

## Testimony and the Epistemic Uncertainty of Interpretation.

### 0. Introduction

The conditions for testimonial knowledge or justification are usually formulated in terms of a speaker having said that  $p$  (or offered testimony that  $p$ ), and an audience recognising this fact. Usually it is stated that a speaker has said (or asserted, or testified, or offered as true)  $p$ , and it is asked what other conditions must obtain for the audience to gain testimonial knowledge or justification. For example, must the audience have reason to believe that the speaker is trustworthy? Should the audience monitor the speaker for trustworthiness? Is the mere absence of defeaters sufficient to yield testimonial justification? Different answers to these questions yield different norms regarding when an audience member is or is not within her rights to form a testimonial belief that  $p$ .

This formulation of the issues seems to assume that (or ignore the question of whether) the determination and recovery of asserted contents is unproblematic. At least, current discussions usually concern only cases where the audience's comprehension is unproblematic. The fact that so much ink is spilled on the situations in which comprehension is unproblematic, and so little is spilled on the situations in which it is problematic, suggests a common assumption that comprehension is usually unproblematic. Sanford Goldberg makes a similar point:

"...so prevalent is the assumption that the comprehension dimension is unproblematic - that hearers reliably recover the propositions attested to - that there is virtually no discussion of the comprehension processes in the epistemological literature"  
Goldberg, 2007, p54.

However, there is a lively debate in the philosophy of language over the determination and recovery of asserted contents (particularly in cases of context sensitivity). It is natural to worry that epistemic problems concerning the recovery of asserted contents will lead to problems in the epistemology of testimony. My aim in this paper is to outline one such problem (the 'recovery problem'), and explain why the most obvious solutions to the problem fail. The problem is roughly as follows: In many cases of context sensitivity audiences will not be in a position to know which precise proposition was intended by the speaker, and the speaker will not be in a position to know precisely which proposition the audience will recover. As a result, in many recovery problem cases the beliefs audiences form will fail safety and sensitivity conditions on knowledge. This appears to hold even in cases in which the speaker is a reliable belief former (with respect to the topic of their testimony) and has no intention to deceive.

I start by outlining the recovery problem, and differentiating it from several related problems in the philosophy of language. Next I explain how the recovery problem relates to (and is a serious problem for) the theory of testimonial knowledge. The relation is not as straightforward as one may think, since the recovery problem concerns audiences' beliefs about what testimony has been offered, whereas most theories of testimonial knowledge concern only the testimony which actually has been offered. Finally, in the second half of the paper I consider and reject a series of responses.

However, before continuing it is worth briefly mentioning a related worry raised by Goldberg 2007. Goldberg considers cases in which audiences either recover a content other than what is said, or are

at risk of doing so. Call these cases of mismatch. The problem I raise also concerns cases of mismatch. However, Goldberg thinks that mismatch always blocks testimonial knowledge. He gives the following reasoning:

“Suppose S tells H that  $p$ , but that for some reason or other the process by which H recovers the proposition attested to is not reliable. In that case, even if H correctly recovers the content of S’s telling, this process of recovery will involve a knowledge-undermining element of luck. To see this, suppose that the content of S’s actual telling was that  $p$ . There are nearby worlds in which what S told H was something else – that  $r$ , say. In that case, so long as  $p$  is a contingent proposition, in some of these worlds  $p$  will be false. Even so, in a good many of those worlds in which  $p$  is false, H will accept  $p$ , taking this (incorrectly) to be the upshot of what S said.” Goldberg, 2007, p 44.

Goldberg is mistaken to claim that so long as  $p$  is contingent there will be nearby worlds at which it is false. For example,  $p$  and  $r$  might be truth conditionally equivalent and just differ in Fregean sense. Or, if the speaker knows that she may be misinterpreted as asserting  $p$ , but knows that  $p$  is true and close to  $r$ , then she might allow the audience to misinterpret her. In such a situation it seems that the audience's belief is a candidate for knowledge. We can also imagine that in some cases the proposition the speaker asserts will be related to the proposition the audience recovers in such a way that they only diverge in truth value at distant worlds<sup>1</sup>. Indeed, in general the mere contingency of a proposition doesn't entail that there are nearby worlds at which that proposition is false. Moreover, several well motivated theories in the philosophy of language and psycholinguistics (for example, Bezuidenhout 1997, Recanati 2004, Heck 2002, Carston 2002, and Sperber and Wilson 1986) seem to entail that mismatch is extremely common. If this is the case then we would be forced to either adopt a rather widespread skepticism about testimony, or reject these seemingly well motivated theories. I am hesitant to reject such theories without a detailed investigation into the precise ways in which mismatch is epistemically problematic. This paper constitutes part of such an investigation. I illustrate a particular way in which mismatch often does seem to block knowledge. However, it is far from clear that all cases of mismatch will block knowledge. Thus, although the problem I raise does sanction a sceptical view of many of our seemingly testimonial beliefs, it is not clear that it sanctions the sort of widespread scepticism necessary to reject otherwise well motivated theories of linguistic communication.

## 1. Context Sensitivity.

In order to get clear on the recovery problem it will be instructive to consider a slightly broader range of issues. This will be useful both in distinguishing the problem from several related issues, and also in highlighting the fact that it is one amongst a web of related issues in the philosophy of language, all of which may raise difficult questions in the epistemology of testimony.

Normal Communication is rife with context sensitivity. That is, often assertions of the same sentence in different contexts will communicate different propositions. As a result, audiences must

---

<sup>1</sup> Goldberg considers similar responses, and maintains that if the audience believes anything other than the proposition asserted then their belief is not properly testimonial, since it does not involve the correct sort of reliance on the speaker. I am happy to accept this consequence. As I explain in section 2 the problem I raise concerns beliefs audiences form whilst attempting to form testimonial beliefs. It does not matter for the discussion here whether such beliefs are properly testimonial.

rely on their knowledge of the conversational context to understand the speaker. There is disagreement about the form this context sensitivity takes. Many theorists identify speech act content with semantic content, accounting for context sensitivity by maintaining that the context invariant semantic content of a sentence is often insufficient to determine a fully propositional content. For the majority of this paper I will be assuming this view. However, this assumption is not essential, and it is not universally held. Some theorists maintain that semantic content and speech act content come apart. For example, Borg 2012 maintains that the sentence 'there is nothing to eat' semantically expresses the proposition that there is nothing to eat (in some unrestricted domain), but that that sentence will typically be used to assert that there is nothing to eat in some restricted domain (e.g. in the fridge). This distinction between speech act content and semantic content has been embraced by semantic minimalists (e.g. Borg 2004, 2012, Cappelen and Lepore 2004), who claim that outside of a small set of cases the invariant semantic content of a sentence does determine a propositional content. By drawing this distinction they are able to maintain that speech act content is highly context sensitive whilst denying that, beyond the small set of obviously context sensitive expressions, semantic content is context sensitive .

