

Knowledge and Certainty: A Speech-Act Contextualist Account

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Abstract:

Contextualists of David Lewis' stripe endorse the thesis that 'know' and its cognates are context dependent so as to heed their infallibilist intuitions while avoiding skepticism. I argue that the plausibility of infallibilism can be explained away as arising from two other intuitively known facts, i.e.:

(KA) For any speaker, *A*, and proposition, *p*, if *A* asserts that *p*, then *A* incurs a commitment to know that *p*, and

(KKC) For any doxastic agent, *A*, and proposition, *p*, if *A* knows that someone knows that *p*, then *A*'s evidence eliminates every possibility in which not-*p*.

I propose that contextualist insights can be incorporated into a semantically neutral theory of speech-act content according to which what speakers typically do by uttering knowledge attributions is to offer their epistemic authority as a guarantee that the putatively known proposition is true in every possible world that is consistent with the proper presuppositions they share with their interlocutors.

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1. *Epistemic Contextualism*:

In “Elusive Knowledge,” David Lewis writes:

So we know a lot; knowledge must be infallible; yet we have fallible knowledge or none (or next to none). We are caught between the rock of fallibilism and the whirlpool of scepticism. Both are mad! ... Better fallibilism than scepticism; but it would be better still to dodge the choice. I think we can.¹

One intuition that drives contextualists of Lewis’ stripe is that knowledge requires certainty.²

Another, which motivates their dodging strategy, is that conflicting knowledge claims concerning the same belief can, if uttered in different contexts, be warranted in their respective contexts. In an attempt to dodge the choice between fallibilism and skepticism, such contextualists propose that the content of knowledge speech-acts is context dependent; that is, they propose that, for any attributor, *A*, believer, *B*, and proposition, *p*, the content of the speech-act *A* performs by uttering, ‘*B* knows that *p*,’ depends, e.g., on the proper presuppositions *A* shares with her interlocutors concerning the possibilities left uneliminated by *B*’s evidence. On the basis of this thesis concerning knowledge speech-acts, contextualists infer a semantic thesis concerning the term ‘know’ and its cognates, namely, that the literal meaning of these terms is context dependent. That is, they hold that the sentence, ‘Lewis knows that penguins eat fish,’ just like the sentence, ‘they eat fish,’ is not truth evaluable when it is severed from its context of utterance. In what follows, ‘*T*₁’ denotes the former thesis and ‘*T*₂’ denotes the latter thesis.

¹ David Lewis (1996), 503-4.

² Not all contextualists would agree that knowledge requires certainty. In “How to be a Fallibilist,” for instance, Steward Cohen proposes that what varies relative to context is the standard of epistemic strength required for knowledge, rather than the domain relative to which one’s belief must be certain in order to count as knowledge. In this paper, I treat contextualism as a generic thesis and cast it in Lewis’ terms. This is because the arguments I propose have purchase on any contextualist account of knowledge, although they are designed specifically to convince those who are primarily motivated to endorse contextualism by their infallibilist intuitions.

The explanatory relationships among these intuitive and theoretical claims are the following: T_2 is offered as an explanation of T_1 . T_1 is offered as an explanation (and vindication) of the intuition that apparently conflicting knowledge claims can, if uttered in different contexts, be warranted in their respective contexts—this is because the speech-acts performed by uttering such apparently conflicting claims can have different contents. T_1 , interpreted as resulting from the semantic facts posited by T_2 , is also offered as an explanation (and vindication) of the intuition that although knowledge does require certainty, we nevertheless know many things, at least in ordinary contexts—this is because knowledge requires certainty with regard only to what is contextually relevant. So, on Lewis' view, knowledge is infallible; that is, B knows that p just in case B 's evidence eliminates every possibility in which not- p . However, he takes the scope of 'every' to be contextually restricted—with *sotto voce* proviso spelled out, his analysis of knowledge is, “[B] knows that p just in case [B 's] evidence eliminates every possibility in which not- p —Psst!—except for those possibilities that conflict with our proper presuppositions.”³

2. Epistemic Contextualism as a Semantic Thesis:

That T_2 affords a passage through some narrow epistemic straits does little to bolster it as a semantic thesis. As such, its veracity ought to be evaluated relative to criteria that are relevant to semantics—usefulness in solving epistemological problems being obviously irrelevant. In *Insensitive Semantics*, Cappelen and Lepore articulate a set of tests designed to discriminate genuinely semantically context-sensitive expressions from expressions that are semantically context insensitive but that might have a context-sensitive import in the content of the speech acts of which they are part (and, so, might deceive one into thinking that they are semantically context sensitive). These tests are as follows:⁴

³ Lewis (1996), p. 506.

⁴ Cappelen and Lepore (2004), ch. 7 ff.

(1) Does the expression typically block inter-contextual disquotational indirect reports?

If an expression, e , is context sensitive, then a sentence, S , that contains e and that is uttered by some speaker, A , in some context, C , cannot typically be reported truly in some relevantly different context, C' —i.e., in a context in which e takes a different semantic value—by ‘ A said that S .’

(2) Does the expression typically block collective descriptions?

