

## CONTEXTUALISM AND THE ROLE OF CONTEXTUAL FRAMES

ANNE BEZUIDENHOUT

*Department of Philosophy  
University of South Carolina  
Columbia, SC 29208  
USA*

*anne1@sc.edu*

**Abstract:** Some part of the debate between minimalists and contextualists can be construed as merely terminological and can be resolved by agreeing to a certain division of labor. Minimalist claims are to be understood as (not necessarily correct) claims about what is needed for adequate formal compositional semantic models of language understood in abstraction from real conversational contexts. Contextualist claims are ones about how language users produce and understand utterances by manipulating features of the psychological and discourse contexts of the conversational participants in real conversational settings. However, some minimalists have attempted to engage contextualists more directly by defending a form of psychological minimalism. The minimal proposition expressed by a sentence *S* is construed either as the most general content shared by all possible utterances of *S* or as the content that expresses the fewest commitments. Both conceptions are shown to be problematic by an extended analysis of the de-contextualized sentence 'John is ready'. Finally, evidence is presented from the psychological literature to show that lack of contextual clues can seriously degrade understanding. This evidence points to the crucial role of discourse factors, such as conversational topics and other contextual framing devices, in utterance understanding.

**Keywords:** Semantic minimalism. Contextualism. Minimal proposition. Linguistic understanding. What is said. Contextual frames.

## CONTEXTUALISMO E O PAPEL DOS QUADROS CONCEITUAIS

**Resumo:** Parte do debate opondo contextualistas e minimalistas pode ser reconstruída como meramente terminológico e poderia ser resolvido com um acordo sobre uma certa divisão do trabalho. As teses dos minimalistas podem ser entendidas como teses (não necessariamente corretas) sobre o que é preciso para construir modelos semânticos, formais, composicionais e adequados da linguagem compreendida em completa abstração dos contextos conversacionais reais. As teses contextualistas dizem respeito à maneira como os usuários da linguagem produzem e entendem frases, pela manipulação de traços dos contextos psicológicos e discursivos dos participantes engajados em conversações em ambientes conversacionais reais. No entanto, alguns minimalistas tentaram relançar o debate defendendo uma forma de minimalismo psicológico. A proposição mínima que uma frase *S* expressa é construída, ou como o conteúdo mais geral compartilhado por todas as enunciações de *S*, ou como o conteúdo que expressa os menores compromissos. Ambas as concepções se revelam problemáticas através de uma análise extensa da frase descontextualizada “João está pronto”. Finalmente, evidências presentes na literatura em psicologia são apresentadas mostrando que a falta de pistas contextuais afeta negativamente a compreensão. Essas evidências apontam para o papel crucial, para a compreensão de enunciação, dos fatores do discurso, tais como os tópicos conversacionais e outros mecanismos de enquadramento contextual.

**Palavras chave:** Minimalismo semântico. Contextualismo. Proposição mínima. Compreensão linguística. O que é dito. Quadros contextuais.

### 1. TERMINOLOGY AND THE CONTEXTUALIST-MINIMALIST DEBATE

The philosophical debate between contextualists and minimalists tends to leave non-philosophers rather bemused, as it can seem to be mainly a terminological dispute about how to apply the notion of ‘what is said’. At issue is whether this notion picks out utterance content or sentence content, whether it is a communicative/pragmatic notion or a semantic one, and whether it is the theoretician’s or the lay person’s intuitions that should count in identifying *what is said* in particular cases. Those who think that

*what is said* corresponds to sentence content, that saying is a semantic notion, and that the notion of *what is said* is a theoretician's construct, tend to be minimalists. (Kent Bach would be a good example of someone who holds this combination of views. See Bach, 1994). Those who think that *what is said* corresponds to utterance content, that saying is a communicative notion, and that ordinary speaker intuitions are sensitive to such contents, tend to be contextualists. (This is the view defended by Bezuidenhout, 2002 and elements of which have long been defended by Relevance Theorists such as Carston, 1988; 2002 and by contextualists such as Recanati, 1989; 2004).

Of course, this scheme is a little too simplistic to pigeon-hole all the players in the debate. For example, Cappelen and Lepore (2005) are very strident minimalists, and yet they argue for a pragmatic notion of *what is said*. This is easily explained in my terms by noticing that Cappelen and Lepore consistently conflate saying and stating. This is simply a mistake. Stating is one sort of illocutionary act (along with questioning, commanding, requesting, promising, declaring, warning, and their ilk). So stating can be rather straightforwardly categorized as a pragmatic notion. Even those who, like Searle (1969), want to distinguish between direct and indirect speech acts, and who want to say that declarative, interrogative, and imperative sentence forms directly encode the illocutionary force of stating, questioning, and commanding (respectively), would agree that the study of speech acts belongs to pragmatics. So when Cappelen and Lepore argue that *what is said* is a pragmatic notion, they are really saying that the speech act of stating is a pragmatic notion – something that is not very controversial.

