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Two dogmas about demonstratives

by

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A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy in Philosophy in the Graduate Division of the University of California, Berkeley

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Abstract

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Nearly everyone with a view on the matter thinks that:

1. Demonstratives are directly referential expressions.

2. The semantic value of a demonstrative is determined as a function of the context of utterance.

In fact, neither of these claims is right. Empirical data from English and other languages make it impossible to sustain the idea that demonstratives refer directly, and there are no compelling reasons to think that the apparent sensitivity of demonstratives to the context in which they are uttered is a genuinely semantic phenomenon.

The original motivation for direct reference was the fact that garden-variety demonstratives appear to be rigid designators. These days, most philosophers recognize that not everything that looks like a demonstrative is interpreted rigidly; compare ‘if Suzanne had won the election, she would have embraced that elector who cast the deciding vote’. Instead of taking non-rigid uses to undermine direct reference, however, people typically respond by saying ‘that’ is ambiguous as between a bona fide demonstrative and a phonetic variation on ‘the’. In chapter 1, I argue that this story cannot be reconciled with the broad distribution of such uses of demonstratives across the world’s languages.¹ It is just not plausible to think that the very same ambiguity should occur in English, and in Russian, and in Hindi, and so on.

Recently, theories have emerged that avoid ambiguity by treating all complex demonstratives as a special kind of definite description. This is a good idea, but existing implementations over-generate. As the contrast between the felicitous ‘the author of *Waverley* was Scott’ and the infelicitous ‘that author of *Waverley* was Scott’ shows, ‘that’ and ‘the’ are not simply interchangeable. In chapter 2, I argue that the basic difference between the two determiners is a difference in the

¹Chapter 1 was published, with minor modifications, as ‘Demonstratives without rigidity or ambiguity’ in *Linguistics and Philosophy* 37:5 (2014), pp. 409–436.
presuppositions they introduce. In a nutshell, ‘that $F$’ is licensed only when the demonstrative can be used to pick out one from a number of candidate $F$’s.

Although it is very widely accepted, the thesis of direct reference has always been at least somewhat controversial. The idea that demonstratives are semantically sensitive to the context of utterance, on the other hand, has seemed to many philosophers hardly to require justification. In normal circumstances, if you are pointing at $\alpha$ when you use a demonstrative, bystanders will take the demonstrative to pick out $\alpha$. The prevailing explanation of this fact is that the semantic value of a demonstrative is determined by applying a rule like ‘the object intended by the speaker of the context’ to the context in question.

As anyone who has ever been lost will know, however, being located in a certain context does not mean that you know which context that is. Stalnaker took this point to show that if an expression is context-sensitive, intuitions about what it picks out on an occasion must be explained not just with regard to the context interpreters are in, but with regard to the context they think they are in. In fact, as philosophers like Bach, Schiffer, and Neale have pointed out, the point suggests something more striking; it suggests that the real work involved in explaining intuitions about reference takes place outside the semantics entirely.

The classic semantic approach entails that the key to our ability to use demonstratives to exchange information is our ability to converge on a way of thinking of the context; even if we agreed that the standing meaning of ‘that’ were a certain context-sensitive rule, applying that rule to different presumptive contexts would result in our talking past one another. The tools we use to coordinate on the common ground are familiar from the work of Grice, Lewis, and others. When I utter a demonstrative, I assume that you will try and figure out which object I intend to refer to; I know enough about you to guess how you are likely to approach this task, and I act accordingly, by pointing, looking in a certain direction, and so on.

Although mutual semantic knowledge obviously plays a critical role in this pattern of explanation, the particular way in which we characterize that knowledge turns out to be much less important. In fact, as I show in chapter 3, we can tell the same basic story about communication if we represent demonstratives using nothing but a free variable in the compositional semantics. If we do this, instead of seeing communication as a coordination problem defined over contexts, we frame the problem in terms of variable assignments. The pragmatic task, however, takes essentially the same form; when faced with my demonstrative utterance, you ask yourself what I could be trying to refer to, and rely on your beliefs about me and my interests in order to generate a hypothesis. Either semantic view can be made to handle the simplest data well enough when embedded in a broader model of communication. Variablism about demonstratives, however, uses fewer parts, handles much trickier cases, and is substantially more elegant than the traditional alternative. It also raises an intriguing question about the role context should play in semantics generally: if demonstratives are not really sensitive to the context of utterance, what is? Answering that question will require significant work that falls well outside the scope of this dissertation, but I hope the arguments made here will be taken to show that it deserves attention going forward.
For my parents, Paul and Janice Nowak
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Chapter 1

What a semantics for complex demonstratives must do

1.1 Introduction

Most semantics for complex demonstratives are designed to analyze what philosophers call ‘deictic’ uses. Although it is difficult to say exactly what makes a use of a demonstrative deictic without employing a theoretically-loaded vocabulary, the basic outline of paradigm cases is widely agreed upon. Consider an example:

(1) That river is frighteningly low.

Imagine a scientist who points at the South Fork of the American River while uttering sentence (1). Intuitively, what she says is true or false in virtue of how things are with the South Fork of the American River. If she had uttered the same sentence while pointing at Tamarack Creek, the truth of what she said would have depended on the water level of Tamarack Creek. The philosophical literature on complex demonstratives is, by and large, devoted to explaining this fact.

Despite their focus on deictic cases, philosophers have recognized for a long time that demonstratives are sometimes used in ways that do not conform to this paradigm. Contrast example (1) with the following, which might be uttered by someone with a tenuous grasp of history:

(2) [Every king], cherished that cleric who crowned him

The subscripts in example (2) are meant to indicate binding; on the only natural interpretation, someone who utters this sentence makes a claim that is true just in case for every king \( x \), \( x \) cherished the cleric who crowned \( x \). Importantly, this person’s claim does not depend on facts about the context of utterance in the way the claim expressed by the hydrologist does.\(^1\)

\(^1\)That is, no sensitivity to context is introduced by the demonstrative. Someone who takes aspect or tense to interact with the context, for example, or who takes predicates like cherish to involve sensitivity to a degree parameter might consider (2) context dependent.
CHAPTER 1. WHAT A SEMANTICS FOR COMPLEX DEMONSTRATIVES MUST DO

From the beginning of the modern era of semantic work on demonstratives, philosophers have set aside complications raised by non-deictic uses in order to concentrate on their deictic analogues. Witness Kaplan (1977, p. 489):

The group of words for which I propose a semantical theory includes the pronouns ‘I,’ ‘my,’ ‘you,’ ‘he,’ ‘his,’ ‘she,’ ‘it,’ the demonstrative pronouns, ‘that,’ ‘this,’ the adverbs ‘here,’ ‘now,’ ‘tomorrow,’ ‘yesterday,’ the adjectives ‘actual,’ ‘present,’ and others. These words have uses other than those in which I am interested (or, perhaps, depending on how you individuate words, we should say that they have homonyms in which I am not interested). For example, the pronouns ‘he’ and ‘his’ are used not as demonstratives but as bound variables in:

For what is a man profited, if he shall gain the whole world, and lose his own soul?

