

The Fregean Perspective and Concomitant Expectations One Brings to Wittgenstein

We know from the *Tractatus* (Wittgenstein 1999, p. 28) that Wittgenstein was a great admirer of the work of Gottlob Frege. In this chapter we will give an overview of those of Frege's basic contributions to a theory of meaning that are most important for an understanding of Wittgenstein's later thought (Frege 1972, 1979, 1984).

As a starting point we can take the older idea of an "analysis" of words and sentences. When we explain the meaning of the word "bachelor," for example, by saying that it is applied to unmarried men, it has long been common to describe the relation between the words involved by saying that the meanings of "unmarried" and "man" are *contained* in the meaning of the word "bachelor." The process of bringing this to light was accordingly described as "analysis": hidden or implicit components of meaning, not visible by just looking at the sign, are brought to light, are made explicit, in something like the way in which water is analyzed into its invisible components hydrogen and oxygen.¹ The usefulness of such an

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analysis lies in the fact that ignorance of such “meaning components” can lead our thinking astray, and in the idea that (positively) explicit knowledge of such components is necessary for a clear understanding of the meaning of the expression in question. Accordingly, complex expressions are taken to have a clear meaning if they have been “analyzed,” that is, broken up into constituent expressions the meanings of which are less apt to be unclear or controversial.

Frege also applied something like this strategy to sentences. Here too an “analysis” can bring out “hidden” meaning-components, for example when a sentence like “lions show aggressive behavior against humans” is paraphrased as meaning “all lions show this behavior”; the “all” had been hidden and has now been brought to light.² In a slightly different case it is the *semantic structure* of the sentence that cannot be unambiguously read from the words alone. The sentence “the lions show aggressive behavior against humans” might be paraphrased as “our group of lions here at London Zoo...” or as “all lions...” A sentence like “you may have cookies or fruit” can be supplemented by “but not both” or by “or both”; our normal ways of speaking often leave it open whether the “exclusive” or the “inclusive” meaning of “or” is intended.

These cases of ambiguity and implicitness need not worry the speaker of everyday language, but where maximal clarity and precision is required (as for proofs in the Philosophy of Mathematics) they do matter. And it was his work on the foundations of Mathematics that inspired Frege to develop what he called a “concept script.” He envisaged it as a “language” that would, on the one hand, be quite restricted in that it would contain only sentences that can be true or false. In other words, it would treat only contents that are “judgeable” – no commands, no questions, no expressions of feeling, etc. Frege was quite aware that it would be absurd to recommend such a symbol system to be used in everyday life. He himself remarks that such a proposal would be like recommending the use of a microscope in the performance of everyday tasks (Frege 1972, 104f.) But on the other hand (on the positive side) his “concept script” would avoid what must, in Frege’s field, be seen as two

shortcomings of our “ordinary” or “natural” language. First, it would make explicit all aspects of meaning that, in ordinary communication, are understood only implicitly. Nothing, Frege declared, should (in his delicate special field of inquiry) be left to guesswork. And, secondly, it should avoid all ambiguity: *one* form of signs should express only *one* kind of meaning. To use the same example again, one should be able to see, to read it off from the sign, whether an inclusive or an exclusive “or” is intended by the speaker. So “nothing implicit!” and “nothing ambiguous!” are the two imperatives that rule the construction of his logical notation, his “concept script.”

Is the project of such a construction realistic? It seems that it only takes a quite simple consideration to justify an affirmative answer here. As the few examples given above show, every speaker of English is able to note (to “perceive,” to “see”) implicit aspects of meaning as well as cases of ambiguity when such features occur in an utterance. Normally she can comment on them, she can easily formulate paraphrases that make explicit what has not been said (but has very often been understood). And so too in the case of ambiguity: every standard speaker of a natural language can easily formulate paraphrases and comments, can use additional or alternative expressions when the need arises to resolve an ambiguity. But if such improvements are indeed easy to provide in any given case, there seems to be nothing that would preclude a systematic approach as envisaged by Frege. In other words, it should be possible to gain an overview of all the ways in which meaning elements can be combined in order to form expressions for a complex content, that is, to form a sentence that can be true or false. Accordingly, it should also be possible to develop a notation that would (firstly) exhibit *all* aspects of meaning (as far as they are relevant for truth), leaving nothing to guesswork, and would (secondly) do so in an *unambiguous* way, so that there would be no difference in meaning that would not be apparent in the signs themselves. The reason for this seems simple: since we can *detect* what (from the perspective of a mathematical logician) are shortcomings in the workings of our natural languages, and since we can *avoid*