Cappelen and Lepore also tend to have a very un-nuanced view of pragmatic content. They tend to lump asserted contents together with presupposed and implicated contents as though these all have the same status in a conversation, whereas in fact it is crucial

for managing a conversation that one accord these sorts of contents very different statuses. Assertions have foregrounded contents whereas presuppositions are backgrounded. Implicated contents can have different strengths and they may shade off into contents that are merely inferable rather than implicitly communicated.

However, when I claim that saying is a pragmatic notion I am *not* conflating saying and stating. To use some older terminology, acts of saying can be identified with Austinian locutionary acts and acts of stating with Austinian illocutionary acts. So I am claiming that locutionary acts are communicative acts. Locutionary acts are utterances of sentences (or perhaps of sub-sentences – see Stainton, 2006) in certain conversational contexts. The contents of such utterances are fixed by (and must be identified by relying on) the meanings that are semantically encoded in the sentences uttered, together with additional relevant information from the conversational context, including information about the conversational partners. This, I take it, is the core of the contextualist claim, namely that *what is said* is not to be equated with semantically encoded sentence meaning but with a pragmatically constructed content. Semantically encoded meanings may contribute elements to *what is said*, but the latter generally goes well beyond encoded meaning. A locutionary act for Austin is the uttering of a sentence with any structural or lexical ambiguities resolved and a definite reference assigned to any indexicals the sentence may contain. The contextualist conception of a locutionary act goes beyond Austin's conception by insisting that disambiguation and reference assignment are not the only contextual parameters that play a role in fixing content.

It should be stressed that contextualists do not deny that there is a coherent notion of encoded sentence meaning. What contextualists do deny, however, is that this notion corresponds to *what is said*. Thus contextualists take issue both with minimalists

such as Borg (2006), as well as with moderate contextualists such as Bach (1994), who identify *what is said* with sentence meaning. The primary difference between minimalists and Bach is that the former assert that the content of every semantically well-formed sentence corresponds to a complete proposition, whereas Bach allows that in some cases sentence meaning can fail to be fully propositional – it can be “gappy” and in need of contextual completion. Nevertheless, Bach is on the side of minimalists such as Borg (2006) in rejecting the idea that contextually completed contents correspond to *what is said*. Bach instead calls such contents implicatures, for the reason that he thinks such contents are implicit in what is said.

On the other hand, Bach is on the side of contextualists in agreeing that it is the pragmatically derived content that is communicated and that sentence meanings may fail to be salient to the participants in real conversational settings. I would go further and claim that while there is a coherent notion of sentence meaning, it plays no psychological role in utterance production and comprehension. This is because pragmatic content construction begins locally, at the level of words and phrases rather than globally at the level of sentences. By the time compositional mechanisms are ready to put elements together to form a complete propositional content, word meanings have already been pragmatically modulated and hence the sentence-level meaning is bypassed.

This does not mean that after the fact or in certain special circumstances – say in a court of law or in a literature class – people cannot reconstruct or recognize the possibility of a “strict-and-literal” sentence-level meaning. However, in such cases (e.g., in cases of puns, jokes, metaphors, etc.) the reason for looking for a “strict-and-literal” meaning is to juxtapose it with the pragmatically enhanced one in order to experience a tension or resonance between these alternative meanings. See Pinker (2007).

As I said at the outset, the debate between contextualists and minimalists can seem to be mere word-mongering. Why can't we all just agree that everyone is right about at least some aspect of meaning and adjust our terminology accordingly, so that what may appear to be substantial disagreements are seen to be just a matter of talking at cross-purposes? For example, no party to the debate is proposing to scrub the semantics-pragmatics distinction altogether. No one is denying that there is a coherent notion of natural language sentence-level meaning that can be studied by the formal semanticist. On the other hand, no one is denying that there is a communicative dimension to language and that to study this it may be necessary to pay attention to the psychology of utterance comprehension and production. So can't we just say there is a division of labor here? Minimalists are talking about a thin notion of saying that can be abstracted from sentences considered in isolation from their use by speakers and in isolation from conversational contexts (except perhaps from some formally tractable sense of 'context'; e.g., one that can be represented by a Kaplanian index). Contextualists are talking about a thick notion of saying that is a genuinely communicative notion. Thick saying is a real act on the part of a conversational participant in a particular conversational context, unlike thin saying which is not an act at all. After all, minimalists claim that sentences say things. Yet it is not possible for a sentence to act, so a sentence cannot say anything in the thick sense.

