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*Carnap and the Tractatus' Philosophy of Logic*

This article discusses the relation between the early Wittgenstein's and Carnap's philosophies of logic, arguing that Carnap's position in *The Logical Syntax of Language* is in certain respects much closer to the *Tractatus* than has been recognized. In Carnapian terms, the *Tractatus'* goal is to introduce, by means of quasi-syntactical sentences, syntactical principles and concepts to be used in philosophical clarification in the formal mode. A distinction between the material and formal mode is therefore already part of the *Tractatus'* view, and its method for introducing syntactical concepts and principles should be entirely acceptable to Carnap by his own criteria. Moreover, despite the *Tractatus* rejection of syntactical statements, there is an important correspondence between Wittgenstein's saying/showing distinction and Carnap's object-language/syntax-language distinction: both constitute a distinction between logico-syntactical determinations concerning language and language as determined or described by those determinations. Wittgenstein's distinction therefore constitutes a precursor of the object-language/syntax-language distinction which the latter in a certain sense affirms, rather than simply contradicts. The saying/showing distinction agrees with Carnap's position also in marking logic as something that isn't true/false about either language or reality, which is a conception that underlies Carnap's principle of tolerance.

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# *Carnap and the Tractatus' Philosophy of Logic*

Oskari Kuusela

## *1 Introduction*

A characteristic feature of analytic philosophy—or at least one strand of it—has been the use of symbolic or formal logic as a philosophical tool. Given the methodological importance of logic for analytic philosophy, developments in logic and the philosophy of logic have played an important part in its development. A widely accepted part of the history of logic and analytic philosophy is a particular account of the relation between Wittgenstein and Carnap, and how Carnap in the 1930s overcame the *Tractatus'* condemnation of logic to silence through its distinction between saying and showing. Carnap's achievement was an important step in the development of the contemporary model theoretic conception of logic which then, so the story goes, left the *Tractatus'* philosophy of logic superseded. Arguably, however, this account of the Wittgenstein-Carnap relation doesn't do proper justice to the *Tractatus*. It fails to recognize important affinities between Wittgenstein's and Carnap's positions, and complexities in their relation. Appreciation of these is a reason to regard Carnap's approach as a particular development of Wittgenstein's, many key components of which were already present in the *Tractatus*, but not as superseding it in an obvious or straightforward way.

In Carnapian terms, the *Tractatus* seeks to introduce, by means of only apparently metaphysical quasi-syntactical sentences, syn-

tactical principles and concepts constitutive of a calculus designed for the purpose of philosophical clarification in the formal mode. Moreover, arguably, a key point of Wittgenstein's saying/showing distinction is to clarify the difference between logical or syntactical determinations concerning language on the one hand, and language as determined or described by such determinations on the other hand. But this means that there is an important correspondence between Wittgenstein's distinction and Carnap's distinction between object-language and syntax-language, and that Carnap's distinction in a certain sense affirms Wittgenstein's. Another point Wittgenstein seeks to clarify with the saying/showing distinction is the sense in which logic isn't true/false about either language or reality. (Rather, it underlies the making of true/false statements.) Again significant agreement emerges between the two philosophers in that Carnap's principle of tolerance assumes as its basis the idea that logic isn't true/false about anything. Still, however, Wittgenstein doesn't conclude from logic not being true/false about anything that we couldn't talk about correctness in logic. His conception of correctness in logic will be discussed in conclusion to the essay.

Despite emphasizing the affinities between Wittgenstein and Carnap, this essay isn't meant to suggest that there wouldn't be very important differences between their views. Rather, it intends to reveal complexities in their relation that remain hidden on a traditional interpretation of the *Tractatus*, one that takes its purpose to be to put forward paradoxically nonsensical theses about logic and language. These complexities emerge if we part with that interpretational idea (for the contrast of interpretations, see note 6). This alternative way of understanding the Wittgenstein-Carnap relation might then also help us to think about their differences in new fruitful ways, although this isn't my focus here. Let's start from the generally acknowledged agreements between Carnap's and the *Tractatus'* positions.

## 2 *Logic as Syntax: Carnap's Departure*

Carnap describes Wittgenstein's influence on him as follows:

For me personally, Wittgenstein was perhaps the philosopher who, beside Russell and Frege, had the greatest influence on my thinking. The most important insight I gained from his work was the conception that the truth of logical statements is based only on their logical structure and the meaning of the terms. Logical statements are true under all conceivable circumstances; thus their truth is independent of the contingent facts of the world. On the other hand, it follows that these statements do not say anything about the world and thus have no factual content [Carnap, 1963, 25].

The Tractarian conception of logic described in this quote is the common basis for both Carnap's and Wittgenstein's philosophies of logic.<sup>1</sup> Part of this conception of logic as tautological and contentless is a conception of logic as syntax, according to which logical relations are syntactical relations determined by the rules of logical syntax. This is to regard syntactical rules as determining, not merely what sentences can be constructed out of subsentential constituents, but also the inferential relations between propositions or sentences. Thus, logic becomes a study of the formal or structural characteristics of language determined by logico-syntactical rules, or to put the point in a more Wittgensteinian idiom, a study of the logico-syntactical employments of signs in language. (See [Carnap, 1967, 2], [Carnap, 1963, 54], [Wittgenstein, 1951, 3.32-3.328, 3.334, 6.12].)<sup>2</sup>

This doesn't mean that there wouldn't also be important differences between Wittgenstein's and Carnap's views of syntax. Whereas Carnap adopts a Hilbertian formalistic conception of logical syntax as rules that apply to uninterpreted signs or characters in the sense of, for example, ink marks on a page, or to abstract patterns

of such marks interpreted as logical structures, for Wittgenstein only signs with a meaningful use have a syntax or logic, and logic for him presupposes the meaningfulness of language. Accordingly, the term 'symbol' means something quite different for each philosopher: a meaningless sign vs. a sign with a meaningful use. Still, however, Wittgensteinian syntax isn't concerned with meanings, but rather with forms that make the expression of meaning possible, and it is established without any reference to meanings [Carnap, 1967, 1, 5, 6, 282], [Wittgenstein, 1951, 3.33, 3.344, 6.124].

On Wittgenstein's view, logic, therefore, has a connection with reality that is absent in Carnap. While Wittgenstein is happy (in a manner reminiscent of Russell) to talk about the logic of objects and facts, i.e. regards them as possessing a logical structure insofar as they are the object of true/false representation, and speaks of logic as offering an insight into the nature of reality, there is no place for such talk on Carnap's account. (See [Wittgenstein, 1951, 2.012, 5.511, 5.5521, 5.555, 5.61, 6.124, 6.54]) This is connected with another important difference: Whereas logical considerations for Wittgenstein are characterized through their special status (logical possibility and necessity can't be expressed in terms of factual statements, but logic 'shows itself'; see below), Carnap seems to identify logical/syntactical considerations by reference to their object (logic is concerned with the syntactical rules of language). However, the difference that logic for Wittgenstein is also the logic of reality isn't relevant for the argument developed here about the Wittgenstein-Carnap relation. What is relevant is that both treat logical analysis as the way to deal with philosophical problems understood as logical confusions or unclarities, and that such a conception of logic and philosophy requires them both to have a method for the introduction of logico-syntactical concepts and principles to be employed in logical analysis. Without such a method the respective projects wouldn't get off the ground at all.

Despite Carnap's fundamental agreement with Wittgenstein that logic is concerned with syntax or the structural or formal character-

istics of language, there are also aspects of Wittgenstein's account of logic that Carnap finds problematic. Wittgenstein's view, he maintains, leaves no room for speaking about syntax or the logic of language, but according to it, "syntax cannot be expressed at all" [Carnap, 1967, 53]. On these grounds Carnap then regards Wittgenstein's position as "certainly very unsatisfactory" [Carnap, 1967, 283]; cf. [Carnap, 1934, 8]). Behind Carnap's dissatisfaction lie issues about the methodology of logic and philosophy. As he explains: "[...] a book on logic must contain, in addition to the formulae, an expository context which, with the assistance of the words of ordinary language, explains the formulae and the relations between them; and this context often leaves much to be desired in the matter of clarity and exactitude." Given Carnap's recognition that "[...] in this context is contained an essential part of logic [...]", "[...] the important thing is to develop an exact method for the construction of these sentences about sentences." Accordingly, the purpose of his book is to: [...] give a systematic exposition of such a method, namely, of the method of "logical syntax" [Carnap, 1967, xiii]; cf. [Carnap, 1963, 55]. Assuming the use of the relevant kind of symbolic languages as tools of logical analysis, the point can also be expressed thus: "The aim of logical syntax is to provide a system of concepts, a language, by help of which the results of logical analysis will be exactly formulable." [Carnap, 1967, xiii]; cf. [Carnap, 1967, 7].

Because Carnap regards logical analysis as the method that a scientifically respectable philosophy must adopt, questions about the nature and methodology of logic are of the greatest significance also in this sense. "The part of the work of philosophers which may be held to be scientific in its nature [...] consists of logical analysis." [Carnap, 1967, xiii]; cf. [Carnap, 1967, 279]. And as he intends to show: "[...] all philosophical questions which have any meaning belong to syntax" [Carnap, 1967, 280].<sup>3</sup> Thus, questions about the nature of logic and logical analysis are simultaneously questions about the nature of philosophy, whereby the idea is

that the adoption of the point of view of logical syntax in philosophy would make it possible to formulate philosophical questions and statements in an exact manner, enabling one to sidestep the inexactitude of natural language. Consequently, Carnap believes, philosophers could avoid the discussion of mere pseudo-problems, such as the questions of metaphysics. Philosophy would become more fruitful in that pointless disputes, that in the garb of traditional philosophical vocabulary appear to concern the nature of relevant objects but really concern the choice of appropriate forms of language for particular tasks, could be set aside. We could then focus on questions about the choice of language without the distraction of disputes about who is right or wrong, given that the choice of a language is a matter of expediency, not truth or falsity [Carnap, 1967, 277-281].