them in any given case by choosing a more appropriate mode of expression, it seems that we should also be able to systematically exclude these shortcomings in a notation especially constructed for limited scientific and philosophical purposes, clumsy and unappealing as such a notation may be for the purposes of everyday life.

What then, in Frege's eyes, are the "elements of meaning" and how can they be combined in order to express truth or falsehood? He was quite careful to avoid a trap that one might fall into right at the beginning. When the possibility of a "combination" of signs into a sentence is what is at stake, we have to see to it that we do not end up with just a *list of words* instead of a sentence (Frege 1984b, p. 193). There is a difference between a complex expression with a unified sentential character on the one hand, and a succession of a number of utterances tied together only by their proximity in time (or on a piece of paper) on the other. A shopping list, for example, is like a "list of names": it does not show the unity that is characteristic of a sentence. So we have to ask right from the beginning: what constitutes the unity of a complex sign, whereby is it distinguished from a mere succession of simple signs?³

Frege's answer to this question is his doctrine of "unsaturated" expressions, which is inspired by his work in Mathematics. He says: "And it is natural to suppose that, for logic in general, combination into a whole always comes about by the saturation of something unsaturated." (Frege 1984d, p. 390; orig. pagination 37) His analytic procedure consists in starting with a consideration of a whole "thought," a content that can be affirmed or denied, and only then breaking it up into parts. These parts are (at the level of expressions) *proper names* on the one hand ("Paris," "Caesar," "my eldest brother") and *concept terms* ("city," "person," "family member") on the other. So an important part of his philosophy of language is his claim that not all meaningful expressions should be understood as names. This corresponds to the fact that in Mathematics we have not only "names of numbers" like "five" or "thirteen," but also functional expressions like "plus" or "divided by." In a symbol system containing only names, complex expressions could be nothing but lists of such names. So one important point in Frege is that he saw

that concept terms are not names; like functional expressions in Mathematics they can play their role only in connection with names. Speaking figuratively, Frege says that they are “unsaturated”; their expression in his concept script therefore contains an empty space (marked by a letter like “x”: “x is green”) that indicates the place where a name must be inserted so that a complete expression results. Using another figure of speech Frege says that a name can “stand alone,” like a person, whereas different kinds of unsaturated expressions (concept terms or other functional expressions) can be added to such a name like one or more coats placed over a person’s shoulders. The coats, on the other hand, cannot “stand upright by themselves.” (Frege 1984c, p. 388; orig. pagination 157)

By distinguishing kinds of expressions in this way Frege is able to give an account of the unity of the sentence. This unity arises from the “cooperation” of words of different kinds, which have quite different functions (logical roles), namely (on the most basic level) those of “naming” and of “speaking of” (predicating). Relational terms like “x is the brother of y” he treats as predicates with more than one object term (name). The relationship between object and concept, which is at the basis of all expressions that can be true or false, Frege calls the “fundamental logical relation.” (Frege 1979b, p. 118) To understand the unity of the sentence, then, we have to understand the interplay of these two (and later some more) types of words.

This interplay constitutes the “logical structure” of the sentence in question, and it is clear that the meaning of “logical” here is defined in view of the kinds of *content* the expressions hold. Therefore we can also speak of *semantic* functions or roles, to avoid a formal reading of the adjective “logical.” In the process of working out and arguing for his “concept script,” Frege uses the word “logical” always in its content related, never its formal, sense. This comprises the “conceptual” level of language (following the old understanding that logic is the theory of concepts, judgments, and deductions) so that instead of “logical” (and the much later coined term “semantic”) we can also speak of Frege as treating “conceptual” problems. Accordingly, he has chosen the term “concept script” for his newly developed symbol system.