This terminological resolution would be a step forward, and certainly would seem to take care of the dispute between contextualists and minimalists such as Cappelen and Lepore (2005). Unfortunately, philosophers rarely just lay down their argumentative weapons and agree to a truce. Most feel that they have been arguing over something substantial and that the opposition has it wrong. Thus Borg (2006) tries to articulate a

conception of minimalism that is part of a psychological account of natural language processing. She largely buys into the Relevance Theory way of framing the issue, namely as one that is attempting to offer a psychologically realistic cognitive theory of utterance interpretation. Borg sees the battleground as having shifted to a debate about the output of the language system at what Chomsky (1995) calls the conceptual-intentional (C-I) interface.

Relevance theorists such as Carston (2002) have suggested that the output at this interface is a representation of the logical form (LF) of the uttered sentence. This LF-representation is a tree-structure containing lexical concepts at its nodes and Carston argues that it underspecifies the speaker's intended meaning. Pragmatic processes of enrichment and/or loosening are required to move from the lexically encoded concepts to the pragmatically modulated concepts that constitute the content the speaker intended to express. Borg argues in opposition that the output at the C-I interface is a propositional representation. It is not underspecified or "gappy" in any way. However, it is admittedly not the proposition that the speaker intended to communicate. Thus there is work for the hearer to do to figure out what the speaker's intended message was.

We can illustrate the difference between Relevance Theory (RT) and Borg's account by considering their differing views about the structures that are the output at the C-I interface when the input to the language module is a sentence with one or more indexical elements. On the RT view, the output will be a gappy entity—what Bach (1994) calls a propositional radical. The gaps will correspond to the indexical expressions and will have associated with them certain rules or instructions for finding suitable referents in the conversational context. (For example, the indexical 'I' will induce a gap associated with the instruction to search the context for the agent of the context.)

Borg on the other hand thinks that the output from the language module, even in the indexical case, will contain no gaps. Corresponding to each indexical expression will be a singular concept (rather than a gap). This concept will itself have a character or rule associated with it, which can be thought of as an instruction for integrating this singular concept (which is just a Mentalese token) with other information the interpreter may have available, such as perceptual information, information about the speaker's intentions, etc. This further information may allow the interpreter to identify the referent of the indexical in a way that is not possible purely on the basis of the possession of the singular concept. Note however that Borg's singular concepts are concepts in a very thin sense. They are basically just mental word-tokens that have the potential to be hooked up with other Mentalese tokens in such a way as to yield the sort of robust identifying knowledge that connects the mind to the world.

At first glance, Borg's views seem radically different from the RT view. After all, insisting that the output of the language module is non-gappy vs. gappy seems like a big difference. But once one realizes that the 'concept' that is the output of the language mechanism (when the input is indexical) is a singular concept in this thin sense (one that does not constitute identifying knowledge of an entity and would remain unchanged even if there were no entity to be identified—as in cases of hallucination), then one begins to wonder how Borg's notion of 'singular-concept-plus-rule' differs from the RT notion of 'gap-plus-rule'. One difference is that for RT these rules are rules of semantic *interpretation*, whereas for Borg these are rules of pragmatic *integration*. On both conceptions these rules are sensitive to wide pragmatic information. This leads defenders of RT to say that the retrieval of (real) truth-conditional content is pragmatically sensitive. However, since Borg thinks that her thin contents already amount to truth-conditional content she

denies that such content is pragmatically sensitive. However, thin truth-conditional content by itself may not give us access to the sort of identifying knowledge that a full understanding of the speaker's meaning requires. Only once this content has been pragmatically integrated with wide pragmatic information will we achieve such full understanding of what the speaker conveyed. I suggest that this is at heart a terminological difference about what deserves to be called truth-conditional content. What Borg is calling truth-conditional content is simply the Mentalese sentence that is the output of the language module. RT denies that this deserves to be called truth-conditional content, reserving this title only for the fully integrated content that Borg agrees needs to be recovered for full understanding.

One might object that the issue here is empirical and that only experimental investigations by cognitive psychology could help us decide between RT and Borg's account. However, even if one disagrees with my assessment of the state of play between Borg and defenders of RT and thinks that the issue here is more than terminological, it should be noted that Borg's minimalism is a long way from the Cappelen & Lepore style of minimalism. The latter are trying to defend traditional formal semantics from the threat they perceive contextualism to present to the task of constructing a formally tractable, compositional truth-theoretic semantics for natural languages. They are not interested in questions about the psychological reality of their formal semantic axioms and theorems or in offering a testable cognitive-psychological theory of utterance production and comprehension. Thus Borg has already made large concessions to the contextualist camp by agreeing to play on their turf.