Thus, Carnap seeks to spell out a conception of philosophy as logical syntax, according to which, *pace* Wittgenstein, the statements of philosophy are statements of logical syntax. Here it is crucial that he believes to have found a way to formulate syntactical sentences that aren't "senseless, if practically indispensable, pseudo-sentences, but [...] perfectly correct sentences" [Carnap, 1967, 283]. For this purpose Carnap adopts a Hilbertian metamathematical point of view which allows for the formulation of statements about logical forms and the syntax of an object-language in a meta- or syntax language, whereby syntactical sentences concerning the logical characteristics of the object-language are understood as sentences of a syntax-language. Consequently, it also becomes possible to give logico-syntactical and philosophical statements an exact formulation. According to Carnap, it is "[...] just as possible to construct sentences about the forms of linguistic expressions, and therefore about sentences, as it is to construct sentences about the geometrical forms of geometrical structures" [Carnap, 1967, 282, 283]. This possibility, he believes, Wittgenstein's position excludes, because there is no exact formulation for nonsensical pseudo-sentences, which he takes Tractarian sentences to be

[Carnap, 1967, 284].

Here Carnap clearly believes to have made advances over the *Tractatus* by finding a way to formulate exact syntactic statements. As he notes about Wittgenstein, “If I am right, the position here maintained is in general agreement with his, but goes beyond it in certain important respects” [Carnap, 1967, 282]. In the history of analytic philosophy this Carnapian account of the Wittgenstein-Carnap relation has become widely accepted. According to it, merging influences from Hilbert, Gödel and Tarski, Carnap managed to overcome the limitations of the Wittgensteinian position, i.e. the silence imposed on logic by Wittgenstein’s saying/showing distinction, according to which, it is impossible to speak about the logical characteristics of language, and the conjoined conception of philosophy as consisting of nonsensical elucidatory statements. To borrow words from recent characterizations of the Wittgenstein-Carnap relation, by breaking out of “Wittgenstein’s prison” Carnap went from “slave to master” developing a “radically different” approach [Awodey and Carus, 2009, 88-91, 93] that in the respects just described is in “outright contradiction” with Wittgenstein [Wagner, 2009, 190] or “radically transforms” the *Tractatus*’ conception [Friedman, 1999, 168]. Consequently, Wittgenstein’s view was superseded by what is now known as the model theoretic conception of logic, characteristic of which is a distinction between an object- and a meta-language (corresponding to Carnap’s syntax-language), where the latter is a medium for statements about the logical characteristics of the former. This view of Carnap’s achievement finds an early expression in the reviews of the *Syntax* by Nagel and Quine in 1935 who seem to have simply accepted Carnap’s account of his relation to Wittgenstein. Perhaps this partly contributed to Carnap’s account becoming engraved into the history of analytic philosophy.

Arguably, however, Carnap’s departure from Wittgenstein is in certain ways less radical than it might seem, and a more balanced account of their relation is called for. The question may even be raised, whether what Carnap says about the *Tractatus* in the *Syntax*

partly reflects a need to emphasize the originality of his own position at Wittgenstein’s expense. This question arises in particular in connection with a priority dispute between Wittgenstein and Carnap in 1932. Let’s begin by examining what Wittgenstein says about the relation in the context of this dispute as a clue to the interpretation of the *Tractatus*’ perspective on the issues.

### 3 *The Wittgenstein-Carnap Plagiarism Affair*

A dispute arose between Wittgenstein and Carnap in connection with Carnap’s article “*Die Physikalische Sprache als Universal-sprache der Wissenschaft*”, whereby Wittgenstein accused Carnap of plagiarism. One reason for the accusation was that in his article Carnap presents as the methodological framework for his discussion, apparently without any acknowledgement, the Tractarian conception of philosophy, according to which philosophy is the logical clarification or analysis of language that dissolves misunderstandings but doesn’t put forward any true/false contentful statements of its own. Rather the propositions of logic are tautologies. According to this view, the kinds of misunderstandings that philosophy clarifies find their expression especially in metaphysical propositions and philosophical pseudo-questions, but are avoidable through the use of a formal language [Carnap, 1932, 432, 433, 435, 452, 456]. There is no doubt that this conception of philosophy is first spelled out in the *Tractatus*, and that Wittgenstein was, at least to this extent, justified in his claim that Carnap had used his work without due acknowledgement. Of course, this conception of philosophy constitutes the core of Carnap’s own approach too, and in the *Syntax* he explicitly attributes it to Wittgenstein (see [Carnap, 1967, 282-284]). It was apparently also meant to be, in some form, part of the collaborative book Wittgenstein and Friedrich Waismann were working on at the time, which may have been part of Wittgenstein’s reasons for raising the issue.<sup>4</sup> Nevertheless, in the form just stated, the Wittgensteinian conception of philosophy is abstract enough to

be compatible with the details of both his and Carnap's different views on logic. Thus, it doesn't help to decide how significant a departure Carnap's metamathematical conception is from Wittgenstein's.

More interesting in this regard is Wittgenstein's statement to Schlick in connection with the affair that I'll use to reconstruct Wittgenstein's view of the situation: 'That Carnap, when he is for the formal and against the "material mode of speaking" ["inhaltliche Redeweise"], doesn't take a single step beyond me, you know well yourself; and I can't believe that Carnap should have so completely misunderstood the last sentences of the *Tractatus*—and so the fundamental idea of the whole book' (Wittgenstein [2004] letter to Schlick 8.8.1932). Intriguingly, when Wittgenstein says that in promoting the formal mode as opposed the material mode as the correct way of speaking in philosophy Carnap isn't taking a single step beyond him, he seems to regard as a non-essential side issue what for Carnap is the most important point, i.e. the possibility of formulating syntactical statements and the identification of correct philosophical statements with such statements. For although Carnap had not in 1932 spelled out the method of logical syntax to the full extent he was to in the *Syntax*, the conception that philosophical statements proper are "metalogical sentences" that speak about "the forms of language" is an explicit part of his introduction of the distinction between material and formal mode in the article [Carnap, 1932, 435]. Given that Wittgenstein clearly read the pages that introduce the material/formal mode distinction, he must have also been aware of Carnap's view that there are syntactical statements. So, how could he treat it as inessential, i.e. as not constituting a significant difference between their positions?

Regard, first, the issue of the *Tractatus* promoting the formal mode as the proper way to talk in philosophy. In his book Wittgenstein characterizes as "the only strictly correct" method the following: "To say nothing except what can be said, [...] 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 propositions" [Wittgenstein, 1951, 6.53]. What such demonstrations and the strictly correct method amount to is, arguably, the following.<sup>5</sup> The strictly correct method is a method of logical analysis in terms of a symbolic notation or a concept-script, whereby the logical, syntactical or formal properties of logically unclear expressions are clarified by translating them into a logically perspicuous notation. Thus, the formal characteristics of logically unclear expressions can be clarified through their transformation into a logically more perspicuous form. This constitutes a formal mode of speaking in the sense of Carnap's 1932 paper in that here the object of discourse is the expressions uttered by the interlocutor, not their meanings or what they talk about, and the objective of the discourse is the clarification of the forms or syntactical properties of the expressions [Carnap, 1932, 435, 436].

With regard to this interpretation of 6.53, two points are important. Firstly, the use of such a notation is just how the *Tractatus* proposes we should seek to get rid of philosophy's "fundamental confusions" [Wittgenstein, 1951, 3.324]: "In order to escape such errors, we must employ a sign-language that excludes them [...] that is to say, a symbolism that is governed by logical grammar—by logical syntax" [Wittgenstein, 1951, 3.325]. Secondly, by sticking to rewriting or translating the interlocutor's statements into such a symbolism a philosopher would be saying nothing except what, according to the *Tractatus*, can be said. In particular, she wouldn't be making any contentful philosophical statements of her own, exactly as Wittgenstein characterizes the strictly correct method in 6.53. (Translating is logically distinct from asserting.) Indeed, this method of translating/rewriting, as I'll explain shortly, is just how Wittgenstein says we can talk about formal properties and concepts, when explaining why such properties and concepts can't be the object of true/false representational statements. (See [Wittgenstein, 1951, 4.122, 4.126] and section 5 below.) In Carnapian terms, the employment of this strictly correct method consists of nothing but

speaking in the formal mode and of statements of translation.

Evidently, it is therefore central to the *Tractatus*' outlook to promote the formal mode of speech as the correct way of speaking in philosophy. Nevertheless, this still doesn't justify Wittgenstein's claim that Carnap doesn't take a single step beyond his position. After all, the novelty of Carnap's view is the possibility of statements about syntax, and of introducing syntactical concepts and principles in this way. However, in this regard it is important to observe the following. Clearly, the employment of Wittgenstein's method of clarification in terms of a symbolic notation presupposes that a relevant kind of notation has been introduced, and that we have in our command relevant principles and concepts of logical syntax in whose terms logical analysis is to be carried out. Thus, unless his claims about philosophizing in the formal mode are a mere daydream, he must hold that the *Tractatus* has introduced relevant concepts and principles to be employed in analysis, and that it has a way to do this. As I'll explain in section 5, this introductory work is done in the *Tractatus* by means of elucidatory statements that Wittgenstein says are ultimately to be understood as nonsensical (cf. [Wittgenstein, 1951, 6.54]). But insofar as this is a possible way to introduce syntactical concepts and principles, then Carnap's method of logical syntax constitutes simply an alternative way to achieve the same purpose. Carnap's way to set up a symbolic notation is to state definitions in the syntax-language; Wittgenstein uses for this purpose the Tractarian elucidations.

