PHILOSOPHICAL INTERACTIONS

JAAP VAN DER DOES

MARTIN, a renowned philosopher and semanticist, but above all a good friend. Acted as genteel midwife for many a student.

JAAP, a former student of Martin, who, among other things, shares his interest in Wittgenstein's *Tractatus*. Although he hardly shows it, he is grateful for Martin's amiable and thought-provoking company, and for all he has learned from him.

The Scene: Amsterdam. A sunny Friday-afternoon. Martin and Jaap meet in Martin's office: a small cultural haven, in between red lights and posh hotels, fortunately still hidden for political passers-by.

A FOOTNOTE: It is a bit tricky to write a dialogue that blends fiction with biographical facts, using the names of people who are alive and kicking. The idea is to give an impression of the inspiring meetings we had over the last few years. To the extent Martin opposes to the arguments and opinions given here, Jaap alone is responsible.

Martin: Before you came in I was wondering when we first met...

Jaap: This is easier for a former student to recall than for a teacher. It was in 1983. I was a so-called 'tweedekans student' who in his early twenties profited from grants to improve on his education. Just imagine: there has been a government stimulating this! After having resumed my studies in Leyden – with professors such as Van IJzendoorn, De Rijke, Nuchelmans, and PhD-student Philipse, – I met Henk Visser in the train from Leyden to Haarlem. Henk was a former math-teacher of mine, but I knew he was also a philosopher. The meeting felt like highly accidental: it was the first time I saw him after leaving secondary school, and I had never met him since. He advised me that if I had a taste for logic and analytical philosophy I should study either at the University of Amsterdam, with its longstanding tradition in these areas, or at the University of Groningen, where Johan held his chair.

Martin: You choose Amsterdam, didn't you?

Jaap: Johan and I only met just before I started working on my PhD. Since it was impossible for me to compare Amsterdam and Groningen in a fair way, I opted for Amsterdam mainly for mundane reasons. Apart from the city itself, it offered me to combine a study in philosophy with more practical subjects such as computer science. I figured

this might come in handy if the second chance didn't work out.

Martin: Well, it did work out.

Jaap: Thank you. But jumping ahead in time, the extras were more than useful when I had to leave research. As you know, only after a few years in my new job I could reconnect to my old subject. However, at that point there was another extra: I realized that in this domain my love for philosophy and semantics is the one thing that really matters. After all, isn't it as hard inside as outside the university to keep that Mojo working?

Martin: Perhaps... But doesn't research require a social context to pursue your interests in a sensible manner?

Jaap: Sure, that is why it was so deeply gratifying that even after I had to leave, there were still some professionals that found it worthwhile to keep in contact with me. In this regard, the last six, seven years, in which we discussed all sorts of topics related to the *Tractatus*, were even better than when we first met.

Martin: Without doubt.

Jaap: When I moved to the UvA, it turned out that my shortened 'kandidaatsexamen' philosophy from Leyden, a kind of BA, had to be supplemented with more analytical philosophy and logic. I chose, among other things, Frege and early Wittgenstein. The exam-procedure for these topics was simple. I contacted you, and we agreed on a substantial list of books and articles; e.g., some Frege articles, a large chunk of Dummett's Frege: Philosophy of Language, a few related articles. For about a month I studied the material at my small desk in the attic my wife and I used to live in, and then called you for an appointment. We talked for about an hour, and I received my grade. Since I had worked for an analogue of The Office for some years, it often felt like paradise all day long.

Martin: Your exams went well.

Jaap: Fortunately, they did. After I had defended my so-called 'doctoralskriptie', it took some calculation and recalculation – with Johan pacing impatiently in and out of the room, – before it was certain: cum laude! But I had developed a taste for the kind of logical semantics Frank and Johan were doing. So apart from the earlier exams, I only took lectures on Montague Grammar with you.

Martin: Indeed, there have been years in which we mainly had social contact, each busy doing other things.

