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ORIGINAL PAPER

The indexicality of 'knowledge'

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Abstract Epistemic contextualism—the view that the content of the predicate 'know' can change with the context of utterance—has fallen into considerable disrepute recently. Many theorists have raised doubts as to whether 'know' is context-sensitive, typically basing their arguments on data suggesting that 'know' behaves semantically and syntactically in a way quite different from recognised indexicals such as 'I' and 'here' or 'flat' and 'empty'. This paper takes a closer look at three pertinent objections of this kind, viz. at what I call the Error-Theory Objection, the Gradability Objection and the Clarification-Technique Objection. The paper concludes that none of these objections can provide decisive evidence against contextualism.

Keywords Knowledge · Context · Contextualism · Epistemic contextualism · Indexicality · Context-sensitivity · Gradable adjectives

Introduction

Epistemic contextualism (EC)—the view that the content of the predicate 'know' can change with the context of utterance—has fallen into considerable disrepute recently. Many theorists have raised doubts as to whether 'know' is context-sensitive, typically basing their arguments on data suggesting that 'know' behaves semantically and syntactically in a way quite different from recognised indexicals such as 'I' and 'here' or 'flat' and 'empty'. This paper takes a closer look at three pertinent objections of this kind, viz. at what I shall call the *Error-Theory Objection*, the *Gradability Objection* and the *Clarification-Technique Objection*. Let us briefly consider each of these objections before going into detail.

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According to the *Error-Theory Objection* to EC, EC is to be rejected because it is committed to a controversial error-theory, viz. to the view that competent speakers are sometimes systematically mistaken about the content of 'know'. Objections discussing EC's error-theory can be found in many different guises in the literature, and their impact has been considerable: opponents of EC usually take them to provide decisive evidence against EC, and even staunch contextualists such as Steward Cohen feel that they ought to address the problem of the non-obviousness of the indexicality of 'know'.[1] I shall argue in this paper that EC's error-theory isn't as implausible as is commonly thought and that the indexicality of 'know' is no more non-obvious and obscure than the indexicality of other, fairly recognized indexicals: gradable adjectives.

The second objection addressed in this paper is based on syntactic data. Jason Stanley's *Gradability Objection* claims that since 'know' isn't gradable, it doesn't have an unarticulated semantic link to a scale of epistemic strength and so isn't context-sensitive along the lines of gradable adjectives: gradable adjectives are, according to a widespread view, context-sensitive precisely in virtue of having unarticulated semantic links to scales. The paper argues against this objection by rejecting one of its implicit assumptions, viz. the *Gradability Constraint*, according to which expressions with semantic links to scales are necessarily gradable.

The third objection discussed in this paper—the *Clarification-Technique Objection*—is based on John Hawthorne's observation that 'know' differs from gradable adjectives in not accepting certain modifier phrases such as 'for'-prepositional phrases, 'enough to'-adverbial phrases and 'of'-prepositional phrases as in 'flat for a golf course', 'dry enough to reuse' and 'empty of vodka'. The paper gives an explanation of why 'know' doesn't accept such phrases: if EC is correct and 'knowledge' is both factive and the norm of assertion, then we cannot expect 'know' to accept the constructions at issue, for their use would lead to Moore-paradoxical assertions and thus do more harm than good.

The paper is structured as follows. To begin with, Section 2 gives a brief characterisation of EC, its motivation and its error-theory. Section 3 then turns to the Error-Theory Objection by examining four apparent counter-examples to EC to be found in the literature. In Section 4 I construct problem cases for contextualists about the gradable adjectives 'empty' and 'flat' that are analogous to the apparent counter-examples in Section 3. As will become obvious, contextualists about these adjectives need an error-theory very similar to EC's. Section 5 then examines syntactic constructions involving modifier expressions in order to shed more light on the problem cases presented in Sections 3 and 4 and sketches a general strategy for dealing with problem cases addressing EC's error-theory. Section 6 then takes a closer look at the semantics of gradable adjectives and presents Stanley's Gradability Objection. My reply to Stanley falls into two parts: Section 7 offers a counterexample to the view that verbs with semantic links to scales are usually gradable, while Section 8 reinforces this point on the basis of cross-linguistic evidence. Section 9 is finally devoted to the Clarification-Technique Objection, which is countered in Section 10 by offering an alternative explanation of the relevant data relying on the assumption that 'knowledge' is both factive and the norm of assertion. Section 11 sums up the discussion and concludes that the linguistic evidence brought forward against EC is far from decisive.

[1] See Cohen (2004, p. 192).

Epistemic contextualism

What is EC? First and foremost, EC is a semantic view, viz. the view that the context of utterance determines the strength of the epistemic position a person has to be in so as to satisfy the predicate 'know'.[2] Assuming compositionality, the content of a sentence *S* containing 'know' can thus change with context, independently of whether *S* contains further indexicals, is ambiguous or context-sensitive in any other way. According to EC, the semantic value of 'know'—and thus the semantic values of expressions containing 'know'—may vary with context. EC, however, is not a lexical ambiguity theory, i.e. it does not claim that 'know' is assigned multiple meanings in English. On the contrary, according to EC the context-sensitivity of 'know' is due to the fact that 'know' has an unstable Kaplanian character, i.e. a character that does not map all contexts on the same content; 'know' is accordingly an indexical such as 'I', 'that' and 'today' rather than a lexically ambiguous expression such as 'bank'.[3]

The main evidence for EC derives from our intuitions about the truth-values of certain 'knowledge'-ascriptions. Let me give a familiar example. Imagine teacher Smith in the zoo explaining to her class that the animals in the pen are zebras. Tom is unconvinced and challenges Smith: 'Are you sure those aren't antelopes?' After Smith has explained the difference between antelopes and zebras, Tom assures his classmates:

(1) She knows that the animals in the pen are zebras.

Has Tom spoken truly? According to our intuitions, Smith's epistemic position seems perfectly fine for satisfying the predicate 'knows that the animals in the pen are zebras' (from now on 'knows *Z*'). Smith has visual experiences of a black and white striped horse-like animal, she can discriminate reliably between zebras and antelopes, she has read the sign on the pen, etc.

Now imagine a couple, Bill and Mary, walking along. Bill, a would-be postmodernist artist, gives details of his latest ideas: he envisions himself painting mules with white stripes to look like zebras, putting them in the zebra pen of a zoo and thereby fooling visitors. Our couple randomly considers Smith and Mary claims:

(2) She doesn't know that the animals in the pen are zebras.

In Mary's mind, to count as satisfying 'knows *Z*', Smith needs better reasons for believing *Z* than are momentarily available to her. To be precise, Mary has it that Smith's reasons must allow her to eliminate the possibility that the animals in the pen are painted mules. As long as her reasons do not allow this, Mary claims, the truth of Smith's belief *Z* will be too much a matter of luck, and so Mary does not qualify as 'knowing' *Z*.

Now, here is the contextualist analysis of the zebra case. Our intuitions have it that 'Smith knows Z' is true as uttered in the context of the school class, while it seems false as uttered in the couple's context. However, since Smith's position towards the proposition *Z* is the same in both contexts (circumstances of evaluation are identical), it seems that we are required to assign different content to 'Smith knows *Z*' as uttered in the former context and as uttered in the latter. Thus, one and the same 'knowledge'-ascribing sentence can

[2] Cf. DeRose (1995). See also Lewis (1996) and Cohen (1988) for particular contextualist theories.

[3] Cf. Kaplan (1989) for the distinction between character and content.

have different truth-values if uttered in different conversational contexts—all effects of recognised indexicals being kept fixed.[4]

It is a familiar consequence of EC that the proposition expressed by (1) as uttered by Tom does not contradict the proposition expressed by (2) as uttered by Mary. According to EC, the appearance of such a contradiction arises owing to the surface syntax of the sentences uttered, while at logical deep structure there is no contradiction. An often stressed analogy contextualists draw between the semantics of 'know' and the semantics of gradable adjectives such as 'empty' or 'flat' helps illustrating this point: just as what counts as satisfying 'flat' or 'empty' may vary with context, what counts as satisfying 'know' may vary with context.[5] Bearing in mind this analogy, EC claims that (1) and (2) stand in a relation similar to the relation between a basketball coach's utterance of 'Michael isn't tall' and a jockey coach's utterance of 'Michael is tall': while the surface syntax of these sentences suggests a contradiction, the propositions expressed are compatible, as the semantic value of 'tall' changes with the context of utterance.