If an expression, e , is context sensitive, then that e can be predicated truly of some object, O_1 , in some context, C_1 , and of some other object, O_2 , in some other context, C_2 , does not entail that there is some context in which e can truly be predicated of both O_1 and O_2 .

(3) Does the expression pass an inter-contextual disquotational test and admit of real context shifting arguments?

An expression, e , is context sensitive just in case e can take different semantic values in different contexts of utterance; that is, just in case e can be used in a true utterance of some sentence, S , even though ‘ S ’ is (or can be) false in some relevantly different context—i.e., in a context in which e takes a different semantic value. To establish that some expression, e , is context sensitive, one must produce a true utterance of an instance of the following inter-contextual disquotational schema (ICD) for some sentence, S , that contains e :

(ICD) There are (or can be) false utterances of ‘ S ’ even though S .

A real context-shifting argument (RCSA) is one in which a putative context-sensitive expression is not only mentioned as its uses in other contexts are described, but also used; the argument is successful if the semantic value of the expression as used differs from the semantic value it takes in the described context(s). A successful RCSA for some expression, e , is conclusive evidence that e passes the ICD test and, so, that e is context sensitive.

While all uncontroversial indexicals clearly pass all three tests with flying colors, it is at best unclear that ‘know’ and its cognates pass any of them successfully. If Basil said, ‘Amy knows that she has hands,’ in an ordinary context, what Basil said can be reported truly, it seems, even in the context of a philosophical discussion concerning skepticism about the existence of physical objects, by uttering, ‘Basil said that Amy knows that she has hands.’ Upon learning that knowledge that she has hands can truly be ascribed to Amy in an ordinary context and to Clara in the context of a philosophical discussion concerning skepticism about the existence of physical objects, it seems natural and legitimate to conclude that the sentence, ‘Both Amy and Clara know that they have hands,’ is true in any context. The sentence,

Amy does not know that she has hands, even though ‘Amy does not know that she has hands’ is false in an ordinary context,

seems contradictory even when it is uttered in the context of a philosophical discussion concerning skepticism about the existence of physical objects. Now, Cappelen and Lepore argue—fairly convincingly—that every expression can be shown to pass all three tests at least as well as ‘know’ and its cognates. If they are right, then accepting that ‘know’ and its cognates are context-dependent expressions commits one to accepting the thesis that all expressions are context dependent. Further, they show that the thesis that all expressions are context dependent suffers from internal inconsistencies and cannot explain how communication is possible. On semantic grounds, then, there are some serious reasons for doubting the thesis that ‘know’ and its cognates are context-sensitive expressions, i.e., T₂ above. In the current state of the debate, it seems to me, the burden lies in the contextualist camp to show that, although ‘know’ and its cognates fail to behave in the manner characteristic of uncontroversial indexicals, their semantic behavior is nevertheless indicative of a different type of context sensitivity, of which a general account can be provided and that is amenable to adequate semantic testing. Although I doubt

that this burden can be discharged, I am content here merely to endorse a conditional commitment to the falsity of contextualism and show that a widespread motivation for accepting this thesis can successfully be explained away.

3. *Diagnosis:*

Epistemic contextualists endorse T_2 because it explains T_1 and because it vindicates the intuition that knowledge requires certainty without committing one to skepticism. If T_2 and skepticism are both false, the intuition that knowledge requires certainty must be misguided.

The plausibility of the intuition that knowledge requires certainty can be explained away as arising from the combination of two other intuitively known facts, which neither severally, nor jointly entail that knowledge requires certainty, namely:

(KA) For any speaker, A , and proposition, p , if A asserts that p , then A incurs a commitment to know that p , and

(KKC) For any doxastic agent, A , and proposition, p , if A knows that someone knows that p , then A 's evidence eliminates every possibility in which not- p .

3.1 *KA Defended:*

In "Knowing and Asserting" Timothy Williamson writes:

To make an assertion is to confer a responsibility (on oneself) for the truth of its content; to satisfy the rule of assertion, by having the requisite knowledge, is to discharge that responsibility, by epistemically ensuring the truth of the content.⁵

Williamson argues that the best account of assertion is one according to which assertion is the speech act governed by the unique constitutive rule, 'assert that p only if you know that p ;' alternatively, ' A must: assert that p only if A knows that p .' Williamson stresses that, unlike conventions, constitutive rules are necessary. Nevertheless, just as one may break the rules of English grammar without thereby failing to speak English, so may one break the rule of assertion

⁵ Williamson (1996), p. 522.

without thereby failing to make an assertion—constitutive rules are not necessary conditions for the performance of the acts they govern.