Jaap: True. But in the years before I left the university, I noticed you were writing a book on the *Tractatus*. This made me curious. Trying to understand the *Tractatus* and getting familiar with its background,

were part of my reasons to start studying philosophy. At first you were a bit secretive about your book. When you were about to finish, on my request you began sending me parts of your manuscript. Round about that time, I started discovering what Rifkins has called 'the European dream', in which being productive is combined with a high-quality of live. After a few years, I felt comfortable enough in my new job to have something on the side. Moreover, my new employer allowed working four days of nine hours per week. Often these days were longer. The fifth day, however, like the sixth and the seventh became kind of sacred to me. They gave me about two fifths of the ultimate dream: financial independence. At least one day per week I could do whatever I liked: ... enjoy family matters, make walks in our slow neighborhood, listen to music, watch movies, play the saxophone, or ... think, read and write.

Martin: You did send me comments on my manuscript.

Jaap: Your book truly impressed and inspired me, especially the original way in which you linked tractarian ethics and logic with ontology. Still we both felt that the system the *Tractatus* hints at deserved more attention than you had room for in your book. Having surveyed what had been done in this area, I concluded it made sense to start working on it myself.

Martin: This is not how we started meeting again. At first we had a reading-group together with Frank and Tine, in which we studied Marion's Wittgenstein, Finitism, and the Foundations of Mathematics.

Jaap: We all enjoyed this book. It is erudite, well-written, and chockfull of interesting insights. We were slow readers, as one should be in case of a text like this.

Martin: ... with as side-effect that in due time drafts of your first chapters started to appear.

Jaap: And over the years our small group condensed to just the two of us. It took time to find a promising handle on the tractarian system. Its truth-tables look so familiar, but looking closer you quickly notice they do not fit the familiar semantical interpretation as graphs of truth-functions. Instead, they are more like analytical tableaux, but viewed as signs that are used to show sense. Once I had seen this, I was able to move on. But then you notice a tension between the way in which sense is shown, and the claim that the tractarian system should somehow be extensional. Also, in what way could sense be shown perfectly, without redundancies, as Wittgenstein claimed it should be? The infinite is bedeviling, too.

Martin: Let's not forget the curious nature of elementary propositions,

the crux of picturing.

Jaap: Sure. In line with the chain metaphor in 2.03 and with remarks in the earliest manuscripts, I came to think of them as linear, with more complex structures build using logical means. However, one may as well assume rich and diverse non-logical structure, as long as a 'holistic' isomorphism projects one structure onto another. Anyway, with a book as difficult and as compact as the *Tractatus*, there is likely to be a 'crack' in every interpretation, and as Cohen sings: 'that is were the light comes in'. Perhaps the same holds for the relationship between teachers and students.

Martin: Are you thinking of us?

Jaap: No, not at all. But every student that is worth its salt will 'crack' the works of his teacher in his own way, sometimes to a point where the teacher's work becomes unrecognizable.

Martin: Nice bridge to today's topic: Frege and early Wittgenstein...

Jaap: Hmm, hmm. As we know, Frege had a profound influence on Wittgenstein, but the tractarian system is unFregean in many ways. There are well-known differences as to which expressions have sense and which reference. Also, the typical function-argument structure with its unsaturated-saturated metaphor, is absent in tractarian propositions. It has been observed often that the tractarian objects propositions are about, are logically all on a par, and in a way are all unsaturated. That such differences pop up is only natural. But Wittgenstein's view on the matter may well have biased his critique of Frege, even if formulated with an uncommon restraint.

Martin: It might be hard to circumvent such bias, especially if your views are so outspoken as those of young Wittgenstein. On the other hand, Frege and Wittgenstein were subtle...Which critique do you have in mind?

Jaap: In 5.02, Wittgenstein introduces the distinction between the arguments of a function and the indices of a name to reflect on Frege's philosophy.

5.02c The confusion of argument and index is, if I am not mistaken, the basis of Frege's theory of the reference of propositions and functions. Frege held the propositions of logic to be names, and their arguments indices of these names.

