

The Idea of Code in Contextualism and Minimalism

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Abstract: In this paper I discuss the idea of a semantic code in the contemporary debate between contextualism and minimalism. First, I identify historical sources of these positions in Grice's pragmatics and in Davidson's theory of meaning in order to sketch the role of a semantic code there. Then I argue that contextualism is committed to the idea of an ad hoc code, while minimalism involves a persistent code. However, the latter approach to a code requires disambiguation which must be carried out in the early stages of speech act processing. I raise a concern that primary pragmatic processes may be active here, especially in the case of disambiguating polysemous expressions, which could be problematic or even devastating for the minimalist program. At the end I evaluate a possible minimalist way out by examining the minimalist account of metaphor, which lies at the root of polysemy. If a code robust enough to deal with polysemy could be created, minimalist conceptions would present a new impetus to understand language as a code. Without such a code, very little would be left of the notion of a persistent code and hence of minimalism itself.

Keywords: code, contextualism, minimalism, disambiguation.

At the end of the twentieth century, it could have seemed that the idea of a semantic code had been discarded. Wittgenstein subsumed it under the Augustinian understanding of language, while Quine addressed it in his myth of a museum. In spite of its apparent rejection, the idea has recently inspired renewed interest. Curiously enough, this renewed interest has arisen thanks to thinkers who directly or indirectly follow in the footsteps of Wittgenstein and Quine.

The current debate focuses on the role of (linguistic or non-linguistic) context in communication and linguistics. If we admit the role of

context, how do we capture this role in theory? Given that the number of possible contexts is limitless, a language user cannot learn all the various impacts of the context. Others argue that, in communication and linguistics, we need to get by with finite means. This finite knowledge could be captured by a finite code coupled with finite recursive rules of composition, in which the understanding of meaning and the interaction of meaning with the context is, as it were, sublimated.

By semantic code I mean a form of mapping that assigns meaning to each element of language, usually a word.¹ This mapping captures language conventions. However, the terms “semantic code” and “language convention” are often used interchangeably. For the purposes of the present work, this indiscriminate use can be accepted, although the link between expressions and their meanings can be constituted in other ways, such as naturally (Cratylus’ hypothesis). If we define semantic code on the level of individual words, we obtain a finite mapping, as each natural language has only a finite number of words. This finite code can be extended into an infinite one using suitable rules of composition.

Two extreme cases of code are worth mentioning. At one extreme, a code is defined primarily on the level of sentences; at the other extreme, a code is defined on the level of letters. A code defined on the sentence level is infinite, as there is infinity of sentences in a natural language. A semantic code defined on the level of letters seems almost an absurdity (assuming we are concerned with a language that uses letters, such as English or Russian). However, strictly speaking, such a code is conceivable, if we systematically describe the semantic effect of each letter in the context of the letters that surround it. I mention this only because a similar problem pertains to lexical code.

What do we need a code for when studying language? This question can be answered only if we clarify the goals to be achieved by the study of language. We can study language in order to create a systematic theory of meaning and inference, where “systematic” has to be understood as “compositional”. Alternatively, we can study language in order to create a psychological theory of communication that involves such questions as how communication is possible, what our communication abilities are, and what things we are able to communicate. These

¹ I use “meaning” in a broad sense, which includes Fregean senses, rules, stereotypes, etc.

two aims are not in contradiction; under certain conditions, they can even be complementary.²

What is a semantic code good for, then, if we want to devise a systematic theory of meaning? The answer is obvious: a semantic code is suitable for modeling the semantic relation, because of the compositionality of the semantic code. A theory of meaning that was not based on the notion of a semantic code would not be systematic, and, thus, it would not meet the initial requirements. In a way, the idea of a semantic code is necessitated by the requirements.

If we aim to create a theory of communication, the usefulness of the semantic code can be clarified using the following transcendental consideration. People understand each other when using language, as they share a code. Or more precisely, in order for people to understand each other at all, they have to share a code. When a person utters “xsffg”, others will not understand the utterance, as the string is not an element of the domain of the shared code. By contrast, a person’s utterance “this is a writing desk” is readily understood by others. A semantic code is, here, a cognitive basis on which the psychological process of understanding is constructed. According to this consideration, knowledge of language amounts to knowledge of a semantic code, the rules of composition, and the rules governing how the code is applied in specific situations.