In this paper the recovery problem is framed in terms of an audience's ability to reliably assign the correct value to a context sensitive term (thus, a close relationship between speech act and semantic content is assumed). However, what really matters is that asserted content is highly context sensitive. When we acquire testimonial beliefs we come to believe the proposition we take the speaker to have asserted<sup>2</sup>. The problems which are raised here concern the recovery of asserted contents. So, for example, when this paper discusses the difficulties of assigning the correct value to a context sensitive term it may be controversial whether that term really is semantically context sensitive. However, those who deny the semantic context sensitivity will often agree that its use is typically context sensitive. Thus analogous problems will arise concerning the audience's recovery of the speaker's intended meaning. Thus, although the framing of the problem assumes the falsity of semantic minimalism, the main point holds for minimalist views and contextualist views alike, as long as it is acknowledged that asserted content is context sensitive (we will consider minimalism about asserted contents in section 5).

The context sensitivity of asserted contents raises several important questions. There is a question regarding which factors determine the content of an assertion in context. Moreover, there is a related epistemic question concerning how and when audiences are in a position to know what has been asserted (and a related psychological question concerning the actual mechanisms by which audiences recover that content).

In the case of simple indexicals (such as 'I', 'here', and 'now') these questions do not seem especially challenging. Although the value assigned to 'I' varies with context, its value is seemingly determined by a simple rule which is, in most cases, easy to apply<sup>3</sup>. However, the metaphysical and epistemic questions become more challenging when we move beyond simple indexicals. Consider demonstratives such as 'that', and pronouns such as 'she'. It is not clear that there is a simple rule (like 'I' refers to the speaker') which relates an occurrence of a pronoun or demonstrative to its referent. In the case of pronouns there are certainly constraints on suitable referents (for example,

---

2 Cappelen and Lepore hold that minimal propositions are always asserted along with many other propositions. On their view we might well take the minimal content to be asserted, however we would not treat it as the only, or even the primary content of the assertion.

3 Although, see Sidelle 1991, Predelli 1998a, 1998b, 2002, 2011, Romdenh-Romluc 2002, 2006, Corazza, Fish, and Gorravett 2002, Gorravett 2005, and Cohen 2013.

'she' can usually only be used to refer to a female). However, these constraints alone are not sufficient to determine a referent. Some further contextual factor must supplement the meaning of the term in order for a referent to be assigned. I follow King (2013, forthcoming a, forthcoming b) in calling terms which require such contextual supplementation 'supplementives'.

Most views of the meta-semantics of context sensitivity raise epistemic questions. However, when the value to be assigned is simply a referent (as in the case of demonstratives and pronouns) these epistemic questions will usually be fairly easy to resolve, for there will not usually be a proliferation of candidate referents to choose from. However, more difficult epistemic and metaphysical questions arise when we consider supplementives with more complex contextual values (call such terms 'complex supplementives'). Consider quantifier domain restriction: usually when someone utters 'every beer is in the fridge' they do not intend to communicate that every beer in the universe is in the fridge. Rather, they intend to communicate that every beer in some more restricted domain is in the fridge. The context must supply a domain restriction, and it is standardly thought that this restriction is supplied in the form of a property (Stanley & Szabó 2000)<sup>4</sup>. In the case of 'every beer is in the fridge' the restriction might be a property such as '*for the party*'. So the proposition expressed might be 'Every beer *for the party* is in the fridge'. The problem with such contextual values is that there will usually be many very similar values which could be assigned in a given instance.

This gives rise to both metaphysical and epistemic questions. For example, imagine you arrive at a party and I say 'every beer is in the fridge'. Is the correct restriction 'every beer *for the party* is in the fridge', 'every beer *I am free to offer* is in the fridge', or some other proposition? Whatever one's meta-semantics for supplementives it seems unlikely that one will be able to easily account for the fact that one of these restrictions is correct and the others are incorrect. For example, it seems unlikely that a speaker would intend one of these restrictions over any of the others<sup>5</sup>. This suggests that it may often be indeterminate what is asserted. This indeterminacy about what is asserted raises interesting questions for the epistemology of testimony, since theories of testimonial knowledge are usually formulated in terms of a speaker having asserted (or said, or testified that etc.) a particular proposition. However, I will not be focusing on these questions here, rather I will be focusing on a purely epistemic problem.

Assume for the moment that speakers do generally assert particular propositions, and that audiences aim to recover the proposition asserted<sup>6</sup>. An epistemic problem arises. When complex supplementives are used there will be a multitude of potential values which could be assigned. Some of these values will be extremely similar. Thus, the contexts which determine one proposition over another will differ only very minimally<sup>7</sup>. The features of such contexts which

---

4 Stanley and Szabó explain that only a property (or other intensional restrictor) will give the correct modal profile for the proposition expressed.

5 The dominant view is that a speaker's intention that a particular value be assigned is at least a necessary condition on that value being assigned. See Donnellan 1966, 1968, Kaplan 1989, Åkerman 2009, 2010, and Stokke, and 2010, and King 2013, forthcoming a, forthcoming b.

6 This assumption seems common in the epistemology of testimony. However, I will argue at the end of section 5 that we can do away with it and still get the problem.

7 It's unclear which aspect of the context determines the proposition expressed. The default view is that speaker intentions determine the asserted proposition. Thus, the 'fine grained aspects of the context' which determine different asserted contents might be slight differences in the speaker's intentions. The recovery problem will thus concern our ability to discern contexts at which speakers have slightly differing intentions.

determine that one proposition rather than another is asserted will be extremely fine grained. Indeed, such contexts will often be close to indiscriminable<sup>8</sup>. This will be true regardless of one's meta-semantics of context sensitivity. Unfortunately, the audience's knowledge of the context is comparatively coarse grained. Audiences interpret extremely quickly, and without much conscious consideration of the evidence (especially in low stakes or casual situations). It would take more time and processing power than a normal audience has at their disposal to make the sorts of very fine grained distinctions required to eliminate all the competing interpretations. The situation seems even more severe if one adopts the speaker intentions view: speaker intentions are internal and only revealed via the linguistic clues they provide, thus it is not clear that any amount of time or processing power would allow the audience to select the correct value<sup>9</sup>.

So, fine grained aspects of the context determine the values complex supplementives are assigned, yet the audience's knowledge of the context is comparatively coarse grained, meaning that there will often be multiple propositions which, for all the audience knows, could have been asserted (call these propositions 'epistemic candidates for what is said' or just 'epistemic candidates'). These epistemic candidates will not be constrained by the speaker's communicative intentions (or any other relevant aspect of the context) since they are precisely candidates which, for all the audience knows, may have been intended (or determined by some other aspect of the context). That is, even if the speaker's intentions suffice to determine that one proposition is asserted, the audience's contextual knowledge may not be sufficient for them to identify precisely which proposition this is (as the audience's access to the speaker's intentions will be limited). Since we are assuming that audiences do reach a somewhat determinate interpretation, the psychological processes underlying understanding must select one of these epistemic candidates over the others. Although these processes will no doubt reliably track epistemic candidates, there is no reason to think that they would reliably result in the audience entertaining the precise proposition asserted, for it is unclear how they could do so.

