

FREGE'S CONTEXT PRINCIPLE: ITS ROLE AND INTERPRETATION¹

Sorin COSTREIE

ABSTRACT: The paper focuses on Gottlob Frege's so called *Context Principle* (CP hereafter), which counts as one of the most controversial points of his philosophy. Due to its importance and centrality in Frege's thought, a detailed discussion of the principle requires a detailed analysis of almost all aspects of his philosophy. Obviously, such a task cannot be successfully accomplished here. Thus I limit myself to address only two questions concerning the CP: *what role does the principle play* (in *Grundlagen*) and *how can we interpret it*. Addressing the first problem is required in order to address the second. Most authors interpreted CP from the perspective of Frege's later distinction between sense and reference, which I will call the 'semantic interpretation'. Although I accept this perspective as valuable and important, I will initially inverse the action and I will try to approach CP, and generally *Grundlagen*, in a more natural way, contextually, namely setting them in the initial logicist plan of the *Begriffsschrift*. Finally, I will try to provide an interpretation concerning the alleged conflict between CP and Frege's compositionality thesis such that they could coherently stay together.

KEYWORDS: context principle, compositionality, sense, reference

1. The Role of the Context Principle in *Grundlagen*.

1.1. Frege's *unity of thought*

There is development in Frege's thought, but seldom retractation, and, when does occur, it is usually in the nature of an emendation requiring little adjustment in the remainder of the system. This almost linear character of the development of

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Frege's philosophy justifies the method (...) of *considering Frege's philosophy as a whole*, rather than as it existed at any particular stage.²

I am sympathetic with this view, and in fact this perspective provides me the *reading key* which entitles me to move conceptually back and forth from *Grundlagen*³ to both *Begriffsschrift*⁴ and *Grundgesetze*⁵, plus to any other later writings. I shall give three points in support of this view, especially with regard to the persistence of Frege's adherence to CP:

First, there is a clear *continuity* of problems through all his major works (the reduction of mathematics to logic, the rejection of psychologism and formalism, the logical power of his 'conceptual notation,'...etc); this issue will better clarify when I will discuss the connection between *Begriffsschrift* the three principles of *Grundlagen*.

Second, the main difficulty in claiming that the unity of Frege's thought was the *apparent* impossibility to accommodate in one coherent picture CP with Frege's later thesis regarding the compositionality of meaning. But, as I will try to show at the end of the paper, this alleged incompatibility can be dismissed and so the coherence of the system could be successfully saved.

Third, we should not forget Frege's *intellectual honesty*, and thus, since CP plays a central and explicit role in *Grundlagen*, an eventual rejection of it in later works would not have been passed tacitly, but surely it would have been signaled by an explicit statement, exactly like in the case when he acknowledged the catastrophic consequences of Russell's paradox for his theory.

² Michael Dummett, *Frege. Philosophy of Language*, second edition (Cambridge: Harvard University Press, 1981), 628; my italics in the original text.

³ Gottlob Frege, *Die Grundlagen der Arithmetik, eine logisch-mathematische Untersuchung über den Begriff der Zahl* (Breslau: W. Koebner, 1884) translated as Gottlob Frege, *The Foundations of Arithmetic*, trans. J.L. Austin, 2nd ed. (Oxford: Blackwell, 1953).

⁴ Gottlob Frege, *Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens* (Halle: I. Nebert, 1879), translated in Gottlob Frege, *Conceptual Notations and Related Articles*, trans. and ed. Terrell Ward Bynum (Oxford: Oxford University Press, 1972), and selections in *The Frege Reader*, ed. Michael Beaney (Oxford: Blackwell, 1997).

⁵ Gottlob Frege, *Grundgesetze der Arithmetik*, 2 vols. (Hildesheim: Olms, 1962); preface, introduction and sections 1-52 of vol. I and appendix to vol. II translated in Gottlob Frege, *The Basic Laws of Arithmetic: Exposition of the System*, ed. Montgomery Furth (Los Angeles: University of California Press, 1964); parts of vol. II in *The Frege Reader*, ed. Michael Beaney (Oxford: Blackwell, 1997).