To sum up, a semantic code can be an idealized condition of the possibility of a semantic theory without the code’s having any psychological reality, and, conversely, a semantic code can have a psychological reality without being a condition of the possibility of communication.

For the sake of the following discussion, three problematic points concerning the idea of a semantic code need to be mentioned. The first problem is that natural languages undergo change, while a semantic code, as an abstract object, is unchanging. If we take a radical stance following Quine and Davidson, we can say that languages change from moment to moment, a fact that needs to be accounted for in the theoretical models of language. From this point of view, two notions of code can be distinguished: a code as an abstract *persistent* object, and a code as an object that is constructed in communication *ad hoc*. One could ob-

² With a little simplification, the first aim is one of minimalists, while the second aim is one of contextualists. Compare Borg (2004, 1-3), Jaszczolt (2005) or Bach (2011).

ject that the second notion of a code is so ephemeral that it does not even deserve to be called a “semantic code”. However, following the definition of a semantic code as a mapping between expressions and their meanings, such an ephemeral mapping is a semantic code per definition, no matter how ephemeral and *ad hoc* it may be. One problem of the notion of a shared *ad hoc* semantic code can be that it does not explain the possibility of communication. We cannot explain the possibility of communication by pointing to a shared code that has been created no sooner than in the very act of communication. The proponents of such a notion of a code have to explain how the communication partners arrive at their shared code. In the following, two methods of construction of a shared *ad hoc* code are mentioned. An advantage of *ad hoc* codes is that they work also on the level of sentences, as they need to specify the sentence meaning of only a small subset of sentences related to the situation at hand rather than the sentence meaning of all possible sentences.

The second problem of a semantic code may be its ambiguity. Natural languages contain polysemous expressions and homonyms, i.e. words that have more than one meaning. In order for a semantic code to be a mapping in the mathematical sense (each member of the domain is mapped to at most one member of the codomain) *disambiguation* needs to be done, which consists in assigning indices to terms in such a way that each term considered together with its index has exactly one meaning. For example, the word *hard* can be disambiguated as *hard*₁ (not easily penetrated, cut, or separated into parts) or as *hard*₂ (difficult to accomplish). The choice of the index of a term depends on the context. Capturing rules of disambiguation turns out to be a formidable task, as I will show later. The existence of polysemy and homonymy suggests that meaning does not depend exclusively on individual words but rather is spread throughout the context of sentences. This problem bears an analogy to a semantic code on the level of letters; a lexical code is possible if we are able to capture polysemy and homonymy with finite means.³ Homonymy and disambiguation that homonymy makes necessary present a problem only for the persistent view of a code. If

³ Wittgenstein (1974, 195) considers the hypothesis that the meaning of a particular word changes according to the day of the week. Such context dependence is systematic and can be captured in lexical code. However, if the meaning changed arbitrarily from day to day or from sentence to sentence, such context dependence could be captured in a code only using an infinite

a code is constructed ad hoc, homonymy does not emerge (except for when it is intentional), as it is resolved when the code is constructed.

1 Historical Background

Contemporary contextualism in the philosophy of language is the result of an effort to elaborate on, or solve, some problems of Gricean pragmatics. In fact, the influence of Gricean pragmatics on contextualism is explicitly acknowledged by contextualists themselves. By contrast, the intellectual sources of minimalist theories are not so clear. I will argue that what lies at the core of minimalism is Davidson's conception of language enriched with Grice's terminology and Grice's theory of communication. However, many elements of Davidson's conception of language can also be found in contextualism. Thus, a short overview of Grice's and Davidson's theories seems to be in order.

1.1 Gricean Pragmatics

Most contextualist authors adopt or refine Grice's basic terminology. To an extent, so do the semantic minimalists; semantic minimalism is also called Gricean minimalism. Grice introduces the technical terms "what is said" and "what is implicated". He distinguishes "what is said" from conventional meaning or "what is encoded", although he says the two are closely related. Roughly speaking, the transition from conventional meaning to what is said is a matter of semantics, while the transition from what is said to what is implicated is a matter of pragmatics. This close relation between conventional meaning and what is said is where contextualism picks up the threads of Grice's work by asserting that pragmatic phenomena are active also in this area. The notion of "what is (en)coded" captures the idea of code that is the subject of the present text.