In order to get clear on the problem it is worth considering an example. Matt and Sally are at Matt's house. Sally says 'I am hungry, is there any food?', to which Matt responds 'Sorry, there isn't any food, lets order a pizza'. Sally agrees, and they order a pizza. Clearly Matt was not saying that there isn't any food *anywhere*. He was saying that there is no food in some restricted domain. However, there are many similar ways the domain could be restricted, here are a few:

1. There isn't any food *belonging to Matt*.
2. There isn't any food *belonging to Matt or Tom (Matt's house mate)*.
3. There isn't any food *that Matt is willing to share*.
4. There isn't any food *which Sally likes and which meets the above criteria*.
5. etc<sup>10</sup>.

---

<sup>8</sup> This argument is similar to what Dorr and Hawthorne 2014 call an 'argument from abundance'. A similar line is pushed by Williamson 1997.

<sup>9</sup> Indeed, supposing that in order to rationally intend to communicate  $p$  a speaker must have a reasonable expectation that the audience will recognise that intention, it seems irrational for a speaker to intend any particular value, for the audience will rarely ever be in a position to recognise which particular value was intended. This leads Buchanan 2010 to conclude that propositions cannot be the objects of speaker meaning.

<sup>10</sup> It might be thought that the correct restriction is 'relevant food', or 'available food'. However, it is not clear what actually counts as available or relevant. Does food that Sally dislikes count as relevant or available? It is not clear,

How could Sally reliably conclude that one of these restrictions was is correct? In a typical situation Sally would process and respond to the assertion extremely quickly, without explicit reflective consideration of the evidence. She would likely assign a restriction similar to the ones listed above, but she would be lucky if she assigned the precise correct one. This is true regardless of Matt's communicative intentions (or any other objective features of the context) since Sally's evidence (in a typical situation) would not allow her to distinguish between a context in which, say, 1 was intended (or otherwise determined) rather than 3.

This concludes my basic outline of the recovery problem. However, I have not yet shown that it generates a problem in the epistemology of testimony. It is to that task I now turn. First it will be necessary to say a word about epistemic norms in order to get clear how exactly the recovery problem relates to current views of testimonial knowledge and justification. Following this I argue that reasoning parallel to that provided in this section can be extended to the speaker's side of the exchange. The result is that in cases where there is epistemic uncertainty about what is said (for example, many cases of complex supplementives, or other forms of context sensitivity such as loose talk) the beliefs audiences form will often fail safety and sensitivity conditions on knowledge.

## 2. Testimony and Uptake Norms.

So far I have outlined the recovery problem and indicated it's relation to several related problems in the philosophy of language. The recovery problem primarily concerns our ability to reliably recover what is said. However, as noted in the introduction the conditions for testimonial justification or knowledge are usually formulated in terms of a speaker having said that  $p$  and certain other conditions being met. For example, most theorists accept something at least as liberal as the following<sup>11</sup>:

Uptake: A hearer  $H$  has the epistemic right to accept speaker  $S$ 's testimony that  $p$  if (i) there are no (doxastic or normative<sup>12</sup>) defeaters, and (ii)  $H$  monitors  $S$  for trustworthiness (and is thus sensitive to the speaker's trustworthiness).

Thus, it may not be clear how the recovery problem relates to the epistemology of testimony. After all, the recovery problem simply illustrates that sometimes audiences will end up recovering a proposition other than what is said. As formulated above, norms such as Uptake do sanction belief in those recovery problem cases where the audience does happen to recover what is said<sup>13</sup>, so it is worth considering the epistemic status of the beliefs formed in such circumstances. However, most uptake norms are silent on what the audience should do in the majority of recovery problem cases, since it is unlikely that audiences will recover the precise proposition asserted in such cases.

---

thus the epistemic problem will still occur on such restrictions.

11 With anti-reductionists usually accepting a far more liberal norm which doesn't require condition (ii) (or a similar condition) to be met.

12 A normative defeater is a proposition an agent *should* believe, which would undermine their belief.

13 This result could be avoided by adding a condition requiring that audiences know what has been said. In the objections and responses section I will argue that this response is unsatisfactory.

In order to see why the recovery problem is of interest we must briefly consider the way epistemic norms relate to epistemic practices. Epistemic norms often hold that an audience should form a belief only under certain conditions. However (at least for externalist norms) agents are not always in a position to know that those conditions obtain. Thus, the epistemic practices of a normal agent attempting to follow such norms will sometimes deviate from the practices of an ideal agent attempting to follow such norms. If an agent frequently ends up in situations where it misleadingly appears that the conditions for justified belief (or knowledge) obtain then, whilst trying to follow aforementioned epistemic norms, agents will violate said norms and form unsanctioned beliefs. If we find out that agents do (with some degree of regularity) find themselves in such situations then it is worth considering the epistemic status of the beliefs thereby formed. If such beliefs fail to constitute knowledge then we will have identified a set of beliefs normal, seemingly responsible agents (ourselves included) tend to form, which fail to constitute knowledge.

This is precisely the situation which arises with respect to the recovery problem. Although the epistemic norms endorsed by most epistemologists don't sanction belief in the majority of recovery problem cases, normal epistemic agents attempting to form beliefs in accordance with such norms will form unsanctioned beliefs in cases where the recovery problem arises. If such beliefs fail to constitute knowledge then we will have discovered a set of unremarkable circumstances in which seemingly responsible agents regularly go wrong when attempting to acquire testimonial knowledge.

In the next section I will argue that in many cases the recovery problem does block knowledge. To do this I will argue that a similar problem arises concerning the speaker's knowledge of the proposition the audience will recover, and that as a result the audience's belief will often be at best luckily true.

### 3. The Recovery Problem and Testimonial Knowledge.

In the previous sections I have outlined the recovery problem and explained that seemingly responsible agents will often form beliefs in recovery problem cases. I also explained that in a small number of recovery problem cases the norms endorsed by most epistemologists will actually sanction such beliefs. In this section it is argued that many such beliefs fall short of knowledge.

In order to see why the recovery problem often blocks knowledge we must consider not only the audience's knowledge of context, but also the speaker's knowledge of context. An idealised speaker would know which interpretations they leave open to the audience. Thus, a trustworthy idealised speaker would only leave open epistemic candidates which they knew to be true. So, testimony from such a speaker would usually yield safe and sensitive beliefs even in cases where the recovery problem occurred. Unfortunately actual speakers fall short of this ideal. Ordinary speakers are limited in many of the ways that audiences are. The psychological factors that lead an audience member to select one epistemic candidate over another are internal, thus the speaker will not know which interpretation the audience will select. Moreover, like audiences speakers have neither the time nor the cognitive resources with which to consider all the interpretations they may be leaving open. Rather, speakers will often make an assertion on the basis of their knowledge of a particular proposition, with little consideration of ways in which the audience might misinterpret them. The extent to which speakers monitor for potential misinterpretation will, of course, vary with context –

when the message is extremely important and misinterpretation carries a high degree of risk speakers will be far more careful about what they say. However, the majority of our everyday communicative interactions are not like this. We assert quickly and move on. Thus, in recovery problem cases speakers will often run the risk of leaving open interpretations which are false, or not known to be true.