Summing up, EC is a *prima facie* neat theory accounting for a particular set of linguistic data. However, leaving the zebra case aside for a moment, contextualists have also claimed that their theory has the resources to resolve sceptical puzzles. In order to add this extra bit of explanatory force to their purely semantic claims about 'know', contextualists refer to an error-theory about content, according to which sceptical paradoxes arise because speakers are blind towards the context-sensitivity of epistemic terms when considering sceptical arguments.[6] To be precise, the contextualist argues that when we are puzzled by sceptical arguments, we fail to realise that the proposition expressed by their conclusions are perfectly compatible with the propositions expressed by our everyday 'knowledge'-claims. This is because the epistemic standards operative when sceptical scenarios are at issue are exceedingly higher than the epistemic standards in everyday contexts. Now, due to this error-theory, EC claims to be able to account for both the plausibility of sceptical arguments and our intuition that our everyday 'knowledge'-ascriptions are true.

The error-theory objection

In the recent literature, EC has been criticised widely for its error-theory. According to Schiffer (1996), for instance, EC and its error-theory are mistaken, since it is ''hard to see [...] that fluent speakers systematically confound their contexts'' when confronted with sceptical arguments.[7] In more detail Schiffer argues that

> there is no plausible semantic theory that will resolve sceptical paradoxes in the way [EC] requires. If the proposed semantics were correct, then the extreme error theory would be needed to explain why we appear to have a paradox in the first place. But

[4] In other words, with respect to the proposition *Z*, the context of the couple (CA) is epistemically tougher than the context of the school class (CB), i.e. it is more difficult to satisfy 'knows *Z*' in CA than it is in CB. Notice that the notion of epistemic toughness is to be cashed out in line with particular contextualist theories. According to Lewis' account, for instance, CA is epistemically tougher than CB because satisfying 'knows *Z*' in CB doesn't require eliminating the possibility that the animals are painted mules, while this is necessary to satisfy 'knows *Z*' in CA. Cp. Lewis (1996).

[5] DeRose (1995), Lewis (1996), Cohen (1999, 2004) draw this parallel.

[6] Cf. Cohen (1988, p. 106) and DeRose (1995, p. 40).

[7] Schiffer (1996, p. 326). There is a grand coalition of epistemologists and philosophers of language reasoning against EC along these lines. See e.g. Davis (2004), Feldman (1999), Pritchard (2002), Hawthorne (2004), MacFarlane (2005), Stanley (2004, 2005), Williamson (2005a, 2005b) and Bach (2005).

> that error theory has no plausibility: speakers would know what they were saying if knowledge sentences were indexical in the way [EC] requires.[8]

Let us take a closer look at this argument. Firstly, note that Schiffer's objection to EC relies on what I shall call the *Transparency Requirement for Indexicals*:

(TR) For all indexicals *i*, in any possible situation in which *i* changes its content, competent speakers realise that *i* changes its content.

EC's error-theory obviously violates this requirement. Since contextualists have it that competent speakers are often wrong about the contents of 'knowledge'-ascriptions when sceptical arguments are at issue, they are committed to the negation of (TR). Clearly, Schiffer takes this to be a *reductio ad absurdum* of EC. But what are his reasons for accepting (TR)?

Schiffer argues that (TR) is supported by empirical data: it holds of all kinds of recognised indexicals such as core indexicals, gradable adjectives, etc.[9] There are simply no situations in which competent speakers get confused about the contents of 'I' and 'here' or 'flat' and 'empty' in ways similar to how the contextualist claims there are situations in which speakers get confused about the content of 'know'. Schiffer accordingly argues that 'know' isn't indexical along the lines of EC, for if it were, then its semantics would differ significantly from the semantics of recognised indexicals in forcing us to give up (TR).

In order to appreciate the full strength of Schiffer's objection, however, it is imperative to note that EC doesn't only need its error-theory when sceptical arguments are at issue. As has been pointed out frequently in the recent literature, there are numerous cases in which EC predicts content changes in 'know', which are entirely hidden from competent speakers. In each such case contextualists have to claim that speakers are mistaken about the contents of their own words, thereby rendering implausible the contextualist semantics they assign to 'know': constant reference to an error-theory in explaining away counter-examples leaves little plausibility to the theory one is defending. Should we therefore really assume that 'know' is context-sensitive, albeit our intuitions are often clearly invariantist?

To get clearer on this question, let us take a closer look at four troublesome cases discussed in the literature. Subsequently, we shall then see how contextualists can defuse the threat posed by these cases and, more generally, how they might justify restricting (TR) according to their needs. For the moment, however, consider the following dialogue discussed by Jason Stanley.[10]

ZOO
A: I know that is a zebra.
B: But can you rule out its being a cleverly painted mule?
A: I guess I can't rule that out.
B: So you admit that you don't know that's a zebra, and so you were wrong earlier?
A: Oh, c'mon. I didn't say I know it's a zebra.

[8] Schiffer (1996, p. 328).

[9] Ibid., pp. 325–328.

[10] Cp. Stanley (2005, p. 52). Examples of this kind go back to Yourgrau (1983).

According to EC, A's last assertion 'I didn't say I know it's a zebra' is true, since 'know' has changed its content after B's first question. But this consequence of EC seems fairly awkward; for competent speakers have clear and precise intuitions that A's last assertion isn't only bizarre, but also straightforwardly false. Indeed, it seems as if there is a genuine contradiction between A's first and her last assertion. Now, in order to deny the relevance of our intuitions about the truth-value of A's utterance in this case, the contextualist clearly needs to appeal to her error-theory.

Here is a similar problem case by Timothy Williamson reinforcing the point made by Stanley:[11]

ZOO*
A: I know that animal is a zebra.
B: How do you know that it isn't a mule cleverly painted to look like a zebra?
A: Hmm, for all I know it *is* a painted mule. So I was wrong. I didn't know that it is a zebra after all.

Note firstly that, as in ZOO, EC has it that B's question causes the word 'know' to shift its content: even though A doesn't satisfy 'knows *Z*' after B's question, she did so before, assuming that the animal is a zebra. A, however, seems to be completely unaware of a shift in the content of 'know', for otherwise she wouldn't admit that she was wrong earlier. As Williamson emphasises, A clearly intends to withdraw her earlier assertion, for there is no other way to make sense of her admission 'So I was wrong' and her use of the phrase 'after all'.[12] The contextualist is accordingly required to appeal to her error-theory.

John MacFarlane objects to EC on the same grounds as Williamson:

> If yesterday Sally asserted 'I know that the bus will be on time', and today she admits that she didn't know yesterday that the bus would be on time, I will expect her to retract her earlier assertion. I will find it exceedingly bizarre if she replies by saying that her assertion was true, even if she adds 'by the standards that were in place yesterday'.[13]

In discussing his example, MacFarlane points out that the problem arises for the contextualist ''because we tend to report knowledge claims homophonically, even when they were made in very different epistemic contexts.''[14]

The third kind of problem case I shall discuss involves indirect discourse. Nikola Kompa presents the following sentence schema, whose instances she calls EC's ''unpleasant consequences''.[15] Note that in Kompa's example the context of ascriber *C* has low epistemic standards such that *A* satisfies 'knows *p*' in it, while the context of the utterer of (UC) has high epistemic standards such that *A* does not satisfy 'knows *p*' in it:

(UC) Ascriber *C* says something true in ascribing '*A* knows that *p*' but *A* doesn't know that *p*.

[11] Williamson (2005a, p. 220).

[12] As Williamson (2005a, p. 220) points out, ZOO* is also problematic for *Subject Sensitive Invariantism* (SSI). Interestingly, the resolution of the case I shall propose later isn't available to SSI.

[13] MacFarlane (2005, p. 203).

[14] MacFarlane (2005, p. 202).

[15] Kompa (2002, pp. 5–7). Note that Kompa endorses EC and bites the bullet.

Here is an unpleasant instance of (UC):

(UC′) Mary: ''Smith doesn't know Z but her utterance of 'I know Z' is true.''[16]

As Kompa emphasises, EC is committed to the truth of sentences such as (UC′). However, this again seems to be a fairly awkward position, for the alleged difference in semantic value of 'know' in its first occurrence in (UC′) and in its second occurrence within quotes is hidden from competent speakers.