The way I read this is that in a name both arguments and indices help to determine the name's referent but they do so in different ways. Wittgenstein's example of an index is 'Julius' in the name 'Julius Caesar'. In a propositional context where the phrase has reference, this index helps identifying the emperor in the family of Julii. Still, the index is just part of a name that has reference only in full. But on

the most common reading, in case of Fregean names for truth-values, 'p' is argument to the function '¬' in '¬p': the sense of '¬p' cannot be understood if the sense of 'p' is not understood first. So, indices are subparts of names that do not themselves contribute to meaning, for in a propositional context names are the smallest parts having reference. By contrast, the arguments of functions do contribute to sense. Wittgenstein uses the distinction, be it with an uncommon incertitude, to indicate what he took to be characteristic of Frege's view on propositions. Is it too simple to assume Wittgenstein's position is that if propositions name structureless truth-values, the structural elements in the name must be indices, and so semantically irrelevant? Simply because the truth-value does not have parts the indices can refer to, and so they can not really contribute to (the content of) sense either. Instead, they help make up the name of the proposition. 1

Martin: If so, Wittgenstein's characterization would be quite surprising. In another context, Anscombe (1959), p.107, has pointed to an important passage in Frege's *Grundgesetze* that I would expect Wittgenstein to have known, and which I think is crucial here as well:

The simple or the itself already complex names that make up the name of a truth-value, contribute to expressing the thought, and this contribution of the particular part is its sense. If a name is part of a name of a truth-value, then the sense of this name is part of the thought that the name of the truth-value expresses.

Grundgesetze, §32, 51

From what Frege says about the sign in this passage, it is clear he holds that when judging a proposition we are drawn to its reference via the referents of the sign's parts. These referents, which consists of functions and arguments, combine into a complex from which the referent of the complex name can be 'computed'. In an ideal language it is the sense of a sign and its parts that determine what the function and arguments are. In this way, both the sense and the reference of a proposition are seen to be obtained compositionally. That in obtaining the result of the composition the structure may reduce to a structure-less object, is a different matter. It does not indicate that the parts of a propositional sign, even if viewed as a name, are indices that do not contribute to determining it's sense and reference.

Jaap: It would rather indicate that Frege's notion of name and object is incompatible with that of Wittgenstein's; e.g., not all of Frege's objects are material. If so, the notions of one can hardly be used to judge

¹This 'simple' reading is akin to that of Goldfarb (2002), p.196.

the notions of the other.

Martin: Well, such relativism was alien to young Wittgenstein. He was after *the* notion of meaning, and clearly he felt that Frege's notion was wanting in certain respects.

Jaap: One may even be tempted to assume Wittgenstein had grossly misread Frege. But isn't this unlikely? Wittgenstein held Frege in high esteem until the end of his life. Much rather, he seems to criticize Frege from within his own view, which in due time he held to be near absolutely correct.²

Martin: To postulate that an important philosopher has misunderstood another important philosopher is often an exegetical weakness. If I recall correctly, Anscombe points to the passage in *Grundgesetze* with regard to 4.431. Here, Wittgenstein suggests that on Frege's approach the sense of a logically complex proposition is 'by no means determined', and that this is due to the idea that these propositions name truth and falsity as objects.

Jaap: This passage, too, has always puzzled me.

Martin: I think it is interesting that Wittgenstein gives his criticism as an aside, after stressing that also for him the sense of a proposition is its expression of truth-conditions:

4.431 The expression of agreement and disagreement with the truth-possibilities of elementary propositions, expresses the truth-conditions of a proposition.

A proposition is the expression of its truth-conditions.

(Thus Frege was absolutely right to use them as starting point to explain the signs of his conceptual notation. But the explanation of the truth-concept that Frege gives is incorrect: If 'the True' and 'the False' were really objects and arguments of $\neg p$ etc. then on Frege's provision the sense of $\neg p$ would be by no means determined.)

Jaap: Anscombe, p.107, does indeed take the parenthetical remark to refer to *Grundgesetze* §32. Even if this is correct, it is still not quite clear to me what Wittgenstein is aiming at.