For someone in Kaplan’s position, embarking on a new research project in a complex area, this kind of circumscription makes sense. As Braun (2008, p. 72) observes, when we first approach the semantics of what appears to be a single expression type that admits of significantly different uses, it may be more fruitful to pick one of those uses to focus on, rather than demanding from the beginning that prototype theories cover both. Ordinarily, however, we expect the kinds of simplifications that help to get a project going to be revisited as it matures. Perhaps because of philosophers’ interest in demonstratives as the candidate linguistic manifestations of singular thoughts, this process has been slow to take shape in the literature on the subject. Despite the benefit of nearly 40 years of progress on semantics, a striking majority continues to follow Kaplan in treating non-deictic uses of demonstratives as though they were someone else’s problem.

King (1999, 2001, 2008) bucks this trend, arguing that if we take familiar semantic proposals that treat complex demonstratives as devices of direct reference and apply them to sentences involving non-deictic uses, we end up with unacceptable predictions about their truth conditions. His challenge, however, has not prompted many philosophers to abandon their reliance on the machinery of direct reference. Some, like Salmon (2008), think intuitions about non-deictic uses of demonstratives are simply too unstable to make anything of. Even those who appear to have accepted King’s characterization of the gap between the predicted and the required truth conditions, however, typically respond by pointing out that their theories were never supposed to account for non-deictic uses in the first place.

On one way of looking at the state of play in the literature on demonstratives, then, the big open question is not whether direct reference provides a way to predict the right truth conditions for non-deictic uses, but whether it should be expected to. Although I will dedicate a significant

---

2Other theorists have raised questions about the status quo. Roberts (2002) employs data from what she calls ‘discourse deixis’ to make the case for a dynamic treatment of demonstratives that is more broadly applicable than the classic view. Wolter (2006) develops a unified theory of deictic and non-deictic demonstratives in a situation-semantics framework. Elbourne (2005), although not explicitly concerned to explain data involving non-deictic demonstratives, suggests that his theory of definite descriptions could be extended to cover demonstratives (p. 125). On a plausible way of implementing the extension, his view would cover many of the non-deictic data that have been discussed in the literature.
portion of this chapter to addressing the kind of skepticism about the data Salmon expresses—and to presenting new data that are problematic for direct reference, including attested data—my primary goal will be to show that hiving off problematic cases in the way friends of direct reference do is unacceptable. I will proceed by arguing that any view that treats deictic and non-deictic uses of demonstratives using different semantic machinery is subject to a powerful objection based on evidence that both uses are widespread cross-linguistically. Then, I will show how the specific proposals that philosophers have employed to protect the semantics of direct reference from non-deictic counterexamples—saying that has a homophone with the semantics of the definite article, and saying non-deictic interpretations are idiomatic—are not even minimally empirically adequate with regard to the data from English. In the final section of the chapter, I will show how the arguments I make against direct reference tell against a number of other proposals that have been advanced in the literature on demonstratives.

1.2 Direct reference and rigidity

Direct reference

The locus classicus for the idea that demonstratives are devices of direct reference is Kaplan (1977). Although Kaplan does not address the semantics of complex demonstratives in great detail, it is not difficult to see how the theory he develops for simple demonstratives could be extended to handle them. The heart of Kaplan’s theory is the operator \( d \text{that} \), which “converts an arbitrary singular term into one which is directly referential” (p. 521). In the language of the metaphysically robust semantic framework Kaplan employs, this means that the propositional contribution of a felicitous and complete \( d \text{that} \)-expression is an individual. If we apply \( d \text{that} \) to a definite description, for example, the propositional contribution of the resulting complex, with regard to an appropriate context, will be the individual that satisfies the description in the context.

In the terms of the formal system Kaplan uses to model his theory (and ignoring parameters that are irrelevant for present purposes):

\[
(3) \quad [d \text{that} (\text{the } F)]^{c,w} = [\text{the } F]^{c,w_c}
\]

In his informal remarks, Kaplan draws a parallel between the semantic work done by a demonstration in a context, and the work done by definite descriptions. This is important because it allows him to treat demonstrations—taken with regard to contexts—as though they were singular terms, which makes them apt to serve as arguments for \( d \text{that} \). Although there is nothing in the formalism that corresponds to the idea of a demonstration, there is no deep theoretical reason for this; Kaplan notes that it would be trivial to add to his system a class of “nonlogical demonstration constants” (p. 527) that fill the same semantic role descriptions do, and whose character is determined (in a way that remains to be precisely specified) by association with a contextually-embedded gesture.

Imagine, for the sake of illustration, that we decide to treat \( \delta \) as one of these constants. Since \( \delta \) will have the description-like meaning a gesture would have, we can employ a formulation like the following to model Kaplan’s thinking about simple demonstratives:
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If we slightly adjust the semantic type we assign to demonstrations (and the constants we use to represent them), so that their semantic contribution is equivalent to the contribution made by the matrix of a definite description (instead of the complex formed by the determiner and the matrix), we can combine (3) and (4) into a treatment of complex demonstratives:

\[
[\text{dthat } (\delta)]^{c,w} = [\delta]^{c,w}.
\]

Unpacked à la Kaplan, (5) says that the content of a complex demonstrative of the form \( \text{that } F \), used in an appropriate context, will be the unique object that satisfies both \( F \) and the demonstration associated with the demonstrative. If there is no such object in a certain context—say, because the object that satisfies the demonstration is not an \( F \)—instances of (5) will not contribute one to the proposition expressed, which is a result Kaplan favored. Salmon (2002, p. 524), endorses a variation on Kaplan’s view that is similar to the one suggested by our (5):

With respect to any context \( c \), the (English) content of an occurrence of the complex demonstrative ‘that’ ◄ 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’ ◄ NP has no content.

Although philosophers, including Kaplan (1989) himself, have moved away from the idea that a demonstrative must occur together with a demonstration, semantic theories with this basic shape are still very common. Borg (2000), for example, takes the propositional contribution of a complex demonstrative to be exhausted by its referent (pp. 243–244). This claim must be understood with regard to her view that “an object, \( \alpha \), is the referent of an utterance of \( \text{that } F \) iff: \( \alpha \) is the object being demonstrated by the speaker and \( \alpha \) satisfies \( F \)” (p. 242). Borg makes clear that she does not mean the locution “being demonstrated by the speaker” to be taken literally; she allows that referential intentions, the speaker’s attention, or a variety of other things might play the relevant role in determining which \( F \) should be treated as the referent of a given demonstrative.

Along similar lines, Braun (2008, p. 62) claims that:

We can take the semantic content of “that \( N \)”, in a context \( c \), to be the demonstratum of \( c \), if that object satisfies (in the world of \( c \)) the semantic content of \( N \) in \( c \). If there is no demonstratum in \( c \), or the demonstratum of \( c \) does not satisfy the semantic content of \( N \) in \( c \), then “that \( N \)” has no semantic content in \( c \).