## 2. BEYOND TERMINOLOGY: UNDERSTANDING SENTENCES OUT OF CONTEXT

Once we see the debate between minimalism and contextualism as one that plays out in the arena of cognitive psychology, there are many more factors that need to be taken into account and that can potentially help the contextualist explain how the idea of pragmatically constructed content does not lead to an anything-goes, Humpty-Dumpty account of meaning, according to which expressions can mean whatever their users intend them to mean. (In *Through the Looking-Glass*, Humpty Dumpty says to Alice ‘There’s glory for you’ and claims to mean ‘There’s a nice knockdown argument for you’). That is, the worry that Cappelen and Lepore (2005) have that contextualism somehow leads to incoherence and the collapse of all order and reason takes on a very different complexion when we move the debate to the realm of empirical science.

Cappelen and Lepore (2005) want to defend the idea of a truth-theoretic semantic theory that can provide an account of the meaning of natural language sentences such as (1). This requires the articulation of a set of axioms that entail T-theorems such as (T1):

(1) John is ready.

(T1) ‘John is ready’ is true in English just in case John is ready.

They are not trying to offer a psychological theory of utterance interpretation. Nevertheless, one can imagine a “psychologized” version of their claims. A psychological minimalist would claim that a representative person with a competence in English, let us call him ‘Ernie’, can grasp what an utterance of (1) minimally expresses without knowing anything about who the speaker of (1) was (except that he or she was a speaker of a standard variety of American

English) or anything about the conversational context in which (1) was uttered. Moreover, the psychological minimalist will claim that the content grasped by Ernie is fully propositional, just as Cappelen and Lepore claim that the right-hand side of the T-theorem (T1) expresses a complete proposition. (Cappelen & Lepore (2005) imagine themselves sitting in a café and being told that a speaker used a certain sentence, such as ‘John is ready’, to express a thought. By hypothesis, this is all they know. They are totally ignorant of who the speaker is or what the context of utterance was. They claim that they, sitting in their café, are able to recover a fully propositional content for that utterance. I assume that they mean they will be able to recover a fully propositional content that is consonant with the proposition expressed by the original speaker. It is beside the point if they are able to invent a content that has absolutely nothing to do with what the speaker expressed.)

When those who are skeptical of semantic minimalism press Cappelen and Lepore to say more about just what the proposition is that is allegedly expressed by the right-hand side of the biconditional (T1), they retreat to the claim that it is not their business to give a theory of propositions. That is a matter for metaphysics to decide, and we should refer our questions to our resident metaphysicians! However, the question is more pressing for psychological minimalists. They claim that as a matter of psychological fact, when Ernie encounters sentences such as ‘John is ready’ without knowing anything about the utterance context, he can nevertheless grasp a fully propositional content. It is necessary to say exactly what this content is, otherwise we have no way of testing this empirical claim or comparing its predictions with those made by contextualists.

One thing we need to ask is what sort of thing a minimal content is. Presumably it is a core meaning, something shared by any utterance of (1), no matter what the context of utterance might be. One suggestion is that the proposition expressed by (1) out of

context is an existentially quantified proposition that can be roughly paraphrased as:

- (P1)  $\exists x \exists y \exists t \exists n$  ( $x$  is a thing and  $y$  is an action and  $t$  is an orienting time and  $n$  is an individual named ‘John’ and  $n$  is ready at  $t$  for  $x$  or to  $y$  or to be  $y$ ’ed at  $t+\Delta$ )

The explanation for this would be that when Ernie accesses his lexical entry for ‘ready’, he will discover that semantically it expresses a two-place relation whose second argument is an event in the future relative to some orienting time. He will also discover that syntactically ‘ready’ subcategorizes for an optional prepositional phrase. Thus existential generalization on the various arguments would yield the proposition (P1). Of course, if Ernie is just an ordinary person on the street with no training in linguistics or philosophy of language, he is unlikely to be able to articulate what it is that he grasps in anything like this detail. But his state of understanding would be one that can be characterized as the grasping of proposition (P1).

The contextualist on the other hand will deny that Ernie grasps anything fully propositional, and certainly not the existential generalization (P1). Firstly, the representation (P1) just helps itself to the notion of readiness and so helps itself to an understanding of the very thing that is allegedly being explained, namely what it is that Ernie understands when he understands (1).

