What the metasemantics of *know* is not

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Epistemic contextualism in the style of Lewis (1996) maintains that ascriptions of knowledge to a subject vary in truth with the alternatives that can be eliminated by the subject's evidence in a context. Schaffer (2004, 2005, 2007, 2008, 2015), Schaffer and Knobe (2012), and Schaffer and Szabó (2014) hold that the question under discussion or QUD always determines these alternatives in a context. This paper shows that the QUD does not perform such a role for *know* and uses this result to draw a few lessons about the metasemantics of context-sensitivity.

1 Shifts happen

Epistemic contextualism is the view that *know* is context-sensitive such that ascriptions like *S knows that p* differ in truth across contexts. Critics claim that contextualists should specify what features of a context are the difference-makers to an ascription's truth. Without explaining what shifts, the contextualist merely permits the truth of ascriptions to differ in a context as opposed to systematically predicting when they will differ.

A common explanation of shiftiness involves alternatives. There are a few ways to implement this explanation. Here is one inspired by Lewis (1996).[1] What shifts are propositions that provide alternative representations of what the world is like. Knowledge requires that subjects settle which proposition provides the true account by eliminating the other alternatives with their evidence. Lewis (1996, 566) puts it this way:

> *S* knows that *P* iff *S*'s evidence eliminates every possibility in which not−*P*—Psst!—except for those possibilities that we are properly ignoring. That 'psst' marks an attempt to do the impossible—to mention that which remains unmentioned.

[1]The implementation of Lewis (1996) is different than the one I adopt. For him, alternatives are not propositions but worlds. The process of elimination then concerns whether alternative worlds are compatible with the subject's experience. In what follows, I stick with alternatives as sets of propositions both because they are easier to work with and because alternatives construed as such are independently motivated by a variety of phenomena in natural language such as questions, indefinites, and more.

Name this take on what shifts LEWISIAN CONTEXTUALISM. Lewisian contextualism is best understood as a metalinguistic thesis compatible with a variety of semantic proposals for how *know* is context−sensitive. As long as the truth of a knowledge ascription can vary with what alternatives need elimination in a context, the contextualist semantics is Lewisian.[2]

Lewisian contextualism is not yet able to predict when the truth of knowledge ascriptions will differ between contexts because it has not yet offered an explanation for how proper alternatives are supplied in a context. We will call the problem of explaining which alternative propositions get properly ignored by the attributor in a context the PSST PROBLEM. Solving the psst problem requires a metasemantics. While semantics is in the business of identifying the meaning had by expressions in a context, metasemantics accounts for how or why expressions have those meanings in a context as opposed to other meanings. With respect to context-sensitive expressions like *know*, metasemantics explains how they are supplemented in a context to contribute a determinate meaning to a sentence (Kaplan, 1989; Glanzberg, 2013).

The seed of a solution was present in early work on epistemic contextualism by Stine (1976) and Lewis (1996). They held that relevance demarcates what alternatives are properly ignorable. But the details are missing from this suggestion. We see their absence in the four rules for determining what alternatives are ignored by Lewis (1996). Together, these rules fail to generate unique alternatives in a context.[3] As a consequence, the rules provide no procedure for predicting when a shift in relevance will occur in a context and bring with it a change in an ascription's truth. As Sosa (1986, 585) remarked about similar approaches in epistemology, "if the problem remains intractable... the relevant−alternatives defense will remain unacceptably occult."

Schaffer (2004, 2005, 2007, 2008, 2015), Schaffer and Knobe (2012), and Schaffer and Szabó (2014) do better. They propose that relevance is determined by the question under discussion or QUD that is allegedly operative in each context. On this view, the alternatives that need to be considered are only those not−*p* propositions that are candidate answers to the QUD in a context. This commitment appears to provide the requisite metasemantic details for solving the psst problem. Relevant alternatives are precisified as candidate answers to the QUD and knowledge consists in knowing its answer.

I assess in this paper whether the marriage of Lewisian contextualism with a QUD−based metasemantics solves the psst problem. I conclude that it does not. I work towards this conclusion in three sections. In §2, the solution to the psst problem is detailed. Then §3 shows that the QUD fails to supply proper alternatives for knowledge ascriptions with two counterexamples. I conclude in

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[2]Most contextualists do not offer a semantics. DeRose (2009) even resists offering one outright. But there are options. Ichikawa (2011, 2017) models the context−sensitivity of *know* on modals and generalized quantifiers. Schaffer and Szabó (2014) offer a semantics where *know* behaves like an adverbial quantifier.