The fourth and final problem case I shall mention here is by John Hawthorne, who cites the plausibility of the following *Disquotational Schema for 'know'* as a witness against EC:

(DSK) If an English speaker E sincerely utters a sentence S of the form 'A knows that p', and the sentence in the that-clause means that p and 'A' is a name or indexical that refers to a, then E believes of a that a knows that p, and expresses that belief by S.[17]

Concerning (DSK), Hawthorne argues that if EC were true, then competent speakers should be aware of the falsity of (DSK), or at least find it defective. Since competent speakers, however, don't hesitate to accept (DSK), the contextualist seems to be required to appeal to her error-theory: competent speakers accept (DSK) because they are unaware of the possibility that the occurrence of 'know' within quotes can be uttered in a context different from (DSK)'s context of utterance. Therefore, speakers are unaware of the possibility that the first occurrence of 'know' could have a different content than its second occurrence. To illustrate this, Hawthorne offers the following example:

> [If] someone sincerely utters 'I know that I will never have a heart attack', we have no hesitation whatsoever in reporting the contents of his mind by claiming that he believes that he knows that he will never have a heart attack. That is how the verb 'know' works.[18]

Reconsidering our intuitions in the zebra-case of Section 2, we are confronted with a serious clash of intuitions. On the one hand examples such as the zebra case suggest that 'know' is indexical along the lines of EC, on the other hand there is a number of examples illustrating the implausibility of that view. How can this clash of intuitions be resolved to the satisfaction of the contextualist?

Questioning transparency

Even though EC's error-theory is *prima facie* unattractive, I shall argue in this section that it doesn't do as much harm as it seems. As I have stressed above, contextualists typically compare 'know' to gradable adjectives rather than to core indexicals: just as what counts as satisfying 'flat' or 'empty' in one context doesn't necessarily do so in another, who counts as satisfying 'know' in one context doesn't necessarily do so in another. Moreover, as Peter Unger has pointed out in great detail, puzzles similar to the sceptical puzzle arise for

[16] For simplicity, I let Kompa's ascriber C coincide with her subject A.

[17] Hawthorne (2004, p. 101). Davis (2004, p. 267) offers a similar example making use of disquotation.

[18] Hawthorne (2004, p. 101).

certain gradable adjectives:[19] just as it isn't too difficult to get people to believe that they do not 'know' anything about the external world, it isn't too difficult to get people to believe that nothing is really 'flat' or 'empty'. And indeed, it often suffices to point out that with sufficiently precise measurement devices one will always find bumps on any surface or matter in any enclosed space: there are no perfectly flat surfaces or total vacua in our empirical world.

These considerations suggest that we shouldn't expect 'know' to be as transparent as 'I' and 'here' are, it rather seems more appropriate to compare 'know' to gradable adjectives such as 'flat' or 'empty'. In the following I shall therefore construe problem cases for 'flat' and 'empty' paralleling the above problem cases for 'know'. If I am right and my cases are in fact problematic for contextualists about 'flat' and 'empty', then the indexicality of 'know' and EC's error-theory should not seem too eccentric after all.

To begin with, consider the following dialogue featuring 'empty':[20]

WAREHOUSE:
A: That warehouse is empty.
B: But have you considered there are some dust particles in there?
A: I guess I haven't.
B: So you admit that warehouse isn't empty, and so you were wrong earlier?
A: Oh, c'mon! I didn't say that the warehouse is empty.

Assuming a context-sensitive semantics of 'empty' as can be found in Kamp (1975) or Kennedy (1999), every sentence in WAREHOUSE has a true reading. The appearance of a contradiction only arises because speakers are unaware that there are two different notions of emptiness at play in the dialogue: in A's first utterance 'empty' is to be interpreted relative to contextual standards according to which something counts as satisfying 'empty' if there isn't anything as large as cars in it, say, while later in the dialogue higher standards are operative, according to which something counts as satisfying 'empty' if there isn't anything as large as dust particles in it. The crucial point here is that the content change of 'empty' in WAREHOUSE appears to be just as hidden from the view of competent speakers as the content change of 'know' in ZOO.

Here is a problem case for the contextualist about 'flat':

MEADOW
A: That meadow is flat.
B: But have you considered there are some molehills in it?
A: I guess I haven't.
B: So you admit that meadow isn't flat, and so you were wrong earlier?
A: Oh, c'mon! I didn't say that the meadow is flat.

If we can construe problem cases for 'flat' and 'empty' paralleling ZOO, then we should also be able to construe problem cases paralleling Williamson's ZOO*:[21]

WAREHOUSE*
A: That warehouse is empty.

[19] See Unger (1975, ch. 2).

[20] Richard (2004, p. 236) discusses a similar example containing the gradable adjective 'rich'. Even though Richard concedes the contextualists analogy, he rejects the error-theory and thus contextualism about both 'know' and gradable adjectives in favour of a relativist account.

[21] The 32 philosophically untrained speakers I interviewed agreed that the last sentences uttered by A in MEADOW and WAREHOUSE are clearly false.

B: But have you considered there are some dust particles in there?
A: Hmm, I guess I haven't considered that. So I was wrong. The warehouse wasn't empty after all.

MEADOW*
A: That meadow is flat.
B: But have you considered there are some molehills in it?
A: Hmm, I guess I haven't considered that. So I was wrong. The meadow wasn't flat after all.

As these cases suggest, violation of the *Transparency Requirement* is a phenomenon more common in natural language than it seemed. Since speakers have a clear tendency to report 'flat' and 'empty'-ascriptions homophonically, the contextualist about the gradable adjectives at issue has to depend on an error-theory very similar to EC's.

However, let us take a look at the other problem cases discussed above. If 'flat' and 'empty' are really semantically as non-transparent as 'know', then contextualism about these adjectives should have consequences corresponding to Kompa's ''unpleasant consequences''. Here are two fairly unpleasant candidates:

(UCE) A: Warehouse F isn't empty but B's utterance 'Warehouse F is empty' is true.

(UCF) A: Christ Church Meadow isn't flat but B's utterance 'Christ Church Meadow is flat' is true.

Surely, ordinary speakers will find (UCE) and (UCF) just as bizarre as (UC′). But if ordinary speakers do not recognize the content change of 'empty' and 'flat' in (UCE) and (UCF), this is good news for EC: why should we expect speakers to detect content changes in our problem cases containing 'know' if they don't do so in parallel cases containing gradable adjectives, which many take to be paradigm cases of context-sensitive expressions?

Turning to Hawthorne's *Disquotational Schema for 'Know'* (DSK) it is fairly easy to demonstrate the need of an error-theory for contextualists about 'flat' and 'empty'.[22] Here are disquotational schemata for 'flat' and 'empty':

(DSE) If an English speaker E sincerely utters a sentence *S* of the form '*A* is empty', and '*A*' is a name or indexical that refers to *a*, then E believes of *a* that *a* is empty, and expresses that belief by *S*.

(DSF) If an English speaker E sincerely utters a sentence *S* of the form '*A* is flat', and '*A*' is a name or indexical that refers to *a*, then E believes of *a* that *a* is flat, and expresses that belief by *S*.

[22] Cp. Cohen (2005, p. 204) for the point that disquotational schemata for 'flat' are just as plausible to competent speakers as Hawthorne's DSK.