Martin: It might help to go back to basics. Frege held that sense determines reference and, moreover, that the levels of sense and reference

²According to Goldfarb (2002), p.187, 'it may well be that Wittgenstein's agenda is distinct from Frege's; and that he is raising problems that from within Frege's scheme of ideas need have no answers. Thus, to blind ourselves to this possibility is to limit the depth of our understanding both of Frege and of Wittgenstein.' Ricketts (2002) indeed argues that 'Wittgenstein's critique is mounted from within Wittgenstein's own distinctive view on language and logic,' p.227.

should not mix. In Über Sinn und Bedeuting, p.49, he writes: 'A truth-value cannot be part of a thought, no more as e.g. the sun can, since it is not a sense but an object'. Perhaps Wittgenstein held the way in which Grundgesetze §32 defines the sense of logically complex propositions, to violate Frege's own principles. For example, the reference of negation is the truth-function mapping the True on the False and conversely. Therefore on Frege's approach the reference of a negated proposition $\neg p$ is specified completely: the truth-value of the negated proposition p is argument to the truth-function \neg to yield the opposite truth-value of p. However, according to Frege, sense is a way in which a referent is given to us, but a truth-value can be given in a myriad of ways. So at the level of sense the rôle of negation seems to be 'by no means determined'.

Jaap: This is also how I read Anscombe's introduction, but I think the argument is by no means decisive. It has a singular focus on the relation between the sense of a proposition and its reference, but the position in *Grundgesetze* §32 is much subtler. For one, it ensures that the structure of a sign naming a structureless truth-value plays a crucial rôle. Starting from a logically complex sign the part of sense that corresponds to a logical constant does indicate, firstly, its reference (the truth-function) and, secondly, the scope of its application (the parts of a proposition that form its arguments). For instance, in the sign ' $\neg p$ ' the sense of the sign '¬' must indicate both its reference, which is the truth-function of negation, and its scope, in this case 'p'. Although it should be granted that these two aspects do not determine the sense of a logically complex proposition in full detail, one may hold that even at this point sense is determined just enough to enable determining the reference of the complex. To continue the example: since 'p' names a truth-value, the ingredients of the sign ' $\neg p$ ' suffices to determine the structureless truth-value of the complex proposition.

Martin: In your argument, sense is kept at a bare minimum, but actually Frege's position is much stronger than this. In specifying the reference of a logically complex proposition, he specifies an extra that is essential to sense, namely: the conditions under which the proposition is true, given the truth-conditions of its composing parts. And the sense of a proposition is the thought that its truth-conditions obtain. Again, in the case of '¬p', the sense of p is assumed given – i.e., the thought that the truth-conditions of p obtain, – and the sense of '¬r' alters this sense into the sense of '¬p': the thought that the truth-conditions of p do not obtain. Despite the fact that even on this reading Frege does not define the sense of logical constants completely – e.g., the way in which they present their referent is still left out, – it cannot

be claimed that sense is 'by no means determined'.

Jaap: But then, why should Wittgenstein object to this position? After all, in the *Tractatus* the sign of a proposition even embodies the form of its sense. On the other hand, it should be granted that this is crucially different from Fregean sense, which is an abstraction in an ideal realm quite distinct from the sign.

Martin: Couldn't this be Wittgenstein's point? Contra 4.431, we are inclined to think Frege has defined the sense of a logically complex proposition sufficiently to see how it determines its reference. However, separating sense from sign will always introduce an indeterminateness, for how to bring the two sufficiently together again? In this regard it also worthwhile to observe that Fregean sense is indirect in that the parts involved and they way in which they combine will often have to be reduced to their referents in order to determine the referent of the whole. Early Wittgenstein held the determinateness of sense to be essential. I think 4.431 points out that in case of logically complex propositions this determinateness can only be guaranteed in line with the picture theory: the sign gives the form of sense immediately, not in need of any further reduction, and this form is projected without further ado onto the content it is about.

Jaap: This does make 4.431 much subtler and interesting. It criticizes Frege's semantics from a tractarian point of view. In effect, 5.02 does the same: the suggestion that the parts of a complex name are like indices seems to presume a pictorial semantics.

Your suggestion reminds me of an important (non-resolute?) distinction of Cora Diamond: Fregean sense concerns 'determinate conditions associated with the sign through which it has this or that reference', while tractarian sense has signs that 'express a thought that something is so' (Diamond (2010), p.574). These views do not have to be incompatible, but they are in the works of Frege and early Wittgenstein.

