all the opportunities to hear about Wittgenstein's new account of syntax between December 1929 and autumn 1932, the preceding establishes that Wittgenstein's principle predates Carnap's first allegedly independent formulations of the principle of tolerance by roughly two and a half years (Wittgenstein starts speaking about syntactical sentences in November–December 1929; see MSS 107 and 108) [27].

Provided the evidence of Carnap's presence in the meeting where Waismann explained Wittgenstein's new account of syntax, other possible opportunities for Carnap to hear about it over the rather long period between Wittgenstein's introduction of his principle and Carnap's first formulations of tolerance, and 'Waismann's Theses' (see Section 3), Carnap's account of the origins of the principle of tolerance and his failure to acknowledge Wittgenstein seems odd. This is so especially because, unlike in the case of Carnap's partial belated acknowledgement of the *Tractatus*, this second failure of acknowledgement cannot be explained in terms of difficulties of interpretation, as one can more plausibly maintain about the *Tractatus*.<sup>14</sup> Neither are explanations in terms of problems of attention and memory likely, given the direct relevance of Wittgenstein's account of syntax for Carnap, and that the period between Wittgenstein's introduction of the principle of arbitrariness and the composition of the foreword of the *Logical Syntax* is only four years. Provided also that the meeting that Carnap attended took place before the 1932 dispute, the explanation can be excluded that Carnap felt too negative about Wittgenstein to pay attention to Waismann's expositions—whose significance to the Vienna Circle he acknowledges but



without specifying the topics discussed (see the earlier quote). So, what explains Carnap's claim that he only heard of Wittgenstein's principle of arbitrariness from Schlick in 1934?

Some clues can be found in the exchange of letters between Schlick and Carnap in 1934 that Thomas Uebel has described as 'what borders on a second priority dispute that Carnap had to weather' (Uebel 2009, 59) [29]. Although Uebel's formulation paints Carnap as a victim, this exchange of letters presumably arose from Schlick's honest reaction to reading the proofs of *Logical Syntax*, whereupon he wrote to Carnap: 'Wittgenstein has long been convinced of the possibility of an absolutely free choice of linguistic rules' (ASP, RC 029-28-13, quoted in Uebel 2009, 59) [29]. Schlick then asked Carnap to revise his 'acknowledgement' to Wittgenstein that Carnap, according to Uebel, had included in the book from Schlick's request. According to the original formulation, 'Perhaps [Wittgenstein's] view too is developing in the direction of the Principle of Tolerance' (Copy of typescript of the *Logical Syntax*, quoted by Uebel 2009, 59; my square brackets) [29]. In light of the preceding quotes, this statement is clearly misleading, and it is not surprising that Schlick found it problematic. (Likely Schlick wrote to Carnap because he knew that Carnap knew better; why else speak of a need for *acknowledgement*?)

Although Carnap, after some persuading, changed the just-quoted sentence that falsely speaks of an uncertainty about the direction of Wittgenstein's development, in general, this second exchange with Schlick seems to have gone similarly to the one from 1932. Again, Carnap insisted that the differences in his views from Wittgenstein's were more significant than the similarities. His attempt to justify this claim is peculiar enough to deserve a comment: Whilst admitting having read 'Waismann's Theses' that contains a whole section on syntax, including the explanation that syntax cannot be justified with reference to facts (quoted in Section 3), Carnap claims to differ from Wittgenstein in (1) not thinking that there is a decision procedure for deriving all logical truths, contrary to what the *Tractatus* had held about logical languages whose syntax is known, and (2) because Wittgenstein does not accept there to be hypotheses (ASP, RC 029-28-11 quoted in Uebel 2009, 60; cf. TLP 6.124–6.1251)<sup>15</sup> [6,29]. This is peculiar in that 'Waismann's Theses' includes no mention of the Tractarian view of the decidability of logical truths, but does include a long section on hypotheses (§8). Understandably, Schlick did not accept Carnap's explanations. In response, Carnap inserted the 'acknowledgement' now contained in the foreword of the *Logical Syntax* that still misleadingly implies his priority by using the device of indirect speech: 'Professor Schlick now informs me. . .'

