No context, no content, no problem*

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Abstract

Recently, philosophers have offered compelling reasons to think that demonstratives are best represented as variables, sensitive not to the context of utterance, but to a variable assignment. Variablists typically explain familiar intuitions about demonstratives—intuitions that suggest that what is said by way of a demonstrative sentence varies systematically over contexts—by claiming that contexts initialize a particular assignment of values to variables. I argue that we do not need to link context and the assignment parameter in this way, and that we would do better not to.

Keywords: Demonstratives, variablism, assertoric content, semantics, pragmatics

1 Introduction

If you are in the market for a view about the semantics of demonstratives, you will not find yourself wanting for options. For each of the remotely plausible ways of unpacking the idea that demonstratives are devices of direct reference, there are philosophers who have staked a claim.[1] Others have argued that demonstratives are really quantifier expressions.[2] There are hybrid views that straddle these two positions, according to which demonstratives involve both a quantificational and a directly-referential component.[3] Philosophers have given reasons for thinking of demonstratives as a special kind of Fregean definite

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[1]Compare Kaplan (1977), Braun (1996), Salmon (2002), and many others.

[2]Compare King (1999, 2001, 2008).

[3]Compare Lepore & Ludwig (2000).

description,[4] as devices that introduce discourse referents,[5] and as variables of the sort familiar from logic.[6]

Despite significant differences of detail, however, nearly all of these approaches involve some version of contextualism: the idea that the context in which a demonstrative sentence is uttered determines which proposition the sentence expresses. The literature on demonstratives has mostly developed around the question of how best to implement contextualism—e.g., on questions like which features of a context determine the propositional contribution of a demonstrative expression, or which propositional architecture is best suited for representing demonstrative sentences—as opposed to questions about the status of the thesis of context sensitivity per se.

Although my aim here will be to argue that this is a mistake, it is not hard to see why contextualist theories have had the reach that they do. In general, the data available to guide us in semantic theorizing are intuitions about whether certain sentences would be true or false in certain circumstances, or intuitions about what someone would be saying (or what she would be committed to, or what she would communicate, or whatever) if she were to utter a certain sentence in certain circumstances. Where demonstratives are concerned, those intuitions vary in a fairly consistent way across contexts; typically, if I utter a demonstrative while pointing at α, you will take me to have said something about α (said something the truth of which depends on how things are with α, etc.), and if I utter the demonstrative while pointing at β, you will take me to have said something about β.

On the earliest systematic treatments of demonstratives, these intuitive data were explained directly in the semantics. According to Kaplan (1977), for example, knowing the meaning of 'that' involves knowing a rule that takes a context of utterance and returns an object. On this view, as long as someone knows which context she is in, her semantic competence will underwrite her intuitions about demonstratives. Why do you take me to be talking about α when I point towards α and utter a demonstrative? Because you know that the semantic value of a demonstrative in a context is the object ostended by the speaker (say), that I am the speaker, and that I am pointing at α.

In recent years, the picture has become more complicated. When we look at the full range of ways in which demonstratives are used in natural language, a semantics that treats them as variables turns out to be more theoretically plausible than a semantics based on rules mapping contexts to objects. At the same time, increased attention to the divergent

[4]Compare Elbourne (2005)

[5]Compare Roberts (2002), Stojnić et al. (2013, 2017).

[6]Compare Kaplan (1989); Rabern (2012a,b, 2013), and others.

theoretical aims of a compositional semantic theory and a theory of assertion or communication has made philosophers less sanguine about assuming that the semantic value of an expression will be the sort of thing that is apt to serve as its propositional contribution, too. This means that a potential gap looms between the intuitive data and the theoretical postulates of the semantic theory. We have the sense that someone pointing at α while uttering a demonstrative has said something about α, but that fact is not captured by the semantics, which represents the demonstrative simply as a free variable.

With a bit of maneuvering, however, the contextualist can take complications like these on board and still preserve the essential outlines of her approach to the intuitive demonstrative data. Lewis (1980) showed how the proposition associated with a sentence in a context can be derived from a semantic value that is not itself directly sensitive to context, but to a set of more fine-grained parameters (that may themselves be initialized by the context). Rabern (2012a) applies Lewis-style machinery to demonstratives; if we endorse a principle linking variable assignments and contexts of utterance, we can bridge the gap between assignment sensitive semantic values and the apparently context sensitive contents that are at issue when demonstratives are used. On Rabern's view, the contexts in which it would be appropriate to use a demonstrative are precisely those contexts that initialize a particular assignment of values to variables.

This move away from a position on which contextualism is built into the lexical semantics of demonstrative expressions, towards a view on which context plays its role in what MacFarlane (2014) calls the 'post-semantics', is surely a step in the right direction. In this paper, however, I will argue that the move does not go quite far enough. A parametrized version of contextualism—i.e., a theory on which context wields its influence indirectly, by setting the value of some other parameter to which demonstratives are sensitive—allows us to give a treatment that is superior to the traditional alternative in terms of the compositional semantics, but it does nothing to address deeper issues raised by the thesis of contextualism itself.

The most striking of these is that four decades of work have not resulted in substantial convergence on a story about which features of a context determine the propositional contribution of a demonstrative. Moving context sensitivity from the semantics to the post-semantics simply moves the locus of this problem; a fully fleshed-out version of parametric contextualism will have to say not just that contexts initialize an assignment of values to variables, but *which* contexts initialize *which* assignments and *why*. Answering these questions will involve facing a host of familiar bogeymen. Should we say that it is a speaker's referential intention that determines the variable assignment? Or facts about the speaker's ostensive gestures? If the existing literature is any guide, some people will want to say that the variable assignment is determined just in case the speaker and hearer

in fact attend to the same object, and others will prefer a view based on partially-idealized versions of one agent or the other.

Instead of revisiting the debates to which questions like these gave rise, I will argue that we would do better to see the variablist semantics for demonstratives as offering a way to avoid taking on a commitment to contextualism in the first place. The basic thrust of my argument will be simple. I will claim that in many contexts, no single proposition is apt to play all of the explanatory roles we intuitively expect 'the proposition expressed' to play; in some cases our intuitions track the proposition the speaker intended, in some cases the proposition listeners picked up on, in some cases we care about both, and in other cases other things altogether. We can avoid having to say that one of these senses of 'express' is more fundamental that the rest if we embrace a form of pluralism about content, i.e., if we associate a demonstrative sentence in a context not with a single proposition, but with multiple propositions.

The idea that a single utterance might express a range of different propositions is, of course, not a new one.[7] Cappelen & Lepore (2005), Egan et al. (2005), and Egan (2009), for example, all claim that one utterance can serve as the realizer of multiple assertions, each involving a potentially different content. On an alternative endorsed by Cappelen (2008) and criticized by Egan (2009) and MacFarlane (2014), the content associated with an assertion is determined not just with regard to the context of utterance, but the context of interpretation, as well. I imagine that a variety of broadly pluralistic views could be developed after the fashion of Lasersohn (1999)'s 'pragmatic halos', or by treating discourse involving demonstratives as though it involved metalinguistic negotiation along the lines of Barker (2002, 2013) and Plunkett (2015). An anonymous referee has pointed out that the arguments I give here might be taken to show that demonstratives should be treated as quasi-indexicals, in the sense of Khoo (2018).

Although I am tempted by the idea of bona fide relativism about demonstrative contents, I will not attempt here to argue specifically for one or another of these or other possible non-contextualist positions, or even to distinguish between them in any detail. For now, my aim will be the more general aim of drawing out a pair of points that have not received the attention they deserve in this literature or in the literature on demonstratives. First, that the intuitive data about demonstratives can be explained without claiming that there is a particular canonical content associated with a demonstrative sentence in a context. And second, that the (independently motivated) variablist semantics for demonstratives provides a natural way of implementing a pluralist view about content—all that

[7] Indeed, as an anonymous referee points out, even Lewis (1980) can, in a sense, be taken to endorse a form of pluralism, since he distinguishes 'horizontal' and 'diagonal' propositions (pg. 94).

is required to make pluralism an open possibility is to reject the idea that contexts of utterance initialize a certain assignment of values to variables.[8]

For those who like to keep a map in mind, in section 2, I offer a quick review of the classic approach to demonstratives, on which contextualism is built into in the lexical semantics. In section 3, I present two arguments that favor a semantics that treats demonstratives as variables; one involves binding and anaphora, and one involves considerations of theoretical parsimony. In section 4, I show how philosophers have transposed classical contextualist views into a variablist key by claiming that context initializes a certain variable assignment, thus indirectly serving to determine the referents of demonstratives. In section 5, I argue that the parametrized version of contextualism is wrong, since it requires a problematic commitment to the idea that a single proposition should count as the proposition expressed by a demonstrative sentence in a context, and in section 6, I sketch what I consider a preferable position that involves pluralism about demonstrative contents. In section 7, I close with discussion of a pair of loose ends.

While I focus my attention here entirely on data involving singular simple demonstratives, I intend the present work to serve as a case study that illustrates a more general phenomenon.[9] If the conclusions I reach about demonstratives are warranted, similar arguments might be constructed against parametrized forms of contextualism in other domains.[10]

2 Lexical semantic contextualism

Although the literature on demonstratives is filled with twists and turns, complexities and counterexamples, sentences like the following exemplify the basic explanatory challenge demonstratives pose:

[8] An anonymous referee observes that one could endorse pluralism without rejecting the idea that contexts initialize assignments of values to variables by taking the context to supply not one, but a cluster of variable assignments. Although I would prefer the resulting position to the kind of monism that is standard today, I think there are reasons to prefer a cleaner break. I offer some discussion of those reasons in section 7.1.