As evidence for the correctness of the knowledge account of assertion, Williamson adduces ordinary conversational practice. Under normal circumstances, it is appropriate to respond to an assertion by asking, ‘how do you know that?’—even to challenge it by asking, ‘do you know that?’ The appropriateness of these questions is best explained, on Williamson’s view, by the hypothesis that only knowledge warrants assertion. Further, the hypothesis that only knowledge warrants assertion explains why there is something wrong with assertions of the form, ‘ p and I do not know that p .’ On the knowledge account of assertion, the assertion, ‘ p and I do not know that p ,’ is warranted only if the speaker knows that the conjunction, ‘ p and I do not know that p ,’ is true. This, however, would require that the speaker both know that p and know that she does not know that p , since knowledge of a conjunction requires knowledge of each conjunct. Such assertions, even when true, are never appropriate because they place contradictory requirements on the speaker. The inappropriateness of asserting, ‘ p and I do not know that p ’ is also evidence that the connection between assertion and knowledge is not merely a matter of pragmatic implicature; if it were, the knowledge implicature of assertion would be cancelable—appropriately—by asserting, ‘ p and I do not know that p .’

3.2 *KKC Defended:*

I will start by establishing the intuitively plausible principle that knowledge of one’s own knowledge requires certainty, i.e.,

(RKKC) For any doxastic agent, A , and proposition, p , if A knows that A knows that p , then A ’s evidence eliminates every possibility in which not- p .

Then I will show that the requirement generalizes to the non-reflexive case, i.e.,

(KKC) For any doxastic agent, A , and proposition, p , if A knows that someone knows that p , then A ’s evidence eliminates every possibility in which not- p .

In virtue of believing that p , A incurs an epistemic commitment to p being true. If A knows that p , this commitment is epistemically permissible for A . What does such permissibility require? At a minimum, it would seem, it requires that A have adequate evidence that p . What adequate evidence requires is, of course, highly controversial. Yet on even the most modest proposal, RKKC follows. So, consider the following externalist requirement:

(EER) For any doxastic agent, A , and proposition, p , A 's total evidence that p , e , is adequate only if A would not believe that p on the basis of e in the nearest possible worlds in which p is false.^{6, 7, 8}

Suppose Amy believes on the basis of her current sense experience that her cat is on her lap.

According to EER, what renders her epistemic commitment to the truth of her belief permissible

⁶ EER is an externalist requirement on adequate evidence in the sense that it can be satisfied even if A 's epistemic situation does not enable her to determine whether her evidence satisfies it.

⁷ The following thought-experiment shows that EER is properly restricted to the believer's total evidence: Suppose that Amy, who is rather near sighted, discerns merely that there is a black spot on the wall opposite her. She can also see quite well that Basil, whose eyesight is much keener than hers, is gazing in the direction of the spot and reaching for the swatter. On the basis of this evidence, Amy forms the belief that there is a fly on the wall opposite her. Although Amy's total evidence for her belief satisfies EER, the elements of which it is comprised do not—and, clearly, need not—satisfy this requirement.

⁸ It might be thought that EER is too strong, as the nearest possible world in which p is false might be one in which A falls prey to a Gettier situation that does not affect her evidence in the actual world. So, suppose that Amy is an ordinary zoo visitor who is looking at an ordinary zebra grazing in an ordinary zoo enclosure marked 'zebra.' At around the same time, the zoo is being shown to a wealthy philanthropist who is famous for his zebra fetish and for making donations to zoos only upon seeing at least one healthy zebra happily grazing in its enclosure. As it happens, the zoo's one zebra has a heart condition that renders its death imminent. This zebra would only be away from its enclosure if it had met its demise, in which case the zoo's director, who is desperate for funding, would have replaced it with the only available substitute—a painted mule. IER below handles such cases better. I am not sure what form a suitably weakened counterpart of EER should take, or even whether such a principle is available in logical space. What this thought-experiment might show is simply that a purely externalist requirement on evidence is inadequate. I will set this issue aside, since it leads directly to the thorny internalism/externalism debate, and assume that EER/IER are at least as weak as the requirements on adequate evidence that are employed in intuitive evaluations of ordinary cases. If EER and IER both entail KKC, this is enough to explain how the intuition that knowledge requires certainty might arise.

is—among other things perhaps—that Amy’s evidence ensures that, in possible worlds just like the actual world except for the location of her cat (*mutatis mutandis*), Amy does not falsely believe that her cat is on her lap. On this view, Amy’s evidence, i.e., her current sense experience, is adequate in virtue partly of yielding a belief that is truth-sensitive relative to the relevant worlds.⁹

Now, suppose Amy believes that she knows that her cat is on her lap. By EER, this reflexive meta-belief would be permissible for her only if her evidence were such that she would not believe that she knows that her cat is on her lap in the nearest possible worlds in which she does not know that her cat is on her lap. The worlds in which Amy does not know that her cat is on her lap include ones in which Amy does not believe that her cat is on her lap (e.g., her cat is elsewhere), and—more interestingly for my purposes—ones in which Amy believes that her cat is on her lap, but does so falsely. It might be thought that, since the nearest worlds in the former category are nearer than the nearest worlds in the latter category, Amy’s evidence can easily satisfy EER without satisfying RKKC. I believe that this view is mistaken for the following reason.