Secondly, I assume that the psychological minimalist is committed to the view that whatever proposition Ernie grasps, it must be one whose structure corresponds to the structure of the proposition expressed by the original speaker’s utterance of (1), the one difference being that the minimal proposition may need to deploy descriptive concepts in place of the *de re* concepts that were

available to the speaker.<sup>1</sup> But then (P1) can't be what Ernie grasps, since it presupposes that (1) is about an individual named 'John' and the original utterance may not have been about any such individual. Perhaps somebody who was working on fixing a broken toilet finished his work and wanted to let others know that the toilet was now ready for use, and so called out 'John is ready!'. If Ernie really knows nothing about the context, he can't rule out this possibility. (Prosodic information about (1) is contextual information and so would be unavailable to Ernie).

Thirdly, (P1) has to be disjunctive to cover various possible contextual understandings of (1), but it is not clear that it covers all relevant possibilities. (P1) acknowledges that the subject of (1) can play either the agent or patient role in the event that is the second argument of the readiness relation – this is the point of 'ready to *y* or be *y*'ed'. However, (P1) fails to acknowledge that there may be differences in the ways in which the subject fulfills these roles, and this may be relevant, since the proposition expressed by a speaker's utterance of (1) may have different inferential potentials depending on these different manners of fulfilling the agent and patient roles. Consider for example the difference between the following possible completions of (1):

(2) John is ready for burial.

(3) John is ready for testing.

In both cases John plays the role of patient rather than agent, in the burial ceremony and the examination respectively. Never-

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<sup>1</sup> E.g., if the uttered sentence contains a deictic use of the pronoun 'he', the minimal proposition will not contain the contextual value for that pronoun but rather a descriptive concept – a concept such as *the salient male in the conversational context*.

theless, it is crucial that John be capable of actively responding to stimuli in the test situation in a way that is not required, and in fact ruled out, in the burial situation (given that John is not being buried alive). In a further twist, one could imagine that the testing situation is something like an autopsy, and so John could be just as dead in the testing situation as in the burial situation. This is true, but just goes to show once again how important knowledge of the actual conversational context is in determining *what is said*.

If (P1) is to match the structure of whatever proposition it was that was expressed by an utterance of (1) in its original conversational context, (P1) will have to represent these different inferential potentials by adding variables that range over manners of fulfilling roles so that we get something like:

(P1\*)  $\exists x \exists y \exists t \exists n \exists m_1 \exists m_2$  ( $x$  is a thing and  $y$  is an action and  $t$  is an orienting time and  $n$  is an individual named 'John' and  $m_1$  is a manner of being an agent and  $m_2$  is a manner of being a patient and  $n$  is ready at  $t$  for  $x$  or to  $y$  in way  $m_1$  or to be  $y$ 'ed in way  $m_2$  at  $t+\Delta$ )

It is by no means clear that even (P1\*) covers all the relevant possibilities. (For example, 'John is ready to rocket to the moon' has implications about the instrument John will use to achieve his goal of travelling to the moon, so we'd need to add variables that range over instruments). Since it is unlikely that anyone can anticipate all possible contextual uses of the readiness concept, we should just admit that what Ernie grasps lacks full generality and that therefore his understanding will be partial.

Another possibility for the psychological minimalist is to retreat to a position like the one mentioned above that is defended by Borg (2006). On this view a minimal proposition is not one with

completely general content but rather one with no real content at all. It would consist of thin concepts – in essence just Mentalese words. So rather than something like (P1) and (P1\*), which try to anticipate all semantic possibilities – is the subject an agent or a patient, what is the manner in which the subject fulfills its role, what are the instruments the subject uses to fulfill its roles, etc. – a minimal proposition remains silent on all these issues. It makes no commitments as to semantic structure and content.

Two problems face this view. Firstly, it is by no means clear that it can really avoid the sorts of commitments embodied in (P1) and (P1\*). Borg (2006) is clear that there are “rules for pragmatic integration” associated with her thin concepts and these are going to have to include information of the sort already mentioned – information such as that a subject can be agent or patient, that there are manners of fulfilling these roles, that the readiness relation requires identification of an orienting time, etc. Secondly, grasp of a minimal proposition in this thin sense (without the associated rules) clearly does not deserve to be called understanding in any sense, partial or full. It would be like encountering a string of symbols in a language that you have no understanding of, such as Sumerian or Akkadian texts written in cuneiform script.