[9] I offer an extensive analysis of the particular issues raised by complex demonstratives in Nowak (2014) and Nowak (2015). Most of those issues are orthogonal to the questions about context that are at issue here, so I set them aside. For readers worried about how to fit a variablist semantics for demonstrative pronouns together with data that suggest demonstrative determiners involve a quantificational element, compare e.g., Lepore & Ludwig (2000) and Elbourne (2005).

[10] Compare, e.g. Yalcin (2011) on epistemic modals and Khoo (2018) on gradable adjectives.

(1) That is Mount Shasta.

If we are standing on some high ground in northern California on a clear day and I utter (1) while pointing at Mount Shasta, you will take me to have said something (true) about Shasta. If I utter the sentence while pointing at Lassen Peak, you will take me to have said something (false) about Lassen.[11] In other words, ordinary speaker intuitions about demonstrative sentences appear to vary systematically over hypothetical contexts of utterance.

Kaplan (1977) described a piece of theoretical machinery that facilitates a certain straightforward explanation of these intuitions. On Kaplan's view, the semantic value of a demonstrative in a context is simply the object ostended by the speaker of the context. He gets that result by applying an operator—*dthat*—to a constituent with the semantic type of a definite description:

(2) $[\![\textbf{that}]\!]^{c,w}$
$=[\![\textbf{dthat (the object ostended by the speaker of } \boldsymbol{c}\textbf{)}]\!]^{c,w}$
$=[\![\textbf{the object ostended by the speaker of } \boldsymbol{c}]\!]^{c,w_c}$

In Kaplan's narrative remarks, he says the purpose of *dthat* is to take a singular term and turn it into a directly referential expression. When the operator is applied to the definite description 'the object ostended by the speaker', for example, the result is a directly referential expression whose content is whichever object was ostended by the speaker of the context in which the demonstrative was used. In the formalism, this effect is captured by treating *dthat* as a rigidifying operator; it sets the value of the world parameter with regard to which the expressions it operates on are evaluated.[12]

Over the years, an increasing focus on natural language semantics per se—as opposed to the logical properties of demonstratives—has led to a consolidation of the work done by Kaplan's *dthat* operator and the definite description it applies to. So, instead of (2), nowadays we are more likely to see formulations like:

(3) $[\![\textbf{that}]\!]^{c,w}$ = the object ostended by the speaker of c

At the same time, most philosophers—including a later time-slice of Kaplan himself (1989)—have come to think of a speaker's referential intentions as more important than her

[11] This might involve a communicated content, or truth conditions, or the undertaking of a certain sort of commitment. For now, let us agree to ignore these subtleties.

[12] Read (2): 'the extension of "that" with regard to a context c and any world w is just the extension of "the object ostended by the speaker" when evaluated at the world of c.'

gestures. So the description used to fix the referent of the demonstrative is commonly amended along the following lines:

(4) $[\![\textbf{that}]\!]^{c,w}$ = the object intended by the speaker of c

For present purposes, the differences between these and any of the many increasingly-sophisticated permutations that have appeared in the literature are less important than the basic shape of the proposal. If we think that demonstrative expressions lexically encode a rule that maps a context to an extension, we make a simple explanation of the intuitive data available. If I know this rule—know what 'that' means, in the sense that any English speaker would—and you utter (1) in a context in which I take you to be pointing at Mount Shasta, then I will treat Shasta as the extension of your demonstrative.

On reasonable assumptions about semantic composition and about the contributions of predicates, this means the semantic value of a demonstrative sentence in a context will be a proposition, i.e., something that is or that determines a mapping from worlds to truth values. Semantic contextualism, in other words, provides a direct explanation of familiar intuitions about the truth conditions of demonstrative sentences, about what such sentences say in a context, and so on.

3 Problems for lexical semantic contextualism

Since lexical semantic contextualism appears to make the right predictions about the most obvious data involving demonstratives, and since it does so in a way that many philosophers have found intuitively appealing, the position is a natural starting point for inquiry. As it turns out, however, lexical semantic contextualism faces substantial difficulties when the full range of considerations that bear on the question of the compositional semantics of demonstrative expressions is taken into account. I this section, I present two arguments against the view, one that has been made in several places, and one that is new, as far as I know.[13]

[13] An anonymous referee points out that Predelli (2012, 2013) offers still another class of argument against lexical semantic contextualism. On Predelli's view, theories that build substantive reference-fixing constraints into the lexical entry for the demonstrative determiner make bad predictions about the entailments demonstrative sentences generate.

3.1 Parity, binding, and anaphora

Binding arguments have frequently been used in philosophy to show that some construction or other must involve variables at some level of representation.[14] While the fact that a certain expression type appears to admit bound readings is not incontrovertible proof that the expression involves a variable element,[15] where demonstratives are concerned, the case is strong.

The apparent similarities between demonstratives and pronouns pose a serious problem for the lexical contextualist semantics for demonstratives. Like demonstratives, pronouns are often used to pick out an object that is salient in the context of utterance. Consider the following sentence uttered by someone pointing at a particular man:[16]

(5) He looks sleepy.

Indeed, Kaplan's original treatment of demonstratives was meant to cover such uses of pronouns, too; Kaplan assumed that 'he' picks out the biologically male animate object ostended by the speaker of the context, or intended by the speaker of the context, or whatever.

Lexical semantic contextualism about pronouns, however, is undermined by the fact that what appear to be the very same lexical items that are sometimes interpreted referentially are also sometimes interpreted as bound variables:

(6) Every man at the debate$_i$ worried that he$_i$ looked low-energy.

Kaplan (1977) assumes that this fact can be handled by claiming that the two readings are produced by two fundamentally different semantic objects. On this story, the referential reading would involve a lexical item that is semantically sensitive to the context of utterance (presumably along the lines proposed in the previous section), while the bound reading would involve a lexical item with the semantics of a variable.

There is a simple and powerful argument against this kind of treatment, however. In a wide variety of unrelated languages, what appear on the surface to be the same pronouns admit both referential and bound readings. This makes a uniform semantics for pronouns much more attractive than an ambiguity theory. Since it is not plausible to treat the covarying

[14] Stanley (2000), Stanley & Szabó (2000), and Stanley (2002) offer prominent examples of the strategy.

[15] Compare, e.g., Rothschild & Segal (2009).

[16] I use a gendered pronoun here to defuse any complications involving phi-features; some readers have complained about examples of binding involving the gender-neutral 'they'.

readings as the result of a systematic permutation of the context with regard to which the pronoun is interpreted,[17] most theorists have concluded that pronouns, in all their guises, are best represented semantically as variables.[18] The difference between the two readings is typically taken to be due to differences in the linguistic environments in which the pronoun can occur (i.e., whether it occurs free, or under the scope of an assignment-shifting operator).

This fact about pronouns entails a dilemma for the person who wants to defend a lexical contextualist semantics for demonstratives. If she maintains that the referential and bound readings for pronouns are produced by the same semantic machinery, she must claim that demonstratives are fundamentally semantically different from referential pronouns. If she wants to offer a uniform treatment of demonstratives and referential pronouns along the contextualist lines we saw in the previous section, she must deny that the referential and bound variable readings of pronouns involve the same semantic elements.

Instead of impaling ourselves on one of these horns, we can avoid the dilemma by treating demonstratives using the same machinery that appears to be required to handle pronouns: the machinery of variables and assignments. We can say, that is, that like pronouns, demonstratives should be semantically represented as variables, and interpreted with regard to an assignment function.

At first glance, however, such a proposal would appear to run into a substantial problem: simple demonstratives resist binding of the sort we commonly see with pronouns. So, for example, while (7) is felicitous, (8) is not:[19]

(7) Every IKEA kit$_i$ comes with instructions for assembling it$_i$.

(8) #Every IKEA kit$_i$ comes with instructions for assembling that$_i$.

If the demonstrative from (8) were a variable, other things being equal, we would expect it to be bindable by the higher quantifier expression 'every IKEA kit', and thus to result in a reading on which kits and instruction sets covary. In fact, we find no such reading.

Nevertheless, it is not obvious that this is a fatal counterexample to the variablist semantics for 'that'. For one thing, it may be possible to explain the missing bound readings

[17] That is, since it is not plausible to treat the semantic contextualist's lexical entry as basic, while analyzing the bound readings as though they involved monstrous shifting of the context of evaluation. See del Prete & Zucchi (2017) for discussion.

[18] See Heim & Kratzer (1998) for the textbook treatment.

[19] This pair of examples and the related discussion are due to an anonymous referee.

by claiming that 'that' and 'it' are in complementary distribution, at least with regard to examples like (7) and (8). We know from classic work on binding theory that pronominal elements are highly sensitive to the syntactic and semantic relationships they stand in to potential antecedents: some elements require that they be locally bound, others permit local binding, and others still rule binding out.[20] Given this general fact, it does not seem implausible to think that 'it' and 'that' might be distinguished as the bound and free versions of the same basic element.

Further support for a hypothesis involving lexical competition can be had from the fact that as strongly as 'that' resists binding, 'it' resists free uses. Imagine that we are standing at a scenic overlook. Gesturing in the direction of some striking object, I might felicitously ask:[21]

(9) Do you see that?

If, on the other hand, I were to say:

(10) #Do you see it?

the result would be strongly marked. The upshot is that 'missing' bound readings for simple demonstratives do not amount to a conclusive reason for rejecting a variablist semantics.

As an alternative argumentative strategy, or perhaps together with a story about lexical competition, the variablist might point to the fact that in at least some cases, simple demonstratives *can* apparently be bound by a c-commanding antecedent. An anonymous referee points out that Elbourne (2008) offers the following data to make this point:

(11) Mary talked to no senator without declaring afterwards that that was the one who would cosponsor her bill.