I am confident that philosophically untrained speakers are just as ready to accept (DSF) or (DSE) as they are to accept Hawthorne's (DSK).[23] In fact, it seems plausible to claim along Hawthorne's lines that if someone sincerely utters 'A is flat', we have no hesitation whatsoever in reporting the contents of her mind by claiming that she believes that A is flat.[24]

Let me sum up the findings of this section. The data I have collected above suggest that competent speakers are in certain situations just as blind towards the indexicality of 'flat' and 'empty' as they are in paralleling situations towards the indexicality of 'know'. 'Know' accordingly shares its need for an error-theory with a group of fairly recognised indexicals: gradable adjectives. Moreover, supposing that gradable adjectives are context-sensitive, the contextualist can grant her critics that the indexicality of 'know' is, in the relevant cases, less transparent than the one of core indexicals while insisting that this isn't anything worrisome.[25,26]

Modification

Let us now look for an explanation of why competent speakers are blind towards the indexicality of 'empty' and 'flat' in WAREHOUSE, MEADOW, (UCE) and (UCF), i.e. in those examples containing apparent contradictions. At first sight, the oddity of these examples is due to the fact that they do not contain expressions indicating that different standards of emptiness or flatness are operative within the example. As gradable adjectives, however, 'empty' and 'flat' accept degree modifiers such as 'completely' or 'absolutely',

[23] According to Hawthorne (2004, p. 106) schemata such as (DSF) and (DSE) are ''clearly unacceptable''. What are his reasons for this view? Note that Hawthorne gives detailed information about particular contexts of utterance in order to make the failure of schemata such as (DSF) and (DSE) obvious. Here are Hawthorne's considerations about 'tall':

(DST) If an English speaker E sincerely utters a sentence *S* of the form '*A* is tall' and '*A*' is a name or indexical that refers to *a*, then E believes of *a* that *a* is tall, and expresses that belief by *S*.

Against (DST) Hawthorne gives the following argument: ''Suppose I am a coach discussing basketball players. Since by 'tall' I mean 'tall for a basketball player' I cannot report an ordinary English speaker as believing that Michael Jordan (who is about 6 foot 6 inches) is tall on the grounds that such a person sincerely uttered 'Michael Jordan is tall'.'' (Hawthorne, 2004, p. 106). Of course, (DST) appears false if discussed on the background of a particular counter-example. But so does (DSK): remember the zebra case: once the story about our cunning would-be artist and Smith's school class was told, intuitions were clear that Mary and Bill said something different by their uses of 'know' respectively. Once this much is granted, it is obvious that Mary in her tougher context cannot report Tom's belief manifested by his utterance of (1) by using the words 'Tom believes that Smith knows that *Z*'. This is precisely the upshot of the zebra example. Hawthorne accordingly doesn't play entirely fair when offering an example illustrating (DST)'s failure while denying such treatment to (DSK).

[24] Cp. Hawthorne (2004, p. 101).

[25] Unger (1975) and Schaffer (forthcoming) don't think that 'flat' and 'empty' are indexicals. Contrary to contextualism, they claim that not the truth-conditions of sentences ascribing these predicates but their assertibility-conditions vary with context. 'Know', 'flat' and 'empty' are ''absolute terms'' that are strictly speaking never satisfied. I shall not discuss their view further in this article. Further arguments for the view that gradable adjectives are contextually invariant can be found in Cappelen and Lepore (2005).

[26] As an anonymous referee has pointed out, one interesting difference between 'know' on the one hand and 'flat' and 'empty' on the other remains: competent speakers can be fairly easily led to see that 'flat' and 'empty' are indexical, whereas the same cannot be said for 'know'. Thus, a contextualist about 'know' seems required to posit a slightly deeper or more entrenched semantic blindness than that which exists for 'flat' and 'empty'. I shall address this objection in Section 10 of this paper, after my discussion of the syntax of 'know'.

which can be used to indicate that contextual standards have switched. Equipped with these expressions we can even out the problem cases at issue.

For instance, with regard to WAREHOUSE, A could convey the proposition that she wasn't wrong earlier in the dialogue by qualifying the second occurrence of 'empty' with the modifier 'completely'. Here is $\text{WAREHOUSE}_{\text{MOD}}$:

$\text{WAREHOUSE}_{\text{MOD}}$:
A: That warehouse is empty.
B: But have you considered there are some dust particles in there?
A: I guess I haven't.
B: So you admit that the warehouse isn't empty, and so you were wrong earlier?
A: Oh c'mon! I didn't say that the warehouse is *completely* empty.

The same strategy can be applied to smoothen MEADOW:

$\text{MEADOW}_{\text{MOD}}$:
A: That meadow is flat.
B: But have you considered there are some molehills in it?
A: I guess I haven't.
B: So you admit that the meadow isn't flat, and so you were wrong earlier?
A: Oh c'mon! I didn't say that the meadow is *completely* flat.

As these modified cases suggest, leaving out the degree modifier 'completely' as in WAREHOUSE and MEADOW leaves competent speakers blind to the fact that the first usage of 'empty' and 'flat' and their second usage are to be interpreted relative to different contextual standards of emptiness and flatness respectively. As soon as we insert the modifier, however, the oddity of the examples vanishes.

Let us try to extend this treatment to (UCE) and (UCF), the gradable adjective versions of Kompa's unpleasant consequences. In order to remove the appearance of contradiction from (UCE) and (UCF) we insert the modifier 'completely' and additionally indicate a comparison class:

(UCE_{MOD}) A: Warehouse 9 isn't *completely* empty but B's utterance 'Warehouse 9 is empty *of cars*' is true.

(UCF_{MOD}) A: Christ Church Meadow isn't *completely* flat but B's utterance 'Christ Church Meadow is flat *as compared to the battle fields of Verdun*' is true.

Again, these modifications give us an idea of how ordinary speakers could convey what the problematic sentences (UCE) and (UCF) are meant to express.

But let us return to EC. Can we treat likewise the problem cases containing 'know' discussed in Section 3? How can speaker A in ZOO convey in a straightforward manner that her first remark is compatible with her inability to rule out that the animal at issue is a cleverly painted mule? Consider the following attempt:

ZOO_{MOD}:
A: I know that is a zebra.
B: But can you rule out its being a cleverly painted mule?
A: I guess I can't rule that out.
B: So you admit that you don't know that's a zebra, and so you were wrong earlier?

A: Oh c'mon! I didn't say I know it *with absolute certainty*.[27]

As compared to the bizarre last sentence of ZOO, ZOO_{MOD}'s last sentence seems rather unproblematic. Thus, it seems that in this case the phrase 'with absolute certainty' does the same job for 'know' as 'completely' does for 'flat' and 'empty': it serves to clarify that the first occurrence of 'know' in ZOO_{MOD} is to be interpreted against standards that had been satisfied at the time of utterance. In a nutshell, what A meant by using 'know' isn't what B meant by using 'know', and A makes this explicit by her usage of 'with absolute certainty'.[28]

Unsurprisingly, our treatment with the modifier 'with absolute certainty' can be extended to (UC′):

(UC'_{MOD}) Mary: Smith doesn't know *Z with absolute certainty* but her utterance 'I know *Z*' is true.

(UC'_{MOD}), however, might still seem awkward to some. This seems to be due to its containing indirect discourse. This source of confusion can be removed easily:

(UC'_{MOD2}) Mary: Smith doesn't know *Z with absolute certainty* but still, she knows it.

What are we to conclude from these data? As the modified examples suggest, we can indicate switches in contextual standards fairly easily, by exploiting the full resources of natural language modifier expressions. Just as we can modify 'empty' and 'flat' with 'completely' to avoid confusion about standards of emptiness and flatness, we can modify 'know' with 'with absolute certainty' to avoid confusion about standards of epistemic strength. As a consequence, the problem cases discussed aren't really threatening the indexicality of 'know', 'flat' or 'empty'. They rather show that contextual switches are to be indicated explicitly in order to yield successful conversation.

At this point it is instructive to draw an analogy between the indexicality of 'know', 'flat' and 'empty' and the ambiguity of 'bank'. After all, it is just as bizarre to switch the standards of flatness, emptiness or epistemic strength in a given discourse without indication as it is to switch between the different meanings of 'bank' without indication:

(B) The nearest bank is 50 yards away and the nearest bank is about a mile away.

[27] At the time of writing this article, Google offered 66,000 website hits for the phrase 'know with certainty', 7,240 for 'knows with certainty', 11,100 for 'know with absolute certainty', 1,050 for 'knows with absolute certainty' and 3,330 hits for 'know with complete certainty'. I take it to be obvious that the notion of certainty at issue is epistemic rather than psychological: 'with certainty' modifies the degree of one's justification, not the degree of one's belief. Note also that I take the phrase 'with absolute certainty' to be itself context-sensitive.