As I argue more specifically in section 5, the *Tractatus* can be understood as employing for the introductory purpose the so-called material mode, i.e. what Carnap calls "quasi-syntactical" or "pseudo-object" sentences. And, importantly, as Carnap explains in both the 1932 paper (p. 456) and the *Syntax*, to employ the material mode for such a purpose is perfectly acceptable, as long as caution is exercised to avoid confusions. Nevertheless, here Carnap's understanding of the relation of his project to Wittgenstein's doesn't seem entirely secure. While suggesting in the *Syntax* that the *Trac-*

*tatus* could be beneficially read as just described, Carnap nevertheless contends that this isn't the intended interpretation. His failure to appreciate that this *is* the intended reading may then plausibly be taken to be what Wittgenstein refers to in the letter to Schlick, when expressing his disbelief that Carnap had not comprehended the fundamental idea of the book. But still, if we assume the interpretation I'm proposing, with his suggestion to interpret the *Tractatus*' sentences as quasi-syntactical, Carnap seems to have come very close to understanding the book as the logical treatise its title claims it to be, rather than a bizarre metaphysical opus that paradoxically denies the possibility of its own theses, as traditional interpretations of the *Tractatus* have read it.<sup>6</sup> Not realizing or acknowledging that this could be the intended reading, Carnap misconstrued the relation between his position and Wittgenstein's.

Given this sketch of Wittgenstein's perspective, let's now turn to the details. In the three following sections I explain how and why Carnap's criticisms of the *Tractatus* miss their target, and argue for the acceptability of Wittgenstein's way of introducing syntactical concepts and principles by Carnap's own criteria. Sections 7 and 8 then examine the Wittgenstein-Carnap relation from the point of view of the saying/showing distinction, discussing also certain differences between their positions.

#### 4 *The Possibility of Speaking about Syntax*

The senses in which, according to the *Tractatus*, it is and isn't possible to speak about syntax require clarification. With regard to this, Carnap maintains that Wittgenstein has wrongly sentenced philosophy to silence through his view that logic or syntax is inexpressible. Carnap speaks in this connection about Wittgenstein's two negative theses (although their relation remains somewhat unclear). The first thesis pertains to Wittgenstein's distinction between saying and showing: 1) According to it, "there is no expressible syntax", because logic (logical form, syntax) can't be represented in state-

ments, but only shown [Carnap, 1967, 282]. The second thesis concerns Wittgenstein's conception of philosophy: 2) According to it, [...] the logic of science ("philosophy") cannot be formulated', i.e. philosophy isn't a theory but an activity of clarifying statements that doesn't result in any statements of its own. "According to this, the investigations of the logic of science contain no sentences, but merely more or less vague explanations which the reader must subsequently recognize as pseudo-sentences and abandon" [Carnap, 1967, 283]. But this Carnap regards as "certainly very unsatisfactory" (Ibid). It results in lack of exactitude and leaves the difference between Wittgenstein's elucidations and nonsense produced by metaphysicians entirely unclear: "[...] he draws no sharp line of demarcation between the formulations of the logic of science and those of metaphysics" [Carnap, 1967, 284]. Arguably, however, Carnap misunderstands Wittgenstein on both counts.

Firstly, it is crucial that Wittgenstein only denies that syntax is expressible in terms of contingently true/false representations or assertions, not in every possible sense of "to express" or "to speak". As he says: "We can speak in a certain sense about formal properties [...] and in the same sense about formal relations [...] or in the case of facts, about internal as opposed to contingent external properties and relations]. It is impossible, however, to assert by means of propositions that such internal properties and relations obtain: rather this makes itself manifest in the propositions that represent the relevant states of affairs [...]" [Wittgenstein, 1951, 4.122; my square brackets]; cf. [Wittgenstein, 1951, 4.124]. A further remark on the theme of 4.12 makes a parallel point about formal concepts: "In the sense in which we speak of formal properties we can now speak also of formal concepts" [Wittgenstein, 1951, 4.126]. Evidently, Wittgenstein therefore isn't denying the possibility of speaking about formal concepts and properties as such. More specifically, this means that in cases where formal properties don't readily manifest or show themselves, but natural language obscures or disguises them, we may need to make them manifest through the transforma-

tion of expressions, i.e. by translating the expressions into a logically perspicuous notation. Hence, a sense in which we can, according to Wittgenstein, speak about formal or syntactical properties is by doing logical analysis by means of a symbolic notation. Accordingly, the results of such analyses aren't presented in the form of propositions about logic or syntax — either true/false contingent assertions or nonsensical metaphysical sentences — but by means of the expressions of the symbolic notation. Although distinct from assertion, analysis as the transformation of expressions (translation, rewriting) constitutes a perfectly respectable mode of language use.<sup>7</sup> This is just what Wittgenstein understands by the "strictly correct method of philosophy" characterized earlier.

A second way to speak about syntax (also already referred to above) is the introduction of syntactical concepts and principles governing the logically perspicuous notation to be used for the purpose of logical analysis. Such concepts and principles—for example, that logical connectives don't stand for logical objects [Wittgenstein, 1951, 4.0312] or the notion of a general propositional form (see below)—Wittgenstein seeks to introduce by means of sentences that his reader is expected to come to recognize as nonsensical. Thus, this way of speaking about syntax seems to correspond to what Carnap understands under the second negative thesis, i.e. the conception of philosophy as an elucidatory activity by means of statements to be ultimately abandoned. Contrary to what Carnap assumes, however, such elucidatory statements aren't simply "pseudo-sentences". As I'll shortly explain, they can be understood as Carnapian pseudo-object sentences or quasi-syntactical sentences (or something very close to such Carnapian sentences). But however exactly the role of the *Tractatus'* nonsensical sentences is characterized in Carnapian terms, in order to grasp the nature and purpose of Tractarian elucidatory sentences it is important that ultimately the expression for relevant syntactical concepts and principles (or logical insights) isn't the nonsensical sentences themselves, but the notation that the sentences are used to introduce. This symbolism is

the proper expression of these concepts and principles. As Wittgenstein says (in a remark from 1929) “The notation is the last expression of a philosophical view” [Wittgenstein, 2000, Ms105, 12].<sup>8</sup> I’ll return to this point presently, but first a brief explanation of how Wittgenstein thinks assertions or theses about essences or necessary features fail as expressions of the kind of necessity and exceptionless generality or universality that logic is concerned with. (According to Wittgenstein, Russell’s logic involves a confusion about this distinction between generality in logic and accidental factual generality that makes logic look too much like a natural science; see [Wittgenstein, 1951, 6.111, 6.1232].)

Assume (for the sake of the explanation) that it is indeed of the essence of propositions that every possible proposition is a contingently true/false representation of a state of affairs, i.e. all propositions universally and necessarily have this form (cf. [Wittgenstein, 1951, 4.5, 5.471]). The problem with expressing this conception in the form of a thesis is that such an expression always seems to leave open the possibility of asking whether what is asserted really is the case. A thesis, in other words, fails or misleads as an expression of necessity and universality, because it makes it look like the statement concerned a very general fact (such as all propositions having a particular form) which, even if it did hold for all cases, did so ultimately accidentally, given it makes sense to wonder whether it does always hold. By contrast, imagine now a notation or a language in which the only possible way to express a proposition is in a form that makes obvious that expressions of this type are true/false representations. In this notation it would be impossible to think of propositions as anything else than true/false representations, or to raise the question whether they all really are that, because there would be no other way to express a proposition except in that form. Thus, this notation—assuming that it would be the logically correct notation—would make clear that all propositions are, universally and necessarily, true/false representations.<sup>9</sup>

This is, roughly, how Wittgenstein envisages the proper expres-

sion of logical necessity and generality. In the logically perspicuous notation the generality of logical categories or types is expressed by means of variables so that, for example, all propositions are presented as substitution instances of a propositional variable (see section 5 for discussion). In this way the notation exhibits in its very design that such and such is a necessary and universal feature of a particular type of expression. Natural language, of course, falls short of the logical perspicuity of the envisaged notation, and theses fail as expressions of logical generality and necessity, as just explained. Nevertheless, it is still possible to convey the idea of such a notation and its concepts and principles by means of assertions or theses. Such statements are, so to speak, a first approximation towards the proper mode of expression which is the notation itself. This is (albeit only illustratively) the function of Wittgenstein’s elucidatory sentences.

Wittgenstein’s nonsensical sentences therefore are used only “transitionally” to introduce the concepts and principles constitutive of a logically perspicuous notation.<sup>10</sup> Here it is crucial that, once the reader throws away these explanations, she isn’t simply left with nothing, as would be the case with metaphysical nonsense where the apparent insights have no other expression than the theses themselves. By contrast to metaphysical nonsense, Wittgenstein can afford his nonsense precisely because there is another proper expression for his logical views, i.e. the notation that embodies these views. What the reader who has understood Wittgenstein then is left with, once they discard the explanations, is the comprehension of the principles and concepts of the notation thus introduced, i.e. how the *Tractatus*’ logical insights find their expression in this notation, and how language is to be analyzed in its terms.<sup>11</sup> For Wittgenstein it is therefore not the (apparent, nonsensical) theses themselves, but the notation whose principles they explain, that carries the philosophical weight, for example, of being tested for correctness. (For Wittgenstein’s conception of correctness in logic, see section 8.)

Hence, we can conclude that it isn’t Wittgenstein’s view that

“syntax cannot be expressed at all” or that it can only be presented by means of pseudo-sentences indistinguishable from metaphysical nonsense. *Pace* Carnap, Wittgenstein’s position does allow for the exact formulation of syntax by means of the expressions of a logical notation which can be employed to make syntax manifest, even though he rejects the idea that syntax, logic or logical forms can be represented by means of contingently true/false propositions. Moreover, contrary to what Carnap maintains, Wittgenstein’s nonsense can be clearly demarcated from metaphysical nonsense by reference to the function it serves, i.e. the introduction of syntactical concepts and principles. For, however the purpose of traditional metaphysical statements has been understood, it hasn’t been as the introduction of concepts and principles of a logical notation regarded as the proper expression of relevant logical insights, which then enables us to philosophize in the formal mode. This seems a genuinely novel idea due to Wittgenstein. Moreover, while nonsense as such is neither exact nor inexact, Wittgenstein uses it for a specific introductory purpose that provides us with something that can be measured for exactness: the exactitude of his logical views can be determined by reference to the notation that is their proper expression. An example of a shortcoming in exactness would be that the notation blurs important logical distinctions, giving rise to confusions or paradoxes, and so on, as a result.