Now I would like to sketch the relationship between conventional meaning and "what is said". In one of his most recent works, Grice came up with the notion of centrality of meaning, which has two independent properties: *dictiveness* and *formality*. Grice identifies the dictive content with "what is said"; formality is related to conventional

number of rules. To put it differently, it would be a code on the sentence level.

meaning.⁴ We can classify speech acts using these two properties. If a speech act has both properties, what is said is determined solely by the conventional meaning. The interesting cases are, however, those in which one of the two properties is missing. A speech act can lack its dictiveness; that is the case of a conventional implicature. Dictive speech acts that lack formality are especially interesting for contextualists. In these speech acts, what is said is partially or wholly independent of the conventional meaning of a sentence. This allows contextualism to be classified into a *moderate* form or a *radical* form, depending on whether it claims partial or complete independence of what is said on the conventional meaning. If “what is said” is at least partly independent of the conventional meaning, then it needs to be explained how this transition (from the conventional meaning to what is said), generally called *modulation*, is possible. Recanati calls this process “sense enrichment”; Sperber and Wilson (2008) speak of the process of a construction of meaning; Levinson goes so far as to allow “what is said” to be influenced by implicatures that were derived later. Here I have mentioned only the most influential theories.

1.2 Davidson’s Minimalist Conception of Meaning

Davidson aimed at providing an acceptable theory of meaning for natural languages. Such a theory should specify what each sentence of a language means, and thus capture semantic code on the sentence level. Furthermore, a theory of meaning has to be holistic in the following sense: “only in the context of the language does a sentence (and therefore a word) have meaning.” (2001b, 22) This has to be understood in such a way that a theory of meaning must contain all (true) sentences “*s* means *m*”. This intuitive requirement has led Davidson to use the well-known T-scheme: “*p*” is true if and only if *s*. Notice that giving the truth conditions of the sentence is, as a consequence, a way of giving its meaning. The meaning of sentence *p* is abstracted from *all* T-sentences that have “*p*” on the left side. But what is the scope of this universal quantifier?

⁴ Some authors identify Grice’s terms “formality” and “dictiveness” with Austin’s terms “locutionary” and “illocutionary”. See Bach (2004) or García-Carpintero (2006, 45-46).

A theory of meaning is, according to Davidson, an empirical theory that has to answer the question of what the meaning of sentence p is, rather than what meaning is *per se*. This theory has to be empirically testable on “sample cases”. In these cases, we do not deal merely with sentence p , but rather with its particular use, and thus utterance. However, Davidson—like later minimalists—explicitly insists that truth (and thus also truth conditions) is a property of sentences rather than utterances. A language user has available only a finite number of specific uses and the scope of the mentioned universal quantifier is—although getting broader—finite. Davidson calls such a theory of meaning a *prior theory*, while an extension (and reinterpretation) of the theory with the current language situation is called a *passing theory*. It can thus be said that language meaning is knowable in this restricted sense, and that if we are concerned with a rational (and psychological) reconstruction of human communication, this restriction of the scope of the universal operator needs to be taken seriously.

However, Davidson (and, later, also minimalism) offers a theory of meaning for sentences (type) of language. Thus, the scope of the mentioned quantifier is still left unspecified. Let us try to make the scope as broad as possible. If we are concerned with a theory of meaning for a particular language such as, say, English, we need to quantify over all possible uses of sentence p in English and, from them, abstract the meaning (i.e. truth conditions). Such a conception of meaning can be called minimal or minimalistic.

In the paper “Communication and Convention”, Davidson (2001a) questioned whether a shared conventional code is a necessary condition of communication. In order for communication to be successful, the speaker and her addressee need to assign the same meanings to the same words (which means that their passing theories have to match). Put differently, the addressee has to correctly determine “what is said”, i.e. the ad hoc code. In order for this condition to be met, it is not necessary that the speaker and the addressee share a persistent semantic code in advance. It does not matter what stands at the beginning of the communication process, during which the speaker performs a speech act and his addressee tries to figure out what is said; what matters is that there is an agreement at the end of the process. In order for this agreement to be possible (i.e. in order that the communication is successful), the language users have to share the same method of how to use their knowledge of language in a particular context. Davidson calls

this general process the “radical interpretation”, and later a transition from a prior theory to a passing theory. The conventions of language enter the process as a “practical crutch”, which sometimes helps and sometimes does not or need not. In the contemporary debate, a similar style of thought can be found in radical contextualism, as exposed in the following section.