Whatever explains the striking similarities between Wittgenstein's account of syntax from 1929 onwards and Carnap's account in the *Logical Syntax*, it is difficult to avoid the conclusion that Carnap never fully acknowledged either the *Tractatus* or Wittgenstein's work during the period of 1929–1932. Despite being urged to do so by Schlick, Carnap refused to do so not only once but twice. Perhaps Carnap really did not hear, pay attention to, or understand Waismann's expositions of Wittgenstein's view of the arbitrariness of syntax, and came up with essentially the same principle independently, implausible as this seems. However, in light of current evidence, there are too many unclarities about who knew and understood what to say anything definite besides establishing Wittgenstein's priority, and Carnap's reluctance to acknowledge him. To be fair to Carnap, it was of course difficult for him to discuss and explain the similarities and differences between his and Wittgenstein's views in the absence of any publications, even though 'Waismann's Theses' seem clear enough in this regard (see Section 3). Whatever the truth may be, however, ultimately, one can hardly speak of plagiarism in the case of tolerance, given the different ways in which Carnap and Wittgenstein develop their points. This illustrates the difficulty of plagiarism in philosophy. Stealing thoughts is difficult because one has to discuss and develop the thoughts in interesting ways oneself.

In order to further clarify relevant aspects of the relationship between Carnap's and Wittgenstein's philosophies of logic, I conclude with a discussion of their respective principles. Although I have no space to develop these points, this brings out certain possibilities

for the development of the philosophy of logic that seem to have remained ignored in the course of the development of analytic philosophy (see Kuusela 2019b for discussion) [2].

### 3. Expediency and the Truth of Logical Accounts

Despite there being no mention of the arbitrariness of logic, syntax, or grammar in the *Tractatus* or elsewhere in Wittgenstein's early work, his new conception of syntax is best understood as a further development of what the *Tractatus* calls his 'fundamental thought', rather than anything radically new. Wittgenstein's fundamental thought, in general terms, is that logic cannot be represented by means of true/false substantial/contentful/material propositions or theses (TLP 4.0312; see Kuusela 2021) [6,30]. As noted in Section 1, Wittgenstein's reason for this holding view is that any true/false propositions/theses already presuppose the logical rules governing thought and language, and therefore cannot clarify them. Neither can such propositions/theses justify logic.<sup>16</sup> Rather, logic can only be clarified or explicated, relying on the tacit comprehension of its rules that speakers/thinkers already have. Accordingly, the *Tractatus* seeks to clarify logic by introducing an improved version of Fregean–Russellian logical language whose purpose is to make perspicuous the logical rules that govern thought and language (Kuusela 2019b, chapter 2) [2].

From this perspective, it is easy to see how Wittgenstein's account of syntactical statements as conventional and arbitrary constitutes a further development of the *Tractatus*' view rather than being in 'opposition to' it, contrary to Carnap (Section 1). Importantly, this also brings out how Carnap's rejection of truth in philosophy for pragmatic considerations of expediency is not a consequence of his account of syntax as conventional or of the principle of tolerance. The justification for logical accounts depends on expediency rather than truth, in other words, is an independent thesis that can be rejected without any inconsistency with the rejection of metaphysical theses. The latter does not require the rejection of truth as the goal of logical/philosophical accounts. Strangely, however, Carnap does not provide any arguments for his pragmatism, as if this would follow directly from tolerance. To explain these points, let me begin with the *Tractatus*' account of the criteria of correctness for an account of logic.<sup>17</sup>

According to the *Tractatus*, '[...] we are in possession of the correct logical conception, when everything finally adds up in our symbolism [wenn nur einmal alles in unserer Zeichensprache stimmt]' (TLP 4.1213; my square brackets) [6]. An account of logic is correct, that is to say, when no anomalies arise for the logical language used to explicate the rules of logic. Examples of relevant problems are those affecting Frege's and Russell's logical languages due to their failure to distinguish clearly between the referential function of names and the representative function of propositions. Accordingly, the *Tractatus* dissolves Russell's problems of the possibility of false propositions and the unity of propositions, for instance (see Kuusela 2019a, 21–23) [33]. Another relevant problem is the regress of justification of logical inferences described by Lewis Carroll that arises when the axioms of logic are construed as true propositions employed as premises in inferences in the manner of Frege and Russell. This problem Wittgenstein dissolves by introducing an account of the justification of logical inference, whereby its justification depends on the logical features of the propositions involved in the inference instead of any additional propositions, axioms, or premises (TLP 5.131–5.132; Kuusela 2019b, 54–59) [2,6]. These examples illustrate Wittgenstein's account of the correctness of logical accounts in that, instead of depending on any claims about the correspondence of the account with alleged metaphysical facts pertaining to thought and language, the criterion of correctness for Wittgenstein's account of logic, and for his dissolutions of problems with Frege's and Russell's views, is the absence of problems (for the notion of Wittgensteinian dissolution, see Kuusela 2023b) [34]. Note, however, that this is not simply a coherence-theoretic view of the truth of logical accounts. The task is to explicate logic to those who already have a comprehension of it, as the *Tractatus*' readers can be safely assumed to be *qua* speakers/thinkers/readers.