## 5 *Wittgenstein and the Quasi-Syntactical Mode*

With respect to the question of how exactly Wittgenstein’s method for the introduction of syntactical concepts and principles relates to Carnap’s method of logical syntax, what Wittgenstein is doing in the *Tractatus* might be described in Carnapian terms in the following way. (I’ll discuss certain complications in section 6.) Mostly the book is concerned to introduce and spell out syntactic concepts and principles by speaking in a metaphysically sounding manner reminiscent of Carnapian quasi-syntactical sentences in the material

mode of speech: Wittgenstein proceeds as if making true/false metaphysical assertions about language or what language speaks about, while he is really concerned to introduce syntactic principles and concepts constitutive of his notation. I’ll give two examples to explain this.

i) When in the beginning of the *Tractatus* Wittgenstein states that the world is a totality of facts, not things [Wittgenstein, 1951, 1.1], he is saying that, from the point of view of his logically perspicuous notation this is just what the world is: when regarded as the object of true/false representation it is a totality of obtaining states of affairs, where objects figure only as the constituents of states of affairs, not independently. Accordingly, as he fills in the details of his account of representation and language, the logical role of names is similarly subordinate to the task of representation as things are subordinate to states of affairs. Like objects are constituents of states of affairs, so names, whose logical function is to stand for objects, are constituents of true/false propositions that, through the arrangement of names in them, represent possible states of affairs. Thus Wittgenstein’s apparently metaphysical account of the nature of reality is really a component of an account of language and thought as true/false representation of reality, proper expression of which is his notation. The core of this account is an idea of representation and reality possessing an identical logical structure, first described in the book by reference to reality.<sup>12</sup> The point is that what looks like a metaphysical account of the nature of reality and representation is really a way to explain the principles of a notation or a logical system. Stated in a summary fashion, this is a calculus that treats complex propositions as analysable truth-functionally into elementary propositions that are contingently true/false representations of reality, and on their part further analysable at a sub-sentential level into concatenations of names that stand for objects. That, Wittgenstein believes, gives us the proper framework for the analysis of language.

ii) When introducing the core syntactical concept of his nota-

tion, the general propositional form, i.e. the notion of elementary propositions as contingently true/false representations that can enter into truth-functional relations, Wittgenstein again speaks as if he were stating a metaphysical thesis about the essence of language. As he also explains, however, the general propositional form is a logical constant, a constant form or a formal characteristic shared by all propositions that in the logically perspicuous notation is represented by a variable [Wittgenstein, 1951, 3.31-3.313, 4.5, 4.53, 5.47-5.472, 6]. But this means that this formal characteristic can't be the object of theses. That mode of expression fails to distinguish the generality of the notion of general propositional form from the merely accidental generality of general facts, as explained in section 4. Rather, the correct expression for the view that propositions possess the general propositional form is the rendering of all propositions in the relevant way in Wittgenstein's notation, i.e. as possessing the relevant form so that every possible proposition can be understood as a substitution instance of the propositional variable.

Again, therefore, what Wittgenstein says is to be understood as a particular way of introducing logical or syntactical notions or principles. Such talk, if we take it literally, fails to respect the distinction between a) true/false representation of reality, including language and b) proper expression of the logic of language. The logic of language can't be represented either in terms of true/false contingent assertions or metaphysical theses about necessities, but is to be made manifest by means of a perspicuous notation. Nevertheless, as explained, the *Tractatus*' statements can be understood as intended to introduce the concepts and principles of such a notation or calculus, which is the proper expression of relevant logical insights. In this case the apparent confusion is harmless, and Wittgenstein can afford his nonsense.

Now, importantly, Carnap too acknowledges the possibility of this way of explaining syntactical notions in the *Syntax* (or something close to it) when admitting that the material mode of speech can be used to speak about syntax. He characterizes the mate-

rial mode as follows: "The material mode is a transposed mode of speech. In using it, in order to say something about a word (or a sentence) we say instead something parallel about the object designated by the word (or by the fact described by the sentence respectively)." [Carnap, 1967, 309]; for more exact definitions, see 287.) Correspondingly, characteristic of Carnapian pseudo-object sentences, which are quasi-syntactical sentences in the material mode [Carnap, 1967, 287], is that they "[...] are formulated as though they refer (either partially or exclusively) to objects, while in reality they refer to syntactical forms, and, specifically, to the forms of the designations of those objects with which they appear to deal", thus belonging to an intermediate field between genuine object- and syntax-sentences ([Carnap, 1967, 285]; for a formal definition, see [Carnap, 1967, 233-234]). About the acceptability of this way of speaking Carnap writes: "We do not mean [...] that the material mode of speech should be entirely eliminated. Since it is in general use and often easier to understand, it may well be retained in its place. But it is a good thing to be conscious of its use, so as to avoid the obscurities and pseudo-problems which otherwise easily result from it" [Carnap, 1967, 288]; cf. [Carnap, 1967, 309]. According to another characterization, sentences in the material mode aren't incorrect but incomplete. However, "[...] in every domain incomplete, abbreviated modes of speech are employed with profit" [Carnap, 1967, 301]. Hence, not only is the use of the material mode "non-contradictory", "when systematically carried into effect" [Carnap, 1967, 308], it "[...] is frequently expedient" [Carnap, 1967, 312] (original italics). But given all this, Wittgenstein's way to introduce syntactical concepts and principles should have been unobjectionable to Carnap, as can now be explained.

When presenting his logical ideas as if he were making metaphysical statements about, for instance, propositions, or the reality they represent and how they do it, Wittgenstein is speaking in just the manner Carnap describes when characterizing the quasi-syntactical mode. Wittgenstein is ascribing a property to an object

of description, for example, he says that all propositions possess a certain characteristic such as the general propositional form, and that this is their essence, something common to them all [Wittgenstein, 1951, 5.47, 5.471]. Really, however, this is meant as a way of introducing a syntactical designation or formal concept that belongs to his notation or calculus. For the concept of a proposition as defined through the notion of general propositional form, and as presented in Wittgenstein's notation by a variable, is indeed a syntactical or formal concept. What Wittgenstein's remarks that employ the concept of a proposition and other connected concepts are then meant to do, is to indicate the role of this syntactical concept in his calculus. And generally, the same applies to other Tractarian concepts too, such as, state of affairs, complex, object, name, function, negation, number, and so on. They all can be understood as quasi-syntactical concepts in the sense that, while used in the *Tractatus* in a fact-stating manner, as if Wittgenstein were stating metaphysical theses about language and reality, they are really intended to explain the role of corresponding syntactical concepts and principles in his notation.<sup>13</sup>

With respect to this issue, Carnap's discussion of the pseudo-object concept *universal word*, which he inherits rather directly from Wittgenstein, is quite instructive. By a universal word Carnap means a word "that expresses a property (or a relation) which belongs analytically to all objects of a genus" [Carnap, 1967, 293]. An example is "thing", which can be predicated of anything belonging to the genus things, and sensibly of nothing else. A universal word then is a pseudo-object concept expressed in the symbolic notation by a syntactical concept, a variable, and the pseudo-object concept functions, basically, as an index for a variable that indicates the genus of its values (or a logical category) [Carnap, 1967, 294-295]. So far Carnap is only rehearsing a point made by Wittgenstein, when the latter introduces the idea of variables as the proper expression of formal concepts (i.e. constant forms), his example being similarly the "pseudo-concept thing", whose proper expression

is the variable name "x", given that things are just what names name [Wittgenstein, 1951, 4.1271, 4.1272]. Carnap writes with reference to 4.1272, using the opportunity to explain the difference of his position from Wittgenstein's: "Here the correct view is taken that the universal words designate formal (in our terminology: syntactical) concepts (or, more exactly: aren't syntactical but quasi-syntactical predicates) and that in translation into a symbolic language they are translated into variables (or again more exactly: they determine the kind of variables [...]). On the other hand, I do not share Wittgenstein's opinion that this method of employing the universal words is the only admissible one" [Carnap, 1967, 295]. Rather, Carnap says, there are also cases in which universal words can be employed as proper concept words.

But here is something remarkable: As the most important case of the kind that constitutes an exception to Wittgenstein's view Carnap now mentions the use of such words in pseudo-object sentences. He characterizes this role "in the simplest form" by saying: "[...] a universal word is here a quasi-syntactical predicate; the correlated syntactical predicate is that which designates the appertaining expressional genus" [Carnap, 1967, 297]. An example is "1 is a number" whereby the "correlated syntactical predicate" is "number word" [Carnap, 1967, 297]. This is remarkable because in the *Tractatus* Wittgenstein repeatedly employs universal words in just this or a very similar way. For example, this is the way he employs terms such as "general propositional form" and "proposition". In the *Tractatus* "general propositional form" can be understood as a quasi-syntactical predicate used to ascribe a quasi-syntactical property to the quasi-syntactical subject-term "proposition".<sup>14</sup> Here the corresponding syntactical concept proper is the propositional variable in Wittgenstein's system. Another example, to be understood in the same way, is "An elementary proposition consists of names" [Wittgenstein, 1951, 4.22], which aims to explain the relation between the propositional variable and the syntactical concept of a variable name. But if Wittgenstein is making this kind of use of

relevant terms, it is quite misleading to say that he doesn't regard it as admissible to employ statements with universal words in a quasi-syntactical way. Given that he is himself doing just that in the *Tractatus*, then clearly he must regard it as admissible in some sense. This sense has already been explained: they are admissible as a means to introduce syntactical notions and principles.

Now my argument can be stated quite straightforwardly. This point about universal words generalizes to all other syntactical expressions introduced by using the material mode in the *Tractatus*: Wittgenstein's purpose there can quite generally be characterized as the introduction, by means of quasi-syntactical statements, of syntactical concepts and principles that together constitute his logical system or calculus.<sup>15</sup> But if this is Wittgenstein's purpose, then we can say that, as far as the explanation or introduction of syntactical concepts of principles is at issue, Carnap's method of logical syntax that employs syntactical sentences to define syntactical concepts and principles is merely an alternative way of doing what Wittgenstein does by means of his quasi-syntactical method. Therefore Wittgenstein's method should be perfectly acceptable to Carnap.