[3]For critical discussion, see Williams (2001), Schaffer (2004), Ichikawa (2011), and Schaffer (2015).

§4 by unpacking the broader metasemantic significance of the QUD's inability to solve the psst problem.

2 Schaffer's solution

I begin by untangling Schaffer's solution to the psst problem from his broader contrastivist theory of knowledge. Schaffer maintains that knowledge is a ternary relation between a subject, proposition, and contrast. The meaning of a knowledge ascription is then *S knows that p (rather than q)* where q is the disjunction of propositional alternatives to p. The role of the question under discussion is determining the contrast. This solution to the psst problem is thus separable from his view on knowledge's addicity. One might be a contrastivist and think that the contrast q is supplied by something other than the QUD. Morton (2012) fits this description. Alternatively, one might be something other than a contrastivist about knowledge, but still maintain that a question supplies the alternatives. Hookway (1996) fits this latter description.

Here ends the untangling. To simplify the discussion, contrastivity is ignored to focus exclusively on the psst problem. There are two parts to Schaffer's solution to the psst problem. The first is the standard semantics of questions. The standard account identifies a question with a set of propositions that are its candidate answers (Hamblin, 1973; Groenendijk and Stokhof, 1997). To illustrate, consider a *who*–question.

(1) Who hosted the party?

The purpose of such a question is to request information about a person who fits a description. According to the standard semantics for questions, the meaning of (1) is elaborated in (2).[4]

$$(2)\ [\![\text{who hosted the party?}]\!]^w = \begin{cases} \{w \mid \text{Sue hosted the party in } w\}, \\ \{w \mid \text{Bill hosted the party in } w\}, \\ \{w \mid \text{Ari hosted the party in } w\}, \\ \dots \end{cases}$$

We can think of a question as a request to fill in a specific blank. A proposition is produced once that blank is filled. Accordingly, questions can be represented as functions from the kind of entity that can fill the blank to a proposition. The function associated with (1) is $\lambda x.\{w \mid x \text{ hosted the party in } w\}$. Various saturations of this function comprise (1)'s candidate answers. Other constituent questions request information about other things. As a result, the blank to be filled is located somewhere other than subject position.

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[4]To simplify discussion, I treat propositions as sets of worlds and overlook details concerning how the question is structured as a set. I do not consider, for example, whether answers need to be mutually exclusive or downward closed. These details will not make a difference to the counterexamples.

Lewisian contextualism is naturally seen as orienting around questions given that sets of propositions just are questions on the standard semantics. That is the first part of Schaffer's solution to the psst problem. To be complete, we need an explanation for how there is constantly a question being entertained by an attributor of knowledge in context. Knowledge ascriptions will then have a stable feature of context to determine alternatives. The second part of Schaffer's solution is accounting for the ubiquity of a question.

Schaffer accounts for ubiquity by adopting a familiar view of the conversational context found in much of contemporary linguistics. For awhile, linguists have been treating contexts as including a question under discussion or QUD (Roberts, 1996/2012; Ginzburg, 1996, 2012). The QUD might correspond to an earlier question that a participant asked or it might have been indirectly raised as the conversation evolved. This take on the nature of conversational context might be unfamiliar to some, but the beginnings of it are in Stalnaker (1978),where contexts keep track of the information that is common ground. For Stalnaker, information that is added to the common ground eliminates various options for what the world is like. The more propositions you accept, the fewer options there are for what the world is like. Adding a QUD to this picture incurs the commitment that the process of elimination is the process of resolving questions. The more you accept, the more questions you answer about the world.

Positing a QUD in every context has the benefit of providing a precise notion of relevance. A cornerstone of cooperative conversation is that speakers aim to make relevant contributions to conversation (Grice, 1989). By hypothesizing that every context has a QUD, the purpose of a conversation at any stage can be identified with attempting to answer the QUD operative in the context. Relevance thereby becomes definable as that which partially answers or is part of a strategy for answering the QUD. Roberts (1996/2012, 21) offers the following definition of relevance in terms of the QUD:

> RELEVANCE
> A move m is Relevant to the question under discussion q, i.e., to last(QUD(m)), iff m either introduces a partial answer to Q (m is an assertion) or is part of a strategy to answer Q (m is a question).