Further, however, correct logical language is also expected to make possible the logical analysis of all sensible propositions. Herein lies the significance of the colour-exclusion

problem: it revealed the simplistic character of the *Tractatus*' account of the function of the logical connectives (see note 11). As Wittgenstein consequently concludes, the Tractarian truth-tables only accounted for part of the logical behaviour of propositions. "The rules for 'and', 'or', 'not' etc., which I represented by means of the T-F notation, are a part of the grammar of these words, but not *the whole* (PR §83; cf. MS 108, 52, January 1930) [27,35]. The *Tractatus* thus failed in its task, which Wittgenstein likewise characterized in terms of truth: 'That most simple thing which we ought to give here is not a simile of truth but the complete truth itself' (TLP 5.5563) [6]. What not merely providing a simile of truth means, I take it, is introducing a logical language that embodies the correct logical conception in itself, instead of being merely a representation of logic. Accordingly, as Wittgenstein explains at the end of the book, subsequent to adopting his logical language and throwing away his introductory elucidations, the reader who has understood him is expected to be able to see 'the world aright' (TLP 6.54) [6]. But although Wittgenstein's attempt to reject theses ultimately failed, it is noteworthy how very different his approach is from merely claiming that every proposition shares the general propositional form. No thesis can exclude unclarities and objections like designing a notation that would be capable of expressing every possible proposition, thus making plain that all propositions really do possess the general propositional form (cf. TLP 5.4541; see Kuusela 2019b, 67–72) [2,6].

Hence, in order for the *Tractatus* to have achieved its goal, everything would have had to add up in Wittgenstein's logical language. This was not the case. Nevertheless, as the preceding brings out, even though a logical calculus and languages more generally are not true/false about anything, it does not follow that logical accounts cannot be correct or true. What follows is that the truth of a logical account codified into the structure of a logical language or expressed in terms of syntactical/grammatical rules is not to be understood in terms of the truth of propositions or theses. An account of logic, in other words, cannot be justified as one would justify a thesis or a proposition, exactly as Wittgenstein's principle of the arbitrariness of grammar emphasizes. This point is also made in 'Waismann's Theses':

The rules of syntax are *rules dealing with signs* [Zeichenregel].

The difference between a rule dealing with signs and a statement is the following. In a proposition signs stand for things. A proposition speaks about reality by means of, or through, signs. It represents reality.

A rule dealing with signs, however, deals with signs themselves. Here signs aren't representatives of objects. That is the reason why a rule dealing with signs does not sketch out a picture of reality: it is neither true nor false. [...]

A rule dealing with signs is a stipulation about the use of signs. Hence it has a meaning only in the context of the notation used.

At first blush a rule dealing with signs looks just like a proposition. (This is why such a rule is frequently confused with a proposition.) (WVC, 240–241; my square brackets) [8]

As this makes clear, as long as syntactical sentences are not understood as substantial true/false propositions, their introduction does not contradict the *Tractatus*, but merely develops its position further. Accordingly, as argued in Section 1, Carnap's *Logical Syntax* is best understood as a further development of the *Tractatus* view like 'Waismann's Theses'. (Given that Carnap had read 'Waismann's Theses', in order to make sense of his denial of knowledge of Wittgenstein's principle of the arbitrariness of syntax, we must assume he did not understand the lines just quoted as the expression of Wittgenstein's principle of arbitrariness.) By contrast, if the reference point is Wittgenstein's views in 1932 instead of the *Tractatus*, it is clear that the *Logical Syntax* does not take a single step beyond Wittgenstein. Still, despite Wittgenstein having introduced the notion of arbitrary syntactical sentences well before Carnap, Carnap's different technical way of developing the point lends some support to the claim that he took the step independently or semi-independently.