(12) Mary talked to no senator without thinking at the time that this was the one who would cosponsor her bill.

At the very least, these data suggest that the question of syntactic binding is more complicated than it at first appears; while I do not take myself to have settled the case here, on

[20] Compare Reinhart (1976), Chomsky (1981), Reinhart & Reuland (1993), and many others.

[21] Compare Barbara Partee's (unpublished) case of the missing marble, which contrasts the felicitous *One of the ten marbles is not in the bag. It is probably under the sofa* with the infelicitous *Nine of the ten marbles are in the bag. ??It is probably under the sofa.*

balance, it appears that the variablist has a much better prospect of explaining the facts than the lexical contextualist does.

This point is substantially reinforced when we turn our attention to data like the following:

(13) If you have a pencil, bring that with you to the test.[22]

Explaining the interpretations produced by pseudo-bound or donkey anaphoric constituents like 'that' as it appears in (13) is a challenge for everyone, and I will not defend an analysis of the phenomenon here. Once again, the key point for us is that data like (13) put the lexical contextualist in an especially awkward position. If 'that', with regard to a context, picks out the unique object the speaker of the context intends to refer to, the only clear candidate strategies for explaining the natural interpretation of (13) will end up depending on the claim that the antecedent introduces monstrous context-shifting, or on the attribution of referential intentions to the speaker that are much more complicated than the garden variety.[23] I suspect few lexical contextualists will be tempted by either option.

If we say 'that' introduces a variable, on the other hand, the task of explaining data like (13) seems tractable. All we need is a story about how the variable assignment might be affected non-locally, a story that will presumably be similar to the one we use to explain the following structurally-similar variation on (13) formed with a pronoun:

(14) If you know a guy who smokes, you should tell him to quit.

In summary, then, the balance of evidence from binding appears to suggest a variablist treatment for demonstratives. The variablist treatment allows us to give a unified theory

[22]Thanks to Seth Yalcin for this example. If the imperative mood seems to introduce a complication, consider the alternative (overheard): *If you have a roller bag, you will want to put that in the overhead locker with the feet pointed out.* Although King (2001) made it clear that complex demonstratives allow 'quantifying-in', i.e., the binding of pronominal elements from which they are formed, examples in which simple demonstratives produce bound or pseudo-bound readings on their own have not often been the focus of much philosophical attention. Among philosophers who have mentioned the phenomenon, most appear to think that it is not attested. Borg (2000), pg. 248, for example, claims that simple demonstratives cannot be used to produce donkey anaphoric readings, pointing out the infelicity of the string *I bought a donkey and had that vaccinated.*

[23]While presenting this material at conferences, I have several times encountered the suggestion that the right readings for sentences like (13) could be derived by claiming that the speakers have intentions that involve pairs of all the possible addressees and (all of?) their (possible?) pencils. This does not seem like a promising strategy.

of simple demonstratives and the other expressions that they appear most similar to, i.e., pronouns. Although simple demonstratives do not always allow syntactic binding, the cases in which they do not appear to admit of plausible explanation, and the cases in which they do are naturally explicable if demonstratives are variables. Finally, variablism makes the problem of donkey anaphoric readings of simple demonstratives seem tractable, while the contextualist theory would have substantial difficulties explaining the data.

3.2 Parsimony

Arguments from binding are the type of argument most frequently used to challenge lexical semantic contextualism. Although I take those arguments to be successful, in my view, an even more powerful class of considerations that tell against the position in fact involve a failure of parsimony. In a nutshell, the problem is that on the lexical contextualist view, instructions for finding the referent of a demonstrative are encoded in its meaning. But those instructions are instructions no reasonable interpreter would need: the relevant constraints fall naturally out of the structure of the interpretive task people are faced with when they encounter demonstratives. So, lexicalizing those constraints amounts to unnecessary double-counting.

3.2.1 An argument by comparison with lexical ambiguity

One way to bring this point out is to consider an analogy with the phenomenon of lexical ambiguity.[24] Suppose you overhear an utterance of the following sentence:

(15) My friend Janna has been at the bank all day.

Which truth conditions should you associate with the sentence in this scenario? That is, which proposition should you take to have been asserted? The answer here will clearly depend on a number of factors. Your job as an interpreter is to weigh them up and come to a decision about which hypothesis you think makes the most sense. Your degree of familiarity with the parties to the conversation and of the particular course it has taken so far will be the most significant considerations. If you know the speaker, for example, and know someone called 'Janna', and have reason to believe that the speaker would be saying something about her, that information will point you in a certain direction. If you know that Janna loves to fish, that will increase the probability of your taking 'bank' to have

[24] See Neale (2005) for related discussion.

been used to say something about a place by the water. If, however, (15) was immediately preceded by a complaint about poor customer service in the retail sub-sector of the financial services industry, you may decide to approach the ambiguity differently.

Of course, your semantic knowledge—your knowledge of the meaning (or meanings) of the word (or words) 'bank'—plays an important role in setting up the decision. If 'bank' meant what 'restaurant' means, you would not be in the position of choosing between the two hypotheses that you in fact must choose between. It would be a mistake, however, to get carried away here and end up packing more into the semantics than is really necessary.

Here is a simple and plausible story that we could tell about 'bank': there are really two distinct lexical items—$bank_1$ and $bank_2$—one of which denotes the property of being a certain kind of financial institution, and one the property of being a certain kind of place by a river.[25] When faced with a sentence involving the phonetic sequence we render as 'bank', interpreters rely on their general pragmatic competence to choose the lexical item that would make the most sense in the context as they take it to be.[26]

Here is a complicated and implausible story we could tell about 'bank': there is just one context-sensitive expression in the lexicon, that is associated with two distinct senses. It is part of the lexical entry for that item that it picks out the side of a river, if that is what is intended by the speaker of the context, or a financial institution, if that is what is intended by the speaker of the context. Unlike either of the preceding analyses, a formal semantics for this element would invoke the context parameter. Call the version of English that invokes context-sensitivity in the lexical entry for 'bank' English′.

If English′ is a conceptual possibility, English″ should be, too. On English″, there are two lexical items, $bank_1$ and $bank_2$, both of which are context-sensitive. $Bank_1$ picks out the property of being a certain kind of financial institution if that is what was intended by the speaker of the context, while $bank_2$ picks out the property of being a certain kind of place by a river if that was what was intended by the speaker of the context.[27]

We can generate variations on English′ and English″ by replacing 'intended by the speaker of the context' with 'would be the choice a typical speaker would make in the given context', and so on, along all of the various reference-resolving lines that have been proposed

[25]Familiar support for the idea of what we might call a bona fide lexical ambiguity can be found in the fact that in other languages, $bank_1$ and $bank_2$ are not homophonous. For present purposes, however, nothing hangs on the question of whether this is in fact the best approach to lexical ambiguity.

[26]For related discussion, compare the case of the banker and the haberdasher from Kaplan (1970).

[27]The point of building this context-sensitivity into the lexical entries for $bank_1$ and $bank_2$, of course, is precisely that there is nothing to be gained by so doing.

in the literature on demonstratives. Following Kripke (1977), we can think of each of these possibilities as candidate hypotheses about the language we in fact speak; if we encountered someone speaking English′ or one of the permutations thereof, we would have no trouble communicating.

Should we take this to show that 'bank' is context-sensitive? Is English′, or any of its derivatives, actually the language we speak? Surely not! The constraints that are lexicalized in English′ are constraints that we get for free by basic pragmatic reasoning. By encoding those constraints in the semantics, we exchange a simpler theory for a more complicated one that gains us no explanatory power.

Parallel considerations apply in the case of demonstratives. Although it is not completely clear whether the view described in Kaplan (1977) would make an appeal to the speaker's gestures a part of the lexical meaning of 'that' or not—not least because it is not clear how exactly Kaplan's remarks about *dthat* should be extended to cover natural language—many philosophers working in a broadly Kaplanian tradition appear to endorse the idea that such appeals are a part of semantics proper. Consider Neale (1993: 108):

> So although there are counterfactual considerations that preclude treating 'that' as equivalent to the ordinary definite description 'the thing I am demonstrating', it is not wholly unreasonable to suppose that something like this description captures its character.

Compare Borg (2000: 241-242):

> In this way the character of a complex demonstrative would be thought of as embodying the complex meaning rule: and object, α, is the referent of an utterance of "that *F*" iff: i. α is the object being demonstrated by the speaker and ii. α satisfies *F*.

Salmon (2002: 524) writes:

> With respect to any context *c*, the (English) content of an occurrence of the complex demonstrative 'that'$^\frown$NP is the demonstratum of the demonstration assigned to that occurrence in *c*, provided: (i) there is such a demonstratum; and (ii) NP applies to it with respect to *c*. Otherwise 'that'$^\frown$NP has no content.

And Braun (2008: 63) holds that:

> The linguistic meaning of 'that *N*' is a (partial) function from contexts to semantic contents such that, for any context *c*, the value of the function is the demonstratum of *c*, if the demonstratum satisfies (in the world of *c*) the semantic content of *N* in *c*.

As I understand them, each of these theorists holds in one form or another that appeals to things like the speaker's intentions, her gestures, the objects to which she is visually attending, etc., deserve to be codified as part of the lexical entry for 'that'.[28] This codification essentially amounts to giving a treatment of 'that' which is like the treatment we gave above for the English′ version of 'bank'. If we want people to take a speaker to have said something about a certain object, there is no reason to stipulate that the demonstrative pick out the object intended by the speaker of the context, since that is precisely the outcome we would predict if the demonstrative encoded no more information lexically than that it should be a candidate referring expression, i.e., an expression with the semantic type $\langle e \rangle$.