Consider a case where the speaker does inadvertently leave open some false epistemic candidates. In such cases the audience will select from a group of propositions, some of which are true, and some of which are false. The cognitive mechanisms which lead them to select one interpretation over another will not be sensitive to the truth of the epistemic candidates (it is hard to see how they could be). Thus, if the audience selects a true proposition from amongst the epistemic candidates it will largely be a result of luck. To illustrate this, consider Matt and Sally again: Matt left open the following epistemic candidates:

1. There isn't any food *belonging to Matt*.
2. There isn't any food *belonging to Matt or Tom (Matt's house mate)*.
3. There isn't any food *that Matt is willing to share*.
4. There isn't any food *which Sally likes and which meets the above criteria*.
5. etc.

He might have asserted 'There isn't any food' on the basis of his knowledge of any of these. Imagine that he asserted it on the basis of his knowledge of (1). Would the falsity of, say, (2) prevent him from asserting 'There isn't any food'? In many cases it would not. Suppose that Tom does have some food, and that he is generally very open about sharing his food. In such a circumstance (2) would be false. Yet its falsity would not reliably block Matt's assertion because, given the limited time and cognitive resources he has at his disposal whilst planning his utterance (together with the inattentiveness which typifies casual low stakes utterances), it could easily fail to occur to him that a reasonable audience might interpret him this way. Yet, an audience member who knew about Tom's liberal attitude toward sharing may well interpret Matt this way, especially if Tom is salient to the audience at the time of interpretation. In such a case the audience would form a false belief. Indeed, even if they selected a true epistemic candidate it would largely be down to luck, since they could have easily selected the interpretation determined by 2 instead. In such a case belief formation is reminiscent of pulling propositions out of a hat containing both true and false propositions. The psychological mechanisms which guide interpretation will no doubt ensure that the hat contains no obviously false propositions. However, it is hard to see how they could filter out propositions like (2) in cases where they are false.

So, in some recovery problem cases the speaker will leave open false epistemic candidates, and the audience will not gain knowledge. But what about cases in which all the epistemic candidates are true? It appears that these cases are also problematic. Consider a version of the Matt and Sally case in which every epistemic candidate is true; as it happens there is no food at all in the house. Suppose that Sally comes to the true belief that there is no food owned by Matt or Tom, but Matt made his assertion on the basis of his knowledge that he himself had no food. In such a situation Sally's belief will fail both sensitivity and safety conditions on knowledge. Consider Sensitivity first:



Sensitivity: 'A belief by *S* that *p* is 'sensitive' iff were it not so that *p*, *S* would not believe that *p*' (Sosa, 1999).

That is, a belief that *p* is sensitive iff in the closest possible worlds where *p* is false *S* no longer believes that *p*. Sally's belief that there is no food belonging to Matt or Tom fails this condition. Many of the closest worlds at which it is false, for example worlds where Tom has some food, are worlds at which Matt still says 'there is no food'. After all, he asserted it only on the basis of his knowledge that he had no food, he never considered Tom's food. Thus many of the closest worlds at which *p* is false are worlds at which Sally still comes to believe *p*. Next consider Safety:

Safety: 'A belief by *S* that *p* is 'safe' iff: *S* would believe that *p* only if it were so that *p*'. (Sosa, 1999).

Sally's belief also fails safety (at least, in many cases). Supposing that it is normal for Tom to keep food in the house it could easily have been the case that the proposition Sally came to believe was false. That is, supposing that Tom normally keeps food in the house, there are plenty of nearby worlds in which he does have food. However, since Matt asserted only on the basis of his knowledge that he himself lacked food (without ever considering Tom) he would have still uttered 'There isn't any food' in these worlds. Moreover, since the two situations are phenomenologically indistinguishable to Sally she will form the same belief (that neither Matt nor Tom have any food) in these worlds. Thus, there will be a significant number of nearby worlds in which Sally forms the same belief via the same method, in which her belief is false. More generally, in recovery problem cases in which the proposition the audience comes to believe differs slightly from the proposition the speaker intends, there will often be nearby worlds in which the audience forms the same belief but in which the belief is false. That is, in such cases the truth of the proposition believed by the audience will not be strongly tied to their reason for belief - the speaker makes an utterance on the basis of their knowledge of a proposition  $p_1$ , the truth of which is independent of the proposition  $p_2$  which the audience comes to believe. It will often be a matter of mere luck when both propositions turn out to be true<sup>1415</sup>.

It is worth noting that this problem does not depend on any particular view of the meta-semantics of context sensitivity. Essentially the problem is that in certain cases speakers will be disposed to utter a sentence *S* on the basis of their knowledge of a proposition *p* (and with the intention to communicate *p*), in circumstances where a similar proposition *q* is false, and in which some

---

14 The situation gets worse when we consider chains of testimony, which have the potential for a Chinese whisper effect. Even if the first audience member entertains the proposition the speaker intended, it is unlikely the final member of the chain will. Whatever epistemic value there was in the first testimonial belief will be diluted further down the chain. Things are worse still if a speaker is required to know *p* in order for an audience to gain knowledge that *p* (although, see Lackey 1999), for a single problematic utterance could cause all the following testimonial beliefs to fall short of knowledge.

15 A related problem is raised in Andow (2014) specifically for aesthetic terms. Andow argues that relativist theories of the semantics for aesthetic terms explain why aesthetic testimony fails to be a source of aesthetic knowledge. The reason for this is that sentences containing aesthetic terms are true relative to a standard of taste, and whatever standard we relativise to it is going to be unlikely that all interlocutors share that standard, and thus that the proposition expressed is true for all of them. As a result, beliefs based on aesthetic testimony will usually be unsafe and insensitive.

competent audiences might interpret an utterance of *S* as expressing *q*. If one has an intention based meta-semantics then this will be a situation in which a speaker asserts *p* and is misinterpreted. However, if one thinks that what is said is audience sensitive then it might be a situation in which the speaker accidentally asserts *q*, or in which it is indeterminate what is actually said. As long as the audience thinks something has been asserted, and the speaker takes themselves to have made an assertion, the problem can occur.

It is an empirical question just how often the recovery problem arises. It will likely arise in many contexts where complex supplementives or loose talk are present, and in which speakers are not optimally attentive to possible misinterpretation. To get a grasp on just how common such situations seem to be we need merely reflect on the sort of situations we find ourselves in every day when we socialise at the pub, relax at home with our partners, or engage in passing small talk in the department. These situations make up a significant percentage of our communicative interactions, yet they are precisely the sorts of situations in which we speak loosely and reflect little on how we might be precisely interpreted. Thus, the recovery problem is not confined to a small class of cases we can safely ignore<sup>16</sup>.

So far I have outlined the recovery problem and argued that, in many cases, it prevents audiences from achieving testimonial knowledge. In the second half of the paper I consider a series of responses, and argue that the problem still arises on weaker assumptions about the nature of asserted contents.

#### 4. Response: Defeaters.

Uptake contains a no (normative or doxastic) defeater condition. Thus, if there are doxastic or normative defeaters present in recovery problem cases then audiences attempting to behave in accordance with Uptake will not form beliefs. This response faces several problems.