A proposition p is a partial answer to a question Q iff p entails the truth or falsity of a member of Q with assistance from what is common ground between conversational participants. Relatedly, p is a complete answer to Q iff p entails the truth or falsity of every member of Q.

Schaffer's solution to the psst problem for Lewisian contextualism can now be detailed. Truthfully ascribing knowledge of p to S in a context c requires that the relevant not−p alternatives be eliminated by S's evidence in c. Since a proposition's relevance is determined by whether that proposition is an answer to the context's QUD, we arrive at the following definition of relevant alternatives for a knowledge ascription.[5]

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[5]For Schaffer (2015, 484), a necessary condition on knowledge is the elimination of a

Q−RELEVANT ALTERNATIVES
A proposition q is a relevant alternative to p in a context c if and only if q entails not−p and is a partial or complete answer to the QUD in c.

With this definition, propositions are properly ignored by an attributor in a context when they are not partial or complete answers to the context's QUD or when they are not incompatible with the proposition towards which a subject is ascribed knowledge.[6] The psst problem therefore has a predictive solution. Change the QUD, change what qualify as answers. Change what qualify as answers, change what propositions need elimination for the truth of a knowledge ascription in a context. Since what question is under discussion is "a relatively stable discourse-level matter," as Schaffer (2015, 484) notes, the solution has the added benefit of not predicting sudden shiftiness. Shifts happen in a context but only when the direction of the conversation changes.

The earlier excerpt from Lewis (1996) made the elimination of relevant alternatives a necessary and sufficient condition for the truth of a knowledge ascription. Lewis got away with that simplification because the usual truth and justification requirements on knowledge were guaranteed through his rules of relevance. But once we leave behind his rules because they fail to determine a unique set of alternatives, the truth and justification conditions need to be added back (Schaffer, 2015; Ichikawa, 2011, 2017). As a result, the elimination of relevant alternatives becomes just a necessary condition.

In what remains, I object to the proposal that the alternatives requiring elimination are Q−relevant. However the semantics of *know* shakes out and whatever further conditions there are on knowledge, the QUD does not determine alternatives.

3   Without the question

The most common way the QUD changes is by asking a question. For Roberts (1996/2012) and Ginzburg (2012), context supplies a stack of questions that

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relevant not−p possibility where a relevant possibility "is a possible answer to the question under discussion in that context." My definition simplifies by combining the answerhood condition from his definition of relevance with the stipulation that only not−p alternatives need to be eliminated from his definition of knowledge.

[6]There are at least two versions of this proposal. When it comes to the semantics/metasemantics interface, some expressions might have lexically-encoded sensitivity to a way of supplementation while others do not. Speaker intentions illustrate. Speaker intentions are generally taken to supplement the meaning of a context−sensitive expression like a demonstrative, but few regard that supplementation as part of the lexical meaning of demonstratives and similar expressions. See Stokke (2010) for the contrasting view on which sensitivity to intention is lexically-encoded. With respect to *know,* the QUD-based solution to the psst problem is neutral between a version where sensitivity to the QUD is hard-wired into the meaning of *know* and a version where *know* is merely sensitive to a set of relevant alternatives and it is a metasemantic convention that the QUD determines what alternatives are relevant. The counterexamples presented in §3 apply to either version.

have not been answered. The topmost is the QUD. Asking a question places a new question at the top. That question could change the overall direction of the conversation or introduce a subinquiry whose resolution will bear on the broader question being investigated by the conversational participants. Either way, asking a question changes the QUD in a context.

Accordingly, we can look for counterexamples to the proposal that alternatives are Q–relevant by sifting through question–reply discourses where a knowledge ascription occurs in the reply. An indicator that we have found one is that the object of knowledge in the reply is not itself an answer to the QUD in the strict sense that it entails the truth or falsity of one or more propositions in the set of propositions that is the QUD's meaning.[7] In such a discourse, knowing the proposition in the reply would not be the same as knowing the answer to the QUD in that context. As a result, the second part of Schaffer's solution would fail. The truth of a knowledge ascription may be relative to a question that provides alternatives, but the QUD is not that question.