Clearly, Amy’s belief that she knows that her cat is on her lap and her belief that her cat is on her lap are significantly different. The content of the former logically implies the content of the latter, but not *vice versa*. Further, the content of the former, but not the content of the latter, logically implies that Amy’s evidence that her cat is on her lap is adequate (on most accounts of knowledge anyway). Finally, if Amy believes that she knows that her cat is on her lap, she is conceptually required to believe that her cat is on her lap, but not *vice versa*. So, if Amy believes that she knows that her cat is on her lap, she is required to believe that her cat is on

⁹ Where *A*’s belief that *p* is truth sensitive (or, simply, sensitive) relative to some world, *w*, if *A* would not falsely believe that *p* in *w*.

her lap, and what the content of the former belief adds to the content of the latter is minimally that Amy believes that her cat is on her lap and believes so based on adequate evidence. It stands to reason that, since the two beliefs differ in these respects, our evaluations of the evidence on which they are based ought to differ in a manner that takes proper account of what one belief adds to the other. Given our evaluative method, this is achieved by restricting the set of relevant alternatives to possible worlds that include the relevant facts, namely, Amy's evidence for her belief that she knows that her cat is on her lap and Amy's belief that her cat is on her lap. Since Amy's evidence is our evaluative concern, the relevant possible worlds are indistinguishable from the actual world in terms of Amy's evidence anyway. However, since we are concerned with evaluating Amy's evidence for her belief that she knows that her cat is on her lap, the relevant possible worlds are ones in which Amy believes that her cat is on her lap, and does so falsely.

Although EER requires merely that Amy's evidence eliminate the nearest among such worlds, it is clear that no world in which Amy falsely believes that her cat is on her lap on the basis of her sense experience is especially close to the world in which Amy presumably abides. The relevant facts that figure in such a world are, Amy has an experience that is internally indistinguishable from the experience she would have if her cat were on her lap, believes on this basis that her cat is on her lap and does so falsely. In short, it is the sort of world that is typically depicted in skeptical scenarios inasmuch as it reveals the gap between, in this case, empirical belief and truth. The sort of evidence that would be required to eliminate such skeptical possibilities is no weaker than that required for infallibility, since its task is to bridge the gap between Amy's first-order belief and truth in such a way that Amy believes that she knows that her cat is on her lap only if her cat is on her lap. In effect, then, what EER requires in this case is that Amy's evidence eliminate every possibility in which it is false that her cat is on her lap. If

Amy knows that she knows that her cat is on her lap, her reflexive meta-belief satisfies EER and, so, satisfies RKKC. Since this result is not due to any peculiarity of the case at hand, we may conclude that EER entails RKKC.

Let us now turn to KKC and suppose Basil believes that Amy knows that her cat is on her lap. Given EER, this belief would be permissible for Basil only if his evidence were such that he would not believe that Amy knows that her cat is on her lap in the nearest possible worlds in which Amy does not know that her cat is on her lap. In this case, the worlds in which Amy does not know that her cat is on her lap include worlds in which Amy does not believe that her cat is on her lap, and worlds in which Amy believes that her cat is on her lap either falsely or on the basis of inadequate evidence. In this case also, it might be thought that, since the nearest worlds in the former category (e.g., worlds in which Amy's cat is elsewhere and neither Amy, nor Basil, believe that Amy's cat is on her lap) are nearer than the nearest worlds in the latter category, Basil's evidence can easily satisfy EER without satisfying KKC. The argument I offered above to the effect that the alternatives relevant to our evaluation are ones in which Amy falsely believes that her cat is on her lap can be modified to show that, in this case, the relevant alternatives are worlds in which Amy believes that her cat is on her lap either falsely or on the basis of inadequate evidence. So, if Basil believes that Amy knows that her cat is on her lap, he is conceptually required to believe that Amy's cat is on her lap. What Basil's belief that Amy knows that her cat is on her lap adds to his belief that Amy's cat is on her lap is that Amy believes that her cat is on her lap, and does so on the basis of adequate evidence. In order for our evaluation to take proper account of the difference between these two beliefs, we must restrict the set of relevant alternatives to worlds that are indistinguishable from the actual world in terms of the relevant fact, i.e., that Amy believes that her cat is on her lap on the basis of her sense experience. The candidate relevant alternatives, then, are worlds in which Amy falsely believes

that her cat is on her lap and worlds in which Amy's evidential basis for this belief, i.e., her sense experience, is inadequate.

What are these worlds like and which among them are nearest? Matters are complicated by the relevance of worlds in which Amy truly believes that her cat is on her lap on the basis of sense experience, and yet fails to do so on the basis of adequate evidence. For ease of exposition, let us start by focusing on the worlds in which Amy falsely believes that her cat is on her lap, then proceed to determining whether it is any easier for Basil's evidence to satisfy EER relative to the nearest worlds in which Amy's belief is true but based on inadequate evidence.