Still I think your reading of 4.431 is not yet entirely satisfying. In Frege's system there is no crucial difference between logical and elementary complexity; both are understood in terms of function and argument structure. Thus, 4.431 should not only object to the purported indeterminateness of logically complex sense, but also to that of elementary propositions. In this regard, if in Frege's work a weak spot is to be pointed at, it is rather that the truth-conditions of elementary propositions are underdetermined, since their relationship with the facts is left underdetermined.

Martin: Okay, but this observation shifts the focus from what is at stake in 4.431: the sense of logically complex propositions. Let us try to find a new angle, leave 4.431 be for a while, and consider the following remark on logical propositions: 'The false assumption that

propositions are names leads us to believe that there must be logical objects: for the meanings of logical propositions will have to be such things.' This insight is from the *Notes on Logic* of 1913, 107(7). About a year later it turned into the fundamental idea that can also be found in the *Tractatus* (4.0312).

NB 25.12.14 My fundamental idea is that logical constants do not represent. That the *logic* of facts does not *allow* any representation.

The idea is that logic is about nothing. In the final analysis logic is what remains after all naming that tied a proposition to the states of things it is about, has dissolved. The position is contrasted, be it implicitly, with Frege's propositions as names for truth-values.

Jaap: This route again seems to presume that Wittgenstein criticizes Frege from within the tractarian system, for to a large extent the contrast is illusory: tractarian names and objects are very different from Fregean ones. In the *Tractatus*, the sense of a proposition as a logical picture comes of course with the projection of elementary structures onto each other. But in formulating this philosophy, Wittgenstein had to adapt the notions of name and object: they must have form and content. Content allows different forms to occur more than once, and hence enables isomorphic projection. The introduction of content and configuration makes Wittgenstein's position hard to compare with that of Frege.

Martin: To see more clearly what is at stake, shouldn't we recall the reasons the Tractatus gives why logically complex proposition are not names of logical objects? There are two. Firstly, truth-functions can be defined in terms of each other, e.g., $p \to q$ can be defined as $\neg p \lor q$ (5.42). But if \to and \lor were to denote relations, thought of as objects, then $p \to q$ and $\neg p \lor q$ would be different propositions, which they are not. Secondly, truth-functions can disappear, e.g. $p \land p = p$ (5.44). But again, if \land were to denote an object, $p \land p$ and p can not be the same proposition. Based on this, Wittgenstein observes:

Here it becomes manifest that there are no 'logical objects', 'logical constants' (in Frege's and Russell's sense).

Jaap: How convincing do you think this is as a critique on Russell or Frege? Wittgenstein's observation holds at best of Russell's structured propositions. E.g., in *Principles of Mathematics aRb* and $p \rightarrow q$ have been compared as both involving a relation of some kind. And in a later logic Russell assumes material objects to combine somehow with non-sensuous, Platonic objects that constitute logical form. Exhausted perhaps by the impressive work he had done with Whitehead, and by the terse criticism of his young Austrian pupil, in the end Russell did

not develop this logic in full.³

Martin: But does Wittgenstein's criticism apply to the abstract objects of Frege? E.g., in Frege's philosophy ' $\neg \neg p$ ' and 'p' have the same sense – namely, the thought that the truth-conditions of p hold, – and they always refer to the same structureless truth-value. Fregean functions can be interdefinable if for the same arguments they reduce to the same value; that is, if they come with the same course-of-values object. Wittgenstein's critique does not seem to have a foothold here. Jaap: It is hard to believe, but as suggested earlier, could it be that Wittgenstein has underestimated the rôle of signs in Frege's philosophy? Even if in the end for Frege sense is more important, there seems to be no way to get at the structure of sense independently of the sign; however misleading a sign in a language may appear at first.