1.2. The continuity revealed in the case of *Begriffsschrift* and *Grundlagen*

Since Frege in *Grundlagen* is casting a great role for his three fundamental principles, one may rightly ask why he did not provide anything here to support them, in order to convince us why should we accept them so unconditionally⁶. One adequate answer would be that the problems addressed in *Grundlagen* arise directly from *Begriffsschrift* and thus it would be somehow superfluous to restate extensively all the guiding principles. But the credibility of such an answer lies on the detection of the principles in *Begriffsschrift*; therefore, they should be in *Grundlagen* only echoes of what has been already stated previously in there. The three *fundamental principles*, as they appear in the introduction of *Grundlagen*, are:

P1: Always to separate sharply the psychological from the logical, the subjective from the objective;

P2: Never to ask for the meaning of a word in isolation, but only in the context of a proposition;

P3: Never to lose sight of the distinction between concept and object.

But how are they related to previous points of *Begriffsschrift*? **P1** surely directs us to the idea of a 'pure thought,' which is central in *Begriffsschrift*, and which is secured by expelling any psychological ingredient out from our logic. **P2**, following Frege's own characterization of the principle ("if the second principle it is not observed, one is almost forced to take as meanings of words mental pictures or acts of the individual mind, and so to offend against the first principle as well⁷"), could be thus seen⁸ as a corollary of **P1**. **P3** is merely a reformulation of the technical and fundamental distinction between function and argument,

⁶ After stating them, Frege is mentioning very briefly some consequences for the system if they would lack; all of them are connected with his explicit and constant rejection of *psychologism* from both logic and mathematics.

⁷ Gottlob Frege, *Die Grundlagen*, x.

⁸ As we will see very shortly in detail, P2 has Kantian roots and thus could be also regarded as an elaboration of the 'priority thesis:' the meaning of a sentence is prior to the meaning of its component words. The 'priority thesis' is encapsulated in Gottlob Frege, *Begriffsschrift*, and Jean van Heijenoort, *From Frege to Gödel: a source book in mathematical logic, 1879-1931* (Cambridge: Harvard University Press, 1977), in the theoretical priority of judgements over their constitutive elements.

keeping in sight the fact that concepts and objects occupy different position in his ontological hierarchy.⁹

Merging all three principles together, it could be said that we are interested only in ‘judgeable contents,’ they constitute our ‘meaningful units,’ and they could be further analyzed in terms of an object that falls under a concept. Thus we may get a coherent picture of the whole *Begriffsschrift*. In deploying these principles in *Grundlagen*, Frege’s strategy was to rely on the *Begriffsschrift* in a way in which it is possible to obtain a conceptual framework for analyzing the concept of number in a very logical manner, and so to fulfill the task of reducing arithmetic to logic.

1.3. The two Roles in *Grundlagen*

Let us see now what the role does CP play in *Grundlagen*. Besides its occurrence in the introduction, CP may be found in *Grundlagen* in another three places:

(§60) That we can form no idea of its content is therefore no reason for denying all meaning to a word, or for excluding it from our vocabulary. We are indeed only imposed on by the opposite view because we will, when asking for the meaning of a word, consider it in isolation, which leads us to accept an idea as the meaning. Accordingly, any word for which we can find no corresponding mental picture appears to have no content. But we ought always to keep before our eyes a complete proposition. *Only in a proposition have the words really a meaning.* It may be that the mental pictures float before us all the while, but these need not correspond to the logical elements in the judgement. It is enough if the proposition taken as a whole has a sense; it is this that confers on its parts also their content.

(§62) How, then, are numbers to be given to us, if we cannot have any ideas or intuition of them? Since it is *only in the context of a proposition that words have any meaning*, our problem becomes this: To define the sense of a proposition in which a number word occurs.

(§106) We next laid down the fundamental principle that *we must never try to define the meaning of a word in isolation, but only as it is used in the context of a proposition*; only by adhering to this can we, as I believe, avoid a physical view of number without slipping into a psychological view of it.