## 6 *Quasi-Syntax and Translatability*

However, a possible objection to the conclusion just stated requires discussion. This has to do with Carnap's more precise definition of quasi-syntactical sentences and the notion of translation. For according to Carnap's definition, it is characteristic of quasi-syntactical sentences that they are—indeed, apparently always must be—translatable into syntactical sentences [Carnap, 1967, 233-234]. The requirement of translatability is important for him from a methodological point of view, because “[t]ranslatability into the formal mode of speech—that is, into syntactical sentences—is the criterion which separates the proper sentences of the logic of science from the other philosophical sentences—we may well call them metaphysical” [Carnap, 1967, 284]. For Carnap translata-

bility into the syntactical mode, therefore, is the feature that distinguishes philosophical statements proper from those to be abandoned as pseudo-sentences. But given that Wittgenstein characterizes his elucidations as nonsensical [Wittgenstein, 1951, 6.54], which means that they can't be translated, his remarks seem to be automatically disqualified from being quasi-syntactical. Indeed, in connection with his discussion of the concept of a universal word, Carnap cites just this untranslatability as what distinguishes his view from Wittgenstein's. According to him, when a universal word is employed in a quasi-syntactical sentence, “[...] it is a question of sentences of the material mode of speech which are to be translated into syntactical sentences. Sentences of this kind with a universal word are held by Wittgenstein to be nonsense, because he does not consider the correct formulation of syntactical sentences to be possible” [Carnap, 1967, 295-296]. Does this mean that Wittgenstein can't, after all, be characterized as making quasi-syntactical statements? No; there is more than one sense in which Wittgenstein can be understood as doing so.

On the one hand, as noted earlier, Carnap himself proposes in the *Syntax* a number of translations of statements from the *Tractatus* into the syntactical mode [Carnap, 1967, 303-304, 307]. An example is: “The world is a totality of facts, not things”, which Carnap regards as translatable, despite it containing two universal words “fact” and “thing” [Carnap, 1967, 303].<sup>16</sup> In this connection he comments: “Similarly many other sentences of his which at first appear obscure become clear when translated into the formal mode of speech” [Carnap, 1967, 303]. Evidently, Carnap therefore believes that at least some of Wittgenstein's statements could be understood as quasi-syntactical and translatable into syntactical statements. But if, according to Carnap, such a way to understand Wittgenstein is possible, then it becomes quite unclear what his philosophical/logical grounds are for saying that Wittgenstein's position is “certainly very unsatisfactory”. For, if translations of Wittgenstein's statements into the syntactical mode are possible,

then apparently Carnap can in such cases at most criticize Wittgenstein for poor self-understanding: Wittgenstein doesn't realize that his elucidations really are quasi-syntactical statements, and incorrectly thinks of them as nonsense. Otherwise, Wittgenstein's employment of quasi-syntactical statements should be fine with Carnap.<sup>17</sup>

In this case Carnap has importantly clarified the status of the *Tractatus*' statements, and developed an alternative, complementary method for introducing syntactical concepts and principles for the purpose of philosophizing in the formal mode. But he is wrong to suggest that Wittgenstein's approach is problematic in principle from a philosophical/logical point of view with respect to this task. Rather, which method we should use in a particular case should be recognized, from Carnap's point of view, as a question of expediency, whereby Wittgenstein's approach has the benefit that the quasi-syntactical mode is, as Carnap readily admits, "frequently expedient" ([Carnap, 1967, 312]; see quotes above).

On the other hand, if we accept Wittgenstein's view that the sentences of the *Tractatus* are nonsense and therefore untranslatable, he can still be characterized as making quasi-syntactical statements in a sense close to Carnap's. In this case his statements can be characterized as quasi-syntactical because of their use for the introduction of syntactical concepts and principles. More specifically, some words or notions that occur in Wittgenstein's sentences (such as "proposition" or "general propositional form") can be said to correspond to syntactical concepts in the sense that they are stand-in notions whose purpose is, as explained, to indicate the role of relevant syntactical concepts in Wittgenstein's notation, even though the statements of the *Tractatus* that contain those words aren't translatable into syntactical sentences. For example, when Wittgenstein says that every proposition possesses the general propositional form, this means that in his calculus all propositions are substitution instances of the propositional variable. (This explanation isn't translatable into Wittgenstein's notation because the generality of the notion

of general propositional form is here misconstrued; see section 4.) Thus, although correspondences between the words in the *Tractatus*' sentences and expressions in Wittgenstein's notation wouldn't be mediated by syntactical sentences, we can still speak of there being such correspondences. (I say more about this shortly.)

Here it is also noteworthy that there are serious problems pertaining to the notion of translation in the *Syntax*. As Carus explains, Carnap runs into trouble when trying to define the concept of a translation by reference to the notion of the sameness of content, defined by reference to the consequences of sentences (formally, equipollence). This means that determining the correctness of a translation requires determining all the consequences of a sentence, but if the language from which we translate is a natural language this seems impossible, due to its complexity and vagueness [Carus, 2007, 257-259]. Accordingly, as Wagner points out, by Carnap's formal criteria it can't even be decided whether a sentence is quasi-syntactical, unless the language in question has been given an explicit syntax, which isn't the case with natural language [Wagner, 2009, 197]. Thus, Carnap's requirement of translation as a way to demarcate metaphysical statements from those of a scientific philosophy turns out to be unusable in the case of natural language. But in that case it is also questionable to require Wittgenstein to meet it. Indeed, it might even be counted to his benefit that he is clear about the untranslatability of his sentences that largely employ words from natural language.

Occasionally Carnap too expresses himself in a way that indicates awareness that in some cases the relation between quasi-syntactical and syntactical terms can't be straightforwardly understood as a translation relation. Thus, he says of universal words that "[...] in translation into a symbolic language they are translated into variables (*or again more exactly: they determine the kind of variables by which [words of relevant type] are translated; [...]*)" [Carnap, 1967, 295] (my italics and square brackets). Remarkably, what Carnap describes here as the more exact way of expressing his

point seems to capture quite precisely the role of terms like “name” and “proposition” in the *Tractatus*. Whilst there is no translation in Wittgenstein’s notation for Tractarian sentences where names and propositions are ascribed quasi-syntactical properties such as logical simplicity [Wittgenstein, 1951, 3.26] or truth-aptness and the possession of general propositional form [Wittgenstein, 1951, 4.022, 4.023, 4.5], it is quite correct to say that the quasi-syntactical notions of name and proposition determine two different kinds of variables in Wittgenstein’s notation in the sense that: 1) they correspond to two different variables in this system; 2) any name or proposition translated into this notation will figure there as a value of the relevant variable. Thus, on this characterization of quasi-syntax Wittgenstein’s approach is perfectly compatible with Carnap’s. (Notably, the last quote comes from the context where Carnap discusses the notion of a universal word, specifically trying to explain the difference between his position and Wittgenstein’s; see above.)

On the basis of discussions in the last three sections we can conclude that Carnap’s criticisms of Wittgenstein’s statements as indistinguishable from nonsensical metaphysics, as well as Wittgenstein not allowing talk about syntax, are misplaced (section 4), and that the *Tractatus* can readily be understood as employing a quasi-syntactical method entirely in harmony with Carnap’s approach (sections 5 and 6). Accordingly, *to the extent that* the purpose of Carnap’s method of logical syntax is the introduction of syntactical concepts and principles to be used in logical analysis (or in whose terms the results of logical analyses are to be expressed), and to set us up for philosophizing in the formal mode, Carnap is wrong to say that his position “goes beyond [Wittgenstein’s] in certain important respects” [Carnap, 1967, 282]. In these specific respects, his approach merely constitutes an alternative to Wittgenstein’s, and seems best regarded a particular development of it. (This doesn’t mean Carnap’s method might not go beyond Wittgenstein in other interesting respects. However, when claiming to go beyond

Wittgenstein, Carnap seems to be referring to just those aspects of their methods discussed above.)

## 7 *Saying and Showing*

The preceding isn’t meant to suggest that there aren’t important differences between Wittgenstein’s and Carnap’s approaches to philosophy and logic. However, when the *Tractatus* is interpreted in the light of a resolute reading, according to which its goal is to introduce syntactical concepts and principles, Carnap’s position turns out to be much closer to Wittgenstein’s than would otherwise seem. Indeed, as I’ll now argue, the agreement between their positions goes even further in that Wittgenstein’s saying/showing distinction and Carnap’s object-language vs. syntax-language distinction can be understood as correspondent in a certain important sense. Moreover, if the status of syntactical sentences is understood as Carnap understands it, then the sense in which Wittgenstein rejects statements about syntax is not the same as that in which Carnap introduces such statements. Hence, their views aren’t in direct conflict in this regard. Rather, underneath their disagreement about syntactical statements lies an agreement about logical determinations not being true or false about reality.<sup>18</sup>

As explained in section 3, while for Carnap the most important difference between his position and Wittgenstein’s is that his position allows syntactical statements, Wittgenstein doesn’t seem to regard this as an essential difference. The discussion in sections 4-6 focused on explaining why Wittgenstein’s not acknowledging syntactical statements shouldn’t be regarded by Carnap as a problem that makes Wittgenstein’s approach “certainly very unsatisfactory”. But looking at the issue now from the other direction, to what extent could Carnap’s conception of syntactical sentences be acceptable to Wittgenstein, despite his view that logic can’t be represented or that there are no assertions about logic or syntax? Answering this question requires discussing the *Tractatus*’ saying/showing distinction,

according to which the logical or formal properties of expressions show themselves in language but can't be represented in language.

A clue to the interpretation of the saying/showing distinction can be found in a later comment of Wittgenstein's that explains its point:<sup>19</sup>

The difference between "saying" and "showing" is the difference between what language expresses and what is recorded in grammar [*was in der Grammatik steht*]. The reason for choosing "it shows itself" was that one sees a connection in the notation. What one learns from the notation is indeed something different from what the language expresses [, and this in turn means nothing other than that grammar can't be derived from *facts*]. In other words: grammar can be established before the use of language. Only later is something said with language. I learn internal relations only from the grammar, even before I have used language, i.e. even before I have said something. [Wittgenstein and Waismann, 2003, 131] (my square brackets; I return to the bracketed clause in section 8).