Martin: Much rather it seems Wittgenstein has radicalized this aspect of Frege's philosophy by having the analyzed sign show the form of sense, so that sign and sense are no longer separated from each other. Frege, in turn, may have objected to this, for in a letter of 1913 he purports to have commented that 'W. lays too great value upon signs'.⁴

If you look at it this way, the most profound tractarian critique on Frege is not phrased in the theses we have discussed thus far but is left implicit. It is to be found in his pictorial, non-referential notion of sense, which shows immediately what may be the case without having to compute the reference of function/argument structures. In line with his absolute ethics, where the value of life is found in the limit of what is possible, Wittgenstein was able to present logic as the non-material, necessary frame of contingent description. The crucial distinction between contingent and logical truth is made apparent in a new, largely non-Fregean system.

Jaap: I see what you mean... Other than description, logic is about nothing; not even about logical objects. In the logical space of contingencies, there is no room for necessary logical objects, so logical propositions cannot name them either. These are main reasons for Wittgenstein to put forward a system in which sense, reference and truth are viewed in ways inspired by but different from both Frege and Russell.⁵

Martin: It is of course a bit odd to say that in logical space there is no

³Cf. Russell (1913) Theory of Knowledge, chapter IX.

⁴Cf. Heinrich Scholz' abstract of a letter from Frege to Wittgenstein, dated: 9 November 1913, which is now assumed no longer to exist; see Floyd (200x), p. 7.

⁵Hacker (1984) was among the first to stress the value of Wittgenstein's philosophy of logic, also compared to that of Frege or Russell.

room for (necessary) logical objects. But 'logic' in 'logical space' is indeed more concerned with contingent combination than with logic *per se*. In this regard it is analogous to the use of 'grammar' in Wittgenstein's later work.

Jaap: As far as I can see, the implicit critique on Frege is the one that stands up to closer scrutiny. Although it seems unlikely for such a subtle thinker as Wittgenstein, I can only make sense of the other points of critique by assuming they are based on major incompatibilities between the notions of names and objects as understood by Frege and by Wittgenstein. Such incompatibilities clearly cannot decide between them.

Martin: I'm unsure whether the objections Wittgenstein raised against Frege are best seen in this light. I do think, however, that Wittgenstein's main critique concerns, among other things, the distinction between contingent and necessary truth. It also highlights what we have swept under the carpet until now; namely, that from a tractarian point of view Frege's treatment of elementary propositions leaves something to be desired.

Jaap: Yes. To make this more explicit, let me recall what I have once learned from you, using an apparently simple proposition such as (\star) . (\star) Caroline weeps.

After translation into an ideal, Fregean language its sign would be, say, W(c). In the sign W and C indicate their contribution to the sense of W(c), which is the thought that the conditions for W(c) to be the True obtain. What these conditions are, however, is left underdetermined. Frege does indicate how the reference of (*), a truth-value, is obtained from the referents of its parts. Thus, the sense of W determines a concept, i.e., a function from objects to truth-values, and the sense of C determines an object. Combining both referents in the way the sign W(c) indicates, a truth-value results. But other than in the case of logically complex propositions, specifying the functional application is insufficient to determine the truth-conditions of (*). For what is the difference between the concept and the object yielding the True or the False? It remains to determine what the world must be like for the concept to apply to the object, and so it can be argued that Frege leaves the sense of elementary propositions underdetermined.

Martin: This indeed concerns the fact that without further ado the True and the False do not capture contingent truth. The elementary (\star) could yield the True in one situation and could yield the False in another. But then the concept involved is not a function.⁶

Jaap: Often the imperfection is attributed to daily language, whose

⁶The observation is used with much force in Hacker (2001).

signs do not show all ingredients of the thoughts expressed. I don't think this stance helps us much. Such imperfections can be amended by making a thought more specific and enrich it with parts referring to the appropriate times, places et cetera. According to Über Sinn und Bedeuting, p.57-59, from a logical point of view these parts are objects, too. However, introducing such specific thoughts is no solution for what is the issue here. Relative to the world (universe) considered, the more specific thought remains a universal truth: in this world it is impossible for the thought to be false. But as far as logic is concerned – surely the one form of necessity that early Wittgenstein accepts, – the thought is not necessary but contingent: there could be another world in which it is false. Logical contingency requires truth-values to be relative to possibly ways the world may be. As it stands the Fregean system does not concern itself with such contingency. In it, truth is first and foremost universal truth.