2 Contextualism

I shall present a definition of contextualism that loosely follows Recanati (2010b). Recanati defines *methodological* contextualism as a position that admits that the meaning of each expression (rather than the meanings of only indexical expressions and demonstratives belonging to the *basic set*) can depend on context. This is followed by two varieties of contextualism which share the thesis that knowledge of contextual factors is necessary for the determination of the meaning of a sentence. Thus, the meaning of a sentence depends on the meanings of its parts, on the manner of their composition, and on context. Because of the specific contextual parameter, we have to speak of the meaning of a specific utterance (token) instead of the meaning of a sentence (type). *Moderate* (modulation based) contextualism is based on the assumption that the meaning of an expression is insufficient (and often unnecessary) for determining the meaning of an utterance that uses the expression. Conventional meaning undergoes primary pragmatic processes⁵ which Recanati calls modulation. Basic types of modulation include free (i.e. not linguistically mandated) enrichment, predicate transfer, and sense-extension. *Radical* contextualism goes even further by claiming that the idea of an association of expressions with meanings is untenable. This is called *generalized indexicality*. Every expression contributes to the meaning of a sentence by means of certain contextual factors. In my view, the difference between moderate and radical contextualism lies in their stance toward the idea of a persistent code. Radical contextualism rejects the idea, while moderate contextualism admits it in a constrained form. Radical contextualism (sometimes also called occasionalism) can also be seen as an effort to thoroughly re-interpret Wittgenstein’s thesis that meaning is use, which amounts to a rejection of Grice’s distinction

⁵ Secondary pragmatic processes pertain to a derivation of implicatures.

between what is semantically encoded and what is said (Baptista forthcoming, 3).

What are words associated with, then, if not with meanings? Recanati answers this question by offering a theory of *semantic potentials* inspired by Wittgenstein and Waismann. A word s is associated with a set of its legitimate uses $\{S_1, S_2, \dots, S_n\}$. If the word is newly used in a situation S_{n+1} , this new use is legitimate only if it is sufficiently *similar* to the uses already present in the set. However, similarity is a vague notion. To deal with this vagueness, Recanati uses the idea of the *contrast set* which makes it possible to abstract the property in respect to which the situations are deemed similar or dissimilar. New legitimate uses enrich the original set and thereby extend the semantic potential of the word.⁶

A code as understood by Recanati is not shared, as people cannot be expected to share the same semantic potential of every word. The sharing of semantic potential is possible only in a very limited manner; e.g. learning a mother tongue can be understood as passing on semantic potential in a shared situation. The condition of successful communication is a certain similarity between the semantic potentials of the speaker and her addressee (together with a shared method for determining this similarity). Two semantic potentials are similar if, in a given situation, they lead to the same judgment of their legitimacy.

Recanati's theory is strongly behavioristic and psychological. While it is inspired by Wittgenstein's conception of language, it is questionable that it faithfully captures Wittgenstein's ideas. However, Recanati is not concerned with an exegesis. More interestingly, his conception of language learning by association reminds one of Davidson's reconstruction of communication in the article "A Nice Derangement of Epitaphs" (2005). The enrichment of semantic potential with a new situation could be seen as a psychological reconstruction of the transition from prior theory to passing theory. Just like Davidson, Recanati admits the idea of code only as a set of temporary associations that dynamically change during communication. The association of expressions with meanings (or semantic potentials) is nothing persistent.

A common objection against all varieties of contextualism is that, if its main tenets were true, communication would be impossible. Although the theory of semantic potentials could seem to be an adequate

⁶ Recanati (2003), compare also Bezuidenhout (2002).

response to the objection, Recanati has come up with what he calls an *availability principle*.⁷ One of its many formulations is as follows:

What is said must be intuitively accessible to the conversational participants (unless something goes wrong and they do not count as ‘normal interpreters’). (Recanati 2004, 20)

This principle, which is a reflection of the psychological spirit of Recanati’s conception of language and communication, constrains the results of primary pragmatic processes to those that can be “normally” expected by the participants of communication. The trouble is with the word “normally”.⁸ The communicating partners must share the same intuitions or at least the same criteria of normality in order to have direct access to what is said. If normality were determined by introspection (as is suggested by the unfortunate term “intuitive”), the speaker could not tell whether he is normal or merely believes himself to be normal, which results in a case of private rule following.⁹ However, Recanati suggests that, in order to judge normality, it suffices to have epistemic access to the following factors: (a) the sentence spoken, (b) the meaning of the sentence (semantic code) and (c) relevant contextual factors (Recanati 2004, 20). This suffices, we are told, for the derivation of what is said. But then the availability principle is transcendently deduced rather than psychologically observed. It plays the role of a transcendental condition of successful communication, which places even harder demands on communication than the respective condition in the case of minimalism. Recanati’s availability principle requires both a shared semantic code and a shared relevant context, whereas minimalism demands a shared code only.