To see this, imagine another hypothetical variation on English, English*, for which we stipulate that demonstratives work like free variables, i.e., that they encode no substantial information lexically, beyond the fact that, if evaluated with regard to an appropriate variable assignment, they pick out some object from the domain. How would we expect people to use an expression like this? If I were to utter such an expression in a normal communicative context—that is, a context in which you hear me, and want to know what I am asserting, and know that what my expression contributes to the proposition I express is an object, if it is anything at all (or: know that the extension of my expression, if defined, is an object)—the nature of the interpretive task you face would impose precisely the constraints that the classical semanticist would codify by means of the rules she associates with demonstratives. But this suggests that English* is simply English.

If I am the one speaking, then of course you will attempt to discern what I am trying to say, as opposed to some third party. If you know that I am saying something about an individual, then of course you will attempt to discern which individual that is. Providing you with instructions that tell you to proceed by applying the description 'the individual intended by the speaker' to whichever context you take to be relevant is providing you no substantive guidance at all. So, there is no point in building that description—or any other—into the lexical entry for 'that'.

There is a coda to this argument: if there *were* lexicalized descriptions associated with demonstratives, we would expect them to vary across languages. But they do not appear to. To the best of my knowledge, while there are superficial variations across languages that concern whether demonstratives may be used to refer to animate objects or not, or that mark various scales of nearness and distance, there are no demonstratives that refer

[28] It is important to note that Salmon's and Braun's 'demonstrata' are not necessarily the objects ostended by the speaker of the context. 'Demonstration', in each of their theories, is meant as a technical term that encompasses a wide variety of ways in which an object might be 'made available' for demonstrative reference, including demonstrations, striking perceptual salience, and so on.

to the object being focused on by the listener, say, or the object that was the center of attention for the person who just walked by.[29]

3.2.2 Two arguments based on empirical work

Empirical work on language acquisition provides further support for the idea that lexicalized instructions for finding the referent of a demonstrative would be superfluous.[30] In an influential paper aimed at explaining the preponderance of nouns in children's lexical inventories, Gillette et al. (1999), describe what has come to be known as the 'human simulation paradigm'. In its original instance, that paradigm involved experiments in which college-aged participants were asked to watch video of parents playing with and speaking to their toddlers.[31] Each trial involved a target word, which was replaced by a beep or by a nonsense 'word' in the audio source. Participants were asked to identify the missing item, which varied across lexical category, relative frequency, and degree of concreteness or 'imageability', among other things.

Repeated experiments show that in the case of nominal expressions—especially concrete nominals, which Gillette et al. call 'highly imageable targets'—speakers are extremely good at filling in the blanks. The authors' explanation of this fact is that speakers are able to identify which objects are at issue in a given context without the benefit of any of the semantic clues that would be provided by the missing word. People do not need to hear the word 'lion', that is, in order to recognize that a certain conversation revolves around a lion, and once they see that it does, it is a short step to filling in the missing word.

Gillette et al. take their results to support a model of language acquisition on which children learn what nouns mean by first identifying the contextually-present objects that are the topics of a particular sentence or discourse, and then forming hypotheses about which words correspond to those objects and about which of the objects' features are the semantically significant ones. Once a suitably dense network of nouns has been established in this way, the relationships between them can be filled in with verbs and expressions from other categories.[32]

[29] See page 36 for further discussion.

[30] Thanks to Daniel Rothschild for this suggestion and for discussion of it.

[31] Piccin & Waxman (2007) and others have reported results similar to Gillette et al.'s, using variations on the original experiment on which the participants were children (for Piccin and Waxman's case, 7-year olds). In any event, the fact that adult speakers have access to more sophisticated recovery strategies than children do does not undermine the key point, which is that nouns are easier to recover than verbs and expressions of other categories.

[32] The primary aim of Gillette et al. (1999) and much of Gleitman's other work is to challenge the idea

Suppose Gleitman et al. are right, and that the first step in acquiring a noun—and thereby, in acquiring language at all—is figuring out which objects people are talking about in a context.[33] Of course, no one will want to say that toddlers determine which objects their parents are talking about by engaging in full-blown second-order Gricean reasoning. Still, even if the vocabulary of referential intentions is out of place, the kinds of skills the child would rely on are precisely the skills that would be required to determine the referent of a demonstrative using the instructions the lexical contextualist builds into the architecture for demonstratives: the key to both enterprises will be the interpreter's ability to track a speaker's gestures, the direction of her gaze, and so on. But if the model of language learning described by Gillette et al. is correct, those skills are likely to be perfectly general ones, skills that are online in the background in every linguistic interaction anyway, and indeed, presumably in any interaction with other agents. As such, codifying them in the lexical semantics for a particular expression type would be redundant.

Even if Gillette at al. are wrong about language acquisition, however, their experiments are still relevant for us. Consider an example that replicates the authors' paradigm. Imagine that we are standing on Sargent's Ridge on Mount Shasta at 12,000' and the wind is gusting at 70 miles per hour. I say, without pointing at a prominent rock feature that has recently become visible in our direction of travel:

(16) That's the Thumb—the hard part is almost over, but the weather looks bad. We should probably head down.

Because of the wind you hear only:

(17) (unintelligible)'s the Thumb—the hard part is almost over, but the weather looks bad. We should probably head down.

In cases like this one—I imagine nearly everyone will agree—the fact that you cannot hear the demonstrative has no effect on your ability to understand what I wanted to get across. One way of explaining this would be to say that you recognize that a word is missing, determine that it must have been 'that' (by relying on what you know about syntax,

that it is children's underdeveloped conceptual repertoire that results in their comparatively impoverished verb inventory. On their view, this is due instead to the fact that is that verbs and expressions from other lexical categories require a higher degree of support from a background linguistic network anchored in nouns, which are easier to acquire directly from the extra-linguistic context.

[33]For a sustained discussion of the issues involved in this picture of language acquisition, compare Bloom (2000). I assume that there are ways of cashing out 'figuring out which objects…' that do not involve metacognition.

frequency, prosody, etc.), consult the lexicon, see that 'that' picks out the object intended by the speaker of the context, and then arrive at a hypothesized interpretation.

The Gillette et al. experiments, however, support our common sense intuitions, which put the key step in the explanation the other way around. If the mechanism they propose is correct, you see that a nominal item is missing, and you see, from the extra-linguistic context, which object is at issue. If you are asked which word I must have uttered, you will likely be able to identify 'that' correctly, but the direction of the reconstructed inference will be from the object to the missing word, and not vice-versa.

Since access to the lexical semantic properties of 'that' is not required for you to identify the object that you would associate with the expression had you heard it correctly, it is hard to see what work could be left for those properties to play, even in normal circumstances. Put differently, if the missing word from the Gillette et al. experiments were a demonstrative, the process interpreters would use to resolve its reference would be exactly the same as the process they would use if the demonstrative were pronounced and had the lexical semantics classical theories attribute it. But this is a reason to doubt that there is any genuine reference-determining work for the lexical semantics to do.

Of course, the fact that our general interpretive ability allows us to successfully recover reference in the absence of semantic cues does not imply that there is no substantial information encoded in the semantics for some expression. You may rely on the same resources to determine that 'tiger' is the word missing in one context as you to do determine that 'bear' is missing in another, but this does not mean that we should say 'tiger' and 'bear' mean the same thing.[34]

Where common nouns are concerned, it is easy to halt this slide, since there is more to understanding a common noun than knowing which object it picks out on a given occasion. It is an important part of knowing the meaning of 'tiger' that you understand which properties are shared by the various objects the word might be used to talk about; we can see this by noticing that these are the properties that figure in predicative uses of the word. In the case of demonstrative expressions, however, the standard lexical contextualist line has always been that the expression contributes nothing but an object to the determination of the truth conditions of the sentences in which it appears. So, unlike in the case of a common noun, the fact that it makes no difference whether an interpreter hears 'that' or not suggests the word has no genuine lexical semantic contribution to make.[35]

[34]Thanks are due to an anonymous referee for urging clarity about this point.

[35]There is a caveat to be entered here regarding the difference between e.g. 'this' and 'that', but this caveat could be implemented without substantially changing the story offered here. See 7.2 for discussion.

In summary, the empirical research discussed here provides two reasons to think that lexical semantic contextualism is not a parsimonious position. First, it is plausible that the instructions for resolving reference that the lexical contextualist builds into the semantics for demonstratives are skills that underlie language acquisition. If this is right, we should not expect to find those skills encoded in the lexical entry for any particular expression, since they will presumably be globally accessible. Second, even if language acquisition does not work the way the Gillette et al. think it does, their experiments provide us a reason to doubt that hearers would have to access substantive constraints from the lexicon in order to solve the kind of reference resolution task that demonstratives pose. The only information we need to solve the question of reference is information to the effect that a certain constituent is a referential one to begin with. That information—and nothing more—is precisely what the variablist semantic treatment provides for demonstratives.

4 Parametric contextualism

I take the arguments from the previous section to establish two things. First, treating demonstratives as variables at the level of the compositional semantics would allow us to tell the best story about data involving binding. Second, there is no compelling reason to treat demonstratives as though they encode substantive reference-fixing rules of the type that have typically been supposed. Together, I take these points to show that we should treat demonstratives as variables, their extensions fixed not by the context of utterance, but by an assignment function.[36] This leaves us with a question: how do we explain the intuitive data we started with? How, that is, do we explain the fact that ordinary speaker intuitions about the truth conditions of demonstrative sentences appear to depend on the contexts in which those sentences are uttered?

Lewis (1980) offered a way of answering questions like this one. Lewis took the fact that natural languages make use of operators like 'forevermore' and 'necessarily' to show that semantic values must be relative to parameters more fine-grained than context.