Let us suppose, then, that in order for Basil's evidence to satisfy EER, it must rule out the nearest possible worlds in which Amy falsely believes that her cat is on her lap. These are worlds in which something occurs that generates, for Amy, an illusion that her cat is on her lap. Candidate worlds include worlds in which Amy undergoes an experience that is internally, though not externally, indistinguishable from the experience she would have if her cat were on her lap (e.g., Amy's experience is caused, unbeknown to Amy, by a hallucinogenic drug), and worlds in which Amy undergoes an experience that is both internally and externally indistinguishable from the experience she would have if her cat were on her lap (e.g., what lies purring on Amy's lap is a perfect mechanical replica of Amy's cat). There is no principled reason for holding that worlds of the former type are nearer to the actual world than worlds of the latter type—both after all, are very remote possibilities. So, if the worlds in which Amy falsely believes that her cat is on her lap are relevant to our evaluation, Basil's evidence must enable him to eliminate worlds of both types. In such worlds, Amy's belief is not truth sensitive. Yet for Basil's evidence for his belief that Amy knows that her cat is on her lap to satisfy EER, it must be such that Basil's belief is truth sensitive relative to these worlds. That is, Basil's evidence must be such that, in such worlds, he does not believe that Amy's cat is on her lap. In

other words, relative to these worlds, Basil's evidential situation concerning the truth of Amy's belief must be stronger than Amy's, and strong enough to bridge the gap between his belief that Amy's cat is on her lap and truth in such a way that he believes that Amy knows that her cat is on her lap only if Amy's cat is on her lap. In effect, then, what EER would require if such worlds were relevant to our evaluation is that Basil's evidence be capable of eliminating every possibility in which it is false that Amy's cat is on her lap. If Basil knows that Amy knows that her cat is on her lap, his belief that Amy knows that her cat is on her lap satisfies EER. So, if worlds in which Amy falsely believes that her cat is on her lap were relevant to our evaluation of Basil's evidence, Basil's belief that Amy knows that her cat is on her lap would satisfy EER only if it also satisfied KKC.

Let us now reflect on what the worlds in which Amy's belief that her cat is on her lap is true but based on inadequate evidence are like, and determine whether it is any easier for Basil's evidence to satisfy EER relative to the nearest among such worlds. Let us pick one such specimen and call it w_1 . Since we have assumed EER for the sake of argument, let us assume¹⁰ that, in w_1 , Amy's evidence that her cat is on her lap, i.e., Amy's sense experience, fails to ensure that Amy does not falsely believe that her cat is on her lap in the worlds nearest to w_1 in which Amy's cat is not on her lap. Let us pick one such world and call it w_2 . If w_1 is relevant to our evaluation of Basil's evidence, so is w_2 , since Basil's evidence must ensure that he does not believe, in w_1 , that Amy knows that her cat is on her lap if Amy's evidence is such that Amy would falsely believe, in w_2 , that her cat is on her lap. So, Basil's evidence must ensure that, in

¹⁰ Since EER merely states a necessary condition on adequate evidence, Amy's evidence might satisfy EER in w_1 and yet fail to be adequate for some other reason. However, since EER is the weakest externalist requirement on adequate evidence I could muster, it seems fair to assume that failure to meet EER is the least shortcoming Amy's evidence might have.

w_2 , Basil would not believe that Amy's cat is on her lap. Now, w_2 is just like the worlds just discussed in which Amy falsely believes that her cat is on her lap. I have shown above that, if such worlds are relevant to our evaluation of Basil's evidence, Basil's belief that Amy knows that her cat is on her lap satisfies EER only if it also satisfies KKC. Since the worlds relevant to our evaluation of Basil's evidence for his belief that Amy knows that her cat is on her lap are either ones in which Amy falsely believes that her cat is on her lap, or believes so on the basis of inadequate evidence, we may conclude that EER entails KKC at least for beliefs relevantly similar to the ones we just considered.

It might be thought that the entailment from EER to KKC is restricted to cases in which the knowledge-attributing belief and the attributed belief are based on similar and fairly direct empirical evidence. The following case should provide strong evidence that the entailment is general. So, suppose Basil believes that Andrew Wiles knows that Fermat's last theorem has been proved.¹¹ For Basil's belief to be permissible for him, his evidence must be such that Basil would not hold this belief in the nearest possible worlds in which Wiles falsely believes that Fermat's last theorem has been proved.¹² In this case, as in the previous case, what this requires is that, relative to such worlds, Basil's evidential situation concerning the truth of Wiles' belief be stronger than that of Wiles, and strong enough to bridge the gap between Basil's belief that

¹¹ Note that the thought experiment cannot be run for the belief that Andrew Wiles knows that Fermat's last theorem is true, since Fermat's last theorem is true necessarily and, so, there are no possible worlds in which Andrew Wiles falsely believes that Fermat's last theorem is true. Unless one holds, like Lewis, that necessary propositions are always known (though they are sometimes unrecognized), what this shows is that, unsurprisingly, true belief based on evidence that satisfies EER is not sufficient for knowledge, since any evidence one might have for a belief that is necessarily true trivially satisfies EER.

¹² Since my earlier discussion of alternatives in which Amy's belief that her cat is on her lap is true but based on inadequate evidence did not rely on anything peculiar to the nature of Amy's belief or evidence, I am taking the liberty to ignore here the alternatives in which Wiles' belief is true but based on inadequate evidence.