If the theory of semantic potentials is true, the participants of communication have no access to the shared meaning of a spoken sentence. Hence, the process of derivation of “what is said” is not shared and deterministic; we have no guarantee of successful communication. But in the fact, there can be no such guarantee in this psychological framework. As Recanati reminds us, communication is a matter of “negoti-

⁷ This principle distinguishes Recanati from other contextualists. The relevance theory comes with what it calls the *principle of relevance*. See e.g. Sperber – Wilson (2008, 177-181).

⁸ This objection is raised by Cappelen – Lepore (2005, 188n.).

⁹ Wittgenstein (1958, §202).

ating meaning”, seeking and approaching the perfect understanding (Recanati 2010a, 8).

There is a sort of payoff here. Recanati includes contextual factors into his availability principle, which, on the one hand, allows him to keep the idea of code narrow, but, on the other hand, cannot guarantee successful communication. Cappelen and Lepore demand that the success of communication cannot depend on shared context (Cappelen – Lepore 2005, 182-189) and communication must be possible across contexts. This is to understand that they exclude contextual factors from conditions of communication. But then they have to demand a very robust semantic code. The rest of my paper is devoted to reflections upon the idea of such a robust code.

3 Minimalism

I admit that the goal of contemporary minimalists is unclear to me. While they claim they are concerned with creating a systematic semantic theory,¹⁰ they respond to objections that their minimalist conception of meaning has no psychological reality. (Cappelen – Lepore 2005, ch. 12) If proponents of minimalism only aimed at a systematic semantic theory rather than the psychological reality of the minimal meaning, there would be little left to disagree about.¹¹

Minimalism can be defined in many ways. According to Cappelen and Lepore, the basic idea of minimalism is simple: The semantic content of a sentence *s* is the same for *all* utterances of the sentence *s*.¹² If a sentence depends on context in some way, this dependence is triggered semantically, as is the case with indexical expressions which belong to the *basic set*.¹³ Minimalism distinguishes between “what is semantically

¹⁰ E.g. in Borg (2004, 3).

¹¹ Recanati (2010, 12-14) claims that this form of minimalism is true by definition.

¹² Emma Borg explicitly rejects this definition: “I’d reject, then, the view of Soames (2002) and Cappelen – Lepore (2005) that minimal contents are those conveyed by *every* utterance of a sentence”. (2010b, 57)

¹³ This is a characterization by Cappelen – Lepore (2005, 143n); the (more radical) minimalism of Emma Borg (2009) adds the thesis that the dependence on context must be formally traceable.

expressed" (or the minimal content or meaning, minimal proposition) and "what is said", where the former is part of the latter. What is semantically expressed is a result of disambiguation in a broad sense and of the saturation of context dependent expressions. For minimalists, "what is said" is a pragmatic notion, whose content can significantly go beyond the content that is expressed semantically. The *speech act pluralism* of Cappelen and Lepore goes so far as to deny any systematic connection between what is semantically expressed and what is said.

Emma Borg's definition of minimalism is slightly different. Her definition of semantic content is this: "Semantic content for sentences is fully determined by syntactic structure and lexical content: the meaning of a sentence is exhausted by the meaning of its parts and their mode of composition" (2010b, 54). For Cappelen and Lepore, a process is pragmatic if it cannot be identified on the syntactic level of a sentence; for Borg (2009, §4), a process is pragmatic if it cannot be derived formally using lexical information only. Finally, let us mention a definition of minimalism from one of its opponents, François Recanati, who labels it I-minimalism:

What is said_{int} is affected by the bottom-up process of saturation but not by top-down processes such as free enrichment. (Recanati 2010, 14)

What is said_{int} is defined as the intuitive truth conditions of an utterance. Thus, this variety of minimalism is concerned with the psychological reality of what is said rather than merely with a systematic semantic theory. Crucial here is the division of processes into *top-down* and *bottom-up*. Roughly, a bottom-up process performs composition or synthesis from elements, whereas a top-down process performs decomposition and the analysis of a larger whole (sentence) into its elements. Recanati gives the following definition: "A 'top-down' or context-driven process is a pragmatic process which is not triggered by an expression in the sentence but takes place for purely pragmatic reasons". (Recanati 2010, 4)

What is the relationship of this terminology to Grice's above-mentioned classification? What is semantically expressed lies somewhere between Grice's conventional meaning and what is said. However, if we remove illocutionary force from Grice's definition of "what is said", we come close to minimal content:

The minimal content of utterance u of sentence s (in context c) is defined as the M-intended truth-conditional content of *sentence s (in context c)*, to whose truth the speaker is committed.