That the QUD would not determine which alternatives are relevant in such discourses can be further seen through two consequences. The first consequence is that plausible alternatives for the object of knowledge would not be predicted by the proposal. Though a metasemantics is needed to identify exactly which alternatives require elimination, we can initially sort propositions into those which are plausible or implausible as alternatives. For example, suppose we are trying to determine whether Ari knows that Sue hosted a party. Then propositions about the number of asteroids in the Oort cloud are not propositions that plausibly need to be eliminated in a context for the truth of the knowledge ascription. Such propositions do not provide a different representation of what the world is like. Assuming nothing is common ground between us inferentially relating propositions about the number of asteroids in the Oort cloud to Sue's having hosted, these propositions about the Oort cloud do not even provide indirect evidence for a plausible alternative. However, propositions about other individuals hosting the party or Sue hosting events other than a party are plausible alternatives because they do represent the world as being different. Failing to predict plausible alternatives constitutes a breakdown for a Lewisian contextualism oriented around the elimination of relevant alternatives.

The second consequence is worse. When the object of knowledge in the reply is not an answer to the QUD, the elimination of Q–alternatives can be vacuously

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[7]In different terminology, counterexamples will occur in discourses where the object of knowledge is NOT-AT-ISSUE because being at-issue is standardly thought to require being an answer to the QUD. For brevity's sake, I do not complicate discussion by introducing the at-issue/not-at-issue distinction. See Simons et al. (2010), Murray (2014), Syrett and Koev (2015), Hunter and Asher (2016), and Frazier et al. (2018) for differing theories of the distinction and Tonhauser (2012) and Snider (2017) for discussion of diagnostics. It is worth noting that the examples used to motivate the QUD-based solution to the psst problem are all ones in which the object of knowledge is at-issue. For example, Schaffer and Szabó (2014, 494) consider *I know that Claire stole the diamonds* under the questions *Who stole the diamonds?* and *What did Claire steal?* that each make the object at-issue.

guaranteed. Recall that the alternatives that need to be eliminated are only those that are answers which entail not−p. In other words, any propositions that are not answers can be ignored along with any propositions that do not entail not−p. So when the truth of the object of knowledge is independent of how the QUD is resolved, every proposition can be ignored. Every answer can be ignored because none entail not−p and every proposition incompatible with p can be ignored because they do not answer the QUD.

But question−reply discourses need to be carefully constructed if they are to furnish compelling counterexamples. Not any discourse will do. Contrast these two.

(4) (A) Who hosted the party?
(B) I know that Sue hosted the party.

(5) (A) Who hosted the party?
(B) [?]I know that Bill ate crème brûlée.

The first showcases the QUD-based solution at its best. Assuming the party had only one host, knowing that Sue hosted is knowing the answer to (4A). Different answers to (4A) are plausible alternatives too. They include the proposition that Bill hosted the party and that Ari hosted the party. Both intuitively require elimination in the context. In contrast, the second discourse illustrates how the QUD−based solution could fail. Assuming nothing is common ground between participants linking Bill's penchant for creamy desserts to who hosted, the object of knowledge in (5B) is not an answer to the question. Plausible alternatives like the propositions that Bill ate flan (as opposed to crème brûlée) or that Ari (as opposed to Bill) ate crème brûlée cannot be accommodated. Likewise, the elimination of relevant alternatives is vacuously guaranteed because no propositions are answers that entail that Bill didn't eat crème brûlée.

However, (5) is not compelling as a counterexample to the solution because it is an incoherent discourse. As Grice (1989, 26) puts it, conversations "do not normally consist of a succession of disconnected remarks, and would not be rational if they did." The search for counterexamples is better served by considering only knowledge ascriptions in question−reply discourses that are coherent. But that does significantly complicate our search. One of the jobs hypothesized for the QUD is explaining discourse coherence. Painting with a broad brush, coherent discourses can be structured as a series of question−answer discourses whereas incoherent discourse cannot be similarly structured. So we need to find a knowledge ascription whose object is not an answer but which occurs in a reply that is an answer in the strict sense.

There is another constraint to consider. Asking a question is not the only way to change the QUD in a context. Other factors can change what conversational participants inquire about together. As a result, question−reply discourses need to provide zero reason to think that the QUD quietly changes after a question is asked and before an answer is given containing a knowledge ascription. Consider this discourse.

(6) (A) Who hosted the party?
     (B) I know that Sue hosted the party and I know that Bill ate crème brûlée.