There are also notable differences in how Carnap and Wittgenstein speak about syntax around 1929–1932. As emphasized by Wittgenstein’s and Waismann’s explanations in the 1930–31 meetings (see quotes in Section 2), the application of syntax distinguishes it from a mere game. This point Carnap misleadingly de-emphasizes, claiming in *Logical Syntax* that ‘[...] we have in every respect complete liberty with regard to the forms of language’ (LSL, xv) [16]. We do, if no attempt is made to use syntactical rules or systems to clarify anything. If we want syntax to be more than a mere game with signs, however, there is no complete liberty. As Wittgenstein explained to his students in 1931: ‘Is grammar arbitrary? Yes, in the sense just mentioned, that it can’t be justified. But it isn’t arbitrary in so far as it’s not arbitrary what rules I can make use of. Grammar described by itself is arbitrary; what makes it not arbitrary is its use’ (WL, 49; Lent term 1931; cf. 57, 86–87)<sup>18</sup> [37].

Carnap’s announcement of ‘complete liberty’ therefore seems to involve significant rhetorical exaggeration. Complete liberty only exists for idle syntactical systems that are not put to work to clarify the syntax of scientific languages or mathematical systems—or concepts such as meaning, language, truth, goodness, and freedom. Naturally, Carnap knows that this is an exaggeration, admitting later in the book that the choice of language is free only ‘in principle’ (LSL, 332) [16]. Accordingly, I merely want to point out a problem with his rhetoric. Carnap’s exaggeration of the alleged ‘complete freedom’ conceals the non-arbitrariness of syntax into opaque talk about expediency without balancing the point about arbitrariness with an explanation of the non-arbitrariness of syntax, contrary to Wittgenstein. Although expediency does leave freedom to design different syntactical systems to clarify the logical features of systems targeted for clarification, this is not the promised *complete* freedom that only exists for mere games with signs. Consequently, there is no ‘boundless ocean of unlimited possibilities’ either, unless Carnap’s logic of science is merely a matter of playing in the sea (LSL, xv) [16]. Now, certainly, rhetoric as misleading as this is very odd for a book that two pages earlier claims to enhance the clarity and exactitude of logic (LSL, xiii) [16]. What explains this? The following explanation suggests itself: stating the plain truth would have spoiled the contrast between Carnap’s view characterized by ‘complete freedom’ and the shackles allegedly put on logic by the dogmatic Wittgenstein.<sup>19</sup>

Misleading rhetoric and exaggeration aside, a related more serious problem is that Carnap does not have anything to say about the issue of why one syntax language might be more expedient than another, i.e., that this has to do with how the languages or symbol systems targeted for clarification actually work, i.e., with *facts* pertaining to their functioning and what is *true* about them. To leave all this unexplained inside the notion of expediency (and for historiographers to gesture towards the even vaguer notion of pragmatism) seems notably inferior to the clarity of Wittgenstein’s account that emphasizes both the arbitrariness and non-arbitrariness of syntax, thus making clear that not everything is a matter of convention and stipulation.<sup>20</sup>

I conclude with remarks on the different directions of the development of Carnap’s and Wittgenstein’s philosophies of logic up to 1934. With regard to the philosophical method, I take Carnap’s key insight to be, in the *Logical Syntax* and later, that the proper way to express logical and so-called metaphysical necessity is not true/false propositions or theses but rather the codification of relevant necessities into rules of syntax or the structure of a language. Accordingly, Carnap proposes to reconceptualise metaphysical disputes about the truth of competing theses as questions about the choice of language. As explained in Section 1, the view that logical necessity is structural to thought/language is the key insight of the *Tractatus*, and this presumably is where Carnap got it from (regardless of whether he realized it, cf. Section 1 and note 5). Like Carnap, Wittgenstein held onto this insight for the rest of his career. As he explains the point to his students in 1931: ‘To a necessity in the world there corresponds an arbitrary rule in language’ (WL, 57; cf. MS 110 from June 1931, 206–207; PI §§370–373) [27,28,37]. The proper way to express a logical or so-called metaphysical necessity, in other words, is a syntactical/grammatical rule. Importantly, this

view brings out how logical necessity and possibility are structural to thought/language, retaining the positive insight of the *Tractatus*' fundamental thought in this sense.