⁹ We may regard this point as an anticipation of the idea that ‘concepts are functions’. Another later idea will be that “everything is either a function or an object.” Since all his later elaborations are *in nuce* here, he is entitled to introduce this very Kantian dichotomy between concepts and objects.

CP has two main roles in *Grundlagen*: to reject any psychological content from logic and mathematics (§60, §106), and to introduce 'contextual definitions', required to define numbers as (abstract) objects (§62). The first role is *methodological* and stands in connection with the other two fundamental principles, whereas the other role is rather *technical*, and employs the principle as a axiom from which the theorem of contextual definition is deduced.

But if the second role is uncontroversial here,¹⁰ maybe more should be said about the connection between CP and the idea of a 'pure thought'. How can we in fact block the psychological infiltration into our logic/mathematics? Frege's response in *Begriffsschrift* was that: "to prevent anything intuitive (Anschauliches) from penetrating here unnoticed, I had to bend every effort to keep the chain of inferences free of gaps."¹¹ *Free of gaps* means here that once we start with pure judgeable contents, the logical system is preserving these contents, producing thus only pure thoughts. But the second step will be to secure the fact that we will be constrained to start *only* with pure contents. This is exactly the general role of CP in *Grundlagen*; since *words have meanings only in the context of a sentence*, we are throwing out the possibility of attaching independent meanings to words. Here, Frege is attacking directly the 'atomistic view of meaning', stemming mostly from the British empiricism, where words get meaning through sensorial perceptions and thus we attach to each word a mental image; our knowledge about the world is built from such images. But these images may be subjective, and thus the meanings may be subjective as well. Yet, meaning is objective for Frege, and so we need to 'purify' our mathematical thought, view which brings into discussion the role of intuition and representation in mathematics and logic. Frege is reluctant to accept the Kantian view that arithmetical truths are synthetic a priori, endorsing the analyticity of mathematics and expelling the intuition out of the mathematical realm.

Employing CP in *Grundlagen*, Frege is obtaining a secured system, where the content of the proposition is kept purely logic and this 'purity of thought' is preserved along all logical inferences. The purity of logical thought ensures us that

¹⁰ "When *Grundlagen* is read in its natural sense, without the importation of views stated only in Frege's subsequent writings, it is plain that he regarded his principle that words have meaning only in the context of sentences as justifying *contextual definitions*, and took this to be one of its most important consequences" (Michael Dummett, *Truth and Other Enigmas* (Cambridge: Harvard University Press, 1978), 95). For a detailed and interesting analysis of the role of 'contextual definitions' in *Grundlagen*, see William Demopoulos, "The Philosophical Basis of Our Knowledge of Number," *Nous* 32, 4 (1998): 481-503.

¹¹ Frege, *Begriffsschrift*, 5.

meanings are not subjective ideas, but objective contents that can be communicated and have a precise truth value.

It should be added here that CP plays even a greater role than those mentioned above, namely it marks the 'linguistic turn' in the contemporary philosophy. The language it is not further seen as a simply tool to communicate and express our thoughts, but *the* tool for approaching the world and so the analysis of language is required and prior to any other analyses. Michael Dummett claims enthusiastically that:

§62 is arguably the most pregnant philosophical paragraph ever written. (...) it is the very first example of what has become known as the 'linguistic turn' in philosophy. Frege's *Grundlagen* may justly be called the first work of analytical philosophy. (...) *There* is the linguistic turn. The context principle is started as an explicitly linguistic one, a principle concerning the meanings of words and their occurrence in sentences; and so an epistemological problem, with ontological overtones, is by its means converted into one about the meanings of sentences.¹²

2. The Interpretation of CP

2.1. The 'methodological' and 'epistemological' interpretations

How can we now interpret the principle? I think that it could be interpreted in three general ways: as a *methodological* principle, an *epistemological* principle and a *semantic* principle.