The object of knowledge in the second conjunct is not an answer to the QUD. Only the first conjunct is. Some might want to conclude that (6B) is a counterexample. But, plausibly, the QUD changes after the first conjunct to a follow−up question about what was eaten at Sue's party. What induces this change is the assertion of the second conjunct. The second conjunct in (6B) then raises the very question it answers. To be compelling, counterexamples need to lack elements like extra conjuncts that can change the QUD.

Despite the limitations imposed by these two constraints, two counterexamples will be provided. The first involves question−reply discourses where the QUD is directly about what a subject knows. In these discourses, the ascription of knowledge in the answer does not find alternatives in the candidate answers to the QUD because the QUD is about a subject's knowledge as opposed to what is known.

CONVERSATIONAL CONTEXT

Two friends are talking about what Sue recently said. The first speaker does not know that Ari hosted a party but they do know that Sue reported that Ari hosted a party. As a result, they want to know whether Sue was just spreading hearsay or stating what she knows. That way, they can decide whether or not to believe Sue's testimony about Ari hosting the party. The second speaker confirms that Ari knows.

(7) (A) Does Sue know that Ari hosted a party?
     (B) Sue knows that Ari hosted a party.

The QUD fixed by (7A) is a polar question. Its meaning is this set of propositions: $\{\{w \mid$ Sue know that Ari hosted the party in $w\}, \{w \mid$ Sue does not know that Ari hosted the party in $w\}\}$. The object of knowledge in (7B) is not an answer to (7A). That Ari hosted a party entails nothing about what Sue knows. Plausible alternatives include the propositions that Bill (as opposed to Ari) hosted a party or that Ari hosted a reviewal (as opposed to a party). But these are not the alternatives served up by (7A). As a result, the elimination of relevant alternatives is vacuously guaranteed in the context because no propositions entail that Ari didn't host a party and answer the question in (7A).

A referee notes that (7) is complicated by the fact that the instance of *know* in (7A) requires a set of alternatives for its own context−sensitivity to be resolved. But this complication does not make a difference to whether the discourse is a counterexample. Either the alternatives for *know* in (7A) are Q−alternatives or they are not. If they are not, then the failure of the QUD to provide alternatives starts earlier than shown. If they are Q−alternatives, it makes no difference to

the instance of *know* in (7B). The QUD changes when a question is asked. The instance of *know* in (7B) therefore depends on a different QUD than the instance in (7A). That different QUD is one in which the object of knowledge in (7B) is not an answer. The two negative consequences still follow. The QUD as set by (7A) does not predict plausible alternatives and the elimination of alternatives is automatically guaranteed for the *know* appearing in (7B).

Sympathizers to Schaffer's solution may be tempted to accept the two consequences but maintain they are not problems for the solution. There is something to this suggestion. Suppose it is mutually known that Ari hosted a party. What is not mutually known is who knows as much. Trying to decide which people might be upset because they knew about the party but were not invited by Ari, one participant asks (7A) of another participant. In such a conversation, the automatic elimination of alternatives for the instance of *know* in (7B) is plausible. The relevant alternatives do not need to be eliminated again because it is already common ground whether Ari hosted a party. Nevertheless, the maneuver is not plausible given the conversational context specified for (7). The speaker does not already know that Ari hosted the party. That and whether Sue knows as much is what they want to know. As a result, the context is one where the alternatives should not be eliminated automatically.[8]

The second counterexample involves question–reply discourses where the knowledge ascription occurs within a non–restrictive relative clause or APPOSITIVE. Appositives can modify either a sentence's subject or objects. When they modify subjects, they occur in a sentence–medial position separated from the rest of the sentence by comma–intonation. Many linguists have observed that sentence–medial appositives rarely if ever answer the QUD (Roberts, 2011; Anderbois et al., 2015; Syrett and Koev, 2015). Such pragmatic behavior distinguishes appositives from similar constructions like conjunctions. It is then worth investigating what happens when a knowledge ascription is placed in a sentence–medial appositive within a reply to a prior question.

The result is unsurprising. The objects of knowledge for ascriptions in the sentence–medial appositive are not answers to the QUD because the proposition associated with main clauses are.