Nevertheless, this insight can also be construed simplistically, as Wittgenstein did in the *Tractatus*. This is how the *Tractatus* fell into dogmatism and relapsed to metaphysical theses, according to its author: it assumed its logical language to give expression to the correct logical conception and to truthfully reflect the logical structure of thought/language. In so assuming, however, it ended up representing thought/language in false dogmatic simplicity. What the early Wittgenstein failed to realize was that the Tractarian calculus was merely a model, a mode of representing the logical function of thought/language—and thus a simile of truth rather than the truth itself. In reality, the logical rules governing thought/language are much more complicated (PI §§22–23, 104, 114, 130–131; Kuusela 2008, chapter 3 and 2019b, chapter 4) [2,28,39]. In response and to address the problem of dogmatism, Carnap introduces tolerance. Wittgenstein's response is different and more consequential: he modifies his account of the employment of logical languages and syntactical/grammatical rules for the purpose of logical clarification. As he explained in 1934:

If we look at the actual use of a word, what we see is something constantly fluctuating.

In our investigations we set over against this fluctuation something more fixed, just as one paints a stationary picture of the constantly altering face of the landscape.

When we study language we *envisage* it as a game with fixed rules. We compare it with, and measure it against, a game of that kind.

If for our purposes we wish to regulate the use of a word by definite rules, then alongside its fluctuating use we set up a different use by codifying one of its characteristic aspects.

Thus it could be said that the use of the word "good" (in an ethical sense) is a combination of a very large number of interrelated games, each of them as it were a facet of the use (MS 140, 33/PG, 77) [27,40].

Logical calculi, syntactical/grammatical rules, and other clarificatory models, such as simple language games and real or made-up exemplary cases, therefore constitute what Wittgenstein later calls 'objects of comparison' (PI §§130–131) [28]. Instead of claiming that the expressions targeted for logical clarification really function according to the syntactical/grammatical rules or systems thereof employed to clarify their uses in the manner of the *Tractatus*, according to the later Wittgenstein, actual uses are to be compared with syntactical/grammatical rules (or other models) to clarify their specific aspects in response to particular logical or philosophical unclarities and problems. In this way, it is then possible to do justice to the complexity of actual uses of language (such as those of the word 'good' in an ethical sense) and to simplify without falsification by using models to bring into focus those aspects of use only that are relevant for addressing the particular problems at hand. (Different aspects or facets of the use of 'good', for instance, might be relevant for addressing different philosophical problems relating to moral goodness.) Moreover, besides making possible simplification without falsification, this method makes possible the simultaneous employment of different models to clarify complex uses (such as those of 'good'), because by merely comparing actual use with a logical model, no Tractarian-style claim is made about any model being *the* true model for how language functions. By contrast to such truth claims, it is possible to *compare* the uses of a word with different models without any contradiction. Accordingly, Wittgenstein does not reject the Tractarian account as false but gives it a new life as an object of comparison. Although the *Tractatus*' account of the functioning of the logical connectives was simplistic, it correctly accounted for some aspects of their use, as Wittgenstein says in the last quote from *Philosophical Remarks* (§83). Similarly, despite their simplistic character, the standard truth-tables continue to be used, even though they cannot explain all relevant cases, such as those giving rise to the colour-exclusion problem. This justification for their use is readily explained



by Wittgenstein's later method of simplification in logic, even though this point remains largely unrecognized.

Wittgenstein's solution to the problem of the dogmatism of the *Tractatus* thus differs from Carnap's, although, as Wittgenstein's solution helps to bring out, it remains ultimately unclear what exactly Carnap proposes. For example, when faced with the choice of language, are we to stick with the language of our choice in the relevant context of discussion or can we employ different languages simultaneously to clarify aspects of complex uses of language? If the former, what is the reason to think that metaphysical disputes will not simply be repeated at the level of disputes about the choice of language, given that expediency might not give any conclusive ground for choice? If the latter, how do we make coherent sense of the objects of study? No answer to these questions seems to be found in Carnap's work. Similarly, his account leaves unclear how the problem is addressed that actual uses might not conform to any definite rules but fluctuate between different uses/rules. For example, one might use the word 'good' within a single conversation to speak about the goodness of character, actions, and states of affairs, even though these 'things' arguably are good in different senses, as indicated by the different ways one may be held morally responsible for each. Or is Carnap exaggerating again, his method being merely a method for clarifying the features of calculi by means of other calculi, contrary to his claim of it being 'applicable to any language whatsoever', including the 'incredibly complicated word-languages'? (LSL, xiv, 8; cf. 5) [16]. As this and my other questions indicate, tolerance on its own does not get us very far. Yet, Carnap does not seem to have anything else to propose, even later on (Carnap 1950/1988) [41].