[28] One might object here that the oddity of the examples vanishes because now we have different examples, with different semantic contents. This objection, however, gets the dialectics of my argument wrong. I don't argue that the last assertions in ZOO and ZOO_{MOD} are semantically equivalent. My argument is rather only that, firstly, ZOO_{MOD} is compatible with a contextualist interpretation, that, secondly, ZOO_{MOD} demonstrates that on a contextualist account, A doesn't have to withdraw her earlier assertion when the context changes, and that thirdly, there is a plausible explanation along contextualist lines of why ZOO_{MOD} differs intuitively from ZOO: the modifier in ZOO_{MOD} indicates that there was a switch of epistemic standards during the dialogue. Note also that it isn't clear whether we really need to insert new semantic material ('with absolute certainty', 'completely') in order to yield the effect I seek: a simple stress of 'know', 'flat' and 'empty' in A's last assertions respectively may well suffice to render the dialogues felicitous.

If we assign different meanings to the first and the second occurrence of 'bank', (B) could express a true proposition. However, competent speakers struggle to find true interpretations of (B), as the relevant switch in the meaning of 'bank' isn't indicated explicitly. Now, I assume that no theorist will claim that 'bank' is an invariant, unambiguous expression, because competent speakers find (B) contradictory. (B) is defective for other reasons: it fails to make explicit a switch in the meaning of 'bank'.

To further illustrate this claim, note that puzzling dialogues paralleling ZOO, WAREHOUSE and MEADOW can be constructed for 'bank', too. Here is BANK:

BANK:
A: The nearest bank is 50 yards away.
B: Have you considered that the NatWest branch on High Street, which is the nearest bank, is half a mile from here?
A: I guess I haven't.
B: So you admit that the nearest bank is half a mile away and you were wrong earlier?
A: Oh c'mon! I didn't say the nearest bank is 50 yards away.

Here is a general manual for contextualists to handle problem cases addressing EC's error-theory: in a first step, construe parallel problem cases for contextualists about gradable adjectives such as 'flat' or 'empty'. If this can be done successfully, the initial problem cases are considerably less damaging, for only few theorists will deny that gradable adjectives are context-sensitive.[29] In a second step, smoothen examples containing apparent contradictions by inserting modifier expressions: into cases containing gradable adjectives insert 'completely' or 'absolutely', into cases containing 'know' insert 'with absolute certainty'.

Whether this strategy will be successful with any possible problem case addressing EC's error-theory can, of course, not be guaranteed. However, considering that the cases discussed in this paper could be treated very smoothly indeed, there are good reasons to assume that the analogy between 'know' and gradable adjectives holds in other problem cases addressing EC's error-theory, too.

The gradability objection

There are, of course, further problems for EC that need to be dealt with. For instance, as Jason Stanley has argued recently, EC's analogy between 'know' and gradable adjectives breaks down on the syntactic side: 'know' clearly doesn't behave like a gradable expression.[30] To get a closer understanding of this objection let us take a brief look at the syntax and semantics of gradable adjectives.

It is often held among semanticists that the contents of gradable adjectives have semantic links to scales measuring the gradable property associated with the adjective at issue. For instance, the content of 'tall' is taken to have a link to a scale of height, the content of 'flat' a link to a scale of flatness and the content of 'empty' a link to a scale of

[29] Apart from Peter Unger and Jonathan Schaffer (see Fn. 25), Cappelen and Lepore (2005) argue that gradable adjectives aren't context-sensitive. Even though I am not convinced by their arguments, I take it that if gradable adjectives aren't indexical, then neither will be 'know'. See Stanley (2005) for arguments against some of Cappelen's and Lepore's arguments.

[30] See Stanley (2004, 2005, ch. 2).

emptiness.[31] According to such *scalar analyses* of gradable objectives, (3) is to be analysed as in (4), where 'δ_F' denotes a function mapping objects onto values of a scale of flatness and the variable '$v_{\min FC}$' denotes a value on that scale separating the domain of 'flat' into its positive and negative extension in context C:[32]

(3) A is flat.

(4) $\geq (\delta_F(\mathrm{A});\ v_{\min FC})$.

More intuitively, (4) is to be read as follows:

(5) The value A takes on a scale of flatness is at least as great as the minimal value required for counting as satisfying 'flat' in context C.

According to the scalar analysis, positive 'flat'-ascriptions have a logical form similar to the logical form of comparative 'flat'-ascriptions. To see this, note that the scalar analysis assigns the logical form as depicted in (7) to the comparative statement (6):

(6) A is flatter than B.

(7) $> (\delta_F(\mathrm{A});\ \delta_F(\mathrm{B}))$.

Again, more intuitively, (7) is to be read as in (8):

(8) The value A takes on a scale of flatness is greater than the value B takes on a scale of flatness.

Thus, according to the scalar analysis, at the level of logical form, positive 'flat'-ascriptions comprise a contextually determined comparison value that is unarticulated at the level of surface structure.

Let us now return to EC. Owing to their emphasis on the analogy to gradable adjectives, defenders of EC might be tempted to take over the scalar analysis for their purposes and claim that 'know' is to be modelled semantically analogously to 'flat': just as the content of 'flat' is semantically linked to a scale of flatness, the content of 'know' is semantically linked to a scale of *epistemic strength*, the degree of epistemic strength required for a belief to satisfy 'know' varying with context.[33] According to this view, (9), which is to be read as in (10), gives the logical form of 'knowledge'-ascriptions:

(9) $\geq (\delta_{ES}(b_x);\ v_{\min KC})$.

[31] See Kennedy (1999) for such an account of gradable adjectives.

[32] There will probably be no definite cut-off point for any gradable adjective here, but rather an area where it is unclear whether the adjective applies or not, i.e. a penumbra. Gradable adjectives are vague. However, I take it that vagueness and context-sensitivity are two distinct semantic phenomena.

[33] The versions of EC to be found in DeRose (1995) and Cohen (1988, 1999) can be read along these lines. DeRose gives the notion of epistemic strength an externalist reading, while Cohen interprets it along internalist lines.

(10) The value *x*'s true belief *b* takes on a scale of epistemic strength is at least as great as the minimal value required for counting as satisfying 'know' in context *C*.[34]

Now, even though this view appears fairly natural at first glance, Stanley objects to it on the basis of syntactic evidence. Here is Stanley:

> If [...] the semantic content of 'know' were sensitive to contextually salient standards, and hence linked to a scale of epistemic strength (as 'tall' is linked to a scale of height), then we should expect this link to be exploited in a host of different constructions [...]. The fact that we do not see such behavior should make us at the very least suspicious of the claim of such a semantic link.[35]

Exactly what kind of syntactic constructions does Stanley have in mind here? As previously indicated, Stanley claims that as a matter of empirical fact, expressions whose contents are semantically linked to scales are usually gradable. As he shows in great detail, however, 'know' isn't gradable: it neither accepts standard degree modifiers such as 'very', 'quite' or 'extremely' nor comparative and superlative constructions with 'more' and 'most' or the degree morphemes '-er' and '-est'. Here are some exemplary constructions demonstrating this syntactic difference:[36]

(11) FLAT/EMPTY:

x is very/quite/extremely flat/empty

x is flatter/emptier than *y*

x is the flattest/emptiest *F*

(12) KNOW:

**x* very much/quite/extremely knows that *p*

**x* knows that *p* more than *y*

**x* knows that *p* most[37]

Let us recap Stanley's argument. In addition to the syntactic data in (12), Stanley's argument rests on what I shall call the *Gradability Constraint*:

(GC) If an expression *e* has an unarticulated semantic link to a scale *s*, then *e* is gradable along *s*.

[34] I ignore the fact that 'know' might not be linked to a linear scale of epistemic strength but rather to a partial ordering of belief-states. Note that many gradable adjectives are linked to partial orderings rather than to linear scales: 'interesting', 'justified' and 'easy' are obvious examples.

[35] Stanley (2004, p. 130) and Stanley (2005, p. 45).

[36] Halliday (forthcoming) distinguishes two different notions of gradability, neither of which captures the purely syntactic notion Stanley and I have in mind. Since Stanley's point, however, is about the relation between the syntax and the semantics of 'know', Halliday's argument to the effect that 'know' is gradable in some other, non-syntactic, sense misses Stanley's point.

[37] As Stanley (2005, pp. 39–40) points out, constructions such as 'knows better than anyone', etc. are idiomatic and therefore don't indicate the gradability of 'know'.