> Under one disambiguation, 'If someone is speaking here, then I exist.' is true at any context whatever. No shift from one context to another can make it false. But a time shift, holding other features fixed, can make it false; that is why 'Forevermore, if someone is speaking here, then I will exist.' is false

[36] Thanks to an anonymous referee for pointing out that the parsimony argument by itself does not suffice to establish variablism—other 'minimalist' semantic treatments might be compatible with that argument.

> in the original context. Likewise a world shift can make it false; that is why 'Necessarily, if someone is speaking here then I must exist.' is false in the original context. The shifts that make the sentence false must not be shifts from one context to another. (Lewis 1980: 86)

In Lewis' terms, we need index sensitivity in addition to context sensitivity because there are natural language operators that cannot reasonably be treated as affecting permutations of the context of utterance. But Lewis accepted that a semantic theory should have an important role to play in explaining how people are able to communicate with one another. So, he wanted to show how speakers could use index sensitive semantic values to express propositions—i.e,. something that might represent the sort of information that is at stake in a conversation. Here is what he proposed:

> [We do not] need to equate the propositional content and the semantic value of a sentence in a context. It is enough that the assignment of semantic values should somehow determine the assignment of propositional content. And it does…we have the relation: sentence *s* is true at context *c* at index *i*. From that we can define the propositional content of sentence *s* in context *c* as that proposition that is true at world *w* iff *s* is true at *c* at the index i_c^w that results if we take the index i_c of the context c and shift its world coordinate to w. (Lewis 1980: 94)

The notion that does the crucial work here is the notion of the index of a context. Contexts, for Lewis, are triples formed from a time, a place, and a possible world. Indices, he says, are n-tuples formed from features of contexts. While not every index is the index of a context—we can construct an index by mashing together arbitrary features drawn from different contexts—every context is such that an index can be constructed from the time, place, and possible world that make it up.

Consider the sentence:

(18) Socrates is currently sitting.

Intuitively, when uttered on June 14, 2016, sentence (18) conveys the information that Socrates is sitting on June 14, 2016. Lewis' idea that contexts determine indices allows us to explain that intuition without having to say that the semantic value of the sentence in that context is the proposition that Socrates is sitting on June 14, 2016. In Lewis' terms, the context of utterance 'initializes' the index with regard to which a sentence is interpreted. Since time is one of the parameters of the index, Lewis can say the semantic value of the sentence in the context is a function from times (or richer indices) to propositions.

Many people think that in addition to Lewis' world, time, and location, contexts determine an assignment of values to variables.[37] Heim & Kratzer (1998: 243), for example, use the variable assignment to model the kinds of facts classical contextualists aim to capture in their lexical semantics:

> Let us think of assignments as representing the contribution of the utterance situation. The physical and psychological circumstances that prevail when an LF is processed will (if the utterance is felicitous) determine an assignment to all the free variables occurring in the LF.

One time-slice of Kaplan (1989: 591) says:

> Context is a package of whatever parameters are needed to determine the referent, and thus the content, of the directly referential expressions of the language…Taking context in this more abstract, formal way, as providing the parameters needed to generate content, it is natural to treat the assignment of values to free occurrences of variables as simply one more aspect of context.

And Cumming (2008: 540-541) writes:

> It is standard—since Kaplan (1989: 541-553)—for a context of utterance c to provide a possible world, c_w. I further suppose that it provides a variable assignment, c_g. Kaplan (1989: 591), building on the work of Montague (1974), suggests this refinement himself to handle deictic pronouns (which are semantically represented as free variables). The variable assignment of the context, on Kaplan's account, models deictic reference: it is a function from deictic uses of pronouns to demonstrated objects (the referents of those uses).

Rabern (2012a) shows how we can explain the intuitive data about demonstratives by combining a variablist semantics for demonstratives with the claim that variable assignments are one of the parameters that is determined by context. The result is a parametrized form of contextualism, on which the semantic value of a demonstrative sentence in a context is assignment sensitive, and thus not the sort of thing ordinary speakers have intuitions about. The proposition expressed by a demonstrative sentence in a context, however, will be just what the classical contextualist would predict—the proposition you get when you evaluate the demonstrative sentence in question with regard to the variable assignment of the context.

So, for example, if you utter:

[37] Thanks to Brian Rabern for extensive discussion of this point and the consequences.

(19) That is not a safe place to ski after a big storm.

while pointing at Shasta, the variablist represents your utterance in the compositional semantics using something we might put informally as:

(20) x is not a safe place to ski after a big storm.

The semantic value of (19) in a context, then, is not a proposition, but a function from variable assignments to propositions. If we evaluate the sentence in the context described, however, we end up with the proposition that Shasta is not a safe place to ski after a big storm, since that context supplies an assignment function that maps x to Shasta.

Parametric contextualism represents a significant advance over classical thinking about demonstratives. By making demonstrative expressions semantically sensitive not to the context of utterance, but to a variable assignment, we put ourselves in a position to neatly handle the problems canvassed earlier, as well as to offer an elegant treatment of deferred ostension and other phenomena. By dividing the task of explaining the intuitions elicited by demonstratives into separate semantic and post-semantic components, we do justice to the divergent aims and requirements of a compositional theory and a broader theory of language use, while respecting the important sense in which the latter must be shaped by the former.[38]

Despite these advantages, however, I take parametric contextualism to inherit a substantial defect from classical semantic contextualism. That defect is a commitment to the idea that demonstrative sentences in a context express a single proposition. What we might call 'monism about content' is not required to explain the intuitive data about demonstratives, and dispensing with the thesis allows us to give a better treatment of those data.

5 Conflicting intuitions about content

As we saw earlier, if we confine our attention to the most familiar kinds of cases involving demonstratives, the claim that a context of utterance determines a single proposition seems plausible enough—if someone utters (21) while pointing at Mount Shasta and intending to refer to the mountain, for example, we have seen how even the simplest lexical contextualist theories will make unsurprising predictions:

[38] As Lewis (1980), Stanley (1997), MacFarlane (2014), Yalcin (2007, 2014), Ninan (2010), Rabern (2012a,b), and others have urged.

(21) That is the tallest point in Shasta County.

Theories based on a speaker's ostensive gestures will say that Shasta was the semantic value of the demonstrative in question, and thus that the proposition expressed concerned Shasta. Theories based on a speaker's referential intentions will issue in the same result. It seems clear enough that in the case described, the person who utters (21) has in some fairly central sense said something about Shasta, so even before we decide exactly what 'saying' amounts to, what a proposition is, or which features of context are the content-determining ones, there is likely to be little to quarrel with here.

When we turn our attention towards more complicated cases, however, the idea that demonstrative sentences can be associated with a single intuitive content becomes less easy to sustain. Any number of classic examples from the philosophical literature on demonstratives can be used to bring this point out. Imagine, for instance, along the lines of Reimer (1991), that a speaker raises her arm to point out her dog, and just as she utters (22), a bear leaps out of some bushes and runs in the way:

(22) That is my dog.

A contextualist theory built around a speaker's ostensive gestures, which seemed to work well in the case involving Shasta, predicts that this person will have expressed the proposition that the bear in question is her dog. But this a bizarre result. If a third party should later ask 'Did Mary tell you which dog was hers? I heard she was planning on telling you…' no reasonable listener would respond 'Mary is weird. She said a bear is her dog.'[39]

A normal person would look past the gesture and report that what the speaker expressed in the context described was a proposition about her dog. Many philosophers have taken cases like this to show that a speaker's referential intentions, not her gestures, are what contextualism should track;[40] the reason we have the sense that this speaker said something about her dog, presumably, is that we can see that it was her dog that she had in mind while speaking.

Contextualist theories based on a speaker's referential intentions, however, are susceptible to counter-examples of the same genre. Consider the famous case from Kaplan (1970)

[39] Although it is worth noticing that a child, or an annoying pedantic person might well say as much—it is not that this interpretation is ruled out, so much as that it is not an interpretation that is available to people who are well-behaved conversational participants.

[40] Compare Kaplan (1989), Bach (1992), and King (2001), among others.

in which someone utters (23) while pointing at a picture of Spiro Agnew with the intention to say something about Rudolf Carnap:[41]

(23) That is a picture of the greatest philosopher of the twentieth century.

A theorist who wants to defend the idea that the propositional contribution of a demonstrative in a context is the object ostended by the speaker of the context will claim that intuitively, someone who used (23) in the context described would be saying something false about (a picture of) Agnew. The theorist might bolster that intuition by inviting us to take up the audience's perspective; she could ask us, for example, to pretend that we enter a room and see a stranger pointing at a picture of Agnew while uttering (23). What else could we hope to recover in such a case but a proposition about Agnew? From here it is supposed to be a short step to the conclusion that the best explanation of our intuition is a contextualist theory that maps contexts to the object ostended by the speaker of the context.

If we accept the intuitions marshaled by the cases we have just looked at, we find ourselves in a bind. There are intuitive data that are handled better by the gesture-based view than the speaker-intention view, and intuitive data that are handled better by the speaker-intention view than the gesture-based view. But the views are mutually exclusive: they specify different conditions under which an object qualifies as the propositional contribution of a demonstrative in a context, which means that other things being equal, they predict that different propositions will be expressed by (23) in the context described.

Actually, the situation is somewhat trickier than this. It is not just that there are cases that pull us one way, and cases that pull us another. In fact, most of the devious cases can be used to argue for either of the contrary positions. Consider the Carnap/Agnew example again. We have just seen how that example can be deployed to support the view that ostensive gestures determine the reference of a demonstrative. But someone who thinks that a speaker's referential intentions are what matter can use the same case to support her view as well.