By “demonstratum,” Braun says that he means that object which is “in focus in a context,” or is “available for demonstrative reference in a context.”

\[3\]The change from lower-case ‘\( \delta \)’ (example 3) to capital ‘\( \Delta \)’ (example 4) is meant to represent the requisite change in the semantic type of the demonstration constant.
Georgi (2012), taking up a line from Nunberg (1993), develops a version of direct reference that is meant to explain cases of deferred ostension; i.e., cases in which the object referred to by means of a demonstrative is not the object demonstrated. Georgi claims that a speaker’s intentions, with regard to a context, determine something he calls the “index” of the demonstrative. When a deictic demonstrative is used felicitously, Georgi says, a certain relation will be salient. In standard deictic cases, the salient relation will be identity, but in cases of deferred ostension, more complicated alternatives play a role. On Georgi’s view, the content of a complex deictic demonstrative, with regard to a context, an index, and a relation, is the unique object that satisfies both the matrix of the demonstrative, and the result of applying the relation to the index.\footnote{The following three clauses provide the heart of Georgi’s semantic proposal (2012, p. 372):}

We can borrow an example from Elbourne (2008) to illustrate how this system works. Imagine a speaker who points at an empty stall in a barn and says:

(6) That horse must be out to pasture.

Intuitively, such a speaker expresses the proposition that a certain (non-perceptually-available) horse must be out to pasture. Georgi’s semantics has the resources to make good on that intuition. Suppose the horse in question is Bucephalus. On Georgi’s account, the stall that is demonstrated in the context will serve as the index of the demonstrative. In the context described, the relation of typically-residing-in-\(x\) is salient. So, we calculate the content of the demonstrative, by asking which objects satisfy both horse and lives-in-\(x\), where the value of \(x\) is the demonstrated barn stall. As we set up the example, the object that satisfies both of those properties is Bucephalus himself, so we predict that he will be the content of the demonstrative.

**Rigid designation**

Although there are significant differences between the various views we have just surveyed, each one involves a commitment to the idea that the propositional contribution of a complex demonstrative, with regard to an appropriate context, will be a certain individual that satisfies the matrix of the demonstrative. That commitment entails a thesis about the extensions of complex demonstratives: once an appropriate context is fixed, the extension of a demonstrative will be the same at every world of evaluation. In other words, the thesis that complex demonstratives are directly referential entails the thesis that complex demonstratives are rigid designators.

This entailment is no secret. In fact, rigid designation is a designed-for feature of many directly referential semantics. The apparent truth conditions of sentences like the following constitute one of the key data used to argue for direct reference:

\[\text{(TD)} \text{ If } u \text{ is a referential use of } \left[ \text{that NP} \right], \text{ then an object } o \text{ is the index of } \left[ \text{that NP} \right] \text{ in the context } C_u \text{ of } u \text{ if and only if } o \text{ is the object of the speaker } S_u \text{'s referential intention in } C_u.\]

\[\text{(TC)} \text{ If } u \text{ is a referential use of } \left[ \text{that NP} \right], \text{ then for any } x, x \text{ is the content of } \left[ \text{that NP} \right] \text{ in } C_u \text{ only if (i) } x \text{ satisfies } is \text{ a/n NP in } C_u, \text{ or (ii) the denotation of } x \text{ in } C_u \text{ satisfies } is \text{ a/n NP in } C_u.\]

\[\text{(TR)} \text{ If } u \text{ is a referential use of } \left[ \text{that NP} \right], \text{ then for any } x, x \text{ is the content of } \left[ \text{that NP} \right] \text{ in } C_u \text{ if and only if there is a maximally salient relation } R \text{ in } C_u \text{ such that the index } o \text{ of } \left[ \text{that NP} \right] \text{ in } C_u \text{ bears } R \text{ to } x.\]

John MacFarlane points out that there is something strange about TC; the variable \(x\) appears to be used equivocally as a variable over objects and as something that has a denotation.
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(7) That man in the purple shirt might not have been that man in the purple shirt.

Most philosophers have the intuition that a speaker who points at a certain man in a purple shirt while uttering (7) says something that is unequivocally false. But if *that man in the purple shirt* could be interpreted non-rigidly, we would expect the sentence to admit of the same interpretive possibilities as analogous sentences that involve definite descriptions, like:

(8) The man who invented bifocals might not have been the man who invented bifocals.

Unlike (7), (8) admits a reading on which it is straightforwardly true. On that reading, the sentence might be paraphrased:

(9) The man who in fact invented bifocals might not have done so.

Directly referential semantics for demonstratives offer a simple explanation of the intuition that there is no such paraphrase available for (7). With regard to the context described, the direct reference theory entails that the extension of *that man in the purple shirt*—at any world of evaluation—will be the man who is wearing purple in the context of utterance. Instead of expressing an obvious truth like (9), then, (7), on the directly referential semantics, expresses something closer to the fraught:

(10) Ibrahim might not have been Ibrahim.

1.3 Non-deictic demonstratives are not directly referential

Some preliminaries

There is no question that direct reference treatments of demonstratives issue in plausible truth conditions for standard deictic examples like our hydrologist’s (1) and our modal-involving (7); i.e., examples in which a demonstrative is used to pick out a certain object from the context of utterance. As we noted above, however, demonstratives are not always used this way; sentence (2, repeated), for instance, is most naturally interpreted as expressing a general claim about the nature of the relationship between kings and their clerical supporters, none of whom are required to be salient in the context:

(2) [Every king], loves that cleric who crowned him.

The semantic theories canvassed so far do not naturally lend themselves to generating truth conditions for sentences that involve non-deictic demonstratives.\(^5\) Consider again, for example, the variation on Kaplan’s semantics that we proposed above for deictic complex demonstratives:

\[
(5) \left[ \text{dthat } \text{x: } (Fx \land \Delta x) \right]_{c,w}^{c_w} = \left[ \text{the x: } (Fx \land \Delta x) \right]_{c,w}^{c_w}.
\]

\(^5\)King (1999, 2001) originally argued against direct reference on the grounds that directly referential semantics simply could not generate truth conditions for such sentences. As we will see, and as King (2008) recognizes, this claim turns out to be too strong.
We can plug the expression that cleric who crowned him into the $F$ slot of this template, but unless we have a demonstration to fill the position—which would defeat the intended non-deictic interpretation—we end up with an incomplete representation. Variations on this problem crop up for each of the formulations of direct reference we surveyed; the whole point of example (2) is that it can (and typically should) be interpreted with regard to a context that does not involve anything that corresponds to Borg’s “demonstrated object,” Salmon or Braun’s “demonstratum,” or Georgi’s “index.”

As Salmon (2006, 2008) has emphasized, however, there is a way in which Kaplan’s semantic framework can be used to analyze data like (2). Instead of requiring there to be a demonstration constant in the representation we give, we could treat the complex demonstrative from (2) as a $d$ that term formed as follows:

\[(11) \quad d\text{that} \text{[the cleric who crowned him,]}\]

Although the precise shape of the implementation would vary across theories, something similar in spirit could be done with any of the versions of direct reference that we considered earlier.\(^6\) In general, instead of saying that the content of $\text{that } F$ (with regard to a context, a time, a variable assignment, and so on) is the demonstrated $F$, we could say that the content of $\text{that } F$ (with regard to the relevant parameters) is the demonstrated $F$, if there is one, and is simply the unique $F$, if there is not. With regard to contexts that feature neither a demonstrated $F$ nor a unique $F$, we can simply say that the content of the expression $\text{that } F$ is undefined.