CP as a methodological principle reads as "*in order to keep pure our system*, then do not ask for the meaning of the words in isolation, but only in the context of a proposition". The *methodological* interpretation is accurate because of the methodological role of the principle in the *Grundlagen*. As we have already seen, CP is securing our logical content from any possible psychological interference. Again, the *reading key* is to keep in mind the whole project of Begriffsschrift, which was to gain a conceptual notation that will make logic the 'real science of truth'. The principle could be thus seen as operating at the methodological level, because of its capacity of providing us a way of approaching the issues. It says that from now on we have to change our habit of constructing logical proposition from the mere conjunction of subject of predicate with a new conceptual practice,

¹² Michael Dummett, *Frege. Philosophy of Mathematics* (Cambridge: Harvard University Press, 1991), 111; see also Michael Dummett, *Origins of Analytical Philosophy* (London: Duckworth and Cambridge: Harvard University Press, 1993), 5.

namely to begin the conceptual analysis with propositions.¹³ Only the propositions have real 'judgeable content,' and only after acquiring such content we can further analyze the judgement into its smaller components.

So, for Frege, we cannot speak about a *composition* of the content of the judgement from smaller contents of its component words, but rather only about the *decomposition* of the judgement into smaller parts. A judgement is a self-existent whole, which is not built of concepts, but rather the concepts are obtained by analyzing the content of the judgement. An illustrative passage in this sense can be found in a letter from 1882 to Anton Marty:

A concept is unsaturated in that it requires something to fall under it; hence it cannot exist on his own. That an individual falls under it is a judgeable content, and here the concept appears as a predicative and is always predicative. In this case, where the subject is an individual, the relation, the relation of subject to predicate is not a third thing added to the two, but it belongs to the content of the predicate, which is what makes the predicate unsatisfied. Now *I do not believe that concept formation can precede judgement because this would presuppose the independent existence of the concepts, but I think of a concept as having arisen by decomposition from a judgeable content.* I do not believe that for any judgeable content there is only one way in which it can be decomposed, or that one of these possible ways can always claim objective pre-eminence.¹⁴

On the other hand, such considerations entitle interpreters like Hans Sluga,¹⁵ Leila Haaparanta¹⁶ and Marco Ruffino¹⁷ to emphasize the reading of CP mainly as an *epistemological* thesis. The CP reads in this case as follows: "never ask about the meaning of a word in isolation, but in the context of a sentence *as expressing a judgement*, just because of the priority of judgements over their components." The context would be thus interpreted in connection with the

¹³ This idea is seen by Dummett as one of his most important and fertile ideas: "the apprehension of the central role of sentences for the theory of meaning, was one of Frege's deepest and most fruitful insights" (Dummett, *Frege. Philosophy*, 629).

¹⁴ Gottlob Frege, *Philosophical and Mathematical Correspondence*, eds. Gottfried Gabriel, Hans Hermes, Friedrich Kambartel, Christian Thiel, and Albert Veraart, trans. Hans Kaal (Oxford: Blackwell, 1980), 101; my italics in the original text.

¹⁵ Hans Sluga, *Gottlob Frege* (London: Routledge and Kegan Paul, 1980).

¹⁶ Leila Haaparanta, "Frege's Context Principle," in *The Philosophy of Gottlob Frege*, vol. 3: *Meaning and Ontology in Frege's Philosophy*, ed. Hans Sluga (New York and London: Garland Publishing, 1993), 265-279.

¹⁷ Marco Antonio Ruffino, "Context Principle, Fruitfulness of Logic and the Cognitive Value of Arithmetic in Frege," *History and Philosophy of Logic* 12, 2 (1991): 185-194.

Kantian thesis that “a judgement is prior to its constitutive elements.” That thesis is called in the literature ‘the priority thesis’, and expresses Kant’s idea that in the order of knowledge judgements are prior and only from judgements we can extract the subject-predicate relation. The epistemic unit of our knowledge of the world would be thus the judgement.