I conclude with a comment on the notion of truth as the goal of philosophy. Unlike Carnap, Wittgenstein does not reject the notion of truth as the goal of philosophy for expediency or pragmatic success. Rather, in response to the failure of the *Tractatus*, he modifies the Tractarian account of the correctness of logical accounts by relativizing the notion of correctness or truth of logical clarifications to particular problems and unclarity. In short, what might be the correct way to characterize a concept in response to a certain problem might not be the correct way to characterize it in response to a different problem about the same concept, whereby the correct or true account is the one that solves the problem or unclarity. This, of course, does not mean that what is true depends on what problems we have; only what it is relevant to say in response to a problem depends on our problems.<sup>21</sup> Nevertheless, the preceding implies that there might not be any generally correct way to characterize or account for a certain concept, such as goodness, but this depends on what exactly the problem or question is (cf. PI §§60–63) [28].

A key point then is this: although it might not be possible to account for how things are or what is true (for example, how a certain concept actually functions) in terms of a single logical language or grammatical model, it does not follow from the plurality of the linguistic means that we might have to employ to grasp what is true that truth is not singular. Rather, truth or how things are might sometimes be more complex than any particular mode of representing it or speaking about it can do justice to. Pluralism about logical languages and grammatical models is therefore perfectly compatible with the assumption that there is a certain way in which things are or how a linguistic expression or system functions and that the task of logic or philosophy is to clarify this. The arbitrariness of syntax/grammar and pluralism about logical languages and other models therefore does not imply the rejection of truth for expediency. Carnap, of course, does not draw the relativistic conclusion from the plurality of languages that truth depends on our means of thinking or that there is not such a thing as truth. But the point is that tolerance of logical languages and other modes of representation in logic does not imply that understanding truth ought not to continue to be the goal of philosophy. Although the relationship between what is the case and what is expedient is complicated, the following question remains for Carnap to answer: Does the success of clarifying something not have anything to do with the clarification capturing something about how 'things' are, including how the linguistic or symbolic systems targeted for clarification behave, that is, with the clarification getting something

right or saying something true about them? If the success of one logical clarification over another does depend on it getting things right, expediency seems a mere proxy for truth and truth remains the goal of philosophy.<sup>22</sup>

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## Notes

<sup>1</sup> Published in English as ‘Physics as a Universal Language’ (1934) [4].

<sup>2</sup> Wittgenstein’s marginal note occurs next to this sentence: ‘By distinguishing between the ‘formal’ and the ‘material’ modes, rejecting the pseudo questions which use of the latter provokes, proving the universality of physical language, and in the consistent application of the formal mode to the construction of syntax (only sketched in the present article) I have arrived at results which wholly confirm Neurath’s views’ (Carnap 1932, 452/1934, 74) [5]. A reader would be forgiven to assume that Carnap is the first to introduce the distinction between formal and material modes and the associated point that speaking in the material mode in philosophy risks nonsense. Note also that, even though Wittgenstein does not use the terms ‘material mode’ (inhaltliche Redeweise) and ‘formal mode’, but speaks of substantial (gehaltvol) true/false propositions (cf. TLP 6.111) [6] in contrast to logical clarifications that are strictly formal, this terminological difference is irrelevant to the dispute. If only terminology mattered, originality would be an easy matter of replacing the terms of an original philosopher with one’s own (Carnap’s term ‘pseudo-question’ (Scheinfrage) is evidently adopted from Wittgenstein who speaks of pseudo-concepts and pseudo-propositions (Scheinbegriff, Scheinsatz)). For other places (besides p. 452) where Carnap appears to be promoting the Tractarian conception of philosophy as his own, see Carnap 1932, 432–433, 435, 456. Kienzler (2008, 72) [5,7] agrees that the material–formal mode distinction is the main point for Wittgenstein.

<sup>3</sup> For the unfolding of the dispute, see Kienzler 2008 [7]. Another helpful contribution is Stern 2007. Although I agree about the need for acknowledgement from Carnap with Hintikka 1996 [10], my reasons are different, arising from a different *Tractatus* interpretation.