**QI demonstratives and their truth conditions**

If we treat non-deictic demonstratives as devices of direct reference along the lines just mentioned, we predict that example (2, repeated):

\[(2) \quad \text{[Every king,] cherished that cleric who crowned him,}\]

will be true with regard to a context of utterance, $c$, and a world of evaluation, $w$, just in case every object that is a king-in-$w$ stands in the relation of loving-in-$w$ to the unique object that is both a cleric-in-empic and that crowned him in $c$.

King (2001, 2008) claims that those truth conditions are wrong. On his view, (2) should have the same truth conditions as the following analogue, which is formed from a definite description instead of a demonstrative:

\[(12) \quad \text{[Every king,] loves the cleric who crowned him,}\]

---

\(^6\)The subscripted $i$ on the pronoun him from example 11 indicates that the pronoun is to be analyzed as a variable that is potentially available for binding by a higher quantifier. Although Salmon (2002, pp. 523–525) requires demonstrations to accompany uses of the $\text{zat}$ operator he relies on to analyze the English word that ($\text{zat}$ applies to open formulas instead of the singular terms $d\text{that}$ worked on), the requirement might be relaxed to allow treatment of non-deictic demonstratives in the way suggested here and in Salmon’s later work.

\(^7\)It bears mentioning that none of the direct reference theorists we mentioned would likely agree to extend their theories in such a fashion, since they take non-deictic demonstratives to be explained by an entirely distinct semantic mechanism.
Definite descriptions are not rigid designators, and on the most natural reading of (12), the sentence is true with regard to a world of evaluation, $w$, just in case every object that is a king-in-$w$ stands in the relation of loving-in-$w$ to the unique object that is both a cleric-in-$w$ and that crowned him in $w$.

The standard way to resolve questions about the modal profile of a disputed type of construction is to embed an example under an expression that shifts the world of evaluation with regard to which its complement is evaluated. In order to determine whether King is right about (2), then, or whether the friend of direct reference is, it would seem like all we have to do is generate an example featuring an appropriate operator.

Salmon (2008), however, claims that in the case of sentences that involve binding into a complex demonstrative—what King calls “quantifying in” or “QI” demonstratives—this diagnostic issues inequivocal results. He uses the following example to support that claim:

(13) Every parent $x$ is such that the following proposition is metaphysically possible: $x$ did not parent that oldest offspring of $x$’s. (Salmon 2008, p. 272, ex. 2)

The phrasing of (13) is supposed to make it unambiguous with regard to scope, so that we can be sure that if the sentence is true, it shows that the non-deictic demonstrative is interpreted rigidly—as we would expect if it were directly referential—and that if the sentence is false, it shows that the demonstrative is not. Unfortunately, Salmon says, it is not clear whether the sentence is true or false, which means that it cannot be used to settle questions about the modal profile of demonstratives that are used non-deictically.

While I share Salmon’s discomfort about the stability of the intuitions (13) elicits, I do not see any reason for taking that discomfort to be the result of a general difficulty brought on by QI sentences. As far as I can tell, the following string produces intuitions that are as unstable as those produced by Salmon’s example:

(14) Every parent $x$ is such that the following proposition is metaphysically possible: $x$ did not parent the oldest offspring of $x$’s.

But I doubt that anyone would take (14) to show that we cannot draw conclusions about the modal profile of definite descriptions on the basis of our intuitions about the truth conditions of sentences involving definite descriptions that occur under the scope of modals. I am not convinced that the unnatural formulation of (13) in fact helps to rule out any scope possibilities, but I agree that Salmon would need a way of ruling out a wide-scope reading of the demonstrative in order for intuitions about the sentence to be significant. Suppose we did not try and rule out the complex demonstrative’s taking wide scope over the modal. In that case, the truth of (13) would show nothing, since wide-scope definite descriptions are interpreted rigidly.

Both Salmon’s (13) and my (14) involve a host of obstacles to computation that come from the tortured commingling of English and logic, along with the metaphysics of essentialism, and what in the terms of traditional binding theory appears to be a condition C violation (see Carnie 2002 or Adger 2003). Although it is hard to know for sure what to make of the expression $x$, since the English lexicon does not really feature explicit variables, the way it is used with the Saxon genitive suggests a parallel with names. But names cannot be used the way $x$ is used in these examples: *John, did not parent that oldest offspring of John;’ $s$ is ungrammatical.
our attention to recognizable natural language data, the standard method of testing issues in clear results.

Imagine, for example, a context in which it is common knowledge that changing tastes and the availability of comedy videos on the internet have made it so that there are no court jesters left anywhere. In such a context, someone could use the following sentence to express a thesis about kings and the way they make decisions:

(15) If there were any court jesters around, [every king] would hire that jester who made him laugh the hardest.

Intuitively, (15) is true with regard to a context just in case at the nearest accessible world in which there are court jesters, every king hires the jester who makes him laugh the hardest. If we interpret the complex demonstrative as an obligatory rigid designator, however, as the direct reference theory requires, this reading becomes impossible. In fact, it is not even clear that the direct reference theory will generate any truth conditions for (15) at all; if there are no jesters at the world of the context, no one is a candidate for the extension of that jester who made him laugh.

The problem (15) poses can be set up in a number of ways. For a slightly different take, imagine a context in which two sociologists are discussing the relationships that obtain between kings and the clerics who crowned them. They agree that all of the world’s current kings love the clerics who crowned them, but they disagree about the source of that feeling. One sociologist thinks there is no general explanation of clerically-directed affection, while the other thinks it is the product of a structural feature of the king-cleric relationship. The structural theorist might say:

(16) Look, regardless of who the kings are and who the clerics are, [every king] is still going to end up loving that cleric who crowned him.

Sentence (16) involves the colloquial expression of a modal claim. Intuitively, the sentence is true with regard to a context just in case in every world that is accessible from the context, every king loves the cleric who crowned him. If we treat that cleric who crowned him as a rigid designator whose extension is fixed at the world of the context, however, we have no way to make this intuitive prediction; that treatment would make only the actual clerics relevant to the evaluation of the sentence.

Intensional verbs can also be used to show how direct reference gets the truth conditions of QI sentences wrong:

(17) [Every girl] is looking for that boy who makes her heartbeat faster, her stomach flutter, and her mind wander.\(^{11}\)

\(^{10}\)Thanks to Seth Yalcin for this example, and for urging me to use it instead of a predecessor that raised unnecessary complications.