<small>CONVERSATIONAL CONTEXT</small>
Two colleagues are making small talk about the result of a recent union election at their university. The first speaker wants to know who won. The second speaker tells them what they know about the

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[8]Another counterexample for Schaffer's proposal is likely to be found in questions about knowledge like (7A). Though the first counterexample is independent of how the alternatives for the instance of *know* in (7A) are determined, we should wonder what determines those alternatives. Often questions of the form *Does S know that p?* are asked in a context when the prior QUD does not provide alternatives to the object of knowledge but the knowledge ascription itself. For example, (7A) might be asked as part of a strategy for answering *Does Sue know or merely believe that Ari hosted a party?* as the prior QUD. The same negative consequences would result. To simplify the discussion, I focus only on counterexamples to Schaffer's solution that involve *know* appearing in declaratives.

person who won.

(8) (A) Who won the union election?
(B) A history professor, who knows that Ari is chair, won the election.

Plausible alternatives to the object of knowledge in (8B) orient around who else might be chair (Bill, Sue) or what other service position Ari may occupy (undergraduate advisor, faculty senator). But no such alternatives are also answers to (8A). Instead, (8A)'s answers include propositions that a history or linguistics professor won the union election. The truth or falsity of these propositions is independent of the truth or falsity of the object of knowledge. Once again, the alternatives are automatically eliminated.

The prognosis for the QUD–based solution to the psst problem is bleak. Each of the counterexamples I provided points to a separate problem with the QUD supplying alternatives for a knowledge ascription. The first counterexample showed that this proposal misfires somewhat ironically for questions about what a subject knows. The second counterexample displayed that it breaks down for knowledge ascriptions occurring in a sentence-medial appositive. For each counterexample, there is zero reason to think that the QUD changes in the discourse. It was defensible above to maintain that the QUD changed in (6) because the reply to the question was conjunctive. The second conjunct could be identified as indirectly raising and answering a new QUD. But discourses like (7) and (8) consist of a question and an answer. Nothing is present to change the QUD in just the right way for it to supply correct alternatives for the knowledge ascription in the reply.

4 Metasemantics reconsidered

Let's use METASEMANTIC MONISM to name the view that what supplements a particular context–sensitive expression in a context is the same across all situations.[9] The denial of monism is METASEMANTIC PLURALISM. Pluralists hold that what supplements a particular context–sensitive expressions varies. They may regard supplementation as directly owed to a changing feature of context, or as indirectly produced by a confluence of factors. Glanzberg (2007, 25-26) gives voice to indirect pluralism:

> What fixes their values will be complicated combinations of such factors as what is salient in the environment, speakers' intentions, hearers' intentions, coordinating intentions, linguistic meaning, general principles governing context, discourse structure, etc. [...] Many

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[9]Being more careful, we can distinguish global and local monism. Global monism maintains that what supplements every context-sensitive expression in a context is the same. An example of a global monist is King (2013, 2014b,a). He offers an account of supplementation that he defends as having the promise to apply all context-sensitive expressions.

contributing factors are involved, sometimes competing factors, from which a value is worked out. No single publicly observable feature of the context directly assigns the value, in the way a pointing gesture might fix reference. Nor do speakers form anything like a referential intention to set the value.

In what remains, I will discuss how the breakdown of the QUD–based solution to the psst problem for Lewisian contextualism enables us to draw a number of conclusions about the metasemantics of *know* and metasemantics more generally. Let's start with the general conclusions.

The counterexamples rule-out the monism defended by Schaffer (2004, 2005, 2007, 2008, 2015), Schaffer and Knobe (2012), and Schaffer and Szabó (2014) where *know* is supplemented by the QUD. But they help us do more. *Know* is not the only expression that has been argued to require supplementation from the QUD in a context. Beaver and Clark (2008) argue that the adverb *only* does too. But their proposal was also susceptible to counterexample (Kadmon and Sevi, 2011). Likewise, Schoubye and Stokke (2016) and Stokke (2016) propose that what is said by a sentence depends on what QUD is operative. That proposal faces counterexamples too (van Elswyk, forthcoming). The counterexamples of this paper therefore contribute to a growing number of counterexamples to proposals where the QUD plays an exclusive role. Skepticism about the QUD is therefore justified. It may be one factor that can supplement a context-sensitive term or enrich what is said. It cannot be the only factor.