Fermat's last theorem has been proved and truth in such a way that he believes that Wiles knows that Fermat's last theorem has been proved only if Fermat's last theorem has been proved. What are the relevant worlds like and what sort of evidence would Basil require to eliminate them? Presumably, these are worlds in which, despite careful scrutiny by Wiles and the mathematical community, Wiles' proof contains some undetected error. To eliminate such worlds, Basil's evidence must be stronger than that available to expert mathematicians; that is, it must be such that it renders Basil immune to any error—however difficult to detect—to which an expert mathematician might fall prey. In short, Basil's evidence must render him infallible relative to the relevant domain, namely, the proof of Fermat's last theorem. In this case also, then, the satisfaction of EER requires certainty. Since the types of belief content and evidence involved in the last two thought-experiments are widely different, it is reasonable to conclude that EER entails KKC for any type of belief and evidence.

Internalizing the requirement on adequate evidence does not help. So, consider the modest internalist requirement,

(IER) For any doxastic agent, A , and proposition, p , A 's total evidence that p , e , is adequate only if it would be rational for A to judge that she would not believe that p on the basis of e in the nearest possible worlds in which p is false.

Clearly, it would not be any more rational for Amy or Basil to judge that their total evidence for their knowledge-attributing beliefs satisfies EER than judging so would have been rational for us upon reading the cases described above. In the first two cases, it would be rational for Amy and Basil to judge that their respective total evidence satisfies EER only if it were rational for them to judge that their respective beliefs that Amy's cat is on her lap are infallible. Similarly, in the last case, it would be rational for Basil to judge that his total evidence satisfies EER only if were rational for him to judge that his belief that Fermat's last theorem has been proved is infallible. Nothing short of certainty—if anything at all—can warrant such a judgment. Still, IER might

have greater intuitive plausibility as a requirement on adequate evidence, as it grants, e.g., that a BIV mental duplicate of Amy has adequate evidence that her cat is on her lap if Amy has adequate evidence that her cat is on her lap.

That knowledge requires the satisfaction of some requirement in the neighborhood of EER or IER is highly plausible. What both EER and IER mean to capture is the intuitive view that only beliefs whose truth is not purely accidental can properly count as known (or justified, or warranted)—EER characterizing this non-accidentality as an objective, and IER characterizing it as a subjective, feature of known (or justified, or warranted) beliefs. Both are modest requirements inasmuch as they merely demand that known (or justified, or warranted) beliefs be non-accidentally true relative to the nearest possible worlds. Yet regardless of their modesty, they clearly generate KKC.

3.3 Objection to EER/IER: The closure problem

One might object that any invariantist fallibilist account of knowledge that requires sensitivity is committed to denying that knowledge is closed under known implication and, so, to denying that valid inference from known truths is an epistemically appropriate method of belief acquisition.¹³ The problem is supposed to arise as follows: Suppose that Amy knows that she has hands (and let ' H ' stand for 'Amy has hands'). Suppose also that Amy knows that, if she knows that she has hands, then she does not falsely believe that she has hands. Suppose, further, that from these two beliefs, Amy infers that she does not falsely believe that she has hands (let ' T_H ' stand for 'Amy does not falsely believe that she has hands'). Since it is not the case that, if Amy falsely believed that she has hands, Amy would not believe that she does not falsely believe that she has hands (i.e., it is not the case that, if not- T_H , then Amy does not believe that T_H)—if Amy were a BIV,

¹³ To require that known belief satisfy EER is to require that known beliefs be sensitive relative the nearest possible worlds, and that their sensitivity be assured by the believer's evidence.

she would falsely believe that she does not falsely believe that she has hands—her concluding belief, though validly inferred from known beliefs, is insensitive and, so, fails to amount to knowledge.¹⁴

The objection can be answered as follows. As the foregoing discussion of EER and IER has made clear, sensitivity is a world-relative notion. That is, the following is false of sensitivity:

For any doxastic agent, A , and any proposition, p , if A 's belief that p is sensitive relative to some world, then A 's belief that p is sensitive relative to every world.

When we ask whether A 's belief that p is sensitive, we ask whether it is sensitive relative to some relevant set of worlds.

Let us now examine the sensitivity of Amy's belief that T_H and Amy's belief that H . Suppose that Amy would falsely believe that T_H in some world, w_1 . That is, in w_1 , Amy would falsely believe that she does not falsely believe that she has hands. So, Amy's belief that T_H is insensitive relative to w_1 . But if Amy falsely believes that she does not falsely believe that she has hands, Amy falsely believes that she has hands. So, in w_1 , Amy would falsely believe that she has hands. So, Amy's belief that H is insensitive relative to w_1 .

w_1 being an arbitrary world, we may generalize as follows:

P_1 : For any world, w , if Amy's belief that T_H is insensitive relative to w , then Amy's belief that H is insensitive relative to w .

Contraposing and canceling double negations, we get:

P_2 : For any world, w , if Amy's belief that H is sensitive relative to w , then Amy's belief that T_H is sensitive relative to w .

Note that the following, more general principle is also clearly true:

¹⁴ The example is borrowed from Tim Black's and Peter Murphy's "Explanation, Epistemic Closure and Belief-Forming Methods," which the authors presented at INPC 2004.

P_3 : For any world, w , doxastic agent, A , and propositions, p and q ,
if A knows that p entails q , A infers q from p , and A 's belief that p is sensitive relative to w , then A 's belief that q is sensitive relative to w .