From (GC) and the rather uncontroversial assumption that 'know' isn't gradable, Stanley infers that the content of 'know' doesn't have a semantic link to a scale of epistemic strength. If the content of 'know' doesn't have such a link, however, then 'know' cannot be indexical along the lines of gradable adjectives, for—according to the scalar analysis—such adjectives are context-sensitive precisely because their contents are linked to scales. Epistemic contextualism is doomed to failure, the argument goes, since its analogy between 'know' and gradable adjectives breaks down on the syntactic side.[38]

Verbs and adverbial modifiers

The contextualist has to grant Stanley that her analogy to gradable adjectives breaks down on the syntactic side: 'know' clearly isn't gradable. But should the contextualist accept (GC)? As a first attempt towards a rejection of (GC) it might be argued that 'know' behaves distributionally in a very different way from gradable adjectives because it is a verb. However, as Stanley points out, there are straightforwardly gradable verbs. Here is 'like':

(13) LIKE:
x likes *y* very much/a lot
x likes *y* more than *z*
x likes *y* most

Now, as Stanley admits, 'know' differs from 'like' in being factive and taking a sentential complement. The contextualist can thus argue that we shouldn't expect 'know' to exploit its semantic link to a scale syntactically in the same way in which 'like' does. 'Know' might, after all, be non-gradable for purely syntactic reasons.

Even though this response seems attractive initially, Stanley counters it by showing that a fairly straightforward distinction can be drawn between gradable and non-gradable verbs, which suggests that (GC) doesn't hold for adjectives only.[39] In fact, Stanley even offers an example of a gradable factive verb taking sentential complements. Here is 'regret':[40]

(14) REGRET:
x very much regrets that *p*
x regrets that *p* more than *y*/more than that *q*
x regrets that *p* most

Since 'regret' is gradable, we may assume that its content has a semantic link to a scale measuring degrees of regret, i.e. (15), which is to be read as in (16), gives the truth-conditions of 'regret'-ascriptions:

[38] Cohen (1999, p. 60) argues that 'know' needn't be gradable, since it is context-sensitive in virtue of entailing 'justified', which is gradable and, so Cohen, context-sensitive. Stanley (2005, ch. 4) objects to this manoeuvre on a variety of grounds, and I shall therefore refrain from addressing the issue in this paper. Let me mention, however, a further possible doubt one might have about Cohen's manoeuvre. Even though 'justified' is gradable, it might be disputed that it is indexical: 'justified', it might be argued, is more likely to be sensitive to the subject's rather than to the ascriber's context.

[39] See Stanley (2004, pp. 127–129) and Stanley (2005, pp. 40–41).

[40] Further examples of gradable verbs are 'like', 'suspect', 'believe', 'hope', 'flatten', 'level' and 'empty'.

(15) $\geq (\delta_R(x,\ p);\ v_{\min RC})$

(16) The value x takes with regard to p on a scale of regret is at least as great as the minimal value required for counting as satisfying 'regret' in context C.[41]

Now, if 'know' were semantically linked to a scale of epistemic strength in the way in which 'regret' is linked to a scale of regret, shouldn't we expect 'know' to be gradable, too?

Even though Stanley's objection cannot be defused by merely pointing out that 'know' is a factive verb taking sentential complements, I take it to be rather obvious that the relation between a verb's semantic links to scales and its syntactic gradability is not as strict as Stanley expects it to be. Here is an interesting example illustrating my point: 'snore'. Firstly, note that 'snore' is context-sensitive: what counts as 'snoring' in one context—in a concert hall or during a theatre play—may merely count as 'heavy breathing' in another context—in a sleeper or the dorm of a youth hostel, say. Thus, 'snore' seems to be context-sensitive in virtue of having a semantic link to a scale of loudness and the truth-conditions of 'snore'-ascriptions are explicated as in (17), whose second condition is to be read along the lines of (18):

(17) x snores iff 1. x sleeps
2. $\leq (\delta_L(b_x);\ v_{\min SC})$.[42]

(18) The value x's breathing b takes on a scale of loudness is at least as great as the minimal value required for counting as satisfying 'snores' in context C.

Even though it is rather plausible that, firstly, the semantics of 'snore' contains a link to a scale of loudness and that, secondly, the context-sensitivity of 'snore' is to be accounted for by reference to this link, 'snore' is clearly not gradable along a scale of loudness:

(19) SNORE:
*x very much snores
x snores more than y
x snores most

Note with regard to (19), that its felicitous constructions compare the frequency of x's 'snoring' rather than its loudness. Thus, 'snore' is not gradable. According to (GC), however, this means that 'snore' is not semantically linked to a scale of loudness, i.e. it follows from (19) and (GC) that (17) doesn't give the correct truth-conditions of 'snore'-ascriptions. But does the non-gradability of 'snore' really suffice to defeat (17), our initially rather plausible account of the semantics of 'snore'?

In order to see why we should resist the pull of (GC) in this case, note that even though 'snore' is non-gradable, individual events of 'snoring' can, of course, be ordered according

[41] Note that the phrase 'in context C' doesn't necessarily signal indexicality here. The contextual variability with regard to what counts as satisfying 'regret' is minimal, possibly even null.

[42] I ignore further conditions on x's breathing such as its regularity, its noise being produced by the soft palate, etc.

to their loudness. In fact, we have at our disposal adverbial modifiers such as 'loudly' or 'very loudly' and adverbial comparative and superlative constructions such as 'snores louder' and 'snores loudest' that can be used to conveniently establish such orderings:

(20) SNORE LOUDLY:
x snores very/quite/extremely loudly
x snores more loudly than *y*
x snores most loudly

As (20) demonstrates, even though 'snore' is non-gradable along scales of loudness, it is clearly modifiable along such scales. As a consequence, it seems increasingly attractive to reject (GC) in favour of what I shall call the *Modifiability Constraint* (MC):

(MC) If an expression *e* has an unarticulated semantic link to a scale *s*, then *e* is either gradable or adverbially modifiable along *s*.

(MC) allows for the fact that a verb's unarticulated semantic link to a scale can be syntactically marked by the acceptance of non-standard degree modifiers, such as adverbial modifiers, adverbial comparative constructions and adverbial superlative constructions. In short, according to (MC), a verb's semantic link to a scale isn't necessarily manifested syntactically by its gradability. But now, if there are verbs with semantic links to scales which are not gradable, why shouldn't 'know' be one of them?

Clearly, it should by now seem attractive for the contextualist to dispose of her analogy to gradable adjectives and argue that 'know' functions semantically and syntactically analogously to verbs such as 'snore'. And indeed, this new analogy reaches a lot further than the old one: firstly, just as with regard to 'snore', there are empirical data suggesting that 'know' is context-sensitive: as examples such as our zebra case from Section 2 suggest, who counts as satisfying 'know' in one context doesn't necessarily do so in another.[43] Secondly, the apparent indexicality of 'know' can be effectively modelled by appeal to a semantic link to a scale of epistemic strength, analogously to how the indexicality of 'snore' could be modelled by appeal to a semantic link to a scale of loudness. Thirdly and crucially, 'know' resembles 'snore' in being non-gradable while accepting adverbial phrases modifying along the relevant associated scale: just as 'snore' accepts adverbial modifiers establishing orderings along a scale of loudness, 'know' accepts adverbial modifiers establishing orderings along a scale of epistemic strength:

(21) KNOW WITH GOOD EVIDENCE/JUSTIFICATION:
x knows with very/quite/extremely good evidence/justification that *p*
x knows that *p* with better evidence/justification than *y*/ that *q*
x knows that *p* with the best evidence/justification (available)[44]

'Know' thus seems to be semantically and syntactically very much on a par with 'snore', and, rejecting (GC) in favour of (MC), the contextualist can plausibly reply to

[43] See also Cohen (1999) and DeRose (1992, 1995) for examples suggesting that 'know' is indexical.

[44] Further phrases that can be used to modify 'knowledge' along a scale of epistemic strength are the earlier mentioned 'with absolute certainty' and 'for sure'. Note also that 'knowledge' is modifiable along a scale of belief, as expressions such as 'with more confidence' and 'with reasonable self-assurance' suggest.

Stanley that contextualism doesn't commit us to the unintuitive view that 'knowledge' comes in degrees. Contextualism rather only commits us to the view that 'knowledge'-states can be ordered with respect to their epistemic strength; and this is almost a truism—whether or not we subscribe to a contextualist semantics of 'know'.