Martin: In this connection Black (1964), chapter XLV, observes, that the Fregean approach requires just two propositional names: 'True' and 'False'. In such a language, how to distinguish between descriptive and logical propositions? In the *Tractatus*, the distinction is made by holding that sense concerns description of states of things, structures of objects that may or may not be realized. And in the space of contingencies there is no room for necessary truths. Rather, in logical propositions all descriptive content is dissolved; they concern form but are about nothing, not even about contentless, abstract truth-values.

Jaap: Wittgenstein must have noted quickly that on a Fregean approach propositions may be structureless and name-like, and he must have disliked the idea almost immediately. In Notes on Logic, he writes: 'Propositions can never be indefinables, for they are always complex' (B64). On the basis of this quotation, Potter (2009), section 9.4, holds that Wittgenstein's main objection to propositions as names of truth-values is that they do not force sense to be structured, while structure is essential to sense. But is this so? An argument similar to Potter's would show that in Frege's arithmetic only natural numbers are needed, as the structure of a functional expression is also lost in the number it refers to.

Martin: Frege's ample use of function and argument rather indicates that for him, too, structure is essential to signs and sense, even if due to the abstract, non-material nature of truth-objects this structure may disappear in reference. At best Potter's observation would indicate that for Frege structure may have been essential to sign and sense, but not so much for the referent resulting form this complexity. Moreover, in the tractarian system, too, there is nothing to preclude borderline cases of states of things that consist of just one object. Such a state

of things $(o)_c$ is different from the object o itself, but is described by a proposition $(n)_c$ with just one name. Despite Wittgenstein's earlier thoughts, he took no explicit precautions to ensure that in the Tractatus propositions are structured. For sure, as for Fregean signs and sense, the most natural approach comes with genuine structure. Still, lack of structure is no strong argument against Frege. The point is, I would say, that states of things are contingent, and that logic concerns the necessities of form. This distinction can be made with states of things – even with unnatural, unstructured ones, – but not in terms of Fregean truth-values.

Jaap: Somehow, possible situations or possible worlds – with or without structure, – should play a rôle as well.

Martin: It did not seem to have Frege's main interest to distinguish the contingent and the necessary nature of truth. His focus was rather on the nature of judgment. According to Frege's this comes with understanding how the sense and the reference of a complex proposition depends on how the sense and the reference of its parts are composed, a composition that reduces in a number of steps to either a 'yes' or a 'no'. Point of departure was his logical work with its universal, necessary truth. As a result, truth-values get an ambiguous status in his reflection on daily language: they are either necessary or contingent. In Frege's use, the distinction is not made explicit, or it is analyzed in favor of the universal.

Jaap: Of course, in the tractarian system necessity and contingency are essential in showing what the similarities and the differences are between logical and contingent propositions. In devising the system, Wittgenstein held sense to be prior to truth. Thus, in line with his ethical stance, the focus shifted from truth to possible ways the world may be within the limits of a necessary frame. Like Frege, Wittgenstein assumed that several analytical steps may be needed before a sign is reached that wears the form of its sense on its sleeve, but this sign (symbol) requires no further reduction. Other than Frege, Wittgenstein captures the content of sense as an immediate projection onto contingent states of things in logical space. Given this intensional use of truth-table signs, truth or falsity depends on whether the depicted states of things are facts or not. Truth and falsity are intrinsic to picturing. They are not values that may seem to be restricted arbitrarily to just two.

⁷Mendelsohn (2005), among others, argues that facts do play a rôle in the implicit semantics of *Begriffschrift*. But as far as I can see, it has left no traces in the later systems of *Über Sinn und Bedeuting* or *Grundgesetze*.

⁸See also Goldfarb (2002), p.190.

In formulating his philosophy, Wittgenstein introduced notions of name, object and sense that made it impossible for a proposition to name a structureless object. Fregean functions and objects, by contrast, are of a different nature. Rather than preserving structure, a function combined with its arguments yields an object without any structure. Also, Frege does not consider worlds or situations as arguments for functions that would allow one to distinguish logical from contingent truth within one system. At this juncture, the work of Frege and that of Wittgenstein become incomparable, due to a strong shift of focus.