What he then adds to the names and concept expressions are the by now familiar truth functions (“and,” “or,” etc.) that combine sentences; like concept terms, expressions for truth functions are not names. And (original to him and most revolutionary) he adds the machinery of quantification. Here his doctrine of “unsaturated” expressions brings a great advantage: in analyzing a sentence like “the lion is man’s enemy,” Frege no longer looks for a “general object” like “the species of lions” (a “platonic form”) which is taken to be *named* so that something is predicated of it (like his medieval predecessors did), but rather treats both “lion” and “man’s enemy” as unsaturated predicate expressions. He therefore paraphrases the sentence as: whatever name of an object will be put into the place of “x” in the expression: if x is a lion then x is man’s enemy, the result will always be true. The quantifier for him is a “second order concept,” a concept expression speaking about concepts.

For our purposes, these few hints must suffice to give an idea of the sense in which Frege’s concept script can serve as an inspiration and model for an attempt to understand the semantics of natural language. It is a proposal concerning how the “semantically relevant structure” of expressions should be viewed; it shows what it means to classify words according to their functions in the sentence. Names *name* a particular entity; concept- and relation-expressions *classify* the entities, that is, they say that a certain predicate is true of them or that they stand in a certain relation. Logical connectives enable us to combine component sentences to form a complex sentence, the truth of which depends solely on the truth of its constituents. And quantifiers express “second order concepts” in that they speak about the results of substitutions in sentences containing a space left open for a name. Accordingly, in Frege’s concept script we are offered a general understanding of the sense in which we can “infer” the meaning of a new sentence from the meanings of the constituent words and from the (semantically relevant, i.e., “logical”) structure of the sentence. This “inferring” is a kind of “calculating”: when we know the meanings of the words and the meaning of the structure-building devices (think of “Paul loves Mary” as compared

to “Mary loves Paul” or of “a and b” vs. “a or b”) we can “arrive at” the meaning of a sentence we have never heard before.

It is remarkable that in this concept script we find a rather limited number of kinds of expression that seem to be able to express a huge number of (or even “all”) true thoughts. We also find that on the lowest level of the realm of “thoughts” (i.e., where we are concerned with truth and stay at the level beneath truth-functional combination and quantification) there is just *one* single way of building complexes: all complex expressions on this lowest level say that an object falls under a concept (or that a plurality of objects stand in a relation).

We now have to take a second look at the method Frege uses to determine the “elements of meaning” and the ways in which these can be combined in order to form an expression that can be true or false. How does he find out what the hidden elements of meaning are, and how they combine to form complexes that we do *understand*, but that we cannot (in natural languages) simply read off from the design of the sign? We noted above that what we normally do (and what Frege is doing in his writings) when we have to resolve an ambiguity (or are in some other way confronted with the necessity to clarify what we had expressed) is to formulate comments and paraphrases, that is, we clarify language with the help of language. Now, it is very tempting to use the following picture when we want to understand how this is possible: since we cannot detect the relevant meaning-aspects as something exhibited by the “mere sign” (for example a certain imprint of letters in a book), we look for something *behind* the sign (the “meaning”) and so are led to presume that the logician has to look in the realm of meaning (or, using Frege’s technical term, “sense”) in order to find out the logically relevant structures. There seems to be a structured realm of content *behind* any given linguistic expression. Every competent speaker seems to “see” it; she can move freely in it, for example when she tries to find helpful paraphrases. Frege here speaks of a realm of “thoughts” (in an objective, non-psychological sense) and what he is aiming to achieve when developing his “concept script” is to follow the structure of the respective “thought” in the closest possible way. The “logical structure of language” would then

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be something *behind* or *above* language, something by which a philosopher of language is guided when she discusses the semantic structure of imperfect utterances formulated in a natural language. Later, Wittgenstein (2009, § 102) would express this guiding picture in the following words:

The strict and clear rules for the logical construction of a proposition appear to us as something in the background – hidden in the medium of understanding. I already see them (even though through a medium), for I do understand the sign, I mean something by it.