None of this is to deny that, when confronted with a sentence out-of-the-blue, we are capable of some sort of partial understanding. After all, the words being used in (1) are English words, and not very difficult ones, so we’re not left completely in the dark (as we might be on encountering a sentence such as ‘The synthetic response develops a sense of change that is not inherently dependent on the monotonous and dangerous movement of negation’<sup>2</sup>). Moreover, even “de-contextualized” sentences are likely to invoke various sorts

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<sup>2</sup> It may or may not help you to be told that this is an actual sentence from an actual book on philosophy and rhetoric.

of knowledge scripts or frames. It may be that there are some stereotypical cases of readiness and that these will come immediately to mind when one encounters the word ‘ready’. And of course, as a part of processing the linguistic string ‘John is ready’, Ernie will access the lexical entry for ‘ready’ and the syntactic and semantic information described above (about sub-categorization frames and argument structure) will become available. However, this information will only be available at a sub-doxastic level, and Ernie will not be consciously aware of or able to monitor this lexical access process. In order to bring some common-sense version of this semantic and syntactic information to conscious awareness, Ernie is likely to cycle rapidly through some sample completions of (1) of his own devising, implicitly testing various hypotheses as to the parameters relevant to the interpretation of ‘ready’.

We can call this the “simulation theory of de-contextualized understanding”. Ernie simulates the sort of exploration of knowledge frames that he would engage in if he were in a real conversational context, the difference being that he doesn’t know what the actual context is and so he has to imagine various possible ones. His reasoning might go something like my reasoning below.

To begin with, note that the first argument of the *ready* relation can be an agent, a patient, or an experiencer. One can say things such as:

(4) John is ready to play a round of golf.

(5) John is ready for surgery.

(6) John is ready for the ride of his life.

In the case of (4), John will be the agent of the golf-playing; in the case of (5) John may be the patient who will be operated on by a surgeon, although he could also be the surgeon or one of the surgical

assistants; and in the case of (6) it could be that John is about to experience the thrill of a roller-coaster ride. Note also that the first argument of the *ready* relation needn't be animate. Thus we can say things such as:

(7) The economy is ready for a boost.

(8) My car is ready for the scrap heap.

Secondly, the examples using the 'ready for (Det) (Adj) N' construction, such as (5)-(8) above,<sup>3</sup> require the operation of a process that cognitive linguists such as Pustejovsky (1995) and Jackendoff (2002) call coercion. For instance, the determiner phrase 'the scrap heap' in (8) doesn't pick out an event, so the interpreter must access something about scrap heaps, what their purpose is, who uses them, what ends up on scrap heaps, etc. in order to figure out that the car is ready to be disposed of by its owner to a scrap dealer, or some middleman who will sell it to a scrap dealer, who will then disassemble it and keep any valuable parts for resale before crushing the useless hulk and shipping it off to a landfill or other industrial waste site. (Of course, a speaker of (8) most likely is using it metaphorically to mean that his car is in very bad repair and that it is *like* a piece of junk rather than that he is actually planning to take his car to the junkyard. Nevertheless, even a metaphorical interpretation of (8) would need to access this world knowledge).

Similarly, to find a suitable event argument for the interpretation of (5), we need to invoke our knowledge that surgeries are performed by surgeons, sometimes together with the help of surgical teams, on patients, for the purpose of repairing

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<sup>3</sup> Further examples are: 'The house is ready for (quick) sale', 'John was ready for every (possible) contingency', 'The baby will be ready for a (warm) bath'.

bodily damage. We also know that surgeries can be major or minor, emergency or scheduled, cosmetic or medically necessary, and so on. We know that some people are trained surgeons but that many doctors perform minor surgeries even though they did not train as surgeons. Also, vets can perform surgery on (non-human) animals. Thus John could be ready to play the patient role or the agent role in a surgical event – he could either be ready to operate on one or more patients or he could be ready to be operated on by one or more “surgeons” (i.e., individuals playing the agent role in the surgical event). It can be seen from this discussion of cases involving coercion that the ‘ready for’ cases reduce ultimately to cases of ‘ready to do *y* or to be *y*’ed’.

Thirdly, ‘ready’ seems to express a state of being poised for the onset of some future event (‘I’m ready for the new administration to take over’) or the cessation of some ongoing one (‘I’m ready for this current administration to end’). It presupposes that as far as the thing in a state of readiness is concerned, any necessary precursors for the onset or cessation of the event are in place. (There is a difference between getting ready and being ready, for example. To complicate matters there are idioms like ‘Ready when you are!’ that seem to suggest that the speaker is not actually ready but could be ready at short notice or in synchronization with the addressee’s actions). Being ready for something does not require that there will in fact be some future event or that some current event will in fact cease – just that there is the potential for such an onset or cessation. This is illustrated in (9) below, since it is possible that the speaker will not actually quit her job. Also, the state of readiness can persist for an extended period of time, as is shown in (10) below. The speaker is in a state of readiness to leave the party, but some impetus for the event of leaving, outside the speaker’s control, is missing (e.g., perhaps the speaker has no car and is waiting for someone to give her a ride):

(9) I am ready to quit this job.