Firstly, normative defeaters are facts or propositions which defeat an agent's belief and which the agent *should* be aware of. This suggests that agents are blameworthy for not being aware of normative defeaters. If this is correct it seems that if a fact is to count as a normative defeater then it should be something an ordinary agent can be reasonably expected to grasp. If we have to do a lot of theoretical work in order to discover *p*, work which the average agent is not in a position to do, then *p* is not a normative defeater. However, the recovery problem, and the problems it causes for testimonial belief formation, have not been widely recognized by even epistemologists of testimony. If the experts on testimony have not recognized the phenomenon or its problematic nature then it seems far fetched to claim that average audience should. Thus it seems far fetched to argue that there are normative defeaters available in recovery problem cases.

Secondly, it is not clear how normal audiences would come to possess doxastic defeaters which would block belief in recovery problem cases. The most plausible approach would be to follow Lackey 2006 in claiming that audiences possess inductive grounds for considering certain

---

<sup>16</sup> It seems that the problem is less likely to arise in high stakes contexts (where misinterpretation carries a risk of meaningful repercussions). There are two reasons for this. Firstly, hearers accept testimony less readily in such contexts (and hedge their beliefs more). Secondly, speakers are more careful about what they say in such contexts.

conversational contexts to be epistemically unsafe, and argue that these contexts include the sorts of situation in which the recovery problem is likely to arise. Lackey is surely correct that audiences possess inductive grounds for considering certain contexts to be unsafe. For example, we are far more trusting of assertions made in the doctor's office than at the poker table. Moreover, it does seem that the recovery problem will be more prevalent in certain types of context. These will be contexts in which the stakes are low, and the information communicated is relatively unimportant. In such contexts loose talk and context sensitivity will be more common, and speakers will dedicate fewer resources to checking for potential misinterpretation. Do audiences possess evidence that such contexts are epistemically unsafe? It is hard to see how they would. We rarely become aware of minor miscommunications. In the sorts of situations I have been discussing the conversation will usually carry on smoothly despite the slight miscommunication. Indeed, it might even be thought that audiences possess positive (misleading) reasons for thinking such contexts are unproblematic. The propositions left open in most recovery problem cases will usually be close to the truth, especially in relevant practical consequences<sup>17</sup>. Thus, when agents act on their testimonial beliefs it will be, in most recognisable respects, as if those beliefs were true. This generates the illusion that low stakes contexts are epistemically safe environments (a similar point is made by Keysar 2007).

Indeed, there is even experimental evidence that we overestimate our own effectiveness as communicators. Boaz Keysar and Anne Henley 2002 found that speakers regularly overestimate their own communicative abilities when making ambiguous utterances. Even when made aware of the specific ambiguity in their utterances speakers were found to significantly overestimate the reliability with which audiences were able to recover their intended message. If such overestimation of reliability is significant even under experimental conditions where the participants are made explicitly aware of the possibility of miscommunication, then it is likely even more prevalent in ordinary contexts where the possibility of miscommunication is not made salient. Thus, the defeater strategy does not seem promising.

A related response is that uptake norms should be formulated with the requirement that the audience be in a position to know that  $p$  has been asserted (or intended). Several epistemologists already endorse such a condition (for example, Goldberg 2007, Fricker 1994, 1995, 2003), and it has some intuitive appeal. However, there are two main problems with this response. Firstly, it usually appears to us that we know what the speaker has said (even in cases of loose talk and context sensitivity). Thus, audiences attempting to follow such modified norms would still form beliefs in recovery problem cases. Secondly, the sceptical result emerging from this view is actually even more extreme than the sceptical view which seems to arise from the recovery problem as I have formulated it. I argue that audiences often lack knowledge in recovery problem cases. However, if we were to accept the 'knowledge of what is said' requirement then we would be forced to claim that audiences are never even justified in forming testimonial beliefs in any recovery problem cases – even when the speaker knows which epistemic candidates have been left open, and knows each candidate to be true.

## 5. Response: Alternative Propositional Objects of Assertion

So far it has been assumed that speakers generally intend to assert, and audiences generally recover,

---

<sup>17</sup> What I mean by this is that given the aims and interests of the conversational participants similar courses of action will usually be sanctioned by each epistemic candidate. True and false candidates alike. This is the sense in which they are close to the truth.

single fine grained propositions. This assumption can be questioned. Perhaps the testimonial beliefs we form, and are justified in forming, are coarse grained. If the propositions audiences recover are highly coarse grained then we might be able to avoid the recovery problem. This will be the case if the propositions believed are true at all (or almost all) the worlds at which any of the fine grained epistemic candidates are true (such a proposition would be equivalent to the disjunction of the fine grained epistemic candidates). Beliefs in such propositions will not be as vulnerable to failures of safety and sensitivity. This response gains intuitive support from the fact that we don't seem to explicitly form the sorts of fine grained beliefs I have been discussing. For example, thinking back to the Max and Sally case, it seems unrealistic to claim that Sally explicitly entertains the restriction "food *which belongs to either Matt or Tom*".

There are three ways of developing this response: Firstly we might maintain that audiences only form a very general testimonial beliefs. Secondly, we might maintain that the audience comes to believe a coarse grained proposition in addition to some more fine grained proposition. Finally, these responses can be combined by maintaining that we only form testimonial beliefs in very general propositions, but merely accept, or assign raised credences to, fine grained propositions.

Before discussing these responses it is important to consider the intuitive claim that we don't form the sorts of fine grained beliefs that give rise to the recovery problem. I think that it is true that we don't *explicitly* form such beliefs. However, this does not undermine the problem. To see this, consider the commonly drawn distinction between occurrent (or explicit) and dispositional beliefs (a similar distinction is drawn by Buckwalter, Rose, and Turri (forthcoming)). Often when we form a belief we explicitly represent the proposition we come to believe, and mentally assent to it. Clearly Sally would not explicitly represent and assent to the proposition 'there isn't any food *belonging to Matt or Tom*' in response to Matt's assertion. Indeed, her explicit mental representation may be somewhat indeterminate in the same way Matt's assertion is. However, the mere fact that she does not explicitly represent and assent to the proposition does not mean that she does not believe it. Many of our beliefs are merely dispositional, or implicit. For example, you no doubt believe that there are no plastic mice on Mars. However, it is unlikely that you ever explicitly represented and assented to this proposition (until now). Likewise, if I see what appears to be a racing car approaching I might explicitly represent and mentally assent to the proposition 'there is a racing car approaching'. Yet, it is unlikely that this exhausts the beliefs I form upon seeing the car. For example, although I may not explicitly represent and assent to the proposition 'that car will be loud', I might still cover my ears, or exhibit surprise if it were to pass by without making a sound. The mental state that gives rise to these dispositions (or perhaps consists in these dispositions) is formed in response to the evidence of my senses, and it interacts with my desires (for example my desire not to be deafened) in order to bring about action. So, although I never explicitly entertain the thought 'the car approaching will be loud', it certainly seems that I have a belief along those lines. My claim is that we often form relatively fine grained dispositional beliefs in response to testimony. These beliefs are revealed through the dispositions we acquire when confronted by another's testimony.