Frege indeed very often speaks this way. We cannot get into the problems such a view comes up against in any detail here; just note that in the end it turns out not to be convincing.⁴ There is no reality “behind” or “above” language in the sense of a language-independent world of thought or an invisible mechanism of “meaning something” that is so construed out of elements that the combinatorial possibilities determine the permissible combinations of words. Furthermore, it turns out that, in the realm of sense, one cannot speak of wholes and their parts, to be mirrored by the wholes and parts of a concept script. The part/whole relationship holds, when it holds at all, only at the level of expressions. (Frege 1984a, p. 165; orig. pagination 35f.; cf. Frege 1979c) But we can also note here that such a theory of a logical world *behind* language was seen as dubious by the later Frege himself. Indeed he gives a hint (Frege 1984d, p. 393) that it is not to a language-independent realm *behind* the sign, but rather to the “*use as a sign*” (Frege here speaks like the later Wittgenstein; the German wording is “*Gebrauchsweise als Zeichen, das einen Sinn ausdrücken soll*”) that we must look in order to detect the logical role of any given expression.⁵ So we find formulated by Frege an idea that is usually only attributed to the later Wittgenstein: it is the *use* of a sign, its function in the act of communication and its function in the sentence that determines its logical classification as a sign of a particular logical type.

When we now turn to the philosophy of the later Wittgenstein, we should note that both his methods and his goals differ markedly

in important respects from those of Frege. Two such differences are of special importance for us. First, Wittgenstein does not restrict his remarks to those aspects of language that are relevant to truth and logical deduction (in Frege's words, to language as an expression of a "judgeable content"). He has neither the language of science nor that of mathematics in mind as the privileged area to which his considerations apply, and it is not his goal to propose a "concept script" that would better serve scientific purposes than does our natural language. This often leads him to develop his arguments using "primitive" forms of language that he has created for the purpose of clarifying his thoughts. They are so constructed that an instance of using them often cannot be described as the passing of a judgment. So, for example, if (on a building site) the order "Slab!" is used to *request* an object, then it is meaningless to ask about the truth-value of this utterance. To express it positively: Wittgenstein has in mind right from the start uses of language that are neither statements of propositions nor parts of such statements. Second, in contrast to Frege's method of breaking down or "analyzing" the necessarily complex expression of a judgeable content, Wittgenstein chooses *simple* expressions as his starting point, and only then proceeds to the fact which is essential to linguistic competency, namely that there are various ways of expanding these simple expressions through the introduction of other linguistic elements. In this sense his procedure in the later philosophy, insofar as it concerns the first steps toward the clarification of linguistic complexity, is "synthetic," and not, like Frege's method, analytic.⁶

We have seen that Frege was aware of the problem of how, when constructing complex expressions out of their components, to avoid coming up with a list of names rather than a sentence. This led him to his strategy of *not* building a sentence out of its component parts, but of getting at the parts by breaking up a whole. Wittgenstein, despite his own "synthetic" approach, did not encounter this problem, because he followed Frege's late insight to its logical conclusion, namely that the sense of an expression consists in its *use as a sign*. One of the main intentions of the philosophy of language strand of the *Philosophical Investigations* (Wittgenstein 2009) is to

reject the idea that the meaning of a linguistic expression always consists in it being assigned some entity, for example for the name "Fido," the dog Fido (or a mental image or representation of it). If linguistic expressions are not always names for entities but are rather meaningful primarily in that they play a certain role (out of a number of very different possible roles) in the use of language, then the problem of having to show that complex linguistic expressions are something other than lists of names of the entities for which they allegedly stand does not arise. It is reckoned right from the start that there are many cases in which such entities simply do not exist.

But the question that is of special interest here, namely how, according to such a view, the *unity of the sentence* is to be understood, is not fully answered with such a very general reference to "the use" of an expression. True, thanks to his new approach to the problem Wittgenstein, unlike Frege, avoids the task of having to draw a boundary between a sentence and a list of names, but he too must be able to distinguish the unified speech act completed through the utterance of a complex sentence from a succession of independent linguistic acts. Such independent utterance acts, like items read aloud from a grocery list, stand in no other relationship than that of being "coincidental" neighbors in time or space. Switching the order of entries in a shopping list generally makes no difference, but for a *sentence* such a switch can make a very great difference, as can be seen, for example, in the sentences "Romeo loves Juliet" vs. "Juliet loves Romeo." And this fact must also be adequately accounted for by a use-related understanding of the semantic side of language.