Furthermore, we need to clarify the relationship of minimal meaning to Davidson's conception of meaning. Here is an obvious connection. Both conceptions define meaning as an abstraction over all uses. All that I have written above about the problems of understanding the scope of such quantification applies also to minimalism. If a semantic minimalist tries to define minimal meaning, he arrives at something like Davidson's T-schema:

Utterance "A is red" semantically expresses the proposition that *A is red*. (Cappelen – Lepore 2005, 157)

There is a worry that what all the utterances of the sentence "A is red" have in common is only (or above all) that they contain the sentence itself. The minimal meaning, or – more specifically – minimal proposition, is for Cappelen and Lepore a metaphysical question in the sense of searching for common properties of objects that are included under a term (e.g. what is it that is common to all big things or all brave actions). Wittgenstein's objection would be that they may have nothing in common at all; they are connected merely by a network of similarities making up a family resemblance. Cappelen and Lepore call this position *metaphysical nihilism* and deem it absurd.

What is the notion of minimal meaning good for, then? Cappelen and Lepore give a clear answer: "In short: the proposition semantically expressed is our minimal defense against confusion, misunderstanding, mistakes and it is that which guarantees communication across contexts of utterance." (Cappelen – Lepore 2005, 185) Thus, minimal meaning has the role of a transcendental condition of communication that was attributed to the idea of a semantic code at the beginning. Contextualists object that the minimal meaning so construed is "an abstraction with no psychological reality" (Recanati 2001, 88). The problem lies in a too broad (or unconstrained) quantification over all uses of each sentence. Only a finite number of utterances can enter into an abstraction of minimal proposition if it is to keep its psychological reality.

Thus, a minimal proposition is what can be expected by an addressee who has no access to the context of an utterance. If there were no such propositions, this would not mean that communication was impossible, but merely that *some* sentences could not be understood with-

out context, which I take to be obvious. On the contrary, the thesis that *all* sentences can be at least minimally understood without the context of their utterance seems absurd to me.

What is the position of minimalism toward the idea of a semantic code, then? Semantic minimalism tries to be neutral: “[...] we want Semantic Minimalism to be neutral between the different accounts of how best to assign semantic values to linguistic expressions; e.g. objects, sets, properties, functions, conceptual roles, stereotypes, or whatever.” (Cappelen – Lepore 2005, 144) A further step on the way from semantic code to minimal proposition is the employment of rules for the composition of meanings; here, minimalism is also neutral. In spite of all that neutrality, it is necessary for these meanings and rules to be shared, as the derivation of the minimal proposition must be deterministic (according to E. Borg, even formal). In order for the minimal proposition to be able to serve as a condition of communication, we need a shared semantic code and shared rules of composition and saturation, even if minimalists are reluctant to describe the nature of the code. Thus it seems that semantic code and minimal proposition come rather close.

As outlined above, homonymy and polysemy present a problem for understanding language as a code. Contextualism deals with these phenomena at the level of negotiation of meaning. In minimalism, the derivation of minimal meaning requires disambiguation. However, there is the suspicion that disambiguation is a primary pragmatic process which enters the derivation of what is said before the determination of truth conditions.

Cappelen and Lepore describe the derivation of the minimal proposition as follows (Cappelen – Lepore 2005, 144n):

- (a) Specification of the meaning of every expression in the sentence.
- (b) Specification of the compositional rules.
- (c) Disambiguation of every ambiguous expression, where the ambiguity is due to homonymy or polysemy.
- (d) Clarification of vague expressions.
- (e) Saturation of semantic values of every context dependent expression.

Here, disambiguation is at the same level as saturation. Thus, it is a sub-propositional process. If saturation is the only process at this level that can interact with context, disambiguation must be independent of context.