What Wittgenstein says can be explained as follows. That which language shows, or what is recorded in grammar, is the logico-syntactical determinations concerning the language that fix what is logically necessary and possible. What is logically necessary and possible—for example, the possibility of certain ascriptions and impossibility of others—can be grasped from the notation or its grammar or syntax without actually having to make relevant statements. I don't have to find out, as it were, experimentally, what is logically possible. (For remarks on internal and formal relations as something shown by language, see [Wittgenstein, 1951, 4.122-4.125].) Similarly, as the *Tractatus* explains, whether the truth of a sentence follows from another one is a matter of an internal relation between them that exists as soon as the sentences exist, indepen-

dently of whether we ever actually infer one sentence from the other [Wittgenstein, 1951, 5.131]. Thus, internal relations or determinations of what is logically possible and necessary that are recorded in grammar/syntax logically precede the uses of language to say something. What is shown differs in this sense by its logical status from what is said. What language shows is what is laid down in the rules of a language, and this can be contrasted with the actual employments of language in that the latter assume as their basis relevant rules or logico-syntactical determinations.

Notably, on the *Tractatus*' view, what is recorded in grammar or syntax, or shown, is distinct from what is said also in the sense that isn't part of the content of what is said. For example, when I assert that a certain stick has such and such a length, I'm assuming the possibility of the attribution of length to sticks, or that the concept of length can be applied to such objects. But in making my assertion I'm not asserting this possibility in the sense that it isn't the content of what I'm saying. What I'm asserting is the obtaining of a certain actuality, i.e. that the stick has a certain length. Rather than being part of what the sentence asserts, my statement *exhibits* the logical possibility of ascription of length to sticks in that the sentence is a sensible/possible assertion. And this is how the *Tractatus* conceives logical possibility as something that shows itself in language. Logical possibility finds its expression in the very possibility of formulating statements that represent states of affairs: what is logically possible is what is describable in language [Wittgenstein, 1951, 3.02]. What is logically necessary, in turn, is that which the possibility of such descriptions presupposes. The latter we can come to grasp, according to Wittgenstein, through a certain kind of process of abstraction: by coming to understand what underlies possible descriptions of reality and is common to them [Wittgenstein, 1951, 3.34-3.3421]. What such a process of abstraction then leads us to, he believes, is the Tractarian calculus, the idea being that the logical principles governing language and thought are to be explicated as principles governing such a perspicuous notation.

The logico-syntactical principles that govern the use of language are made manifest or show themselves in a notation designed not to obscure logic, unlike everyday language [Wittgenstein, 1951, 4.002, 4.12ff.].

On the basis of this explanation of the saying/showing distinction,<sup>20</sup> it should now be easy to see the connection between what on Wittgenstein's account is shown and what Carnap proposes to express in terms of syntactical sentences. For what language shows, according to Wittgenstein, is just those formal characteristics or logico-syntactical determinations that according to Carnap are determined or described in the syntax-language. As he characterizes the notion of syntax language, it is "the language in which we speak about the syntactical forms of the object-language" [Carnap, 1967, 4]. Thus, there is a correspondence between Wittgenstein's saying/showing distinction and Carnap's distinction between the object-language and syntax-language: what Wittgenstein refers to as what language shows, and Carnap as what the syntax-language speaks about, is the logico-syntactical determinations i) concerning what is said in language for Wittgenstein, and ii) concerning the object language for Carnap.

For Wittgenstein there of course is no syntax-language of the kind Carnap envisages. Nevertheless, this should not be allowed to obscure the fact that with his saying/showing distinction Wittgenstein is drawing and emphasizing essentially the same distinction as Carnap with his distinction between object- and syntax-language, i.e. a distinction between the logico-syntactical determinations concerning language on the one hand, and language as determined or described by those logico-syntactical determinations on the other hand. Hence, the difference between their views here boils down to just this: while Wittgenstein doesn't acknowledge the possibility of expressing logico-syntactical determinations by means of sentences, Carnap does. But although this is an important difference, it is equally important to notice the correspondence between the saying/showing and the object/syntax-language distinction. To

make this evident, the relation between Wittgenstein's and Carnap's distinctions might also be described as follows. Just as Wittgenstein's saying/showing distinction delineates statements in the material mode from clarifications in the formal mode (to clarify what is shown is to philosophize in the formal mode, whilst saying is speaking in the material mode), Carnap's distinction between syntax- and object-language concerns the distinction between the formal mode and material mode of speech.

To put the point in yet a different way, Carnap's spelling out of the idea of a syntax-language is of course significant in clarifying the possibility of analyzing and studying one calculus in terms of another one in logic, and in generalizing the perspective of Hilbert's metamathematics on linguistic systems. Nevertheless, still Carnap's distinction between the object- and syntax-language constitutes an implicit acknowledgement rather than a rejection of Wittgenstein's distinction between statements in terms of a language (what is said) and logical determinations concerning that language (what is shown), or between the material mode (what is said) and formal mode (what is shown). Accordingly, Wittgenstein's distinction should be recognized as an important precursor to the object-language/syntax-language distinction, instead of Wittgenstein's view being seen negatively as something from whose influence Carnap had to liberate himself (see Awodey and Carus [2009]). After all, it was Wittgenstein who pushed matters as far as making Russell wonder in his introduction to the *Tractatus*, whether there might be a hierarchy of languages so that we can talk about logic after all. By contrast, the idea of there being distinct languages in logic seems quite foreign to Frege's and Russell's logic. They lack the distinction between logical determinations concerning a logical system and the statements of that system that Wittgenstein draws by means of his saying/showing distinction, and that re-emerges in a different way in the object-language/syntax-language distinction.<sup>21</sup>

To further clarify the Wittgenstein-Carnap relation, and to bring

to view another easily obscured aspect of agreement between them, let's turn to the question of the acceptability of Carnap's syntactical statements to Wittgenstein. The reason why, according to the *Tractatus*, it isn't possible to speak about the syntax or the formal characteristics of language can be explained as follows. It is characteristic of the *Tractatus*' calculus that, from its point of view, any sensible proposition is a contingently true/false representation of reality, that is, either an elementary proposition or a truth-function of elementary propositions (cf. note 7). That logic or syntax can't be spoken about, but only shown, then means in the first instance that it can't be represented by means of contingently true/false statements. In other words, if we assume with the *Tractatus* that the function of language is true/false representation of reality by means of contingent statements, then there are no statements about what is logically necessary or possible. And because it is designed in accordance with this principle, there are no resources in Wittgenstein's calculus to make statements about logic. Silence about logic follows for that system, and if we assume that natural language actually functions like Wittgenstein's calculus, then for natural language too.

On this background it is interesting to observe that when Carnap explains in the *Syntax* what isn't quite correct in saying that we make statements about logic in the syntax-language, he explains his view about the status of syntactical sentences by reference to exactly the same contrast as the *Tractatus*, i.e. that syntactical sentences aren't contingent representations of reality. As he writes:

When we say that pure syntax *is concerned with* the forms of sentences, this 'concerned with' is intended in the figurative sense. An analytic sentence is not actually "concerned with" anything, in the way that an empirical sentence is; for the analytic sentence is without content. The figurative 'concerned with' is intended here in the same sense in which arithmetic is said to be concerned with numbers, or pure geometry to be concerned with geometrical constructions [Carnap, 1967,

7].

Rather than stating something contingently true/false about reality, and having content or concerning something in this sense, pure syntax, like pure geometry, only states definitions of relevant notions and spells out their consequences.<sup>22</sup> This is the sense in which pure syntax and geometry are both concerned with syntactical or geometrical constructions. But if so, Carnap's characterization of the status of syntactical sentences is quite compatible with Wittgenstein's denial of syntactical sentences in the specific sense of his rejecting the possibility of talking about logic in terms of true/false contingent representations. (Such representations are what the *Tractatus* refers to by "sentence" or "proposition", when denying that they can represent logic [Wittgenstein, 1951, 4.12].) Thus, if we pay close attention to the sense in which Wittgenstein is concerned to deny the possibility of statements about logic, we find that this is something that Carnap agrees with: that syntactical sentences aren't true/false representations of reality is a central feature of his philosophy of logic. (This point is crucial for his principle of tolerance, and more generally for combining empiricism with a non-empiricist and non-metaphysical account of logical necessity.)

Thus, we arrive at the following conclusion. If the status of syntactical sentences is understood as Carnap understands the status of pure syntax, then there is no direct or immediate conflict between his position and that of the *Tractatus* in that, while the *Tractatus*' does indeed deny the possibility of statements about logic, it is concerned to deny specifically the possibility of true/false contingent representations of logic. To see that this conclusion holds observe also the following. In the end the *Tractatus*' denial of statements about logic in the sense outlined does indeed also mean denying the possibility of statements about logic in general, because in its calculus there are no other kind of sentences in terms of which syntactical definitions could be expressed. The result is a fundamental disagreement between Wittgenstein and Carnap about the possibility of syntactical statements. Crucially, however, Wittgenstein should be recognized

as making two distinct points here: it is one thing to say that logical necessity and generality can't be expressed in terms of statements that are contingently true/false representations of reality, but a very different thing to say that contingent representations of reality are the only type of sensible statement there is, so that there are no other kinds of statements to express syntactical definitions. Wittgenstein does in fact run these points together in the *Tractatus*. But this is a mistake, as he comes to recognize later on. It is a substantial (and dogmatic) philosophical thesis of just the kind he was supposed to avoid to claim that natural language actually functions like the *Tractatus*' calculus, so that from there being no way to formulate syntactical sentences in this calculus we could conclude that there is no possibility to formulate such sentences at all.<sup>23</sup> If, however, for the purpose of the present discussion we keep separate what ought to be kept separate, it becomes clear that, as far as concerns the specific sense in which Wittgenstein rejects statements about logic in the *Tractatus*, he and Carnap entirely agree on this point.