\(^{11}\)This example is an instance of a widely-attested class; it is ‘Love Quote #6748505’ from http://www.wittyprofiles.com/q/6748505, Accessed May 1, 2014. Nb: the remaining ‘love quotes’ do not all involve QI demonstratives.
Regardless of how we eventually come down on the complicated—and here, orthogonal—question of how best exactly to analyze the semantics of ‘seeking’ verbs, it is very hard to see how a directly referential approach to the demonstrative from (17) could result in a successful representation. If we analyze the demonstrative that boy who makes her heart beat faster, her stomach flutter, and her mind wander using the semantics of direct reference, we predict that at every world of evaluation, the extension of the expression is whichever unique boy from the world of the context makes the girl-in-question’s heart beat faster, stomach flutter, and mind wander. This analysis, however, completely defeats the ‘seeking’ interpretation; on the only plausible reading, the sentence leaves open the question of whether there even is such a boy for every girl. Crucially, the sentence would still be a candidate truth, even if we knew ex ante that there were no such boy.

**Addressing the ‘oddness’ of QI demonstratives**

Before turning to look at how data involving other types of non-deictic demonstrative can be used to argue against direct reference, I would like to address a potential concern: an anonymous referee reports finding QI sentences in general so odd that s/he cannot say with any confidence what they should mean. In part, this concern can be met by noting that QI sentences are not the only data that can be used to motivate the kind of argument we have made so far (I will offer other motivating considerations shortly). Still, it is worth pointing out that while QI sentences are in fact attested, many of the examples that have been discussed in the literature on demonstratives are contrived in a way that might explain the referee’s discomfort.\(^1\)

According to a proposal from Gundel et al. (1993), the indefinite, definite, and demonstrative determiners form a hierarchy of familiarity; on their proposal, one of the characteristic pragmatic roles of the demonstrative determiner is to allow a speaker to signal to her audience that the object she wishes to talk about is one which is mutually familiar. Barbara Partee (p.c.) has suggested that something like this sort of assumption of familiarity is what explains the fact that (18), uttered as part of an NPR pledge drive, is annoying in a way that (19) is not:\(^2\)

\[(18)\] So go ahead, pick up that phone, and give us a call now to donate.
\[(19)\] So go ahead, pick up the phone, and give us a call now to donate.

In the case of a typical deictic demonstrative, the assumption of familiarity appears to be justified by the fact that the referent of the demonstrative is perceptually accessible to both speaker and hearer. If I know you can see a certain post, (20) is a perfectly natural thing to say, while if I know that you cannot, the sentence sounds bizarre:

\[(20)\] Watch out for that post!

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\(^1\)Examples (17) and (21) are attested.

\(^2\)As John Campbell aptly remarked (p.c.), (18) provokes the indignant response: “what do you know about my phone?” Note that the fact that the example involves a recorded advertisement is irrelevant; the same effect is produced when a sales associate in a jewelry store says *This would be a perfect gift for that special someone!*
CHAPTER 1. WHAT A SEMANTICS FOR COMPLEX DEMONSTRATIVES MUST DO

One reason QI demonstratives like our (2) might strike some people as odd is that they depart from this practice; it is not clear that the idea that some particular clerics are familiar to the speaker and hearer has any role to play in the interpretation of (2). Someone who expects every use of the demonstrative determiner to involve familiar referents, then, would probably find the sentence awkward.

If this explanation is on the right track, it might be helpful to look at examples in which a speaker exploits a violation of the expectation of familiarity to accomplish a communicative goal. Consider the following excerpt from a recent commencement ceremony at UC Berkeley, for example:

(21) There is so much debate among a selection committee that even if your film makes it out of oblivion onto the radar of programmers, there’s no guarantee that it will make it into the festival—unless there’s that one person who’s willing to champion it, to say out loud and loudly that this film deserves to be seen. At almost every film festival I attended, I met that one person who lobbied for my film. (Betty M. Park, May 17, 2013)

The speaker of (21) is aware that her audience does not know which individuals supported her film. So why does she use the demonstrative determiner instead of the definite article? On my way of understanding, the choice is self-conscious; by asking her audience to accommodate the presupposition of familiarity, the speaker creates an emotional or evaluative bond with them.

Speakers can accomplish a similar goal by referring to an object they suppose listeners know well, but which they themselves are unfamiliar with. Consider a variation on King’s sentence about skiers and black diamond ski runs, uttered by a seasoned ski patroller to a room full of hardcore experts:

(22) I know [every one of you], remembers that first time youi ducked under a boundary rope to slash some pow youi knew was off-limits...our job here is to make skiing that exciting for everybody, while keeping people safe.

The grizzled veteran does not know where each of her listeners had their first out-of-bounds experience. But she assumes they had such an experience, and underscores that fact by using the demonstrative determiner. The effect is the creation of a feeling of solidarity, which serves a useful communicative purpose.

Alternative non-deictic constructions

If the arguments advanced so far are successful, pace Salmon (2008), QI demonstratives constitute a powerful class of counter-examples to direct reference. As noted earlier, however, the problems for direct reference do not depend on accepting QI data. Even if we set those data aside for the sake of argument, other varieties of non-deictic demonstrative can be used to motivate a similar objection.

King (2008), for example, points out that if we treat non-deictic demonstratives as devices of direct reference, we generate mistaken truth conditions for discourse fragments that mix modality and anaphora. He invites us to consider a situation in which it is common knowledge that it would
be a disaster if two students, an iPod, and a logic book were all located in a certain library at the same time. We enter the library together, and find it empty. Nevertheless, after noticing that you took no precautions to preclude the doomsday scenario from obtaining, I reprimand you as follows:

(23) This whole thing could have been a disaster! A student\textsubscript{1} could have been sitting in the library. Another student with an iPod\textsubscript{2} could have been sitting across from him\textsubscript{1}. And that student\textsubscript{2} could have had a logic book. (King 2008, p. 115, ex. 9)

(23) is true in the context described just in case there is an accessible world in which two students are seated across from one another in the library, one with an iPod, and one with a logic book. If we interpret the demonstrative as an obligatory rigid designator, however, we have no way of generating this truth condition. In the world of the context, there are no students in the library at all, so there is no object that satisfies the demonstrative matrix.

Although King’s example wears its philosophical authorship on its sleeve, it is not difficult to construct similar sentences that show how natural it is to mix anaphoric demonstratives and modality:

(24) If there were a left-handed puck-moving defenseman available at the draft, that player would be the one to pick.

(25) Although it’s clear that we need someone to dig us out of the hole we are in, I doubt Dany is that hero.\textsuperscript{14}

Attested examples of this kind of construction are not uncommon, either. Here is one from the \textit{New York Times}:

(26) The real worry, I think, for men is that they will have to change their ways. They will have to monitor what they say to female students and colleagues. They will have to think twice before chatting up that attractive graduate student they see at a conference. (Anthony 2013, emphasis added)

These examples all tell against direct reference in the same way King’s (23) does. In every case, an anaphoric demonstrative is ‘anchored’ in a non-actual possibility. (24) is felicitous even in contexts in which there is no appropriate player, (25) in contexts in which there is no one who could perform the required rescue, and (26) in contexts in which the men in question see no attractive graduate students.\textsuperscript{15} If we require that complex demonstratives designate rigidly, we end up with no way of predicting the intuitive truth conditions for sentences like these.

Finally, note that the problem modal anchoring poses for direct reference can be brought out without using anaphora at all. Consider (27) for example, uttered in a context in which Simone did not win a certain election:

\textsuperscript{14}Thanks to Seth Yalcin for this example.