The above-mentioned objection that it is unclear whether all utterances of a sentence have something in common is not only a matter of metaphysics, as it is claimed by Cappelen and Lepore. The objection that there is nothing that all utterances of the sentence “That is a hard thing” have in common can be answered by a semantic minimalist as follows: If you have found nothing in common, it may be because the term “hard” has multiple meanings. Get back and perform disambiguation thoroughly. In some cases, disambiguation can be done during the derivation of the logical form of the sentence;¹⁴ in other cases, disambiguation requires information from context such as the topic of conversation.

Emma Borg (2004, 142) deals with the problem in more detail and proposes the following solution: Homonymous expressions need to be disambiguated *before* semantic processing, if possible. If this is not possible, it is necessary to semantically process all the varieties of meaning, and pragmatically resolve them only later. Borg even allows the existence of homonymy that needs to be handled during semantic processing, if it is a case of *top-down feedback*, i.e. the gradual exclusion of contextually anomalous interpretations. This process differs from real pragmatic processes such as free enrichment in that no further information is added to what is said.

Disambiguation is a bottom-up process, as it is triggered by the presence of a homonymous expression. A top-down process is only the exclusion of anomalous interpretations. In this case we have here something like the above-mentioned Grice’s circle by Levinson, as later implicatures can influence what is said. It would be devastating for the minimalist program if a process of disambiguation would require information that was not lexically encoded. In the following, I will try to argue in this direction.

Disambiguation needs to proceed with respect to some code that maps each expression to a discrete set of meanings. But this is a simplification, as language meanings cannot really be understood as discrete sets. If meaning is holistic to an extent, criteria of identity for particular meanings cannot be exactly specified. So far I have spoken mainly

¹⁴ The sentences “They were armed with bows” and “He bows deeply” could be disambiguated in this manner, for the word “bows” must be a noun in the former sentence and a verb in the latter.

about the rather rare phenomenon of homonymy. By contrast, polysemy is a much more common phenomenon, one closely related to a holistic understanding of language. An expression is polysemous if it has multiple meanings that are in some way related, often one of the meanings being metonymically or metaphorically derived from another. Homonymous expressions are mostly considered distinct lexical units (and thus in need of indexing), whereas a polysemous expression has only one entry in the lexicon. Thus, it depends on the choice of the code whether, and to what extent polysemous expressions are considered related or quite different, i.e. whether they will be reduced to homonymy. If the code is fine-grained enough, disambiguation that uses the code requires finding a correct metonymic interpretation of many expressions.

Let us have a look at how the phenomenon of metaphor and metonymy is approached by minimalists, namely Emma Borg (2001). The interpretation of metaphor is based on a figurative interpretation function which assigns the set of (all) possible interpretations $p_1 \dots p_n$ to each literal meaning of metaphor p together with conceptual framework α :

$$f(p, \alpha) = \{ p_1 \dots p_n \}$$

A conceptual framework is made up of relationships between concepts that are common in the given community or concepts of the particular speaker. Importantly, these relationships can depend on information that is not lexically encoded, i.e. on knowledge of the world. In the second step, a subset of those interpretations that are relevant in the given context needs to be chosen. The contextual factor c comes into play:

$$f(p, \alpha, c) = \{ p_1^c \dots p_n^c \}$$

This second step, which involves the restriction of interpretations that are unsuitable in the given context, is analogical to the above-mentioned top-down feedback, in which anomalous interpretations of homonymous expressions are excluded. This process poses no problems for the minimalist derivation of meaning.

What is important for further consideration is the first step. If finding metaphorical interpretations requires extra-linguistic information, this information is probably in some way contained in the interpretations. If the same process of interpretation were active with polyse-

mous expressions, we would be dealing with a truly pragmatic process that precedes the determination of truth conditions, which would be fatal for minimalism.

Disambiguation of homonymous expressions is activated on the syntactic or semantic level and is mandatory (even if it were performed only after semantic processing). By contrast, disambiguation of polysemous expressions is not always mandatory. Thus, it can be governed only by pragmatic decisions. Consequently, the semantic information contained in a semantic code is insufficient for a complete determination of the meaning of an utterance, typically for truth conditions. But is this really the case?

This is exactly what contextualists claim. One of their types of modulation is “predicate transfer” or “metonymic transfer” (Recanati 2010, 166-168). It is a typically top-down process which is in many cases optional, i.e. it is triggered purely pragmatically. Recanati gives the following example:

There is a lion in the courtyard.