It is conceivable that one might wish to save the word 'belief' for mental states involving explicit representation of, and assent to, propositions. We might label unconscious mental representations belief\*. Such a change would not make a substantial difference. My belief\* will represent the world as being a certain way, this representation will guide my behaviour, and it will be evidence responsive<sup>18</sup>. Thus, it is hard to think of a reason to worry about unjustified, false, or unsafe beliefs

18 Indeed, as Rose and Schaffer 2013, and Buckwalter, Rose, and Turri forthcoming argue, they are capable of

which are not also reasons to worry about unjustified, false, or unsafe beliefs\*. If the fine grained representations I am claiming we acquire in response to testimony are in fact beliefs\*, then the recovery problem will be just as worrying. For that reason I will continue to call these unconscious mental states simply 'beliefs'.

The first version of the coarse grained proposition response maintains that the only beliefs normal audiences form in recovery problem cases are highly coarse grained. This, entails that it would be unusual for Sally to form a belief such as 'there is no food *belonging to Matt or Tom*'. Of course, it would be unusual for her to explicitly form such a belief. However, we have just seen that not all the beliefs we form are fully explicit. Many of our beliefs are revealed through the dispositions we acquire upon forming them. If Tom's open food policy were salient to Sally at the time of Matt's assertion then she would, in many cases, acquire the disposition to be surprised upon finding her favourite foodstuff in the fridge labelled 'Property of Tom'. This suggests that it would not be unusual for her to form a dispositional belief concerning Tom's food, meaning that standard practice does not involve *only* forming highly coarse grained beliefs. Such a reaction would be unusual if we normally form only highly coarse grained beliefs in recovery problem cases. So this response fails<sup>19</sup>.

A second way to push this objection is to maintain that audiences form highly general beliefs in addition to more fine grained beliefs. Since these coarse grained beliefs will usually be safe and sensitive audiences will usually gain some knowledge in addition to some unsafe fine grained beliefs. It is unclear whether this really constitutes a response at all. We retain the consequence that ordinary agents form many false or luckily true beliefs in recovery problem cases, and merely add that we do at least gain some minimal knowledge in addition. It is not clear that the additional knowledge adds much of value, since we will still act on our more fine grained beliefs.

To get a feel for just how unsatisfying this response is consider an analogous skeptical argument concerning perception. Suppose it is argued that many of the perceptual beliefs we form in certain circumstances are the result of potentially misleading cognitive penetration (the influence of expectations, beliefs, and biases on the content/character of one's perceptual experience), and are at best luckily true (see Siegel 2012, 2013 for discussion of the actual epistemic impact of cognitive penetration). One might argue that my current belief that there is a water bottle in front of me is likely to be either false or luckily true because, as a result of cognitive penetration, I would have had the belief that there was a water bottle in front of me even if it were in fact a beer bottle. In such circumstances I would still form the true beliefs that there is a bottle in front of me, and that I would be refreshed if I were to consume its contents. However, this observation should provide little comfort, since I still have a fine grained false or luckily true belief which I am likely to act on. Likewise, it is of little comfort to maintain that Sally at least gains *some* testimonial knowledge, since she also forms a significant belief which she may well act on, and which falls sort of knowledge.

A third version of the coarse grained proposition response runs as follows: the object of testimonial belief is coarse grained, so testimonial beliefs are safe and sensitive. However, we adopt weaker attitudes to the fine grained epistemic candidates. These weakened attitudes explain the dispositions we acquire as a result of uptake. There are two ways to develop this line – either in

---

constituting knowledge.

<sup>19</sup> Additionally, there will still be a proliferation of very similar coarse grained epistemic candidates. Coarse grained propositions can differ in fine grained ways. It is not clear how the audience could reliably recover the correct coarse grained proposition over one of the many similar coarse grained propositions, thus the recovery problem will still arise.

terms of mere acceptance (perhaps as discussed in Bratman 1992), or in terms of a raised (but sub-belief) credence. The main reason to be skeptical of the mere acceptance response is that acceptance seems to be a reflective attitude – a way of hedging our beliefs<sup>20</sup>. However, we seem far less prone to hedging in sorts of context in which the recovery problem arises (low stakes casual contexts where miscommunication carries little practical risk). Uptake in low stakes contexts is usually fast, automatic, and unreflective. Thus it is unlikely that our default reaction in such contexts is mere acceptance.

The second version of this response does not seem to capture the full extent of the dispositions we acquire on the basis of testimonial uptake. Perhaps a raised (but sub belief) credence is enough to explain Sally's surprise at finding her favourite food in the fridge. However, there are more problematic dispositions Sally may acquire. Consider the following continuation of the Matt and Sally case: Matt tells Sally 'there isn't any food'. Tom's partner then enters and asks if there is any food. Sally responds 'no, there isn't any food, but we're ordering a Pizza'. This is a fairly natural exchange. However, Tom's food would be considered available to his partner if he had any. This suggests that the mental state which triggers Sally's assertion disposes her to assert as if Tom doesn't have any food. It is unusual to assert on the basis of mere high credences, such actions generally require (at least) all out belief<sup>21</sup>. If Sally's assertion is not unusual then all out belief in the fine grained proposition is not unusual either. Thus the problem remains.

One might worry that this exchange only seems natural because Sally interpreted Tom's partner as asking about food which Sally or Matt were in a position to share, or because Sally might not think about Tom's food when replying. The second interpretation seems unpromising because we have already postulated that Tom, and his food sharing policies, are salient to Sally. With respect to the first interpretation; we can imagine Tom's partner asking 'Does anyone know if there is any food?'. This question is more naturally read as concerning food available to Tom's partner, rather than food Matt and Sally are in a position to share. Yet Sally's response would still not be unusual.

A slightly different version of the coarse grained proposition response runs as follows: the object of testimonial belief is a coarse grained proposition, thus our testimonial beliefs are safe and sensitive. However, we often move from our coarse grained testimonial belief to more fine grained beliefs which fail safety and sensitivity. These beliefs are reached by combining our coarse grained testimonial belief with our background assumptions (and other psychological factors), thus they are not truly testimonial. This response is unsatisfactory, for it seems to be a merely taxonomical point. Whether these beliefs are in the strictest sense testimonial is not very important once we recognise that they are still problematic, and still commonly arise as a result of testimony. Indeed, my claim has been that in many recovery problem cases the proposition recovered is not the asserted proposition anyway. So it was antecedently unclear whether or not we should, strictly speaking, call them 'testimonial beliefs' any way.

I think that all versions of the coarse grained propositions response fail. However, it is worth considering a related response which runs as follows: we come to believe many fine grained propositions on the basis of a single utterance. Some of these beliefs will be problematic, but some will constitute knowledge, and that is good enough. This response faces many of the problems I have already discussed, for example it is unclear the extent to which it is a genuine response - it still

---

<sup>20</sup> This is not merely an intuitive point – there appears to be psychological evidence which points toward our default attitude being belief. For example, Gilbert 1991 argues that when we adopt an attitude like disbelief, or some weaker intermediate state, we start by forming a belief and then weakening it.