\textsuperscript{15}When I say “(24) is felicitous even in contexts in which there is no appropriate player,” I do not mean that the sentence is felicitous in contexts in which such a player is not visible, say, or otherwise salient. I mean that the sentence can be used at a world even if there are no such players in existence there; insofar as it makes sense to talk about the referent of this kind of anaphor, that referent is to be found in a counterfactual possibility, the possibility introduced by the modal antecedent.
(27) If Simone had won the election, she would definitely have embraced the elector who cast the deciding vote.

Suppose Simone is the liberal party candidate in some election, and that Antonin Scalia in fact cast the vote that decided the election in favor of the conservatives. If we claim that the content of the expression *that elector who cast the deciding vote* is the object from the context that satisfies *elector who cast the deciding vote*, we end up with the idea that (27) expresses the proposition that in the nearest accessible world in which Simone wins the election, she hugs Scalia.

While this might be a possible interpretation of (27)—in a context in which we think the nearest possible world is a world in which Scalia reconsiders his ideology before the election, for example—it is clearly not the only interpretation, and clearly not the most plausible one. In a normal context, (27) would be used to make a claim about how enthusiastic Simone is about politics: if she had won the election, she would have embraced whoever it was that delivered the victory. If we treat non-deictic demonstratives using direct reference, however, this interpretation becomes impossible.

### 1.4 Non-deictic demonstratives cannot be set aside

#### Setting up the debate

The considerations advanced in the previous section show that if we analyze non-deictic demonstratives using the machinery of direct reference, we end up with the wrong predictions about the truth conditions of sentences that involve them. The way philosophers have responded in the literature to data involving non-deictic demonstratives suggests that many accept this point. Instead of disputing the relevant intuitions in the way Salmon (2008) does, people who defend directly referential semantics for deictic demonstratives typically focus on insulating their views from counterexample; they claim that direct reference was never meant to address non-deictic cases in the first place, and they suggest that such cases should be dealt with by means of an alternative semantic mechanism.

Two justifications have been offered in print for this division, and philosophers have endorsed two ways of implementing it. Neither justification withstands scrutiny, and neither implementation is empirically successful. In fact, the considerations I will draw upon here suggest that any plausible semantics for demonstratives should cover both deictic and non-deictic instances straightforwardly, using the same basic resources.

#### Two arguments for separating deictic and non-deictic data

The first justification for treating non-deictic demonstratives differently from deictic instances is formulated most clearly in Braun (2008), but it is also suggested in the quote from Kaplan (1977) with which we began this paper and is frequently offered in conversation on the topic. The justification involves an analogy with pronouns, which, as Braun notes, are interpreted in a striking variety of ways. Despite the fact that referential pronouns, bound-variable pronouns, and anaphoric
pronouns are superficially indistinguishable, he says, most theorists do not advocate a unified semantics for them. Braun takes the case of pronouns to establish a sound methodological precedent, one that offers no grounds for expecting a unified semantics for demonstratives.

The second justification for offering a semantics that applies only to deictic uses of demonstratives rests on a putative fact about the cross-linguistic distribution of non-deictic demonstratives. Corrazza (2003) claims that QI demonstratives in particular are a quirk of English. Comorovski (2007, p. 64)—who, in fairness, is not primarily concerned with defending a semantics for demonstratives—assesses the cross-linguistic data in the same way. If this characterization were accurate, it would make maneuvers that might otherwise be called ad-hoc (like treating non-deictic demonstratives as idioms) seem less objectionable.

A cross-linguistic argument for unity

I agree with Braun (2008) that it is instructive to compare the cases of pronouns and demonstratives, expression types that both involve superficially similar instances that admit of sharply disparate interpretations. Unlike Braun, however, I take the comparison to show that the only live semantic options are theories that treat both deictic and non-deictic demonstratives using the same basic resources.

Like demonstratives, pronouns admit both deictic and non-deictic readings. With regard to an appropriate context of utterance, for example, the extension of the pronoun from (28) will be a particular individual who is salient in the context. The extension of the pronoun from (29), on the other hand, depends on the value of its antecedent (the quantifier expression every man here), not on facts about the salience of any individual in the context of utterance:

(28) He appears to be in a hurry.

(29) [Every man here]; looks like he{i} is in a hurry.

Someone interested in pronouns—but focused only on data like (28)—might be tempted to give a directly referential analysis of he; she might claim, for example, that the propositional contribution of he, with regard to a context, c, is whichever male object is ostended by the speaker in c. That analysis would work perfectly well as long as it were applied only to deictic data. If we try to apply it to sentences like (29), however, the results are clearly unsuccessful.\(^{16}\)

In the face of this difficulty, we might rethink the directly referential semantics we offered for cases like (28), in favor of a single semantics that can handle both deictic and non-deictic data. Or, we might preserve direct reference for deictic uses of pronouns, and propose an entirely separate treatment for non-deictic uses. Although his formulation is extremely compact, such an ambiguity theory seems to be what Braun (2008, p. 72) has in mind when he writes that “most theorists hold that ‘he’ on its demonstrative use is directly referential, and that ‘he’ on its bound variable use functions as a bound variable.” In the passage that follows the material just quoted, Braun speaks approvingly of theories that involve distinct but homophonous lexical items, he\(_1\) and he\(_2\),

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\(^{16}\)There is a reading of (29) on which the pronoun he is interpreted deictically; the direct reference treatment can generate this reading, but not the bound-variable reading which is indicated by the subscripts.
and concludes that “we have no particular reason now to think that the correct comprehensive theory
is a uniform theory rather than an ambiguity theory.”

If an ambiguity treatment of pronouns were plausible, it would provide some prima facie support
for an ambiguity treatment of demonstratives; at the very least, there would be a precedent for
separating deictic and non-deictic instances of a superficially similar expression type.

Pace Braun, however, the standard approach to the semantics of pronouns is not an ambiguity
theory; on the textbook analysis, both referential and bound-variable interpretations for pronouns
are derived from a single lexical entry. The English pronoun he, in both manifestations, is treated
like a variable over individuals (a variable that involves a gender presupposition). Deictic readings
occur when the variable receives its assignment from the context. Bound-variable readings occur
when the variable is bound by a linguistic antecedent; in such cases, the variable receives its as-
signment as per the rules governing the behavior of that antecedent. In summary, the difference
between the referential reading and the bound-variable reading of a given pronoun is explained by
differences in the way the pronoun’s environment affects the assignment, not by differences in the
semantics associated with two homophonous lexical items.

One of the major considerations that tell in favor of this unified treatment is that pronouns
from a wide variety of languages give rise to the same diversity of interpretations that English
pronouns do. The pronoun on from the Russian sentence (30), for example, which is used to refer
to a salient individual from the context, is phonetically indiscernible from the one that requires a
bound-variable interpretation in (31):

(30) Evidently he not slept enough
    ‘He, evidently, didn’t get enough sleep.’
(31) Kazhdyj igrok, prishel, dumaya o to on, mozet sta’ pobeditelem.
    ‘[Every player], arrived thinking that he could become the winner.’