<sup>4</sup> For the justification of this interpretation, see Kuusela 2019b, chapter 3 [2]. I do not share the view of Awodey and Carus that the *Tractatus* account of philosophy is based on the so-called picture theory of language (Awodey and Carus 2009, 80, 90) [11]. Provided that the picture theory is nonsense by the *Tractatus*’ lights, the proponents of such an interpretation owe an explanation of how anything follows for logic and philosophy from nonsensical theses concerning language, the difficulty being that nothing logically follows from nonsense. As for the picture ‘theory’, I have argued elsewhere that this is best understood as a further clarification of the *Tractatus*’ notion of the general propositional form that explicates how propositions represent, and whose proper expression is Wittgenstein’s logical language, rather than any nonsensical ‘theses’ (Kuusela 2022) [12]. Later in the 1930s, Carnap adopts a similar approach that substitutes logically perspicuous linguistic constructions for theories (Carnap 1935, 292) [13].

<sup>5</sup> Kienzler (2008, 75–76, 79–80) [7] reaches a similar conclusion. See Stern (2007, 323) [17] on Wittgenstein’s perception of the similarity between his and Carnap’s work.

<sup>6</sup> This makes implausible Johannes Friedl’s suggestion, in contradiction with Schlick, that Wittgenstein’s plagiarism complaint was based on his failure to understand Carnap: ‘That Wittgenstein included the formal mode of speech in his accusations of plagiarism is bewildering, but maybe due in part to the fact that Carnap’s ideas concerning it became fully intelligible only in *Logical Syntax*’ (Friedl 2021, 284) [18].

<sup>7</sup> This is how the *Tractatus* avoids the alleged paradox of nonsensical theses about language and logic. Given that a paradox would clearly constitute a problem for a book on (the philosophy of) logic, the attribution of nonsensical theses to *Tractatus* ought to be the last resort of interpretation by the principle of charity, provided also that this interpretation directly contradicts Wittgenstein’s rejection of theses (TLP 4.112; cf. Kuusela 2023c) [3,6]. Unfortunately, Russell’s introduction to the *Tractatus* seems to have somehow legitimized the misconception that it contains a contradiction, despite Wittgenstein’s well-known reservations about the introduction (see TLP, 22) [6]. Notably, Wittgenstein himself never describes the *Tractatus* as suffering from a paradox, despite criticizing it extensively.

<sup>8</sup> As relevant notions are often introduced in the *Tractatus* through a series of remarks rather than by individual sentences (which makes no difference to the point), I have reformulated some remarks as simple sentences for illustration (only the last one is an actual quote).

<sup>9</sup> Wittgenstein’s prison is the conception that ‘The very nature of language [...] prevented us from ever stepping outside it’ (Awodey and Carus 2009, 88–89; my square brackets) [11].

<sup>10</sup> Benjamin Marschall has recently expressed the standard view thus: ‘In his *Logical Syntax of Language*, Rudolf Carnap develops an account of the nature of logic and mathematics that differs radically from the views of his predecessors and contemporaries [...].’

At the heart of *Logical Syntax* is the principle of tolerance, according to which we can freely adopt any system of logic we like without further philosophical justification' (Marschall 2021, 282; my square brackets) [22].

11 The colour-exclusion problem arises from the observation that not all contradictions can be explained truth-functionally in accordance with the Tractarian (and what has now become the standard) truth-tables. For example, although 'A is red all over and A is green all over' is not a formal contradiction, the conjunction is nevertheless false when both conjuncts are true, and thus does not conform to the usual logical rules for conjunction. The same problem arises for many physical magnitudes, for example, length, mass, temperature, speed, acceleration, and so on, and is therefore clearly relevant to science—and for anyone who, like Carnap, is concerned with the logical syntax of scientific languages. See Kuusela 2023a [23] for discussion of the colour-exclusion problem and the development of Wittgenstein's philosophy of logic.

12 The first sentence brings to view the influence of David Hilbert's metamathematical approach on Wittgenstein (*pace* Coffa 1993, 280–281) [26], which underlies the development of his later method of language games (WVC, 103; for relevant references to Hilbert by Wittgenstein, see Kuusela 2019b, 151–152) [2,8]. The method of language games extends logic beyond calculus-based logical methods, as indicated by the observation that although every calculus can be understood as a game according to rules, not every game is a calculus (Kuusela 2019b, chapter 5) [2].