(10) I've been ready to leave this party for the last hour!

Fourthly, it is important to note that the pivot point of readiness (what I earlier called the 'orienting time') need not coincide with or temporally overlap with the moment of utterance, as might be suggested by 'John is ready'. The orienting time is something that will need to be determined by reference to the conversational context. The tense of the main verb can be some indication of what the orienting time is. Think of the difference between 'John is/ was/ will be ready', where the orienting time might be in the present, past or future, depending on the tense of 'to be'. However, the suggestion of overlap of orienting time with utterance time in 'John is ready' can be contextually overridden, for example with the use of the so-called Historical Present. Thus if 'John is ready' is preceded by some sort of context that sets events in the past, the orienting time will be fixed in the past. (E.g., 'It is 1970 and young men are being drafted into the US Army. John is ready to serve his country and doesn't hesitate to show up to the recruiting office.')

All of this is supposed to make a case for the claim that our understanding of sentences is thoroughly dependent on rich contexts that weave together world knowledge with semantic and syntactic information. This applies just as much to "de-contextualized" sentences as it does to utterances of sentences that belong to the written or spoken conversations of which we are a part, as speakers and/or audience members. However, in the "de-contextualized" cases we necessarily have only a partial understanding that depends on our ability to simulate understanding by running imaginary scenarios in our heads.

### 3. EMPIRICAL EVIDENCE OF THE REAL CONSTRAINTS OF CONTEXT

Philosophers may be especially good at spinning scenarios in their heads, leading to the impression that the understanding of de-contextualized sentences is effortless, as well as giving the illusion that such understanding is more complete than it in fact is. This illusion is also fed by the fact that philosophers tend to use very simple illustrative examples, such as 'John is ready' rather than real examples such as 'The synthetic response develops a sense of change that is not inherently dependent on the monotonous and dangerous movement of negation'.

Thus, in the remainder of this paper, I discuss some of the empirical findings that support a contextualist view of language production and comprehension. This will by no means be an exhaustive survey of what is a huge field of research, stretching back at least as far as the late 1960s. I have selected just a few examples focused on the language comprehension side of the issue. These are intended to demonstrate that utterance understanding is a thoroughly contextualist affair. These experimental findings show that unless we can weave together world knowledge with semantic and syntactic information in an appropriate way, our understanding will be very thin.

Some pertinent sets of findings are those reported by Dooling & Lachman (1971) and Bransford & Johnson (1972). In these experiments, participants were presented with narratives with and without titles or other such topic- or situation-orienting clues. In one of Bransford & Johnson's experiments, participants listened to a recording of the narrative below. Their task was to listen to the narrative, then rate it for comprehensibility on a 7-point scale, and then complete a recall task in which they had to write down as much as possible of what they remembered of the narrative:

The procedure is really quite simple. First you arrange things into different groups depending on their makeup. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo any particular endeavor. That is, it is better to do too few things at once than too many. In the short run this may not seem important, but complications from doing too many can easily arise. A mistake can be expensive as well. The manipulation of the appropriate mechanisms should be self-explanatory, and we need not dwell on it here. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then one can never tell.

One group was told in advance that they were about to hear a passage outlining the procedure for laundering clothes. Another group was given the topic-orienting information after they'd read the passage but before completing the rating and recall tasks. A third group got no topic information either before or after hearing the narrative. Bransford & Johnson (1972) found that people rated the text as more comprehensible and could recall more of this text if they were told in advance that this was a passage describing how to do laundry. Those who were given the topic information after hearing the narrative were at no advantage on the recall task and found it just as incomprehensible as those who got no topic information at all. These findings suggest that the contextualizing information was crucial to the way text was comprehended in the first place and was not simply acting a retrieval cue.

In another experiment, Bransford & Johnson's participants heard a passage and either saw or did not see a cartoon drawing in

advance. Again there was an advantage in terms of levels of comprehension and recall for those who saw a cartoon in advance that depicted the scenario described in the text. Seeing the cartoon after reading the text did not confer any advantage, nor did seeing a cartoon in advance that consisted of pictures of story elements but arranged in a way that failed to correspond to the story. It also did not help to hear the story repeated twice without any context-setting clues. This again shows that contextual clues are not merely used as labels to help in recall but are actively used to construct a meaning in the first place and that taking these clues away can seriously hinder proper understanding.