The doctrine of the priority of judgements over concepts can be understood only if it is seen as deriving from deep features of Frege’s thought. It expresses one of the Kantian elements in his thinking. Together with the Leibnizian idea of a perfect language and that of the reduction of arithmetic to logic these elements constitute the guiding principles for the construction of the *Begriffsschrift*.¹⁸

But why should we consider the judgement as the fundamental epistemic unit? The answer lies in the connection of epistemic problems (and, as we will see very shortly, semantic problems as well...) to the theory of truth. Concepts encapsulate meaning, they are meaningful, but they are not true of false. Only when connected with objects, we can speak about true facts. But, as stated above, in this case, in a purely Fregean terminology, “the objects fall under the concepts” and the recognition of that fact constitute a judgement. So, only with regard to judgements we can talk about truth and only they can be seen as the adequate truth-bearers.

Whenever we read CP in connection with the other two principles in order to reject psychologism, then we are committed to a *methodological* interpretation, whereas when we read it as restating the Kantian ‘priority thesis,’ then we are committed to a *epistemological* interpretation. They should not be seen as contradictory interpretations, but rather as complementary theses that try to capture Frege’s intentions for using CP in a very fundamental way. CP, if seen in a broader Kantian epistemological framework and along the project of *Begriffsschrift*, admits of both a methodological and an epistemological interpretation. But what if one interprets it through later writings, where Frege distinguished between sense and reference.

2.2. The ‘semantic’ interpretation

When I wrote my *Grundlagen der Arithmetik*, I had not yet made *the distinction between sense and reference*; and so, under the expression ‘a possible content of judgement,’ I was combining what I now designate by the distinctive words ‘thought’ and ‘truth-value.’ Consequently, I no longer entirely approve of the

¹⁸ Sluga, *Gottlob Frege*, 95.

explanation I then gave, as regards its wording; my view is, however, *still essentially the same*.¹⁹

So, since what was the meaning ('judgeable content') of propositions in *Begriffsschrift & Grundlagen* is now divided into sense (Sinn) and reference (Bedeutung), we may correctly wonder now whether CP is a thesis concerning only sense, or maybe only reference, or perhaps both. This line of interpretation is followed by interpreters like Michael Dummett and Michael Resnik, and I will call it the 'semantic interpretation' of CP.

Firstly, it should be made clear the point that to interpret CP as a semantic thesis does not mean at all to affirm Frege's support for some kind of 'semantic holism,' as some recent interpreters²⁰ have suggested. In this case it is not the meaning of a proposition which is 'responsible' for the meaning of its components, but a whole system of such propositions; we may thus have (that in this 'semantic holism,' what gives meaning to words and/or propositions is) either the language as a whole (Wittgenstein) or a certain theory and/or a system of such theories (Quine). But surely this was not Frege's intention.²¹

Secondly, CP implies neither that words have no meaning at all in isolation, nor that the meaning varies necessarily from sentence to sentence. The latter point means that the principle does not preclude a word to have only one meaning, whereas the former point suggests that here, in *Grundlagen*, Frege is concerned primarily with concepts and concept-words, and therefore he is not dealing with proper names, which are complete and saturated expressions, and

¹⁹ Gottlob Frege, *Posthumous Writings*, trans. Peter Long and Roger White (Oxford: Blackwell, 1979), 47; my italics.

²⁰ "If Contextuality is taken - as it has been by many - to indicate some sort of *semantic* principle, some sort of *semantic holism* whereby the meaning of individual words is constituted by, or is ontologically dependent upon, the meaning of sentences in which they occur, then there is no evidence whatsoever that Frege held the view at any time in his career, from the earliest to the latest publication and in all the unpublished works. Baker and Hacker, Davidson, Dummett, and the others who think Frege not only was a 'meaning holist' but that this is his 'most important contribution' are just wrong" (Francis Jeffrey Pelletier, "Did Frege Believe Frege's Principle?," *Journal of Logic, Language, and Information* 10 (2001): 110).

²¹ A similar position is expressed by Bar-Elli: "Does the context principle imply a kind of *holism* in the theory of meaning? Does it imply a version of *ontological relativity*, which threatens the Fregean conception of the objectivity of meanings? (...) I believe that a negative answer should be given to the first two questions" (Gilead Bar-Elli, "Frege's Context Principle," *Philosophia* 25 (1997), 100).

which seem to have senses independent from any linguistic context.²² But we should also not confuse CP with the considerations regarding the incompleteness of predicates and the completeness of proper names, which are so by their intrinsic nature and not by any extrinsic feature of a given context.²³ In the light of the sense-reference distinction, CP can be understood as two different principles:

(CPS) Only in the context of a proposition words have *senses*;

(CPR) Only in the context of a proposition words have *references*.