13 I'm grateful to Christoph Limbeck-Lilineau for relevant historical information.

14 According to Coffa, Wittgenstein's explanation regarding the arbitrariness of grammar 'is an extraordinarily convoluted argument that makes one wonder what exactly was going through his mind' (Coffa 1993, 269) [26]. Why he thinks so is unclear, but it may be worth noting that what Wittgenstein says is not an argument to establish a truth of any thesis. It is an elucidation given for the purpose of introducing a concept of logic and accords with Carnap's requirement to 'give syntactical rules instead of philosophical arguments' (LSL, 52 quoted above; see the title page of 'Waismann's Theses' for the logical status of elucidations) [16].

15 As regards the decidability of logical truth, as the condition that we know the syntax of the language in question indicates, the *Tractatus* had assumed that there would be a decision procedure for establishing all logical truths in the case of artificial logical languages, although not colloquial language (TLP 5.557) [6]. This was more than ten years before Gödel's incompleteness theorem in 1931, whilst by the start of 1930, Wittgenstein had already abandoned any expectation of the decidability of logical truths by rejecting the assumption that language/thought constitutes a logical system (see Kuusela 2023a) [23]. As he writes on 1 January 1930, 'The concept of "elementary proposition" now generally loses its great significance' (MS 108, 52) [27]; see Kuusela 2023a, 67–71.) [23] Thus, although 'Waismann's Theses' still speaks of elementary propositions, Wittgenstein had already rejected them by 1930 in response to the colour-exclusion problem.

16 It is sadly ironic that the *Tractatus* has been read as a putting forward just the kind of metaphysical account and justification of logic whose eradication was its key aim, as exemplified by Awodey and Carus's interpretation (2009; see note 4) [11]. Arguably, it is not possible to correctly construe the relationship between the *Tractatus* and Carnap from the perspective of such metaphysical interpretations (cf. Kuusela 2019b, chapter 3) [2].

17 My interpretation contradicts the interpretation going back to van Heijenoort and embraced by Goldfarb, according to which the *Tractatus* denies the possibility of a metaperspective on logic (van Heijenoort 1967, Goldfarb 1982) [31,32]. Problematically, the van Heijenoort–Goldfarb interpretation rests on the ambiguity regarding the notion of logic. By logic one can understand 1) the rules of logic that govern thought/language or (2) accounts of logicians regarding the rules that govern thought/language. Whilst the *Tractatus* holds that it is not possible to transcend logic in the sense of (1), i.e., to go beyond thought/language by means of thought/language (of which van Heijenoort and Goldfarb are right), its explicit aim is to correct the errors of Frege's and Russell's accounts of logic in the sense of (2) by introducing a logical language that avoids the errors of their languages (TLP 3.325; see Kuusela 2019b, chapter 2) [2,6]. The van Heijenoort–Goldfarb interpretation thus fails to account for the very possibility of the Tractarian project.

18 Wittgenstein comments in lectures in 1934 and 1935 on the relationship of his 'speaking of more than one logic' with 'the view of C. I. Lewis and the Warsaw schools that there are many different logics', emphasising that the value of a logical calculus depends on it being employed to 'destroy prejudices' or to clarify the functioning of other calculi, as exemplified by the *Tractatus*' TF-notation whose point was 'to afford a translation of Russell's calculus, making clear the relations between the latter sort of calculus and its application' (AWL, 139) [36].

19 See Uebel 2009, 68–70 [29] for Neurath's contribution to Carnap's ocean imagery.

20 Gary Ebbs has argued against the received view of Carnap as a radical conventionalist who takes logic and language to be simply conventional, defending Carnap from Quine's criticism in 'Truth by Convention' (Ebbs 2011) [38]. The price for thus defending Carnap, however, is the trivialization of his position: of course, anyone can design a language any way they like if it is merely an extension of non-conventional natural language.

21 What is true cannot depend on our thinking, insofar as there is to be objective truth. Only what truths we can grasp depends on our thinking and the available instruments of thought, such as the languages, concepts, and other symbol systems we use (see Kuusela 2019b, chapter 6.6 for relevance, completeness, and the truth of logical accounts in light of Wittgenstein's later philosophy of logic) [2].

22 I'm grateful to Wolfgang Kienzler, Christoph Limbeck-Lilienau, Benjamin Marschall, and David Stern for their comments.

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