Verbal gradability in cross-linguistic examination

According to the view just presented, verbs with semantic links to scales can exploit those links syntactically in two different ways: firstly, in terms of gradability, and, secondly, in terms of the acceptance of adverbial modifiers. As a consequence, I argued, (GC) is to be replaced by (MC), this replacement leading to the failure of Stanley's argument against contextualism. In support of my view I have thus far offered arguments bearing on the assumption that 'snore' is context-sensitive in virtue of having a semantic link to a scale of loudness as explicated in (17). Even though this assumption will seem innocuous to many theorists, my argument would, of course, be reinforced if we could find additional evidence in its support.

Interestingly, there is a set of data supporting my view more straightforwardly than the data examined thus far: there are pairs of verbs from different languages that are synonymous, one verb being gradable, the other being non-gradable but adverbially modifiable along the relevant scale. In fact, our above-discussed 'snore' lends itself to such an example. As the following constructions demonstrate, 'ronfler', the French translation of 'snore', is gradable along a scale of loudness:

(22) RONFLER:

x ronfle beaucoup/vraiment beaucoup/ énormément

x ronfle plus que *y*

x ronfle le plus

Even though 'snore' is not gradable along a scale of loudness, its French counterpart 'ronfler' is.[45]

These data provide us with the resources for another argument against (GC). Firstly, note that since 'ronfler' is gradable along dimensions of loudness, it has a semantic link to a scale of loudness, i.e. the semantics of 'ronfler' is to be explicated along the lines of (17). Secondly, note that 'ronfler' and 'snore' are synonymous or at least semantically similar enough to share their fundamental semantic properties: if they didn't share their fundamental semantic properties, French sentences containing 'ronfler' couldn't be systematically translated into English sentences containing 'snore'. Thirdly and finally, note that an expression *e*'s property of being semantically linked to a scale *s* is one of *e*'s fundamental semantic properties, since it is, for instance, precisely the possession of a link to a scale that frequently triggers context-sensitivity and that thereby significantly changes the semantic role of the relevant expression. Now, on the basis of these considerations it follows that 'snore' has a semantic link to a scale of loudness: from the second and the third of the above propositions it follows that 'ronfler' is semantically linked to a scale of loudness iff 'snore' is semantically linked to a scale of loudness. Combining this result with the first of

[45] To be precise, the constructions in (22) are ambiguous between readings grading the frequency and readings grading the loudness of *x*'s snoring.

the above propositions, it follows that the non-gradable 'snore' has a semantic link to a scale of loudness.

Cross-linguistic examination of the phenomenon of verbal gradability accordingly provides further evidence against (GC): syntactic gradability after all doesn't seem to be a necessary condition for a verb's possession of a semantic link to a scale. Moreover, considering that there are further verb pairs supporting my conclusion,[46] we may finally hypothesise that there are natural languages in which the translation of 'know' is gradable along a scale of epistemic strength. And indeed, as Peter Ludlow suggests in a footnote, Hungarian seems to be such a language.[47] However, independently of whether the Hungarian translation of 'know' is gradable or not, Stanley's argument against EC collapses.

The clarification technique objection

One final linguistic objection to EC remains to be addressed. According to what I shall call the *Clarification Technique Objection* gradable adjectives come with a fine-grained system of modifiers that can be employed to clarify relativity to particular standards.'Know', however, doesn't come with such devices. Suppose I say 'That meadow is flat' and you challenge me by pointing out that there are some molehills in it. In such a situation, there are—as Hawthorne (2004) observes—three different strategies available to me. Hawthorne:[48]

> (i) *Concession.*
> I concede that my earlier belief was wrong and try to find new common ground: 'I guess you are right and I was wrong. It's not really flat. But let's agree that...'
> (ii) *Stick to one's guns*:
> I claim that the challenge does not undermine what I said. I say ['That meadow is flat']. You point out some small bumps. I say: 'Well, that doesn't mean it isn't flat'.
> (iii) *Clarification*.
> I clarify my earlier claim and then protest that your challenge betrays a misunderstanding of what I believe and what I was claiming. There are various sorts of 'hedge' words that can be invoked in aid of this kind of response.
> Hawthorne then continues by giving examples of the clarification strategy:

> *Example 1*. 'The glass is empty'. Challenge: 'Well, it's got some air in it'. Reply: 'All I was claiming is that it is empty of *vodka*'.
> *Example 2*. 'The field is flat'. Challenge: 'Well, it's got a few small holes in it'. Reply: 'All I was claiming is that it is flat *for a football field*'. (Or: 'All I was claiming is that it is *roughly* flat'.)
> *Example 3*. 'He'll come at 3 p.m'. Challenge: 'He's more likely to come a few seconds earlier or later'. Reply: 'All I meant is that he'll come at *approximately* 3 p.m'.

[46] Another example is the verb pair 'run'(English)/'correr'(Spanish).

[47] See fn. 9 of the online version of Ludlow (2005), which can be found at http://www-personal.umich.edu/~ludlow/contextualism.pdf. Ludlow does not include the footnote in the printed version of the paper.

[48] Hawthorne (2004, p. 104).

If Hawthorne is right and we have no natural language devices for implementing the clarification technique when it comes to 'know', the contextualist faces a significant disanalogy to gradable adjectives that is in need of explanation. Let us firstly take a closer look at 'knowledge' and hedges.

What exactly is a hedge? As Stanley (2005) puts it, ''a hedge is some expression the linguistic function of which is to comment on the appropriateness of asserting the embedded sentence''.[49] Typical hedges are, for instance, 'roughly', 'approximately', 'more or less', 'sort of' and 'kind of'. If I am roughly the same size as you are, then I'm close enough to your size for the purposes at issue, but I'm not necessarily strictly your size. Similar considerations hold for the phrases 'roughly flat', 'more or less empty', etc.

Why doesn't 'know' accept hedges? The answer is straightforward: because it is a verb. Verbs in general don't accept hedges:

(23) **x* roughly/approximately runs/runs roughly/approximately
**x* roughly/approximately likes *y*/likes *y* roughly/approximately
**x* roughly/approximately regrets that *p*/regrets that *p* roughly/approximately
**x* roughly/approximately believes that *p*/believes that *p* roughly/approximately
**x* roughly/approximately knows that *p*/knows that *p* roughly/approximately[50]

Of course, one can believe or know that snow is roughly white or that one weighs roughly 160 pounds, but in these constructions it is not the verb 'know' or 'believe' that is hedged but rather the sentential complement they take. Verbs, I take it, can't be hedged, no matter whether they are gradable or non-gradable, context-sensitive or context-insensitive.[51]

Even though verbs cannot be hedged, there is something important about Hawthorne's point that 'know' doesn't accept 'for'-prepositional phrases, 'of'-prepositional phrases and 'enough to'-adverbial phrases, as indicated in the quoted passage. As Hawthorne emphasises, with regard to ascriptions of 'flat' and 'empty', phrases of these types can be used to make explicit the standards of flatness or emptiness that are applied by the speaker: 'All I meant was that the meadow is flat *enough to land a plane on*'. The problem for EC is that there are no natural language expressions which would allow speakers to do exactly that. 'Flat' and 'empty' come with a rather rich system of modifiers that is unavailable with regard to 'know'. As Hawthorne points out, it is a consequence of this that we usually react to epistemic challenges by either conceding that we were mistaken or by sticking to our guns.[52]

[49] Stanley (2005, p. 27), fn. 3.

[50] To some of my interviewees verbal constructions containing the hedges 'sort of' and 'kind of' seem less ungrammatical than the constructions in (23). Since this is true of constructions containing 'know' too, the contextualist will not get into trouble with such examples.

[51] Note also that hedging doesn't necessarily have to be considered a clarification technique. Since by using a hedge the speaker implicitly admits the inappropriateness of her earlier assertion, hedged 'flat'-ascriptions such as 'All I meant was that the meadow is roughly flat' can plausibly be understood as falling under Hawthorne's category of concession.

[52] Hawthorne (2004, p. 105).