The closure problem arises only for accounts of doxastic relevance, such as EER above, according to which the sets of possible worlds respectively relevant to Amy's belief that H and to Amy's belief that T_H can differ (in a single context) in such a way that Amy's belief that H is sensitive and Amy's belief that T_H is insensitive. Since the problem does not arise for invariantist infallibilist accounts, as these hold that the set of relevant possible worlds is every possible world, or for contextualist infallibilist accounts, as these hold that the set of relevant possible worlds is context relative rather than belief relative, the problem might be viewed as a strong reason for rejecting the sort of account I have been proposing and for endorsing infallibilism (contextualist or invariantist).

This objection, however, fails to note that what ensures that a belief is sensitive is the manner in which it is acquired/sustained. This indicates that the sensitivity of beliefs is derivative; that is, a sensitive belief is sensitive in virtue of having been acquired/being sustained in a sensitive manner, i.e., in a manner that ensures that the believer would not hold this belief in the relevant worlds in which it is false. Now, some doxastic methods involve other beliefs. Among these, some—valid inferences—are intra-world sensitivity preserving, i.e.:

SP: For any doxastic method, M , doxastic agent, A , proposition, p , and world, w ,
 M is intra-world sensitivity preserving just in case:
if (i) A acquires the belief that q via M , and
(ii) for any proposition, p , such that A believes that p and p is involved in M ,
 A 's belief that p is sensitive relative to w ,
then A 's belief that q is sensitive relative to w .

If some sensitivity-preserving doxastic method is sensitive relative to some world, w , its sensitivity relative to w is derivative; that is, it is sensitive relative to w in virtue of involving

only beliefs that are sensitive relative to w . Relative to w , these beliefs are also derivatively sensitive; that is, they are sensitive in virtue of having been acquired via a method of belief acquisition that is sensitive relative to w .

These considerations recommend the following amended account of sensitivity: a belief is sensitive *tout court* just in case it is acquired/sustained either via a doxastic method that is non-derivatively sensitive relative to the relevant possible world in which this belief is false, or via a sensitivity-preserving doxastic method involving only beliefs whose doxastic lineage can be traced, via sensitivity-preserving doxastic methods, to beliefs acquired/sustained via doxastic methods that are non-derivatively sensitive relative to the relevant possible worlds in which they are false. Although this account of sensitivity is a bit of a mouthful, it is immune to the closure problem and matches our evaluative and argumentative practices rather nicely. When someone proffers a claim we are loath to endorse, we may counter simply (though perhaps somewhat unhelpfully) by stating that this claim could be false—thereby challenging the sensitivity of the belief our interlocutor expressed by making her claim. If she offers a valid argument in support of this belief, the natural move for us to make next would be to challenge the sensitivity of the beliefs whose contents figure as premises in her argument. If she can show that these beliefs are sensitive, we would hold that she has successfully met our original challenge.

Similarly amended, EER runs as follows: For any doxastic agent, A , and proposition, p , A 's total evidence that p , e , is adequate only if either (i) A would not believe that p on the basis of e in the nearest possible worlds in which p is false or (ii) if A 's belief that p is acquired/sustained via a sensitivity-preserving doxastic method, M , then M involves only beliefs whose doxastic lineage can be traced, via sensitivity-preserving doxastic methods, to beliefs based on evidence that satisfies (i). Closure, then, does not pose an insurmountable problem for accounts of knowledge that require sensitive belief and according to which the set of relevant

possible worlds does not include every possible world and depends on belief content rather than context.

3.4 *Verdict:*

The intuition that knowledge requires certainty arises as follows: Given KA, if *A* asserts that someone knows that *p*, *A* incurs a commitment to know that someone knows that *p*. Given KKC, if *A* knows that someone knows that *p*, *A*'s evidence eliminates every possibility in which not-*p*. So, if *A* asserts that someone knows that *p*, *A* incurs a commitment to her epistemic position being such that her evidence eliminates every possibility in which not-*p*. On this view, knowledge does not require certainty, although by making a knowledge claim one commits oneself to being certain that the allegedly known proposition is true. That is, certainty is a commitment of knowledge claims; alternatively, certainty is a requirement on legitimate knowledge claims. The diagnosis I propose, then, is that invariantist infallibilists mistake matters of conversational ethics for matters of metaphysics, and that contextualist infallibilists mistake matters of conversational ethics for matters of semantics. The following confirms the accuracy of this diagnosis: If Amy utters, 'I have hands,' her claim is properly challenged by the question, 'Do you know that you have hands?' If Amy utters, 'I know that I have hands,' her claim is properly challenged by the question, 'Are you certain that you have hands?' However, if Basil utters, 'Amy knows that she has hands,' his claim is properly challenged by the question, 'Are you certain that Amy has hands?' rather than by the question, 'Is Amy certain that she has hands?'