<sup>21</sup> Indeed, it has been argued by Mark Kaplan 1996 that to have a belief in  $p$  simply is to be disposed to assert that  $p$  if forced to assert either  $p$  or not- $p$ .

has us forming many false beliefs. It also has problems of its own. For example, it seems unclear whether *any* of these fine grained beliefs, considered alone, would satisfy the safety or sensitivity conditions on knowledge. Moreover, this response fails if we endorse an agglomeration principle for belief. That is, we run into problems if we maintain that if I form a belief in  $p$  and a belief in  $q$  on the basis of a single stimulus then I have formed a belief in ( $p \ \& \ q$ ). If such an agglomeration principle were correct then audiences would typically form beliefs in a conjunction of epistemic candidates, and thus would be at even greater epistemic risk. However, if we deny the agglomeration principle then this response does have one redeeming feature: it establishes that, even in the sorts of context where the recovery problem occurs, testimony produces a baseline of true fine grained beliefs. This baseline of truth may be sufficient to explain why the norms of testimonial belief formation in low stakes contexts have not adapted in response to the epistemic problems which seem to arise in such contexts.

Finally, it is worth considering whether semantic minimalism offers a response to our problem<sup>22</sup>. If the context invariant semantic content of a sentence is fully propositional, then this proposition seems a natural candidate for the object of testimony. For Cappelen and Lepore the minimal semantic content of a sentence is the proposition expressed by every assertion of that sentence<sup>23</sup>. There are two related reasons to be skeptical of the claim that such minimal propositions are the objects of testimony. Firstly, these minimal propositions do not convey much information, and the information they do convey seems to be of limited value. Imagine that Matt and Sally are about to go for a walk. Matt is waiting, and Sally shouts 'I'm ready'. Matt is interested in the information that Sally is ready to go for a walk. However, this is not the minimal semantic content of the utterance. Rather, the minimal content is simply that Sally is ready. This is the same minimal content which would be expressed by an utterance of 'I'm ready' in a context where Sally is ready to convert to Buddhism, or to give up drinking. It is not clear why Matt would be interested in this information, or how his knowledge of this minimal proposition alone would guide his action. Thus, if the objects of testimonial knowledge are minimal propositions, then testimonial knowledge seems ill suited to play the sort of central role we assign it in our every day lives.

Secondly, assuming that testimony is our central means of sharing knowledge it would be hard to explain the importance of labels such as 'liar' if they do not track testimonial wrongdoing. However, as Jennifer Saul 2012 argues, our assessments concerning whether or not someone has lied do not track minimal propositions. Saul asks us to consider Bill Clinton's assertion of 'there is no improper relationship', shortly after his affair with Monica Lewinsky. Technically Clinton was not lying since the affair was over and the 'is' of his utterance is indexed to the present. However, if Joe Blogs, a current adulterer, were to respond the same way to the allegation that he is currently having an affair he would be lying. However, precisely the same minimal proposition is expressed in each case. Thus if our assessments track minimal contents then we should reach the same verdict about each case. Since verdicts about each case differ it appears our assessments don't track minimal contents. If our most central normative assessments of assertions don't track the contents of testimony, but rather some other level of content, then this calls into question the relative importance of testimony to ordinary agents. So, once again, the minimalist response calls into question the central role testimony seems to play in our lives.

So far I have considered several attempts to resolve the recovery problem by denying that audiences come to believe single fine grained propositions (whilst still maintaining that the objects of belief

---

22 Thanks to an anonymous referee for pressing this response.

23 Borg 2012 holds that the minimal content of an otherwise sincere truthful assertion is often false, making it a poor candidate for the object of testimony.

are propositional). However, to be clear, it *is* a simplification to maintain that audiences entertain single precise fine grained propositions. Our communicative intentions, and the testimonial beliefs we form, are undoubtedly vague and imprecise. However, it seems they are not imprecise enough to reliably avoid the problem. This is illustrated by the naturalness with which audiences appear to gain dispositions we would normally associate with more fine grained beliefs. This suggests that some fine grained aspects of the audience's belief state will be relatively settled (settled enough to have an impact on the audience's dispositions), whilst others may be more indeterminate. For example, Sally's belief state may be determinate with respect to the question of whether Matt or Tom have any easily preparable food (for example, frozen pizzas or ready meals), but indeterminate with respect to the question of whether or not they have any food with a medium preparation time (for example, it may be unclear whether a pre-spatchcocked chicken would be considered contextually relevant). Thus, the recovery problem does not rely on the simplifying assumption that audiences typically form precise/fine grained testimonial beliefs, merely the assumption that the audience's belief states are usually settled with respect to some fine grained questions. And this claim is motivated by the fact that it is far from unusual for audiences to acquire, through uptake, the sorts of dispositions associated with fine grained beliefs.

#### 6. Response: Non-Propositional Objects of Assertion.

Attempts to avoid the problem by postulating alternative propositional objects of assertion (or belief) seem to fail. However, Ray Buchanan 2010 denies that the objects of speaker meaning are propositional, and he does so on the basis of considerations similar to those raised here. So it is worth considering whether his view offers a solution to the recovery problem.

Buchanan claims that the objects of speaker meaning are not propositions, but rather properties of propositions ( incomplete propositional templates with vague restrictions as to how they are to be completed). Audiences grasp these properties by entertaining one or more of the propositions which fit the template. Buchanan's view is developed partly in response to an epistemic problem which bears many similarities to the recovery problem: On speaker intention based of meta-semantic views the asserted proposition must be intended by the speaker. In order to rationally intend to assert that  $p$  a speaker must have a reasonable expectation that the audience will recognise their intention to assert  $p$ . However, due to the proliferation of highly similar propositions which the audience might attribute in cases of context sensitivity there is no single proposition such that the speaker can reasonably expect the audience to recover that precise proposition. Thus, unless speakers are highly irrational, the object of speaker meaning cannot be propositional. However, it would not be irrational for a speaker to expect the audience to recover one (or more) of the propositions in the extension of some vaguely specified property. This is because there is a far greater chance of the audience recovering one of the many propositions which fall in the extension of the intended property.

This problem sounds very similar to the recovery problem, thus one might think that the solution should carry over unproblematically. This would be a mistake. Buchanan's problem concerns the determination of what is said – what is said cannot be determined by speaker intentions if propositions are the object of speaker meaning. To claim otherwise would be to attribute an unrealistic degree of irrationality to speakers. The recovery problem, on the other hand, does not concern the metaphysics of what is said. The problem is simply that due to the collective epistemic limitations of the speaker and audience speakers will, in certain cases, be insensitive to the ways in which they may be misinterpreted. This is entirely consistent with the notion that what is said is actually a property rather than a proposition. And it is consistent with the view that speakers are not



irrational enough to expect audiences to recover a particular fine grained proposition. On a view like Buchanan's, recovery problem cases would simply be cases in which either A) the audience is at risk of recovering a proposition which does not fall under the extension of the speaker's intended property, or B) the speaker does not realise that there are propositions in the extension of their intended property which they do not know to be true. It seems likely that the former situation would occur more frequently, unless the speaker were being particularly careless. In such cases the set of propositions in the extension of the speaker's intended property will usually be a subset of the epistemic candidates.

## 7. Conclusion.

The recovery problem holds that we are often at risk of forming false or unsafe testimonial beliefs as a result of our heavy reliance upon limited contextual knowledge when planning and interpreting assertions. This problem will arise even for agents attempting to follow the epistemic norms endorsed by most epistemologists of testimony. The problem will be more pronounced in low stakes contexts where speakers are more careless and audiences hedge their beliefs less. Several responses have been considered, none of which were satisfactory.