Seen in this way, Wittgenstein's subsequent view on Frege may be strongly biased by a change in paradigm. The proper relationship of Frege and early Wittgenstein is best seen 'holistically', by comparing their systems as a whole, rather that to comment on one or two tractarian theses. Then, the referential and the pictorial notion of sense should be compared, besides, e.g., the ability to distinguish between contingent and logical truth.

Martin: To present the matter thus remains a bit unsatisfactory. For one, Wittgenstein's own philosophy developed in a way that some see to have come with similar paradigm-shifts. Yet his remarks on earlier work are often sharp and to the point. Similar traces of how Wittgenstein understood Frege, independent as it were of the tractarian system, are lacking... Still, it would be rash to claim that Wittgenstein misunderstood Frege. He criticized him from within his own system without any indication of how he read the great works of his predecessor.

For sure, it is a major contribution of Wittgenstein to have devised a system that shows how logic and contingent description differ and interconnect. In the process many aspects of Frege's philosophy had to be rethought. It resulted in a new conceptual framework, which profited from Russell's work and that of Frege, but which is incompatible with both in many ways. In the *Tractatus* there are some indications of the disagreement. The crucial points, however, are left implicit and require a detailed study of the tractarian system of the kind you have been aiming at in your book.

Jaap: Agree... Frege must have sensed that both had difficulty in taking each other's stance. In one of his last letters to Wittgenstein there is the moving observation that it is important to help each other see with the eyes of the other.⁹

⁹Quoted in Reck (2002), p.20.

Jaap: So, this ends today's Philosophy '18 Revisited?

Martin: Yes, I have to leave... Tickets for the Stopera.

Jaap: As always, it was great pleasure to reflect on the philosophical roots of our subject with you.

Before we leave, something completely different, a bit speculative... Lately it crossed my mind that at the outskirts of Wittgenstein's influence, where among others we find Elisabeth Luytens, Jasper Johns, the Coen Brothers, Bruce Nauman, Felix Bennett, W.F. Hermans, Balduin Sulzer, Derek Jarman, Van Kooten & De Bie, Terry Eagleton, Claude Tousignant, M.A. Numminen, Iris Murdoch, Eduardo Paolozzi, Basil Fawlty, perhaps we also find Roald Dahl?!

Martin: Curious suggestion... What are you thinking of?

Jaap: Well, in Philosophical Remarks, 72, there is this thought-experiment: 'Suppose all the parts of my body could be removed until only one eyeball was left; and this were to be firmly fixed in a certain position, retaining its power of sight. How would the world appear to me? I wouldn't be able to perceive any part of myself, and supposing my eyeball to be transparent for me, I wouldn't be able to see myself in the mirror either.' The story 'William and Mary' in Dahl's Kiss Kiss is a variant on this theme. It describes how the brain of the well-regarded philosopher William is transplanted and kept alive in a basin with one eye attached. Finding her stern husband in this helpless situation, Mary is finally able to get the revenge she has always longed for. Now it is as simple as smoking in front of a brand-new television set in what has remained of William: his field of vision.

Martin: A philosopher that is so fond of his brain that he wants it kept alive even after his death, doesn't seem to have studied Wittgenstein much. Isn't the beauty of Wittgenstein's thought-experiment that in it the field of vision is at the limit of a nearly absent body?

Anyway, I can imagine it is fun to fantasize about such intertextual relationships. But do you really want to suggest that Dahl, a former RAF-pilot, had access to the manuscripts? After all, *Kiss Kiss* was published in 1960, and the translation of *Philosophische Bemerkungen* in 1975. Sounds like B. von Lippe-Biesterfeld reading Kant.

Jaap: Could Iris Murdoch have been the missing link?

Martin: Honestly, I prefer a more systematic approach. Please drop me an e-mail to make a new appointment.

Jaap: Sure will do... Enjoy your opera... We'll keep in touch!

Exeunt. No dragging away of corpses.

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