## 8 *Tolerance and Correctness*

But why should we take into account this Tractarian confusion, and keep separate things separate on its behalf? The reason is that this enables us to see more clearly aspects in which the *Tractatus*' and Carnap's philosophies of logic agree, and the true complexity of their relation. Compare this with my previous de-emphasis of Wittgenstein's denial of syntactical sentences in order to highlight the correspondence between the saying/showing distinction and the object-language/syntax-language distinction. That correspondence is genuine and important to notice, but easily obscured if we focus on the fact that Carnap admits syntactical statements while Wittgenstein doesn't. Similarly, Wittgenstein's and Carnap's agreement that logical or syntactical statements aren't true/false representations of reality points to an underlying affinity between their positions that is otherwise easily eclipsed.

More specifically, this underlying agreement concerns the point that logic isn't true or false about anything, and that it can't therefore be justified by reference to any facts about language, or the reality language talks about, or derived from any such facts. For just this is a key consideration behind Wittgenstein's view of logic as something shown rather than stated in the form of sentences: what language shows isn't a truth about anything, i.e. neither an empirical nor a metaphysical, necessary truth. Rather, what is shown underlies the expression of truth/falsity in the sense in which true/false statements may be said to presuppose grammatical or logico-syntactical rules that determine what it makes sense to say. As Wittgenstein says in the long quote above from which I bracketed a clause for later discussion: "The reason for choosing "it shows itself" was that one sees a connection in the notation. What one learns from the notation is indeed something different from what the language expresses, and this in turn means nothing other than that grammar can't be derived from facts" [Wittgenstein and Waismann, 2003, 131]. In other words, while true/false representational statements may be justified by reference to the facts they describe (a sentence is true if things are as it says they are), there is no corresponding justification for the rules of logical grammar or syntax, or for a notation defined in their terms. Such rules or a notation aren't a description of anything in reality of which they are true/false, or as Carnap says in the last quote from him, rules of pure syntax aren't concerned with anything, except figuratively. In this sense logical syntax and grammar can't be derived from facts.<sup>24</sup>

Although Carnap doesn't in the *Syntax* connect the point that logic isn't true/false about anything with Wittgenstein's saying/showing distinction, it is notable that the very same conception of logic as not being true/false is the basis of his famous principle of tolerance that constitutes a rejection of the view that the language-forms introduced in logic "[...] must be proved to be 'correct' and to constitute a faithful rendering of 'the true logic'" [Carnap, 1967, xiv]. Rather, according to Carnap, one of the main tasks of the *Syn-*

*tax* is to eliminate this standpoint, and together with it the pseudo-problems and controversies that arise as a result, and to open up for us in logic a “boundless ocean of unlimited possibilities” for the construction of languages or calculi [Carnap, 1967, xv]. The principle of tolerance, he says, relates to all questions of logic, so that in logic “[...] we have in every respect complete liberty with regard to the forms of language; [...] both the forms of construction for sentences and the rules of transformation [...] may be chosen quite arbitrarily” [Carnap, 1967, xv] (cf. [Carnap, 1967, 51, 52]; cf. [Carnap, 1988, 221]). Accordingly, rather than trying to justify the choice of logic or the forms of language by reference to any facts, in logic only the syntactical consequences to which a choice of language leads matter. Consequently, the choice of a language becomes for Carnap a practical question of expediency [Carnap, 1967, xv].

Certainly, my intention isn’t to suggest that Wittgenstein and Carnap are here in the same boat in that Wittgenstein would subscribe to Carnapian tolerance. He doesn’t, but is committed in the *Tractatus* to there being *the* correct logical point of view, which the book tries to express (Wittgenstein [1951], Preface). Nevertheless, it is equally clear that the principle of tolerance in Carnap’s sense (where it doesn’t involve or imply relativism about truth) isn’t possible without assuming the Wittgensteinian non-cognitivism’ about logic described above, i.e. the view that logic isn’t true/false about anything and not expressible in terms of true/false statements. Thus, in this regard too there is more agreement between their philosophies of logic than is usually recognized, and Carnap apparently recognized himself. Interestingly, here the agreement is again connected with Wittgenstein’s saying/showing distinction, as in the case of its correspondence with Carnap’s object-language/syntax-language distinction. Hence, rather than seeing the saying/showing distinction simply as a mark of differences between Wittgenstein and Carnap (of which there is no denying), Wittgenstein’s distinction might *also* be understood as the locus of significant agreement. Accordingly, one might say that the key to understanding the say-

ing/showing distinction isn’t Wittgenstein’s declaration of silence, undeniably as that is part of his view. Rather the saying/showing distinction is better comprehended as Wittgenstein’s attempt to spell out (not entirely successfully) the sense in which logic underlies the making of true/false statements, but isn’t true/false itself.

Finally, it seems in order to note in conclusion how the *Tractatus* connects the notion of correctness in logic with the notion of showing. For, notably, Wittgenstein remarks on the issue of correctness right in the midst of his remarks on the theme that logic shows itself rather than being the object of statements.<sup>25</sup> “Now we understand also our feeling that we are in possession of the correct logical conception once everything is all right in our symbolism” [Wittgenstein, 1951, 4.1213]. His point may be understood as follows. Correctness in logic isn’t to be understood in terms of the truth of statements, i.e. as some kind of correspondence between a logical account and facts about language or reality. Rather, correctness in logic means the absence of any anomalies or contradictions. Once we have arrived at the correct logical point of view, and have found an expression for it in a logical notation, the correctness of the conception will simply show/manifest itself in the absence of any logical anomalies. And however exactly we should relate correctness in this sense to Carnapian considerations of expediency in logic (this seems a complicated issue), it apparently isn’t Wittgenstein’s view that there is something like the correct notation in the sense of a particular system of signs and manipulations (cf. [Wittgenstein, 1951, 5.511]). Rather, his formulation in 4.1213 leaves open the possibility of there being different but logically equivalent notations that all express the correct logical point of view, but none of which is more fundamental than the others. While this isn’t Carnapian tolerance, there is some overlap between the positions even here.<sup>26</sup>

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## Notes

<sup>1</sup>For some differences between their conceptions of logical truth, see [Friedman, 1999, ch. 7 and 8].

<sup>2</sup>This characterization applies to Carnap before his “semantic turn”. Later on Carnap characterizes logic “in the sense of a theory of logical deduction” as “a part of semantics”, although according to him, “This, however, does not contradict the possibility of dealing with logical deduction in syntax also” [Carnap, 1948, 60].

<sup>3</sup>Later on in his autobiography, Carnap singles as “the main thesis” of his book “the importance of the metatheory for philosophy” [Carnap, 1963, 56]. Cf. [Carnap, 1967, xiii], where metatheory is a broader notion that also includes semantics. Modifications required to the Syntax from Carnap’s later semantical point of view are discussed in [Carnap, 1948, 246ff].

<sup>4</sup>The article was published in 1934 in English as “Physics as a Universal Language”. Wittgenstein first starts the discussion of the affair with Schlick by saying that by browsing Carnap’s article, “[...] I found many of my thoughts stated anonymously” (? letter to Schlick, 6.5.1932; all translations from the correspondence are mine). He expresses the worry to Schlick that since he hasn’t published anything recently, although he has worked much and “constantly” given oral accounts of his views, his work might be regarded merely as plagiarism or a “second brew” of Carnap’s. Wittgenstein also says that I see myself being pulled against will into what is called the “Vienna Circle”, while “[...] I don’t want to belong to a circle” (Ibid). This suggests that for him the key issue isn’t plagiarism (which Wittgenstein also explicitly denies in a letter to Schlick from 8.8.1932), but he wants to avoid being read in light of the work of the Vienna Circle and Carnap. For, to take Wittgenstein’s work as a second brew of Carnap’s would be to read it in the latter’s terms. Although Schlick agreed with Wittgenstein that an acknowledgement would have been in place, Carnap refused any need for it in a letter to Schlick. This convinced Wittgenstein that Carnap had not acted in good will, and that the issue wasn’t about oversight. (See letter from Schlick to Carnap quoted in [Kienzler, 2008, 69, 70], and Wittgenstein’s letter to Carnap 20.8.1932.) After a letter to Carnap where Wittgenstein tried to clear things up, and a letter on the following day to Schlick, Carnap isn’t mentioned in Wittgenstein’s published correspondence and only on two distinct occasions (with seven repetitive occurrences) in his Nachlass, both times briefly and critically. Unlike Frege’s and Russell’s views, Carnap’s views aren’t subjected to any sustained philosophical discussion. By the mentioned oral accounts Wittgenstein presumably refers to his discussions with the Vienna Circle, in some of which Carnap was present; other sessions were reported to the circle by Waismann and Schlick (see, WVC and Carnap [1963]). Wittgenstein’s and Waismann’s manuscripts have been published as Wittgenstein and Waismann [2003] and as a version completed by Waismann Waismann [1995]. See Kienzler [2008] for a detailed account of the unfolding of the affair on the ba-

sis of letters exchanged between Wittgenstein, Schlick and Carnap and discussion of the philosophical issues. For discussions, see also [Hintikka \[1996\]](#) and [Stern \[2007\]](#). Whilst Hintikka too maintains that with respect to the notion of a formal mode of speech Carnap “[...] was merely repeating certain ideas of the *Tractatus*” [[Hintikka, 1996](#), 136], his grounds are entirely different from those spelt out here, as is his *Tractatus*-interpretation.

<sup>5</sup>I discuss this strictly correct method and its relation to the method employed in the *Tractatus* in my [Kuusela \[2011b\]](#).

<sup>6</sup>Kienzler also observes Carnap’s ambivalent relation to the *Tractatus* [[Kienzler, 2008](#), 79, 80]. As for the different *Tractatus*-interpretations contrasted here, notably, although Wittgenstein later subjects his book to various criticisms, he never says that it contained a paradox of the sort traditional metaphysical interpretations attribute to it: maintaining that the book puts forward both metaphysical/philosophical theses and/or arguments, and is nonsensical. (The paradox of nonsensical theses or arguments is this: if the book is nonsense, it can’t contain theses or arguments; if it contains theses or arguments, it can’t be nonsense.) The philosophical dead end created by the nonsensical-theses paradox, and the related difficulty with understanding the notion of so-called ineffable truths, constitute a reason to interpret the *Tractatus* differently, along the lines of so-called resolute readings of which the present interpretation is a variant. For the contrast between the interpretation-types, and how an interpretation of the *Tractatus* as seeking to introduce concepts and principles constitutive of a symbolic notation avoids the paradox, see [Kuusela \[2008\]](#) and [Kuusela \[2011a\]](#).