With respect to a different narrative used in a similar experiment (the “kite-flying” narrative), Bransford & Johnson’s participants reported afterwards “that they actively searched for a situation that the passage might be about; generally they were unable to find one suitable for understanding the entire passage, although they could make parts of it make sense.” (1972: 724-5). This has to do with the fact that without a knowledge frame in which to insert the story elements, it is harder to discern connections among the events described in the narrative. With an impoverished framework for understanding, it is unsurprising that details are inadequately encoded in memory, leading to degraded recall of story elements at a later time.

More recently, in an ERP study, St. George et al. (1994) found that the words in passages such as Bransford & Johnson’s “laundry” narrative produce a stronger N400 when the title is not supplied in advance, suggesting that readers find such passages less coherent without a title.<sup>4</sup> The studies from the 1970s required people to make

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<sup>4</sup> Evoked Response Potential (ERP) studies are ones in which measurements of electrical activity are taken at various electrode sites in an array of electrodes placed on the skull of a participant. These measurements can be represented by

judgments about what they had heard *after* presentation of the passages, leaving the door open for a non-processing explanation of the difficulties people experienced. This ERP study helps confirm that these problems with global coherence emerge during the actual processing of the passages and are therefore not problems of recall. It appears that the difficulties here are with higher-level text integration processes.

Participants read the same passages whether they were in the Title or No-Title group. Thus the advantage experienced by the Title group cannot be explained by appeal to semantic priming, since any advantages due to the presence of semantically related words would have been enjoyed by both groups. What the people in the No-Title group lacked was the ability to relate the underspecified concepts expressed by words such as ‘things’, ‘facilities’, ‘appropriate mechanisms’, etc. to one another and to their proper referents. When people are given topic information in advance, on the other hand, they can access an overarching frame or schema which has a place in which to insert these concepts, thereby putting contextual flesh on the bones of these minimal meanings. Moreover, a contextual frame allows for a richer set of inferential relations between story elements to be derived, leading to a more coherent overall interpretation of the passage.

In another ERP study, Nieuwland & van Berkum (2006) found that discourse-level information can overrule local lexical-

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means of sine-wave graphs, the peaks and troughs of which represent spikes of activity. The continuous ERP record can be synchronized with the onset of a stimulus presented to the participant and conclusions drawn about how the stimulus is being processed based on the pattern of activity from the stimulus onset point. It has been found that a large negativity (as compared with some base-line activity) at around 400 milliseconds after stimulus onset – the so-called N400 effect – is correlated with the semantic anomalousness of a linguistic stimulus (e.g., its unpredictability given the prior sentential context).

semantic violations. When presented in isolation, sentences involving such violations (e.g., ‘The peanut was in love’) produced the expected N400 effect (see note 4 above). However, when preceded by supportive context (e.g., a child’s story about a peanut who is singing a song to his new girlfriend), the N400 effect disappears. Moreover, in such a context one can induce an N400 effect for a sentence about the peanut that involves no lexical-semantic violation (e.g., ‘The peanut was salted’), if that sentence fails to fit with the overall narrative.

It will not be surprising to philosophers who have been following debates in Artificial Intelligence and cognitive psychology for the last 30 years or so to be told that mental frames and/or scripts are needed to explain the cognitive architecture of our “mental encyclopedias” (viz. our mental repositories of knowledge about the world) and that frames play a role in cognitive processing more generally. Hence it is no surprise to be told that frames are involved in utterance production and comprehension. I do not think this will be surprising even to those who have been arguing for what I’ve called psychological minimalism. However, I think it has not been sufficiently appreciated the degree to which this requires a complete inversion of the way philosophers tend to think about language understanding.

Minimalists think that we begin with minimal propositions and that we move out to contextually derived information from there. They tend to think that the minimal proposition represents something more secure – something you can retreat to when in doubt as to the speaker’s message. Cappelen & Lepore (2005), using reasoning very similar in structure to that used by Fodor & Lepore (1992) against “horrible holism”, treat contextually based understanding as risky, relying on assumptions that may be unstable and on reasoning processes that are not well-behaved. Thus for them it would be contextual understanding that is weak and changeable.

This of course is exactly the opposite of what I have been arguing in my extended analysis of the ‘John is ready’ example and what I hope to have shown by citing the empirical research mentioned in this section. Minimal meanings leave one with degraded understanding unless suitably hooked into context. And attempts to uncover minimal meanings are unstable because they are open to the challenge that they have distorted or failed to discern the underlying structure of the speaker’s message. Thus it is minimal meanings that are weak and changeable.

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