The expression “lion” can refer to a living lion or it can be metonymically transferred to a statue of a lion. A further metonymic transfer is possible, by which “lion” refers to a person born under the sign of Leo. Thus, the expression “lion” is polysemous in this way. Polysemy can even be defined as conventionalized modulation (Recanati 2010, 70n). This is where a way out for minimalism could be found. If it were possible to conventionalize all the information that is contained in polysemous expressions, there would be no need for pragmatic decisions. If we reduced polysemy to homonymy, the conceptual relations that, according to Emma Borg, are necessary for metaphorical interpretations would be lost. If minimalists succeed in including these relations into a semantic code, disambiguation of polysemous expressions would not be counted a primary pragmatic process.

The last sentences of the previous paragraph are stated using conditionals, as I do not know of a conception of code robust enough to include all conceptual relations. It is an open question whether such a code can be constructed using finite means. Even if this were possible, it is unclear that such a code would be psychologically adequate (for instance, because of massive parallelism).

4 Minimalism Is (Radical) Contextualism

From the above discussion, it could seem that there are only a couple of varieties of contextualism and minimalism which cover all the possible semantic and pragmatic approaches to formulating a systematic theory of meaning and its interaction with context. This, of course, is not the case. Minimalism and contextualism are merely extreme positions in some sense, and there are several approaches to the unification of their various features.¹⁵

One group of approaches includes theories that extend the *basic set* of indexical expressions (as understood by minimalism) with further expressions or classes of expressions. Among these, let us mention Jason Stanley's theory of hidden indexical expressions, which places further indexical parameters on the sentence level, or the predicate indexicalism of Rothschild and Segal, which extends the set of indexical expressions with predicate expressions. In indexicalism, these further indexical expressions can be detected using syntactic methods and all semantic content has a propositional character (similarly as in minimalism).

Another group of approaches includes theories that extend the concept of proposition with a further parameter whose content needs to be gained from context. Thus, truth values depend not only on the possible world but also on a further parameter (we can call it a *generalized proposition*). If the proposition expressed in sentence *p* varies with context, it is possible to add this further parameter. The generalized proposition thereby becomes context invariant. It is a typically semantic approach consisting in an effort to capture context dependence by semantic means.¹⁶

An example of this approach is the non-indexical contextualism of John MacFarlane (2007). It extends proposition with a "count-as" parameter as a function from properties (resp. expressions that stand for properties) to intentions. For each property (e.g. big), the intention that

¹⁵ An overview of various positions can be found in Borg (2010a).

¹⁶ We can distinguish two kinds of context dependence: An expression or sentence is context dependent if it has different meanings in different contexts or if its truth depends on context. By adding a further parameter to proposition, we convert the former kind of context dependence to the latter one. Compare Cappelen – Lepore (2005, 146) or MacFarlane (2007).

is expressed by the property (e.g. big for a dog) is determined using context. This approach is reminiscent of Recanati's proposal to include a contrast set. As is admitted by MacFarlane himself, his proposal approaches radical contextualism, whose basic tenet is that a proposition is created only in context. We can see that a small modification of, or a small departure from semantic minimalism leads directly to radical contextualism.

The following line of argumentation is typical of proponents of minimalism (as an instance of *modus tollens*):¹⁷

Even a small departure from minimalism collapses into radical contextualism.

Radical contextualism is absurd and internally inconsistent.

No reasonable modification of minimalism is possible.

Proponents of radical contextualism can turn the argument the other way around while keeping the first premise:

Even a small departure from minimalism collapses into radical contextualism.

Semantic minimalism is inadequate and in need of modification.

Radical contextualism is the only acceptable position.

Both these arguments suggest that there is not much of a difference between minimalism and radical contextualism. If minimalists failed to solve the problems connected with the disambiguation of polysemous expressions, minimalism would collapse into radical contextualism without any modification. Thus, the notion of a code is at a crossroads. If a code robust enough to deal with polysemy could be created, minimalist conceptions would present a new impetus towards understanding language as a code. If such a code could not be created, very little would be left of the notion of a persistent code, other than perhaps a provisional code that could, for a certain time and in a certain language community, help in interpreting meaning or be active in the process of creating it. As Davidson has already claimed, it is a practical crutch.¹⁸

¹⁷ This is the main argument from Cappelen - Lepore (2005, 14) and also from Borg (2010a).

¹⁸ Supported by project GACR P401/11/P174.

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