4. *Proposal for a Non-Semantic Contextualist Thesis:*

Strictly speaking, for any attributor, *A*, believer, *B*, proposition, *p*, and context, *C*, it is legitimate for *A* to utter '*B* knows that *p*' in *C* only if *A* is certain that *p*, i.e., only if *A*'s evidence eliminates every possibility in which not-*p*. However, insofar as knowledge claims play a fundamental role

in securing a central communicative goal, namely, to foster a mutually beneficial division of epistemic labor, breaches of the certainty requirement on knowledge claims are tolerated, or—more accurately perhaps—ignored, in systematic, context-dependent ways. The participants in a communicative exchange typically share a significant number of presuppositions, which they tacitly—and often pre-reflectively—take to be proper presuppositions in their context. Insofar as their common goal is to foster a mutually beneficial division of epistemic labor, they hold one another accountable only for breaches of a weaker requirement on knowledge claims, namely, it is permissible for *A* to utter ‘*B* knows that *p*’ only if *A*’s evidence eliminates every possibility in which not-*p*—Psst!—except for those possibilities that conflict with our proper presuppositions. That is, in light of this goal, by uttering ‘*B* knows that *p*,’ *A* is typically taken—and typically takes herself—to incur merely the commitment that her evidence eliminate those possibilities that not-*p* that are consistent with the presuppositions that are properly accepted by all participants in the exchange.¹⁵

In light of this goal, then, knowledge claims that fail to abide by the certainty requirement are typically taken to have a context-dependent, conversational legitimacy. This gives good reason to endorse a restricted version of T₁, namely, the thesis that, in a communicative exchange that aims to foster a mutually beneficial division of epistemic labor, for any attributor, *A*, believer, *B*, and proposition, *p*, the content of the speech-act *A* performs by uttering ‘*B* knows that *p*’ is context dependent. That is, in such an exchange, what *A* typically does by uttering ‘*B* knows that *p*’ is to offer her epistemic authority as a guarantee that *B*’s belief that *p* is true in every possible world that is consistent with the proper presuppositions she shares with her

¹⁵ Of course, disputes concerning what presuppositions are proper in one’s context frequently arise. When this occurs, it is not permissible for *A* to utter ‘*B* knows that *p*’ if *A*’s evidence fails to eliminate some possibility that not-*p* that is consistent with one of the contested presuppositions.

interlocutors.¹⁶ The content of *A*'s speech-act is context dependent inasmuch as the proper presuppositions that *A* shares with her interlocutors are context dependent. Since, in such cases, *A*'s speech-act is legitimate only if *A*'s evidence eliminates every possibility in which not-*p* that is consistent with these presuppositions, this proposal explains (and vindicates) the intuition that conflicting knowledge claims can, if uttered in different contexts, be warranted in their respective contexts, i.e., T₂ above.

5. Further Thoughts:

5.1 Concerning Epistemology:

Immediately following the passage quoted at the outset of this paper, Lewis muses:

Maybe epistemology is the culprit. Maybe this extraordinary pastime robs us of our knowledge.¹⁷

The view that I am proposing does saddle epistemology with a peculiar predicament. Although epistemology does not rob anyone of knowledge, it generates contexts in which knowledge claims are especially illegitimate. I stated above that knowledge claims can have a limited, context-dependent legitimacy. For such legitimacy to be secured, the speaker's evidence must eliminate every possibility which is consistent with the presuppositions that are appropriate relative to the context of her utterance and in which the putatively known proposition is false. In the context of some epistemological discussions, however, especially when skepticism is at issue, there are no relevant proper presuppositions. In such a context, though the speaker might very well know that she has hands, it is never legitimate for her to answer the skeptic by claiming, e.g., 'I know that I have hands.' By contrast, it is always legitimate for the skeptic to counter such a claim by asking, e.g., 'Are you certain that you have hands?' This asymmetry

¹⁶ Note that *A*'s evidence that *p* may differ from *B*'s evidence that *p*—*A*'s evidence might merely be that *B* is an expert concerning *p*-like matters, while *B*'s evidence might be gathered via direct empirical investigation.

¹⁷ David Lewis (1996) p. 504.

between the respective argumentative positions of the skeptic and her opponent explains, I think, some of the appeal of skepticism and much of the difficulty involved in arguing against it.

5.2 Concerning Knowledge Beliefs, Meta-skepticism and Dogmatism:

If the argument I offered for KKC is sound, then believing that someone knows something is epistemically permissible only for one whose evidence eliminates every possibility in which the putatively known proposition is false. So, the argument does commit one to meta-skepticism concerning all but, perhaps, tautological beliefs and beliefs about the contents of one's own mental states. This might be thought to indicate that there is something wrong with my argument—in particular, that knowledge does not require the satisfaction of any principle in the neighborhood of EER/IER. I believe that it is highly plausible that knowledge does require the satisfaction of some principle in the neighborhood of EER/IER. I believe also that meta-skepticism is not an especially implausible view, and that it is the plausibility of meta-skepticism that lends skepticism whatever credence it has. One of the virtues of the account outlined above is that it disentangles reasons one might have to endorse meta-skepticism from reasons one might have to endorse skepticism—the former having to do with holding that knowledge requires adequate evidence, the latter having to do with holding that knowledge requires certainty.

Another of its virtues is that it counsels epistemic modesty.

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