I will not enter in any dispute concerning which thesis is more correct, if any. I will simply say that since senses determine reference, the sense being the *mode of presentation* of the reference, it seems that whenever CPS is accepted then CPR should be accepted as well. On the other hand, if 'more correct' means here 'closer' to *Grundlagen's* claims and intentions, since there Frege is distinguishing between an objective content (judgeable content) and a subjective content (idea or mental image), it seems very natural that he had in mind the content/meaning as 'sense' and not as 'reference'; it is clear that the distinction between objects and their mental representations does not create any trouble in the sense of the problems discussed in *Grundlagen*. Thus, I will restrict myself to discuss only CPS.²⁴

²² In *Sense and Reference* we can find that: "the reference of a proper name is the object itself which we designate by its means; the idea, which we have in that case, is wholly subjective; in between lie the sense, which is indeed no longer subjective like the idea, but is yet not the object itself" (Frege, *Posthumous Writings*, 60).

²³ A clear formulation of this point can be found in Bar-Elli: "The context principle must be distinguished from the thesis that the senses of predicates and of functional expressions are *incomplete*. The latter is a much more specific thesis. This becomes manifest once we realize that if they were the same claim then Frege should have said that the sense of a name is incomplete, as that of a predicate is. The incompleteness thesis, however, is specifically about predicates, incompleteness being a feature that distinguishes them from names" (Bar-Elli, "Frege's Context," 106).

²⁴ Since the reference of a sentence is its truth-value, CPR requires a further interpretation, because to say that only in the context of a true proposition a word have reference seems somehow to reverse the natural way of dealing with truth, namely that a proposition is true exactly in the case when its constituents have references (counterparts in reality). This applicability of CPR constitutes the core of Peter Milne, "Frege's Context Principle," *Mind* XCV, 380 (1986): 491-495 analysis, and is also mentioned by Pelletier: "Frege of course does not think the *Bedeutung* of a term is a part of the *Bedeutung* of more complex expressions in

CPS, understood as a thesis governing sense, reads as follows: *we can ask about the senses of words only in the larger context of the sense of a sentence*. But does this make sense? I think it does, in the sense that the meaning of the proposition ('judgeable content' of beginning writings and 'thought' in later works) constitutes the basic semantic unit. Why? Why sentences and not words? Exactly like in the case of epistemic reading, the complete sentence is regarded as the fundamental unit because it is the basic carrier of truth. We cannot ask about sense in isolation, outside the context of a proposition. For example we may encounter a name in isolation (like passing by a city name on the highway...), but if we are going to ask about its meaning, then we are putting it in a context, in the context of that particular thought. Thus the moral of CPS would be that whenever we are asking about the sense of a word, we are looking for it already in the context of the sense of a proposition.

CPS would become also the expression of a very fundamental insight about natural languages, namely the fact that meaning, exactly like truth, is *context dependent*. This context dependence is an intrinsic feature of its very nature. But interpreting CP as a fundamental claim about the nature of language, one seems to come in conflict with another fundamental insight, namely that natural languages have a compositional structure; we can understand the meaning of new sentences only after understanding the meanings of their component words:

It is marvelous what language achieves. By means of a few sounds and combinations of sounds it is able to express a vast number of thoughts, including ones which have never before been grasped or expressed by a human being. What makes these achievements possible? The fact that the *thoughts are constructed out of building-blocks*. And these building-blocks correspond to groups of sounds out of which the sentence which expresses the thought is built, so that the construction of the sentence out of its parts corresponds to the construction of the thought out of its parts.²⁵

This linguistic capacity of humans to understand new thoughts seems to force Frege to accept, contrary to CP, that in order to understand/grasp a new proposition we must first be able to understand the meanings of its component words. But does it mean that senses are compositional? And if so, how can we solve the conflict with CP?

which it occurs. It would be absurd to think that, because "Etna is taller than Vesuvius" is true, the mountains Etna and Vesuvius are parts of The True" (Pelletier, "Did Frege Believe," 104).