When one keeps both these differences in mind and recalls the systematic results of our discussion of Frege's views, then from Wittgenstein's work (given a rough familiarity with his later philosophy) one could expect an approach to the questions posed here along the following lines: by way of creating simple "language games" Wittgenstein can be expected firstly to show his readers how a word appearing individually is applied, that is, a word the use of which is closely interwoven with extra-linguistic actions but that, as far as their *linguistic* surroundings are concerned, can occur without any surrounding verbal text. One could then expect him,

again in Fregean terms, to make a second step in which he would discuss ways of expanding these types of language games (i.e., those that use independent or “saturated” expressions) in order to make understandable the use of newly added “unsaturated” expressions of various categories (logical connectives, possibly predicate expressions, etc.). Frege had in this context made use of the following evocative image (Frege 1984c, p. 388; orig. pagination 157):

I compare that which needs completion to a wrapping, e.g., a coat, which cannot stand upright by itself; in order to do that, it must be wrapped round somebody. The man whom it is wrapped round may put on another wrapping, e.g., a cloak. The two wrappings unite to form a single wrapping.

So in the second step we would expect Wittgenstein to explain the use of such “dependent” words (i.e., words that cannot appear without a *linguistic* context). Words of this kind are necessarily related to other expressions that are already mastered, words that also occur in the situation of use under consideration, but are modified in their meaning by the newly added expressions. These expansions should make the possibility of semantic complexity intelligible to us: that is to say, the difference between a complex expression with a unified sentential character on the one hand, and a succession of various utterances tied together only by their proximity in time on the other. Such expectations about Wittgenstein’s later philosophy are confirmed in the following passage from the *Blue Book* (Wittgenstein 1958, p. 17 [my italics]):

I shall in the future again and again draw your attention to what I shall call language games. These are ways of using signs simpler than those in which we use the signs of our highly complicated everyday language... If we want to study the problems of truth and falsehood, of the agreement and disagreement of propositions with reality, of the nature of assertion, assumption, and question, we shall with great advantage look at primitive forms of language in which these forms of thinking appear without the confusing background of highly complicated processes of thought. When we look at such simple forms of

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language the mental mist which seems to enshroud our ordinary use of language disappears. We see activities, reactions which are clear-cut and transparent. *On the other hand we recognize in these simple processes forms of language not separated by a break from our more complicated ones. We see that we can build up the more complicated forms from the primitive ones by gradually adding new forms.*

The last, italicized statement is of particular importance to us: does Wittgenstein claim that we can obtain the complex forms of *our* language through a step-by-step expansion of simple “language games,” by adding new forms? And does he thereby explain what it means to speak of the “forms” of language(s) in the sense of their “content-structures”? Could we arrive in this way at an extended version of Frege’s “concept script,” the syntactic forms of which would explicitly and clearly reflect the respective content-relationships – or would we discover hindrances that stand in the way of such a project?

Notes

- 1 Frege (1979c, p. 253) here consciously uses a term taken from chemistry: “Zerfällung.” In an earlier formulation Frege (1979a, p. 17) uses the closely related expression “zerfallen lassen,” which has been translated as “splitting up”: “We...arrive at a concept by splitting up the content of possible judgements.” Cf. Picardi 1992.
- 2 I leave it open as to whether this reading of the original sentence is correct or not.
- 3 This question has received a new prominence in recent years; cf. Davidson 2005, Burge 2007, Jolley 2007, Gaskin 2008, Picardi 2009, Toksdorf 2009.
- 4 For details see Schneider 1992, Chapter III, § 10.
- 5 “As a mere thing, of course, the group of letters ‘and’ is no more unsaturated than any other thing. It may be called unsaturated in respect of its employment as a symbol meant to express a sense... .” (Frege 1984d, p. 393; orig. pagination 39) Cf. below, pp. 51f.
- 6 On the concept of analysis, compare the critical remarks in Wittgenstein 2009, § 60ff, and § 90ff.

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