Instead of focusing on the audience's reaction, this theorist will urge us to adopt the perspective of the speaker as we survey our intuitions. Suppose, to bring those intuitions into focus, that the speech act involving (23) occurs in a hypothetical society from the distant future in which it is considered heretical to accuse a politician of high-mindedness. Now imagine that it was *you* that uttered (23)! If someone who overheard the conversation

[41] Imagine, furthermore, if the details seem relevant, that the speaker sincerely believes the picture is a picture of Carnap, and that the audience has no reason to think anything strange is going on.

accused you of blasphemy, you would presumably defend yourself by saying: 'But that's not what I said at all—Carnap is the person I had in mind, not Agnew!' To the extent that you find yourself receptive to this intuition, you are supposed to be pushed in the direction of a version of contextualism that maps contexts to the object intended by the speaker of the context.

Some contextualists have concluded that tricky cases reveal the need for a more sophisticated approach. Instead of a unilateral view based on a speaker's intentions, or on her gestures, these philosophers think a balance must be struck between possibly divergent perspectives. King (2014), for example, offers what he calls a 'coordination account' of demonstratives, on which the weight given to a speaker's referential intentions is set against the requirement that those intentions be transparent enough for interpreters to recognize them. King says that:

> The semantic value of a use of a demonstrative *d* in a context *c* is that object *o* that meets the following two conditions: (1) the speaker intends *o* to be the value of *d* in *c*; and (2) a competent, attentive, reasonable hearer who knows the common ground of the conversation at the time of utterance would know that the speaker intends *o* to be the value of *d* in *c*. (King 2014: 102)

On King's view, the question of which object should count as the referent of a demonstrative, if there is a referent, is entirely settled by the speaker's intentions. By building the perspective of a hypothetical audience into the semantics, however, King introduces a new way in which reference might be defeated (and thus secures a way to explain why this kind of case seems tricky). The solipsism of the ostensive and the speaker-intentional views is replaced here by the idea that a demonstrative in a context will only have a defined semantic value—and thus, figure in the determination of a proposition—if it has a reasonable chance of serving as a vehicle for communicating that value.

This proposal is meant to allow us to reject the choice between (24) and (25) that the other two proposals would force:

(24) The speaker said that Agnew was the greatest philosopher of the twentieth century.

(25) The speaker said that Carnap was the greatest philosopher of the twentieth century.

by adding a third hypothesis to the range of possibilities:

(26) The speaker failed to say anything at all.

While it would admittedly be bad to have to choose between (24) and (25) in describing what happens in the Carnap/Agnew case, in my view, the difficulty is not avoided by adding (26) to the mix. The problem with the choice is not that neither option describes the case accurately, it is that there is a sense in which each gets something importantly right. King's view misses this point in the same way as the views it is meant to improve on, by forcing us to say that just one from among the range of intuitions elicited should be taken more seriously than the rest.

Like the other views we have considered, King's is designed to set out the conditions under which a certain proposition should count as having been expressed by a demonstrative sentence in a context. But his view is no less susceptible to counter-examples than those views; it is not difficult to set up cases on which intuitively, we think that a certain proposition would be expressed, although King says none is.

Consider what a proposal like King's will predict about the following case. Imagine that a shaman and her vision-quest protégé are navigating through some deep rainforest. Under the influence of the powerful combination of psychotropic plants and sincere religious convictions, the forest appears to them to be even fuller of animal life than it in fact is. A certain fern appears to both travelers as a serpent-headed jaguar, and the shaman says:

(27) Do you see that? It is a very powerful spirit—we must approach it with great care. You go around to the left, and I will go to the right, and that way we will be safe.

Now suppose that no one but the shaman and her protégé would be in a position to have understood which object the shaman was referring to. To an ordinary observer, even one from the same spiritual community, the forest looks like a more-or-less undifferentiated mass of foliage. But the protégé understands immediately which object the shaman had in mind, and the two take diverging paths around it, moving carefully through the forest.

On King's view, no proposition would be expressed in this scenario, since being attentive, competent, and reasonable is not enough to allow you to determine which ferns might appear to be jaguars.[42] It hardly seems plausible to deny, however, that in a fairly central

[42]There is room for debate here. King suggests, for example, that to properly count as knowing the common ground of the conversation, someone might have to be in a perceptual state broadly similar to that of the shaman and the protégé, i.e, too see a jaguar in the ferns. He also notes that what counts as attentive, competent, and reasonable might change over contexts; maybe you have to have consumed ayahuasca or similar to count as reasonable in a case like this one. For a more detailed presentation of this kind of case, and a response to this kind of potential reply on King's behalf, see Nowak & Michaelson (2019).

sense of 'saying something', the shaman has said something perfectly determinate. Of course, you might think that what she said was false—there is no serpent-headed jaguar, there is only a fern. But is there any reason to think that she fails to refer to the fern, just because she takes it to be something else? Surely the requirement that a speaker know which sortal an object falls under would be an unreasonably high bar to place on reference.[43]

In case the non-veridical perception involved in the example muddies the water, consider a variation that preserves the relevant features. Anecdotal evidence from YouTube suggests that twins are capable of extraordinary feats of linguistic coordination. It is not hard to imagine that twins, who know each other uncommonly well, would be able to coordinate their activities using demonstratives in perceptual environments that would be impossible for other speakers. On the simplest interpretation of King's view, however, such coordination would not entail that a twin speaker in such an environment count as having expressed any proposition, since a normal interpreter would not have been able to track the same objects as her twin interpreters.

Finally, consider cases in which coordination on an object obtains, but not due to any competence of the interpreter or helpful input from the speaker. Imagine, for example, that a certain interpreter focuses her attention on the same objects as a speaker over some interval thanks to carefully-orchestrated third-party neurophysiological interventions. (Or miraculous interventions, or even dumb luck, if you think careful coordination undermines the example.) Every time the speaker uses a demonstrative, the interpreter tracks the object the speaker intended to refer to, although the speaker does nothing to secure this coordination.[44] We can imagine such an interpreter helping such a speaker to repair a car, or perform surgery, by handing the speaker tools or performing actions on cue. For King, however, the joint activity here is secured without the expression of any propositions, since an ordinary interpreter would have no idea what do to with the speaker's demonstrative sentences.[45]

In each of these cases, the typical hallmarks of communication are present; information

[43] Although compare discussion from Ayers (1974), Dickie (2011), Goodman (2012), and others.

[44] We do not need to assume that the speaker is being willfully uncooperative in doing nothing; we might imagine that she sincerely wishes she could do something, but is unable to because she is unable to move, or physically distant from the listener, and so on. We might imagine, too, that she wrongly *takes* herself to be providing useful interpretive information to the listener, say, by gesturing, without realizing that the listener does not see her gestures.

[45] Michaelson (2013) discusses cases similar to these, although he takes them to work the opposite way, i.e., to show that the mere fact of coordination between a speaker and a hearer is not sufficient for a proposition to count as having been expressed. Compare his note 24, pg. 54.

is proffered, uptake is secured, and joint activity proceeds in a coordinated way. But in each case, King's view issues in the counter-intuitive prediction that no proposition is expressed. In other words, there are cases for King on which a proposition is expressed although communication fails, and cases in which no proposition is expressed, although the speaker in fact succeeds in communicating. If the point of the theory is to make the semantic value of a demonstrative sentence in a context match the content we intuitively take to have been expressed, this should be an unacceptable result.

Someone determined to find a mapping from contexts to the propositions intuitively expressed in them might take the examples I have offered to suggest focusing on the actual states of mind of the participants in the conversation, instead of the speaker's state and the state she could reasonably have expected her hearer to settle upon.[46] If we say that a proposition is expressed when de facto communication occurs—when both the speaker and the audience track the same object—we can make the right intuitive predictions about the cases just surveyed, as well as maintaining the result King wanted for the Carnap/Agnew case, i.e., that no proposition be expressed.

But this option does not really move the ball forward. In fact, King himself offers an excellent reason for rejecting it. King says that making de facto communication the key to determining whether or not a proposition was expressed places implausible limits on when speakers count as saying something. If you only count as expressing a proposition when you succeed in communicating, then your ability to express propositions will depend on whether your audience is paying attention to you, or indeed, whether you have an audience at all.[47]

Accepting the force of King's objection, however, does not mean that we should fall back and accept his positive proposal. What the objection reveals is a sense in which King—and everyone else with a contextualist theory—is stuck trying to navigate a course between two poles. On the one hand, they need a theory that does justice to our sense that contents reflect speakers' mental states—what Michaelson (2016, 2019) calls 'expressive uses' of

[46] Compare Speaks (2016), for example.

[47] An anonymous referee points out that there is room here for someone who identifies the proposition expressed in a context with the proposition in fact communicated, if there is one, to respond to this worry. Such a theorist, for example, might treat cases in which no one is paying attention as cases of self-talk, and analyze self-talk as though it involved successful communication. There is no space here to consider all the branches in the argument tree that would result from such a move; Eliot Michaelson and I take up some of them in our Nowak & Michaelson (2019). The basic thrust of our argument there is that the notion of communication that seems to be at work in e.g. Speaks and King does not seem to be obviously met in cases of self-directed speech. See Grice (1969), especially pp. 174-177 for related discussion, and Michaelson (2019) for criticism.

demonstratives.[48] On the other hand, they need a theory that does justice to our intuition that contents must be accessible to interpreters as well. (Otherwise, we end up with a humpty-dumpty theory of content.) The crude theories we began with ended up biting one or the other bullet here; the ostensive theory went all in on what is available to the audience, the speaker-intentional theory went the other way, emphasizing the priority of the speaker's state of mind. While theories like King's try to balance the claims, the result is unstable, ignoring now one intuition, now the other.