<sup>7</sup>The *Tractatus* assumes all sensible language use to be analysable in truth-functional terms, until we reach the so-called elementary propositions that are contingently true/false representations of reality. Tautologies and contradictions are limiting cases of propositions that are devoid of sense or content (*sinnlos* but not *unsinnig*): their representational content cancels itself out due to how their component propositions are combined [[Wittgenstein, 1951](#), 4.466, 4.5]. However, the making of sensible assertions (or stating tautologies and contradictions) doesn’t exhaust possible modes of language use for the *Tractatus*. There are also, firstly, logical analysis, i.e. the decomposition of complex propositions into elementary ones that consist of logically simple names. For the truth-functional analysis of compound propositions Wittgenstein provides two notations, the truth-table notation and the bracket-notation, by means of which we can establish, for example, whether a proposition is a proposition of logic, i.e. an unconditionally true (or analytic) tautology. Given that, according to the *Tractatus*, all logical truth-preserving inferences are analysable as tautologies, this type of analysis is an important mode of language use from the point of view of logic, though not reducible to true/false assertion (or to asserting tautologies and contradictions) [[Wittgenstein, 1951](#), 4.31, 6.1, 6.1203]. Secondly, a further distinct mode of language use (to be discussed presently) is the employment of nonsensical elucidations for the purpose of intro-

ducing logical concepts and principles.

<sup>8</sup>For a discussion of this remark and its interpretational import, see [Kuusela \[2011a\]](#).

<sup>9</sup>This assumption about *the* correct notation and that it would reveal the essence of propositions is, of course, quite un-Carnapian. I discuss Wittgenstein’s conception of correctness in logic and Carnap’s principle of tolerance in section 8.

<sup>10</sup>For the notion of a transitional remark, see [Diamond \[1991\]](#). For a discussion of the issue of how nonsense can seem to express anything at all, for example, exhibit apparent inferential patterns like Tractarian nonsense, see [[McManus, 2006](#), ch. 4].

<sup>11</sup>It would be a misunderstanding to think that this interpretation constitutes a relapse to psychologism about logic. Logical laws as embodied in Wittgenstein’s notation or revealed through its application aren’t psychological regularities about how any particular individual happens to think. There is, of course, no guarantee that an individual should comprehend Wittgenstein’s elucidations or his clarifications of logic in terms of his notation, but this is a different matter. Such an individual is subject to logical laws all the same.

<sup>12</sup>See [[Wittgenstein, 1951](#), 1-2.25] for these points explained abstractly as an account of reality and representation, or picturing; from 3 onwards these notions are used to build up a corresponding account of thought and language.

<sup>13</sup>Here it is important that, for Wittgenstein, logical statements are identified by reference to their status, not their object (cf. section 2), and that for him there is such a thing as the clarification of the formal characteristics of reality. Material mode for Wittgenstein is a matter of speaking about reality or language in terms of factual statements, including statements about any alleged necessary or metaphysical facts. Thus, transitional talk that aims to introduce syntactical concepts and principles is for him the use of one mode of speech (the material, factual or metaphysical mode) to introduce concepts and principles of the other mode (formal, logical mode). As objects of factual statements both language and reality are at the same level from Wittgenstein’s point of view, so that the distinction between the formal and material mode can’t be characterized by reference to the objects spoken about (language or reality).

<sup>14</sup>An example of the use of “general propositional form” as a quasi-syntactical predicate is Wittgenstein saying that all propositions share this form in [[Wittgenstein, 1951](#), 5.47]; a related use of another quasi-syntactical concept occurs in 4.1, where he says that propositions present the existence and non-existence of states of affairs, thus employing the locution “presentation of a state of affairs” to characterize the concept of a proposition. The same goes for the concept of a picture in 4.01, where a proposition is characterized as a picture of reality. These remarks are examples of successive characterizations of the quasi-syntactical concept of proposition in terms of quasi-syntactical predicates aiming to give an idea of the syntactical concept of a propositional variable.

<sup>15</sup>This isn't quite correct but serves to illustrate the fundamental similarity between the *Tractatus* and Carnap's conception. The *Tractatus* in the same way also seeks to introduce concepts that might be classified as semantical, such as sense or meaning and truth. Remarking later on the notion of a theory of systems that covers both semantical and syntactical questions, Carnap also observes: '(Wittgenstein seems to use this terms likewise "(logical) syntax" for an analysis which, in our terminology, combines syntactical and semantical questions but also covers what we call descriptive syntax and descriptive semantics, and perhaps even something of pragmatics)' [Carnap, 1948, 240].

<sup>16</sup>Carnap translates this as: "Science is a system of sentences, not of names" [Carnap, 1967, 303].

<sup>17</sup>Other Tractarian sentences Carnap uses as examples of untranslatable and therefore unacceptable metaphysical statements [Carnap, 1967, 314]. Whatever the case may be with the translatability of these sentences, however, it wouldn't seem fair to require that all sentences of the *Tractatus* should be translatable into the syntactical mode. Any philosophical or logical book contains various kinds of expository statements—including the *Syntax*, the status of most of its sentences being quite unclear if we try to classify them as syntactical, quasi-syntactical or empirical. Accordingly, in order for the *Tractatus*' approach to be acceptable to Carnap, it should be enough that the general thrust of the book is the introduction of syntactical concepts and principles as preparation for philosophizing in the formal mode. Here a question also arises whether it is justified to require the *Tractatus*' sentences to be translatable into syntactical sentences one by one, rather than in larger groups (of remarks or remark sequences), so that such groups together would constitute explanations that correspond to syntactical sentences (cf. note 14).

<sup>18</sup>Here one should recall that although for Wittgenstein there is something like the logic of reality, it is not describable in terms of contingently true/false factual statements.

<sup>19</sup>The remark is from the period of his collaboration with Waismann between 1929-36. Of course, any interpretation of the *Tractatus* must be based on what Wittgenstein says in that book. In this sense this remark offers no more than a clue to its interpretation. That Wittgenstein uses the term "grammar" rather than "syntax" in the quote doesn't affect interpretation in the sense that from 1929 onwards and in the early 1930s he often uses the terms interchangeably, like the *Tractatus* uses the terms "logical grammar" and "logical syntax" [Wittgenstein, 1951, 3.325].

<sup>20</sup>Generally, the employment of a perspicuous notation need not be understood as the only way to make manifest what shows itself, but there may be other ways to clarify it, perhaps more suitable in contexts such as ethics (cf. [Wittgenstein, 1951, 6.42]). Thus, Wittgenstein, for example, regards a poem by Uhland as bringing to view "the unutterable" [Engelmann, 1967, 7].

<sup>21</sup>Awodey and Carus speculate about the possible influence on Carnap of Rus-

sell's point about the hierarchy of languages, as if Russell wasn't struggling there to come to terms with Wittgenstein's view or it was something simply to overcome ([Awodey and Carus, 2009, 91]; [Carus, 2007, 232]). The latter seems to express a bias towards Carnap's account of the Wittgenstein-Carnap relation.

<sup>22</sup>A definition in the capacity of a statement of a rule, as such, isn't true/false about anything, and doesn't describe anything independent of it. By defining a concept in one way rather than another one isn't yet in agreement or conflict with anything, unless the definition is intended to capture some actual, existing concept or phenomenon. But to use a definition for such a purpose—as in Carnap's descriptive syntax which is concerned with the syntactical properties and relations of empirically given expressions/languages—is a logically distinct step from merely stating a definition in the sense of pure syntax (See [Carnap, 1967, 6, 7, 15, 53, 168]).

<sup>23</sup>See [Kausela, 2008, chs. 2 and 3] for discussion of Wittgenstein's later diagnosis of the *Tractatus*' confusion. It is also important to note that, if we understand logical statements as stipulations like Carnap does, the problem with theses as the expression of logical generality discussed in section 4 doesn't arise. While one can ask about a thesis whether it really holds completely generally, it would be a misunderstanding to ask this about a relevant kind of stipulation. In this sense Carnapian syntactical statements could then be regarded as unproblematic by Wittgenstein, i.e. as not problematic in the same way as theses are, except that, since the *Tractatus* doesn't regard logic as conventional, this account of the status of syntactical statements isn't available to it (See [Wittgenstein, 1951, 6.124]).

<sup>24</sup>Later Wittgenstein formulates the point that logic isn't true/false about anything as the principle of the arbitrariness of grammar, continuing to hold this view until the end of his career. In his later thought the point is divorced from the conception that logic can only be shown, and Wittgenstein makes use there of so-called grammatical statements. Apparently he first spelt out the principle in these terms in March 1930, stating it also about syntax, although at this point he increasingly starts using the term "grammar" instead of "syntax" ([Ms108, 104] and [Wittgenstein, 1998, 322]; for a mature formulation, see [Wittgenstein, 1997, §370-373]). One might speculate about whether Wittgenstein's principle of the arbitrariness of syntax/grammar might have influenced Carnap's formulation of the principle of tolerance, since Wittgenstein's principle predates Carnap's, and given Wittgenstein's interaction with the Vienna Circle during just this period. But I'm not aware of textual materials that would support any conclusions one way or the other.

<sup>25</sup>This comes immediately before the explanations of the sense in which we can talk about formal properties, discussed in section 3.

<sup>26</sup>This paper was presented at the Set Theory, Model Theory, Generalized Quantifiers and Foundations of Mathematics Conference (in celebration of Jouko Väänänen's 60<sup>th</sup> birthday), University of Helsinki (September 2010), UEA Philosophy Society (December 2010), in the seminar of the *Zukunftskolleg*, Univer-

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