The same pattern of uses occurs in Spanish:

(32) Por lo del partido, no escogieron a él.
    ‘Because of political affiliation, they didn’t choose him.’

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17 An anonymous reviewer takes my characterization of Braun to be unfair. The reviewer points out that Braun
does not unequivocally endorse an ambiguity treatment, either for pronouns or for demonstratives. Since the unified theory
Braun leaves open, however, is one on which one pronoun is associated with three distinct semantic clauses, only one
of which is parametrically triggered in any given context, I take it to be a notational variation on the ambiguity theory.

18 It is important to be clear that the analogy between the cases should not be overstressed: there is a significant
difference between claiming that the extension of a demonstrative can depend on the value of a bound variable that
occurs within its matrix and claiming that the demonstrative itself is interpreted like a bound variable.

19 See, for example, Heim and Kratzer (1998) and Chierchia and McConnell-Ginet (2000).

20 Instead of providing fully-detailed morphological glosses of foreign language data, I provide approximate English
renderings that I assume will be more helpful for philosophically-oriented readers.
(33) [Todo miembro de la academia], sabe que él, puede ser el próximo delegado.
Every member of the academy knows that he can be the next delegate
‘[Every member of the academy] knows that he could be the next delegate.’

The availability of both referential and bound-variable readings for what appear to be the same pronouns is not a particularity of English, Russian, and Spanish. In fact, it appears to be an extremely common property of natural languages. The most straightforward explanation of this fact is that both the referential and the bound-variable readings derive from a single basic semantics for pronouns; if referential and bound-variable type pronouns were really different lexical items, the fact of their cross-linguistic homophony would be astonishing.

Exactly the same considerations tell against an ambiguity treatment of demonstratives. Pace Corrazza (2003) and Comorovski (2007), it is not a particular quirk of English that licenses QI readings of complex demonstratives. Consider some data from Russian:

(34) [Kazhdyj], poshël k tomu metro kotoroe k nemu, bylo bliže vsego.
Each went towards that metro which towards him was closer than all
‘[Each person] went to that subway station which was closest to him.’

Note that the very same determiner used in Russian QI demonstratives is used in deictic demonstratives, too:

(35) Skaži tomu čeloveku, čto my xotim est’.
Tell that guy that we want to eat
‘Tell that guy we want to eat.’

The same pattern of use obtains in Italian:

(36) [Ogni padre], ricorda con nostalgia quel periodo della sua vita in cui non aveva ancora la responsabilità dei figli.
Every father remembers with nostalgia that period of his life in which he had not yet responsibility of the children
‘[Every father] remembers with nostalgia that period of his life in which he was not yet responsible for his children.’

(37) Mi piace quello ristorante.
Me pleases that restaurant
‘I like that restaurant.’

Someone attracted to an ambiguity treatment of *that*, then, has to say that in a wide variety of languages, the bona fide demonstrative determiner happens to share a morphological form with a different determiner that is used to generate QI-type readings.\(^{21}\) Since it is not inconsistent to say

\(^{21}\) In addition to Russian and Italian, Spanish, French, Polish, German, and Hindi allow the formation of QI-type demonstratives, according to native speakers of those languages. As John MacFarlane points out, it would be good to be able to point to data from non-Indo-European languages in this connection. I hope soon to be able to deploy Korean and Ecuadorian Highland Quichua; preliminary investigation suggests many more languages will support the point as well.
that the very same ambiguity is persistent across languages, this is not an outright refutation of the ambiguity theory. But that remarkable fact would surely deserve significant explanation, of a sort which has not been even hinted at so far in the literature. The best explanation of the cross-linguistic data is a simpler one: complex demonstratives, like pronouns, have a single underlying semantics that gives rise to two distinct types of interpretation depending on the environment in which the demonstrative occurs. For the reasons given earlier, the semantics in question cannot involve a fundamental commitment to direct reference.

**English-based arguments for unity**

The arguments from the previous section are meant to undermine any theory that does not treat deictic and non-deictic demonstratives as instances of a single basic semantic type. If those arguments are successful, they tell against the two most prominent moves philosophers who defend direct reference make when dealing with non-deictic data: saying there is a word pronounced like that but interpreted like the, and saying demonstratives are sometimes interpreted non-literally. In addition to the kind of general concern raised in the last section, though, these two strategies are vulnerable to specific difficulties that their proponents have not addressed. Before closing, I would like to draw attention to the seriousness of those difficulties.

**Problems for the ‘homophony’ thesis**

Aside from Dever (2001) and Georgi (2012), few philosophers have unequivocally endorsed the claim that the English lexicon features two distinct instances of that, one that is a bona fide demonstrative, and one that works like the familiar definite article. Intimations of the idea, however, recur throughout the literature, and many philosophers appear to rely on some version of it when they downplay the significance of data that involve non-deictic demonstratives. Recall, for example, the quote from Kaplan (1977, p. 489) with which we began: “perhaps, depending on how you individuate words, we should say that [pronouns and demonstratives] have homonyms in which I am not interested.”

Braun (2008, p. 86) seems to support treating that as though it had two classes of homophonous instances when he claims that “complex demonstratives with uniquely identifying common noun phrases are emphatic pragmatic alternatives to their corresponding definite descriptions.” Corrazza (2003, p. 272), following Dever (2001), expresses a similar idea, pointing out that the Oxford English Dictionary says, of that, that it is “often interchangeable with the but usually more emphatic.”

If I understand correctly, Braun and Corrazza are claiming that there is a version of that that means what the means, but carries a different degree of emphatic force. That certainly appears to be what Dever (2001, p. 286) has in mind, at least, when he says of Q1 sentences that “[he] will...assume that such examples make use of another word, homophonous with the demonstrative that, and treat them as outside the scope of [his] investigation.”

Although the idea that there is a homonym of that which is interpreted like the ordinary definite article would allow us to explain some of the data involving non-deictic demonstratives, other data show that it cannot be right. Consider the following pair, for example:
(38) The guy in the brown shirt always wins.

(39) That guy in the brown shirt always wins.

Suppose (38) is uttered at a boxing match, where one boxer is dressed in brown and the other in some other color. (38) can mean one of two things in such a context: either that the guy who now happens to be in the brown shirt is such that he always wins, or that whichever guy wears brown during a match, wins the match (imagine a case in which the fights have been fixed, and I am letting you know about this regularity so that you do not bet on the other color). The fact that (38) has these two readings is not surprising; this is a familiar feature of definite descriptions, even if the mechanism is controversial.\(^{22}\) If \textit{that} were ambiguous in the way the homophony theory says, however, we would expect there to be an instance of (39) that is formed from the version of \textit{that} which means what \textit{the} means. In this configuration, the sentence should admit the two readings (38) does. (39), however, cannot be interpreted as though it contained a definite description. In the context described, the sentence has univocal truth conditions; it is true only if the person wearing the brown shirt in the context is such that he always wins.

Examples like (38) and (39) illustrate just one of the many over-generation errors the homophony theory incurs. Consider the following pair:

(40) The author of \textit{King Lear} also wrote \textit{Romeo and Juliet}.