6 Pluralism about demonstrative contents

The discussion from the previous section shows that in many cases, there is no single proposition that is apt to fill all the roles philosophers expect the content associated with a demonstrative utterance in a context to fill. Some of our intuitions about content are best captured by the proposition we would get if we took the speaker's referential intentions to determine the referent of a demonstrative. Others are best captured by the proposition we would get if we took the speaker's gestures to be key. Sometimes, it seems like we reserve the locution 'the proposition expressed' to track those propositions that are coordinated upon by both the speaker and the hearer, and it is not hard to imagine intuitions that would be best modeled by other propositions besides these.

If we accept that the best semantic analysis of demonstratives involves treating them as variables, the conflicting intuitions about 'what is said' by way of a demonstrative utterance in a context can be handled in three ways. First, we might take the conflict to show that another round of iterative changes to the basic parametric contextualist framework is required. We could conclude, that is, that although current state of the art stories about how the context initializes a particular variable assignment are not quite good enough to match all of our intuitions, a future story might do better. Although I know of no conclusive argument against this possibility, I take the intuitive data to suggest that some of our intuitions are simply incompatible.[49] That, together with the fact that philosophers' long history of work in this area has not resulted in a theory that fits all of the intuitive data, constitutes a reason for pessimism. In any case, I will have nothing further to say about this option.

The second strategy we might take in the face of conflicting intuitions would be to main-

[48] Compare Heck (2014) on 'Child with a Dove'.

[49] On the assumption, that is, that just one proposition is expressed by a demonstrative sentence in a context.

tain that one or another parametric contextualist treatment is correct, while offering an error theory to explain away the data the parametric theory does not fit well. On the face of things, this would appear to be a plausible option. Hard cases, as the saying goes, make bad law, and there will certainly be philosophers who will think the simplest way of dealing with them would be to point out that a proposition can be 'put in play' for an agent without its being the content of an assertion (say).[50]

Imagine, for example, that we endorse a parametric contextualist view on which contexts initialize a variable assignment that tracks the object demonstrated by the speaker of the context. That would allow us to directly explain the intuition that the speaker in the Carnap/Agnew case says something about Agnew. But, by making the speaker's gestures the determinant of demonstrative reference, our story would miss out the intuition that the speaker says something about Carnap. On the error theoretic approach, we would explain that latter intuition by invoking a weaker sense in which a proposition can be 'activated' in a context. For example, we might point to the difference between the proposition expressed in a context, on the one hand, and the proposition that a certain agent *took* to have been expressed, on the other. Or we might invoke Kripke's (1977) distinction between speaker's reference and semantic reference.

One problem with the strategy of picking some data to explain and others to explain away is that it is available to philosophers on both sides of the traditional divide in the literature on demonstratives. So, philosophers who think that the speaker's intentions determine the referents of her demonstratives can avail themselves of it just as easily as those who think her gestures are the key. This means that all of the old (and seemingly intractable) debates about *which* features of a context are the reference-determining ones recur if we rely on an error theory in the complicated cases.[51]

The real challenge for the error-theoretic approach, however, is that it depends on a substantial assumption that has not been subjected to appropriate scrutiny and which is not obviously warranted: the assumption that when a demonstrative sentence is used in a context, it will determine a unique proposition if it determines any proposition at all. A comment from Speaks (2017: 720) illustrates the prevailing attitude among philosophers nicely:

> Though opinions differ about the right thing to say about the case of Carnap

[50]Thanks to an anonymous referee for raising this point, which Eliot Michaelson, Daniel Rothschild, and Robert Stainton have also made in conversation.

[51]Of course, if there were no theory available that promised to transcend these debates, this would not by itself constitute a reason for rejecting an error theory. As we will see, however, there *is* such an option on the table, which makes the error theory less attractive.

> & Agnew, we can all agree that in that scenario the demonstrative does not refer to *both* the picture of Carnap and the picture of Agnew.

Although this may be a fair assessment of the state of the literature, it is not clear *why* we should assume that (someone's use of) a demonstrative could not pick out both Carnap and Agnew. In the early days of work on demonstratives, when it seemed plausible that an adequate compositional semantic treatment would take a felicitous utterance and deliver a determinate proposition (take a demonstrative and return its extension), this kind of monism about content (reference) would have appeared to be a natural consequence of the shape of any of the extant semantic alternatives.

Once we recognize that the best compositional semantic theories do not in fact traffic in propositions (referents), however, we can no longer afford to treat monism about contents (reference) as an assumption that requires no defense. Since the best semantic story for demonstratives is one that massively underdetermines propositional contents, by massively underdetermining the referents of demonstratives, someone who wants to claim that there is just one way in which a proposition can come to count as the proposition expressed by a demonstrative sentence in a context should be expected to offer not just a description of a mechanism that maps contexts to propositions, but an argument that establishes that that mapping serves an explanatory project that is more fundamental than any of the others in the vicinity. Friends of contextualism have not generally acknowledged this challenge, let alone offered arguments that would meet it.[52]

Until they do, the default response to the problematic data about demonstratives should be to take up what I see as the third possible strategy: pluralism about demonstrative reference, and thus about demonstrative contents. Instead of holding out hope for some future synthesis that resolves the conflicting intuitions, or embracing one set of intuitions at the cost of the other, we should take the intuitive data at face value and say that a single demonstrative sentence, used in a context, might express more than one proposition.

In my view, the real philosophical significance of the variablist compositional semantics for demonstratives lies in the fact that it allows us a natural way of having our cake, with regard to the cases that generate conflicting intuitions, and eating it, too. Instead of being forced to choose between the context's initializing the Carnap assignment or the Kaplan assignment, or avoiding the choice by saying that neither a proposition about Carnap nor a proposition about Agnew was expressed, variablism offers us a way to reject the demand that we match contexts of utterance with a single proposition in the first place. By evaluating the same sentence with regard to different assignments, we might hope to

[52] Bach (1992) and Michaelson (2016) are exceptions.

make sense of the intuition that our speaker expresses a proposition involving Carnap, and also the intuition that she expresses a proposition involving Agnew.

If we give up the idea that demonstrative sentences in a context should be associated with a single proposition, of course, we invite the question of how many propositions a sentence should be associated with, and how those propositions are determined.[53] Although a detailed consideration of the comparative merits of various responses will have to wait for another paper, it will be worth taking a moment to sketch some of the natural options, and to look at some of the challenges they will face.

One way of implementing the idea that a single use of a demonstrative sentence might be associated with different propositions would be to embrace a form of relativism about content. We might, for example, follow the general contours of the framework developed in MacFarlane (2014), distinguishing contexts of use, c_u, from contexts of assessment, c_a, and claiming that demonstratives are evaluated not with regard to a variable assignment initialized by the context of use, but by the context of assessment.[54]

Suppose, to illustrate the point with a toy proposal, that we said that contexts of assessment are structured around an assessor, and that the variable assignment initialized in a context of assessment is one that maps i (the default index associated with a demonstrative) to the object the assessor takes the speaker of the context of use to have intended to refer to.

This proposal would make it easy to see how the conflicting intuitions about the Carnap/Agnew-type cases could be explained. Although there is a single context of use at stake, there are two distinct contexts of assessment—the one in which the speaker of c_u is the assessor (let this be c_{a_1}), and the one in which the hearer of c_u is the assessor (let this be c_{a_2}). The speaker in c_u takes himself to be talking about Carnap, so with regard to the assignment initialized by c_{a_1}, the proposition he asserts is a proposition about Carnap. The hearer of c_u, on the other hand, takes the speaker of c_u to be talking about Agnew, so the assignment initialized by c_{a_2} returns a proposition about Carnap.

My own inclination is to think that we would be best served by endorsing a kind of

[53] An anonymous referee wonders whether, instead of talking about *the* variable assignment of a context, we might take contexts to initialize a set of assignments. A story like this would allow us to endorse a form of pluralism, without giving up on the idea that there is a fact of the matter about which contents are expressed in a context. A full response will have to wait for another day, but I sketch one worry in section 7.1.

[54] To be clear: MacFarlane's claims concern predicates of personal taste, epistemic modals, standards of precision, and similar expressions, and not demonstratives. His aim is to defend a form of relativism about truth values, not about content.

instrumentalist position. Since variable assignments are cheap, we can use them to model whatever we want. Instead of asking 'does this context determine this assignment (among possibly others)?' we should ask 'is there some interesting explanatory project that would be furthered by using this assignment to evaluate the demonstrative that was tokened in this context?'

On this kind of approach, instead of saying that g is the variable assignment (or one of the assignments) determined by c, we might say that if g is useful in representing the object-directedness of the state of mind a certain agent from c is in while considering a demonstrative sentence, then we should use g for that purpose. Some other assignment, f, might be the most illuminating representation of the directed state of mind of some other agent. We might use various assignments to track the objects that the agents who are in fact involved in a certain conversation *would* attend to, if they were idealized in certain respects. And we might use assignments to track any number of other things, besides.

Of course, to properly explore the consequences of endorsing one of these views would require substantial further work. I hope the considerations offered here so far, however, will go some way towards making clear that where demonstratives are concerned, there are theoretical options available that have so far not been recognized. The true significance of variablism might not lie in its superiority as a treatment of demonstratives at the level of the compositional semantics, but in the fact that it allows us a natural way of moving beyond the question of how to pair contexts with *the* proposition a demonstrative sentence would express in them.

7 Loose ends

I hope the arguments advanced so far will convince readers that a form of pluralism about demonstrative contents implemented using variables in the compositional semantics is an attractive possibility. Before closing, I would like to address two outstanding issues that I suspect readers will be likely to wonder about.