Factivity and epistemic norms of assertion

Why are locutions of the above-mentioned type unavailable for 'know'? The answer to this question does not have to do with the fact that 'know' is a verb. Rather, it has to do with the fact that 'knowledge' is both factive and the norm of assertion. Imagine for a moment that there were expressions of the relevant kind for 'know' and let us use the phrase 'by standards$_N$' as a proxy for such expressions. Clearly, the expressions at issue would enable Mary from our zebra case to say the following, where the index '$_E$' indicates relativity to the *e*asy standards of Smith's context:

(24) Smith knows Z by standards$_E$.

Now, note that in the zebra case, Mary herself is in an epistemically tough context, i.e. owing to the epistemic standards salient in her context, she doesn't satisfy 'knows Z' in it. If Mary doesn't satisfy 'knows Z' in her own context, however, then she cannot felicitously assert 'Smith knows Z by standards$_E$', for this would commit her to Z (factivity), and—since 'knowledge' is the norm of assertion—such an assertion would implicate that Mary satisfies 'knows Z' herself in her own context, which is false.[53] Mary's assertion of (24) would therefore be of a Moore-paradoxical kind: she would violate what we may call the *Extended Rule of Assertion* (ERA):[54]

(ERA) If your assertion of S in C implicates p, assert S in C only if you satisfy 'knows p' in C.[55]

As a consequence, for all standards$_N$, we cannot felicitously assert sentences of the form 'x knows p by standards$_N$' if our own context of assertion is such that we don't satisfy 'knows p' in it. Thus, if there were devices for indicating the relativity of 'knowledge'-ascriptions to particular epistemic standards, these devices would be prone to lead to pragmatic paradoxes and accordingly wouldn't be linguistically very useful. Quite to the contrary, such expressions would be prone to cause confusion and would therefore be rather ineffective and detrimental to everyday conversations.[56]

[53] The argument here assumes that any assertion of a sentence S in a context C that commits the speaker to p implicates that the speaker satisfies 'knows p' in C. The notion of commitment at issue here is vague, but I assume that with regard to the factivity of 'knowledge' it can be cashed out in terms of obvious semantic entailment.

[54] Cp. Williamson (2001, pp. 26–27) for this point.

[55] See Williamson (2000, ch. 11) for the original Rule of Assertion.

[56] A similar point can be made for devices clarifying relativity to tougher standards. If I am in an easy context, can I assert sentences of the form 'x doesn't know p by standards$_T$' without committing a pragmatic crime? This isn't possible either, since the phrase indicating relativity to standards$_T$ will mostly contain a description of a counter-possibility or sceptical scenario or at least in some conversationally relevant sense invoke such a description: 'standards$_T$' just means or is short for 'the standards salient in a context in which the cleverly painted mule alternative is relevant', or analogous descriptions. According to EC, however, asserting such descriptions would exert a certain pressure to raise the standards. This pressure can be resisted, but we can see that this would lead to a conversationally defective assertion.

Interestingly, these considerations about EC and its relation to both the factivity of 'knowledge' and (ERA) also help resolving a difficulty for EC's analogy to gradable adjectives presented by (Davis, 2004). Here is Davis:

> [W]hen the Coloradan says 'Iowa is flat' and the Floridian says 'Iowa is not flat', they are both right because they are comparing Iowa to different states, just as the Texan and the Rhode Islander are both right when one denies and the other affirms 'Pennsylvania is big'. But when Moore, focusing on the evidence of his senses, proclaims 'I know that I have a hand', and the sceptic, focusing on various remote possibilities proclaims 'No one knows that he has a hand', the last thing we are inclined to say is 'They are both right'.[57]

Clearly, in the situation imagined by Davis, the assertion of 'They are both right' seems defective. The reason for this, however, is not the falsity of EC but rather the fact that the assertion gives rise to a pragmatic paradox along the lines explained above: EC has it that conversations about sceptics and sceptical possibilities raise epistemic standards to the effect that speakers cannot satisfy 'knows that they have hands'. Now, since the speaker in the situation imagined by Davis is herself talking about sceptics and sceptical possibilities, she is—according to EC—herself in a context in which she doesn't satisfy 'knows that she has hands'.[58] By asserting 'They are both right', however, Davis's speaker intends to claim that Moore satisfies 'knows that he has hands by standards$_E$' and thus makes the same pragmatic mistake as Mary does in the above example. If EC is true and if 'knowledge' is both factive and the norm of assertion, then we have an explanation of why in the given case we can't assert or think 'They are both right'.

A final point that needs to be addressed is once more relating to the contextualist's error-theory. I have argued in Section 4 that the gradable adjectives 'flat' and 'empty' are just as susceptible to problem cases concerning the phenomenon of semantic blindness as 'know' is. However, there is one interesting difference between the indexicality of 'know' and that of 'flat' and 'empty' that I did not address just then. As Cohen (2004) points out,

> ''[c]ontextualist theories of flatness ascriptions gain easy and widespread acceptance among most people. But contextualist theories of [...] knowledge do not. This is something a contextualist—one like me anyway who relies on the analogy—needs to explain.''[59]

Taking into account our above considerations about the unavailability of 'for'-prepositional phrases and 'enough to'-adverbial phrases, an explanation of Cohen's datum is easily obtained: it is sometimes more difficult to convince competent speakers that 'know'

[57] Davis (2004, p. 266).

[58] See DeRose's (1995) Rule of Sensitivity or Lewis's (1996) conversational rules for how contextualists may explicate the conversational mechanisms determining epistemic standards. Note that even on views according to which the mere mentioning of sceptical hypotheses doesn't suffice to raise epistemic standards Davis's case can be said to be conversationally defective, since it may be argued that it isn't altogether clear what the standards are in that case. On this view, 'They are both right' doesn't express a complete proposition and therefore doesn't have a truth-value.

[59] Cohen (2004, p. 192). Cohen proposes to explain this difference by means of the normativity of epistemic notions.

is context-sensitive than it is to convince them that 'flat' or 'empty' are because 'know' does not accept modifier constructions indicating relativity to particular epistemic standards.

Consider a case in which you want to convince a competent speaker that 'flat' is indexical. The typical way to proceed is to tell a story in which speaker A in one context asserts 'That meadow isn't flat' and speaker B in another context asserts 'That meadow is flat', while the intuitions are that both A and B express truths. You will then analyse the situation by claiming that A in her context was saying that the meadow isn't flat *for a golf course*, whereas B in his context was saying that the meadow is flat *enough to land a plane on*. Since corresponding 'for'-prepositional phrases and 'enough to'-adverbial phrases are, however, unavailable for 'know', it is no wonder that it is more difficult to lead competent speakers to see that 'know' is indexical: the relativity of 'knowledge'-ascriptions to different epistemic standards can—for the semantic and pragmatic reasons explicated above—not be made obvious as easily as it can in the cases of 'flat' and 'empty'.[60]

Conclusion

In this paper I have addressed the three most pertinent linguistic objections to EC in the literature and argued that each of them does not withstand closer scrutiny. Pace the epistemological mainstream, it turned out that with regard to the non-obviousness of its indexicality, 'know' is on a par with 'flat' and 'empty'. In other, mainly syntactic respects, however, 'know' has been seen to differ from 'flat' and 'empty'. These differences could be accounted for by, firstly, dropping the implausibly strong *Gradability Constraint* and by, secondly, acknowledging the fact that 'knowledge' is both factive and the norm of assertion.

'Know' is thus linguistically exceptional in a sense fairly harmless for the contextualist: it combines the semantic properties of being indexical and factive with the syntactic property of being non-gradable while at the same time taking the pragmatic role of functioning as the norm of assertion. This combination of properties is, of course, unique and we therefore shouldn't expect 'know' to function in all linguistic aspects exactly like gradable adjectives, which contextualists have so frequently compared 'know' to. Analogies tend to break down at some point, and this surely is the reason why knowledge rather than flatness or emptiness has been at the heart of philosophical enquiry for centuries. Thus, the uniqueness of 'know' shouldn't worry the contextualists too much, as longs as a coherent and illuminating account of this uniqueness can be given.[61]

[60] In addition to what has been said thus far it seems as if we don't really need expressions indicating the relativity of 'knowledge'-ascriptions to particular standards. There are, after all, many non-factive expressions in natural language that we can use to modify the epistemic strength of attributed beliefs, thus avoiding the above problem: 'justified', 'warranted' and 'rational' are examples. These expressions can be used to say what Mary may want to say instead of (24).

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