²⁵ Frege, *Posthumous Writings*, 225; my italics.

This tension between the two claims is very important, because *prima facie* it seems that we have to renounce at one of the two theses. But are they in conflict? Some commentators²⁶ say yes, and in virtue of this incompatibility of the two, they are rushing to claim that Frege totally renounced CP after writing *Grundlagen*.

Frege seems to have never endorsed explicitly CP after *Grundlagen*, but he also never acknowledged explicitly compositionality as a fundamental principle. The former does not mean either that he explicitly rejected it; on the other hand, from the latter point we cannot deduce that compositionality is not important to Frege's conception of meaning.

However, to agree that Frege changed his conception in a very fundamental way means to deny his amazing 'unity of thought'. But, since I advocate Frege's coherence, I must accommodate both features in a consistent theory of meaning, and thus to articulate an interpretation in which both contextuality and compositionality peacefully coexist. This interpretation is supported by Michael Dummett,²⁷ Gilead Bar-Elli,²⁸ G. P. Baker and P. M. S. Hacker,²⁹ or Leila Haaparanta.³⁰ Bar-Elli, for example, holds that in speaking about senses we have to distinguish between two interpretations of CP:

Let us call the first interpretation – according to which the principle tell us how to identify or determine the meaning of a term – ‘the *identifying interpretation*’; the other – according to which the principle tells us in what the very idea of the meaning of a term consists – we shall call the ‘*essential interpretation*.’ (...) The distinction between the essential and the identifying interpretations seems to me important for understanding the significance of Frege's principle, and it will

²⁶ Michael David Resnik, “The Context Principle in Frege's Philosophy,” and “Frege's Context Principle Revisited,” in *The Philosophy of Gottlob Frege*, vol. 3: *Meaning and Ontology in Frege's Philosophy*, ed. Hans Sluga (New York and London: Garland Publishing, 1993), 60-69, 123-137, Pelletier, “Did Frege Believe,”; on the other hand Theo M.V. Janssen, in “Frege, Contextuality and Compositionality,” *Journal of Logic, Language, and Information* 10 (2001): 115-136, claims that, due the central and continuous role of CP, Frege never really endorsed something like a compositionality principle.

²⁷ Michael Dummett, “The Context Principle: Centre of Frege's Philosophy,” in *Logik und Mathematik. Frege-Kolloquium Jena 1993*, eds. Ingolf Max and Werner Stelzner (Berlin: Walter de Gruyter, 1995), 3-19.

²⁸ Bar-Elli, “Frege's Context,” 99-219.

²⁹ G. P. Baker and P. M. S. Hacker, *Frege. Logical Excavations* (New York: Oxford University Press, 1984).

³⁰ Haaparanta, “Frege's Context,” 265-279.

prove essential for the way I shall suggest for reconciling the apparent clash between the principle and the compositionality thesis."³¹

There is an important point of divergence between my view and Bar-Elli's. I do not consider them as two different interpretations of CP, but rather as two different ways of dealing with senses. Perhaps the distinction would be better explained in connection with the problem of truth. With regard to truth, there are two different things: the nature and the criterion(s) of truth. They response to two distinct questions: *what is truth?* and *how can we determine it?* It is one thing to define the truth and another to specify the criterions of being true.³² For instance the definition of truth can be the *correspondence* with facts, whereas the criterion would be the *coherence* among propositions. The same distinction seems to work for sense. The answer to the question *what is sense?* may be obtain by employing CP, whereas the appeal to compositionality thesis could serve us to answer to the question *how do we determine sense?*³³

But his point may be undermined by saying that, since the distinction definition-criterion of truth in not clear and without problems, the analogy may cause more problems than clarifications. Thus the reconciliation is in danger and we need a firm terrain to build up a common accommodation of the two claims. An important insight for this reconciliation lies in Dummett's slogan that "in the order of *explanation* the sense of the sentence is primary, but in the order of *recognition* the sense of a word is primary."³⁴ This thought captures precisely the nature of the two apparently contradictory points. When we ask for the nature of the sense, for a theoretical *explanation* of what meaning is, then the role of CP is exactly to make clear the point that sentences are prior to words, and they should be considered as complete sense carriers. On the other hand, when we try to see