What about solving the psst problem? One option is to embrace indirect pluralism. But this is less of a solution and more of a concession because indirect pluralism, as articulated by Glanzberg, is not predictive. If we stick with metasemantic monism about *know*, though, four options present themselves. Suppose the contextualist wants to stick with the suggestion that relevance somehow determines alternatives. Then when it comes to the QUD, a choice is faced. Jettison the QUD as an account of relevance, or supplement the QUD with additional rules of relevance. However, suppose the contextualist is ready to abandon relevance. Then two different choices are available. A common metasemantic assumption is that context-sensitive expressions have their meanings supplemented by features of the conversation such as speaker intentions, relevance, salience, practical interests, discourse structure, and the like.[10] One choice is to appeal to features of the conversational context other than relevance or the QUD. The fourth option is to abandon this common metasemantic assumption altogether. Instead of features of the conversation, perhaps normative facts about the speaker determine the alternatives that are properly ignorable.

A thorough investigation of each available solution is not the point of this paper. Still, we can easily see that all face initial obstacles. Start in reverse with

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[10]Features of conversational context sort into MIND-DEPENDENT or MIND-INDEPENDENT features. Speaker intentions are a feature that illustrate the first category whereas discourse structure illustrates the latter. See Mion and Gauker (2017) for discussion of this distinction and its bearing on epistemic contextualism.

the last option highlighted, an option represented by McKenna (2014, 2017). He argues that the usual reliance on features of the conversational context is a mistake. To determinative alternative, the contextualist should look to normative facts about what propositions a speaker has a reason to consider. A consequence of adopting such a view is that the metasemantics of *know* is wholly unlike the metasemantics of any other context-sensitive expression. Other expressions like the demonstrative *that* presumably rely on features of the conversational context. And the more *know* is unlike other similar expressions, the more it looks like contextualism is merely a convenient epistemological proposal as opposed to an independently plausible semantic proposal. This starkly contrasts with the QUD proposal of Schaffer (2007, 400) where the alternatives are determined by "a general and independently needed contextual parameter" such that "no special rules... for knowledge ascriptions need be invented."

The next option is appealing to other features of the conversational context to determine alternatives. But many of the other features are arguably not up to the job. For example, speaker intentions are widely thought to play a necessary role in metasemantic supplementation. As Stanley (2005) observes, speaker intentions do not well–serve the contextualist. In the typical cases supplied to motivate the shiftiness of *know*, speaker intentions can remain constant even while the truth of a knowledge ascription changes.[11]

The remaining options are the ones which stick with relevance. The problem with hanging on to the QUD to precisify relevance is that it problematizes Lewisian contextualism. If relevance is what determines alternatives and the QUD demarcates what is relevant, then the failure of the QUD to provide alternatives is a failure of contextualism full stop. The contextualist therefore has to maintain that the QUD does not determine what is relevant for knowledge ascriptions. Then the worry that the solution to the psst problem is *ad hoc* returns because the contextualist will have a different theory of relevance for *know*.[12]

The final option is to jettison the QUD altogether and to seek out another account of relevance to solve the psst problem. But, importantly, the failure of the QUD to generate alternatives for a knowledge ascription is not an instance of a general failure to determine relevance. The QUD smoothly explains the relevance

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[11]Though see Montminy (2013) for a defense of speaker intention as the determinant of alternatives. Another example is the proposal of Blome-Tillmann (2009) which holds that what is presupposed determines the proper alternatives. For problems with his view, see Ichikawa (2015) and McKenna (2017).

[12]One way to allay this worry is to highlight the parallels with *only*. It is widely thought to be supplemented by the QUD, but it cannot always be supplemented as Kadmon and Sevi (2011) showed. The diagnosis of *only*'s metasemantics offered by Roberts (2011, 47) is that the QUD fails to supplement "only when other contextually relevant alternatives are sufficiently salient and differentiating among them would also address the QUD[.]" One might claim the same for *know*. After all, the QUD-based solution does appear to correctly predict which alternatives are ignorable when the object of knowledge is an answer to the QUD. However, Roberts's diagnosis, as it stands, is too speculative to solve the psst problem. It lacks an explanation of which alternatives are properly ignorable when the QUD does not determine them, and now an independent notion of salience is required to explain when the QUD does determine them.

of the answers in the question–reply discourses in §3. For example, discourse (8) involved an answer with a knowledge ascription stuffed in an appositive clause. Compared to the content of the main clause, appositives have irrelevant content. In (8), the QUD correctly identifies the status of both main clause and appositive content. The content of the main clause is relevant because it is in the denotation of the prior question, and the appositive's content is not relevant because it is not a member of the question's meaning.

What solution to the psst problem is best for the alternatives contextualist is not a question I have answered in this paper. But we at least know what the metasemantics of *know* is not.[13]

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