**Acknowledgments:** This paper has greatly benefited from comments and discussion with James Andow, Sebastian Becker, Mark Bowker, Sarah Broadie, Jessica Brown, Herman Cappelen, Don Fallis, Daniel Fogal, Patrick Greenough, Katherine Hawley, Allan Hazlett, Nick Hughes, Torfinn Huvenes, Bruno Jacinto, Colin Johnston, Jennifer Lackey, Matt McKeever, Anders Schoubye, Peter Sullivan, Brian Weatherson, Stephen Wright, and an anonymous referee for this journal. I would also like to thank audiences at the University of St Andrews, the University of Edinburgh, and the University of Vienna at which earlier versions of this paper were presented. This research was supported by the United Kingdom Arts and Humanities Research Council.

## Bibliography

Åkerman, J. 2009. A Plea For Pragmatics. *Synthese*. 170. 155-167.

Åkerman, J. 2010. Communication and Indexical Reference. *Philosophical Studies*. 149. 355-366.

Andow, J. 2014. A Semantic Solution to the Problem with Aesthetic Testimony. *Acta Analytica*. DOI 10.1007/s12136-014-0238-4

Bezuidenhout, A. 1997. The Communication of De Re Thoughts. *Nous* 31 (2): 197-225.

Borg, E. 2004. *Minimal Semantics*. Oxford University Press.

Borg, E. 2012. *Pursuing Meaning*. Oxford University Press.

Bratman, M. 1992. Practical Reasoning and Acceptance in Context. *Mind*. 101. (401). 1-15.

Buchanan, R. 2010. A Puzzle about Meaning and Communication. *Nous*. 44 (2). 340-371.

Buckwalter, W., Rose, D., Turri, J. Forthcoming. Belief through Thick and Thin. *Nous*. 1-28.

- Cappelen, H. and Lepore, E. 2004. *Insensitive Semantics: A Defence of Semantic Minimalism and Speech Act Pluralism*. Blackwell Publishers.
- Cappelen, H. and Lepore, E. 2006. Shared Content. from Lepore & Smith (eds) *The Oxford Handbook of Philosophy of Language*, 1056- 1069. Oxford University Press.
- Carston, R. 2002. *Thoughts and Utterances: The Pragmatics of Explicit Communication*. Wiley Blackwell.
- Cohen, J. 2013. Indexicality and the puzzle of the answering machine. *The Journal of Philosophy*. 110. (1). 5-32.
- Corazza, E., Fish, W., Gorvett, J. 2002. Who Is I?. *Philosophical Studies*. 107. 1-21.
- Donnellan, K. 1966. Reference and Definite Descriptions. *Philosophical Review*. 75 (3). 281-304.
- Donnellan, K. 1968. Putting Humpty Dumpty Together Again. *Philosophical Review*. 77 (2). 203-215.
- Dorr, C., and Hawthorne, J. 2014. Semantic Plasticity and Speech Reports. *Philosophical Review*. 123. (3). 281-338.
- Fricker, E. 1994. Against Gullibility. In B. K. Matilal and A. Chakrabarti (Ed.), *Knowing from Words*, 125-161. Amsterdam: Kluwer Academic Publishers.
- Fricker, E. 1995. Telling and Trusting: Reductionism and Anti-Reductionism in the Epistemology of Testimony. *Mind* 104: 393-411.
- Fricker, E. 2003. Understanding and Knowledge of What is Said. From A Barber (Ed) *Epistemology of Language*, 325-367. Oxford University Press.
- Gilbert, D. 1991. How Mental Systems Believe. *American Psychologist*. 46. (2). 107-119.
- Goldberg, S. 2007. *Anti-Individualism - Mind and Language, Knowledge and Justification*. Cambridge University Press.
- Gorvett, J. 2005. Back Through the Looking Glass: On the Relationship Between Intentions and Indexicals. *Philosophical Studies*. 124. 295-312.
- Heck, R. 2002. Do Demonstratives Have Senses?. *Philosopher's Imprint* 2 (2): 1-33.
- Kaplan, David. 1989. Afterthoughts. From Perry and Wettstein (Eds), *Themes from Kaplan*. Oxford University Press.
- Kaplan, M. 1996. *Decision Theory as Philosophy*. Cambridge University Press.
- Keysar, B. 2007. Communication and miscommunication: the role of egocentric processes. *Intercultural Pragmatics*. 4. 71-84.

- Keysar, B., Henly, A. 2002. Speakers' Overestimation of their Effectiveness. *Psychological Science*. 13 (3). 207-212.
- King, J. 2013. Supplementives, the Coordination Account, And Conflicting Intentions. *Philosophical Perspectives*. 27. p 288-311.
- King, J. Forthcoming a. Speaker Intentions in Context. *Nous*. 1-19.
- King, J. Forthcoming b. The Metasemantics of Contextual Sensitivity. From Burgress and Sherman (Eds) *New Essays in Metasemantics*. Oxford University Press.
- Lackey, J. 1999. Testimonial Knowledge and Transmission. *The Philosophical Quarterly*. 49. 471-490.
- Lackey, J. 2006. It Takes Two to Tango: Beyond Reductionism and Anti-Reductionism in the Epistemology of Testimony. From Lackey and Sosa (eds.), *The Epistemology of Testimony*. Oxford University Press. 160-189.
- Predelli, S. 1998a. 'I am not here now'. *Analysis*. 58. (2). 107-115,
- Predelli, S. 1998b. Utterance Interpretation and the Logic of Indexicals. *Mind and Language*. 13. (3). 400-414.
- Predelli, S. 2002. Intentions, Indexicals, and Communication. *Analysis*. 62. (4). 310-316.
- Predelli, S. 2011. I am Still Not Here Now. *Erkenntnis*. 74. 289-303.
- Recanati, F. 2004. *Literal Meaning*. Cambridge: Cambridge University Press.
- Romdenh-Romluc, K. 2002. Now the French are Invading England. *Analysis*. 61. (1). 34-41
- Romdenh-Romluc, K. 2006. 'I'. *Philosophical Studies*. 128. 257-283.
- Rose, D., Schaffer, J. 2013. Knowledge Entails Dispositional Belief. *Philosophical Studies*. 166. 19-50.
- Saul, J. 2012. *Lying, Misleading, and What is Said*. Oxford University Press.
- Sidelle, A. 1991. The answering machine paradox. *Canadian Journal of Philosophy* 21. 525-539.
- Siegel, S. 2012. Cognitive Penetrability and Perceptual Justification. *Nous*. 42 (2). 201-222.
- Siegel, S. 2013. The Epistemic Impact of Etiology of Experience. *Philosophical Studies*. 162. 697-722.
- Sperber, D. and Wilson, D. 1986. *Relevance: Communication and Cognition*. Oxford: Blackwell; Cambridge, MA: Harvard University Press.
- Stanley, J. and Szabó, Z. 2000. On Quantifier Domain Restriction. *Mind and Language*. 15. (2):

219-261.

Stokke, A. 2010. Intention-Sensitive Semantics. *Synthese*. 175. 383-404.

Williamson, T. 1997. "Replies to Commentators." *Philosophy and Phenomenological Research*. 57: 945–53.