7.1 Quantification

If the arguments given here so far are good, we should avoid claiming that contexts initialize a canonical variable assignment. For one thing, we do not need a canonical assignment to make sense of the intuitive demonstrative data. For another, a canonical assignment

would undermine the kind of pluralism we have argued for here. There is a third reason, however, for thinking that it would be better not to endorse a principle linking contexts and variable assignments. In a nutshell, the reason is that such a link does not fall naturally out of the standard justification we give for thinking that semantic evaluation involves assignment-sensitivity.

Linguists and philosophers typically hold that semantic evaluation occurs with regard to a parameter for the variable assignment because the machinery of variables and assignments offers a straightforward analysis of quantification. Recall the familiar semantics we give for quantifiers in first-order logic. In order to determine whether a sentence like:

(28) $\forall x Fx$

is true with regard to some domain, we check to see whether the open sentence:

(29) Fx

is true on every assignment of individuals from the domain to *x*.

Essentially the same procedure, adapted to meet the constraints of compositionality, is used in the standard analysis of natural language. Drawing together threads from Frege (1879/1997), Tarski (1944), Lewis (1970), and Montague (1973), it is customary to treat quantifiers as functions that take property-denoting arguments and return functions from properties to truth values (in the industry jargon, functions of type $\langle et, \langle et, t\rangle\rangle$). The standard implementation of this idea relies on the claim that there are operators in natural languages that shift the assignment with regard to which their complements are evaluated, so that sentences like:

(30) Every king$_i$ cherishes that cleric who crowned him$_i$.

turn out to be true with regard to a domain just in case every assignment of values to x_1 that satisfies:

(31) x_1 is a king

is also an assignment that would satisfy:

(32) x_1 cherishes that cleric who crowned x_1

The standard reasoning about quantification, then, involves a version of Lewis' principle to the effect that a parameter deserves to be considered part of a semantic index when a natural language involves an operator that shifts the value of that parameter.

Of course, there may be philosophers who would reject this principle, and there may be philosophers who accept it, but have other reasons for adding parameters to an index, too.[55] I will not take up either of those issues here; the point that is crucial for our purposes is that Lewis' 'shifty' principle does not give us a reason to treat the variable assignment as though it were determined by the context, much less as though it were determined by particular psychological facts, say, in the way Heim & Kratzer (1998) and others propose. In other words, while the proper treatment of quantification in English may well turn out to involve sequences of objects, there is no reason to think that the composition of those sequences should result from any psychologically substantive selection procedure.

To see whether a sentence like (33) is intuitively true in a context:

(33) All dogs are mammals.

we check to see whether every assignment of values to variables that satisfies 'x is a dog' satisfies 'x is a mammal'. The clauses we give for quantifiers test to see whether every assignment of values to variables meets some constraint, or whether any assignment does, but they do not care at all what the 'initial' assignment looks like, nor do they require that there *be* such thing as an initial assignment. Since the quantifier—or a lambda abstractor associated with it—modifies the assignment with regard to which its complement is interpreted, any pair of arbitrarily-generated assignments will end up producing exactly the same interpretation.[56]

Contrast the case of the time parameter. Imagine that someone says:

(34) Forevermore, Socrates will sleep.

Lewis (1980) takes the truth conditions intuitively expressed by (34) in a context to be determined by applying the 'forevermore' operator to the semantic value of:

(35) Socrates sleeps.

[55] See MacFarlane (2014), chapter 4 for discussion.

[56] Compare Belnap & Green (1994). In certain cases, like cases involving multiple quantifiers, it might be important to keep track of output of some operation involving a variable assignment. This is hardly a compelling reason, however, to think that assignments are initialized by the context of utterance.

'Forevermore', on Lewis' account, is an operator that shifts the value of the time parameter of the index associated with the constituent it operates on. Unlike in the case of the variable assignment, the initial value of that parameter appears to matter.[57] (34) is true with regard to a context just in case (35) is true with regard to all times t such that t is later than the time of the context.

To summarize: the idea that contexts of utterance provide the initial value for a parameter that tracks the time might plausibly play a role in the explanation we give of the intuitive truth conditions of sentences involving shifty operators, like 'forevermore'. To explain the familiar data involving quantifiers, however, there is no reason to postulate a privileged initial assignment of values to variables.

7.2 ϕ-features

I have argued throughout that demonstratives have no lexical semantic content. There is a sense in which that seems right, but also a sense in which it may put the point too strongly. Let me now back off slightly.

If demonstratives are semantically represented simply as free variables, and if the only constraints on which variable assignment is applied to a particular demonstrative in a particular context are general pragmatic constraints of the sort canvassed so far, we should expect it to be possible to use demonstratives to refer more-or-less to anything.

In fact, however, this is not what we find. English simple demonstratives appear to be subject to certain restrictions concerning animacy and proximity, among other things. Witness the contrast between the felicitous (36) and the degraded (37):

(36) He's really handsome. (pointing at a person or a dog)

(37) #That's really handsome. (pointing at a person or a dog)

Similarly, compare (38) and (39):

(38) That is a Jeffrey pine. (pointing at a lone tree on the horizon)

[57]Note, however, that if the arguments offered here about demonstratives are successful, it might be possible to dispense with the idea that context initializes the time parameter, too. Instead of saying that the context initializes a certain value for the time parameter, we might leave the parameter undefined, and expect competent speakers to fill in an appropriate value. If the sort of pragmatic approach described here is successful, in fact, we might be able to dispense with the idea of initialization in general. I will leave this possibility for future consideration. I am grateful to Seth Yalcin for discussion of this point.

(39) #This is a Jeffrey pine. (pointing at a lone tree on the horizon)

Do contrasts like these undermine the view developed here so far? As far as I can tell, the answer to this question is 'not in a significant way'. For one thing, none of the data involving restrictions on the reference of a demonstrative are as univocal as they might at first appear. Many commentators have noticed, for example, that English demonstratives are frequently used with equative or identificational copular clauses:[58]

(40) This is Maryam Mirzakhani, the 2014 Fields Medal winner.

(41) That is the guy who discovered the Higgs boson.

(42) That is the guy I was talking about earlier.

Certain predicates appear to license 'animate' simple demonstratives in English, too:

(43) That is a world-famous scientist you just talked to. (as someone walks away)

(44) That is a lab-boxer mix. (pointing at a dog)

Similarly, Sherman (2015) has shown that the distal/proximal features that appear to be associated with English demonstratives are much more plastic than simple contrasts like the one between (38) and (39) suggest. Whether an object counts as near enough to be referred to with 'this' turns out to have less to do with the absolute proximity of the object to the speaker than it does with the nature of the preceding discourse.

Even if we accept data like (38)–(44) at face value, though, we can handle them without substantially revising the non-contextualist variablism we have argued for here. There are many options available to theorists who treat referential pronouns as free variables that involve presuppositions about number, gender, and similar features.[59] Without committing ourselves to any particular story about how presupposition should be handled, we could take a similar approach with regard to demonstratives, while maintaining our central claim that the assertoric contents associated with demonstratives are not determined by the contexts in which they are uttered.

Indeed, the sorts of reasons that might be invoked in favor of presuppositional constraints on reference themselves suggest that the basic non-contextualist idea is right: it makes sense to think that demonstratives from different languages come with a particular presuppositional profile, since the distribution of those demonstratives is different. English

[58] Some take this fact to show that the demonstratives in question do not really refer to people; see Moltmann (2013) for discussion.

[59] See e.g. Sudo (2012) and del Prete & Zucchi (2017) for discussion.

demonstratives appear to involve a binary distal/proximal distinction. Korean demonstratives involve proximity measures that treat the speaker's and the listener's perspectives differently.[60] Spanish demonstratives involve a ternary distinction between degrees of proximity instead of a binary distinction, and so on.[61] No human language, however, appears to lack expressions that are used in various contexts to refer to whatever the speaker of the context intends to refer to, and to the best of my knowledge, no human language involves demonstrative-like expressions that pick out the objects of someone other than the speaker's intentions. This is a powerful reason to allow demonstratives to vary locally with regard to their presuppositional profiles, while insisting that at root, what constraints there are on demonstrative reference fall out of the nature of the interpretive task.

8 Conclusion

We began with a review of arguments designed to show that lexical contextualism—the idea that contexts of utterance determine the semantic value of a demonstrative—should be replaced by a semantic theory on which demonstratives are treated as variables.

Replacing the familiar form of lexical contextualism with a variablist picture, however, left us with a question: how should we explain the fact that assertoric contents appear to vary systematically over contexts of utterance? We considered one answer, according to which contexts determine the proposition associated with a sentence by providing initial values for the parameters with regard to which the semantic value of the sentence is evaluated. This option committed us to saying that a demonstrative sentence in an apt context must be associated with just one proposition. Our intuitions, however, seemed to suggest that there are a range of different ways in which a proposition might count as having been expressed in a context. We took this to show that we should dispense with the claim that context initializes a particular variable assignment, and instead embrace the idea that a range of variable assignments might be used to model different but theoretically-interesting features of a context.

Although our discussion was focused on demonstratives throughout, the theoretical issues that we have considered raise general questions about the relationship between semantic values and the propositions those values are used to express. If we can explain

[60] Compare 'kuh gon', which is used to pick out objects that are far from the speaker but near to the hearer, and 'joh gon', which is used when the object in question is far from both speaker and hearer.

[61] Compare 'éste', 'ése', 'aquél', which correspond to English 'this', 'that', and 'yon'.

the intuitive data about demonstratives without invoking the context, there is room to wonder about how significant a role context sensitivity will have in the explanation of other phenomena that have traditionally been assumed to involve context.

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