³¹ Bar-Elli, "Frege's Context," 103

³² The distinction is explicitly stated in Russell: "coherence cannot be accepted as giving the *meaning* of the truth, though it is often a most important *test* of truth after a certain amount of truth has become known" (Bertrand Russell, *The Problems of Philosophy* (New York and Oxford: Oxford University Press, 1997), 123).

³³ In the light of the previous discussions, the connection with truth here is not *ad hoc*, but it follows the intimate connection between truth and sense. In Frege's semantics truth and sense are deeply interconnected. As Dummett points out: "to grasp the sense of a sentence is, in general, to know the conditions under which that sentence is true and the conditions under which is false" (Dummett, *Frege. Philosophy*, 5).

³⁴ Dummett, *Frege. Philosophy*, 4; for further elaborations of this point see also Michael Dummett, *The Interpretation of Frege's Philosophy* (Cambridge: Harvard University Press, 1981), 547.

the criterion of being meaningful, of how we are actually grasping senses, then we are looking for something else, namely for a *recognition* of how the things works in this case.

This semantic picture³⁵ resembles very much with the Leibnizian metaphysical view concerning the part-whole relation, where the parts are prior to the whole in the case of actual discrete objects, whereas in the case of continuous ideal objects the whole is prior to its parts. Of course that the smallest meaningful carriers of sense of natural languages are words, yet we learn words and use them in order to produce sentences, like we produce bricks not for themselves, but in order to put them together and build houses. It is like in molecular chemistry: we acknowledge the existence of submolecular levels like atoms, electrons, quarks and so forth, yet the theoretical level of analysis is set at the level of molecules. They are relevant for our investigation, even though they are made up of various combinations of atoms. The comparison is further relevant for in nature as in natural languages, we very rarely may find solitary atoms; most of them come up combined in molecules. Molecules made up the surrounded universe, even though they are in fact composed of atoms. So, both contextuality and compositionality could peacefully and fruitfully coexist under the same Fregean roof.³⁶

What needs perhaps here to be added is the fact that all the three interpretations of the principle should be seen as complementary to each other, rather than mutual exclusionary. I do not think of this classification as bringing

³⁵ This is also similar with Socrates' talk about 'wholes' in *Parmenides*; we can regard either the whole as divisible into parts or the parts as forming up the whole.

³⁶ All this Fregean problematic issues seems to have its echoes in *Tractatus*, where both contextuality and compositionality are to be found:

- Contextuality:

3.3. Only propositions have sense; only in the sense of a proposition does a name have meaning.

3.314. An expression has meaning only in a proposition. All variables can be constructed as propositional variables.

- Compositionality:

3.318. Like Frege and Russell I construe a proposition as a function of the expression contain in it.

4.026. The meanings of simple signs (words) must be explained to us if we are to understand them.

Wittgenstein's later conception of the meaning of a word as its use in the language (games), could be regarded as a 'mere' extension of Fregean CP. For a detailed and interesting analysis of this point, see Erich H. Reck, "Frege's Influence on Wittgenstein: Reversing Metaphysics via the Context Principle," in *Early Analytic Philosophy. Essays in Honor of Leonard Linsky*, ed. William W. Tait (Chicago: Open Court Publishing Company, 1997), 123-185.

into light distinct Fregean views and thus any overlapping zone among the three points is excluded *ab initio*. I rather see these interpretations as a natural succession of views, starting with the broadest interpretation and ending with the narrowest. A methodology gives one a way of approaching things, epistemology restricts this way only to the realm of knowledge, and semantics preserves from knowledge only the parts relevant to meaning. The link between the last two points can be even more explicitly exhibited by the slogan that "a theory of meaning is a theory of understanding," and since to understand something means to know it, the connection would be obvious in this case.