(41) \#That author of \textit{King Lear} also wrote \textit{Romeo and Juliet}.

If \textit{that} were ambiguous as between a bona fide demonstrative and a variation on \textit{the}, we would expect there to be a reading of (41) on which it means what (40) does. But there is no such reading; while the sentence might be uttered felicitously in a context in which it were widely known that the writing of Lear was a collaborative effort, it cannot be used as a variation on (40). The obvious conclusion is that there is no \textit{the}-homophone of \textit{that}.

A friend of direct reference might object here that things are not so clear, since even in a context in which Shakespeare is ostended, (41) is marked. Since there should be no difficulty in interpreting (41) according to the classical semantics, she might say, it would be over-hasty to chalk the markedness of (41) up to the unavailability of a version of \textit{that} which has \textit{the}-type semantics.\(^{23}\)

Part of this point deserves to be taken on board; there is clearly something about (41) that needs to be explained by anyone with a view about complex demonstratives. In fact, the sentence illustrates a general property of complex demonstratives: they do not mix well with superlatives and adjectives that connote uniqueness.\(^{24}\) Compare:

(42) \#I climbed that tallest mountain.

(43) \#That fastest racer won the prize.

\(^{22}\)Compare Donellan (1966).

\(^{23}\)In my mind, this objection in fact does more to undercut typical versions of direct reference than it does to support them. Since typical semantics for demonstratives do not explain the markedness of sentences like (41) when they are used deictically, such sentences provide another reason for thinking the typical semantics to be inadequate.

\(^{24}\)Thanks to Seth Yalcin for pointing out this fact about superlatives; see Yalcin (2014) for discussion.
(44) #That author of Waverly was Scott.
(45) #That inventor of bifocals was a genius.

Although this putative feature of demonstratives deserves closer inspection, it provides no support for the homophony treatment of that. If the homophony theory is right, the fact that the genuine demonstrative version of that would be marked in (41) is not related in any clear way to the question of the availability of a definite description-type reading; if the ambiguity thesis were right, the definite description reading would be gotten from an entirely different homophonous lexical item. Whichever features of the demonstrative result in the failure of (41), there is no reason to expect they would be instantiated by its definite description-making homophone. Absent a compelling story about why we should expect to see those features repeated, then, we should expect (41) to mean what (40) does, and for (42)–(45) to be perfectly felicitous, and interpreted as though they involved definite descriptions. That expectation, however, is clearly not borne out by the data.\footnote{It deserves to be mentioned that examples like (41)–(45) are as much a problem for semantic theories like King’s (2001) and Elbourne’s (2005) as they are for directly referential theories. In chapter 2, I defend a proposal that can handle those data straightforwardly. The key to that proposal is the idea that the demonstrative determiner takes two arguments, and introduces a presupposition to the effect that its second argument serve as a kind of restrictor on the first; infelicitous strings like (41–45) violate that presupposition, while felicitous non-deictic demonstratives like our QI sentence (2) meet its requirement.}

Sentences involving generic and non-specific uses of the definite article might provide support for the same point. If those constructions are best analyzed using the ordinary definite article—a claim I do not intend to commit myself to—and if the homophony theory were true, we would expect non-deictic demonstratives to support generic readings. As the following examples show, however, no such readings are available:

(46) (The/#that) blue whale is the largest mammal.
(47) (The/#that) outcome of the election was never really in doubt.
(48) Soledad is in the garden, reading (the/#that) newspaper.

Problems for the ‘pragmatic thesis’

In Sect. 3, we saw how directly referential semantic proposals are unable to generate the intuitive truth conditions for sentences like (15, repeated):

(15) If there were any court jesters around, [every king]i would hire that jester who made himi laugh the hardest.

An anonymous referee proposes a way of explaining how the right truth conditions might be derived, without rejecting direct reference, and without denying that that, as it appears in (15), is the same word as the word used to form deictic demonstratives. S/he recommends distinguishing the literal truth conditions of sentences like (15) from an alternative set listeners arrive at by means of some sort of pragmatic process. The referee takes this to be what Salmon has in mind when he claims that non-deictic demonstratives are stylistic variations on definite descriptions, and it
seems like a plausible reading of Lepore and Ludwig’s (2000, p. 219) suggestion that non-deictic
demonstratives involve a demonstrative’s being “pressed into service” as a definite description.\footnote{Some of what Corrazza (2003) says about non-deictic demonstratives could reasonably be interpreted as providing support for a pragmatic explanation, too.}

At first glance, however, it is not easy to see how the details would work, since there is no obvious Gricean relationship between the perceived truth conditions for (15) and the truth conditions predicted by the directly referential semantics. Perhaps to meet this point, instead of trying to explain the transition in terms of conversational implicature, the referee proposes an explanation rooted in a cognitive constraint: the literal truth conditions for (15) might be so difficult to compute that listeners are forced to reinterpret the demonstrative. Instead of taking the demonstrative determiner to contribute its normal semantic value, the suggestion goes, people simplify the required interpretive task by hearing it as though it were the definite article.

The problem with this strategy is that it is not at all clear why interpreting a definite description would involve any less cognitive work than interpreting a directly referential expression. This comes out particularly clearly if we take Salmon’s variation on Kaplan’s theory as our model for direct reference. As Salmon would have it, the non-deictic demonstrative from (15) is treated as though it were equivalent to:

\[(49) \ dthat \ [the jester who made him laugh the hardest]\]

Computing the extension of (49), however, does not seem like it would be any less difficult than computing the extension of the description \(the jester who made him laugh the hardest\). The only significant difference between the two expressions, insofar as the derivation of truth conditions for (15) is concerned, is the value of the world of evaluation parameter used to evaluate the description.

Although I doubt that there is a role here for the notion of computational tractability to play, the referee’s explanation suggests another that deserves consideration. Instead of saying that hearers are forced into computing erroneous truth conditions for strings like (15), we might just say that they get the truth conditions wrong because of the way non-deictic demonstratives are most commonly used.

Most attested examples of non-deictic demonstratives involve no modal operators. Consider the following representative excerpt from an article in the \textit{New York Times}:

\[(50) \ I\ was\ a\ federal\ agent\ for\ 27\ years\ and\ worked\ undercover\ as\ a\ money\ launderer…for\ five\ of\ them.\ I\ worked\ on\ teams\ that\ put\ leaders\ of\ drug\ cartels\ behind\ bars.\ The\ largest\ and\ most\ sophisticated\ of\ these\ criminal\ enterprises\ don’t\ trick\ banks\ into\ laundering\ their\ money—they\ partner\ with\ \textit{that\ small\ segment\ of\ the\ international\ banking\ and\ business\ community\ that\ recirculates\ drug\ profits\ and\ cash\ from\ other\ illicit\ trades}…(Mazur\ 2013,\ emphasis\ added)\]

In order to understand what the author of this passage intends to communicate, readers are not required to calculate the intension of the expression \(that\ small\ segment\ of\ the\ international\ banking\ and\ business\ community\ that\ recirculates\ drug\ profits\)... This means that whether they elect to treat
the expression as (say) a *dthat*-term or a definite description has no practical effect; extensionally, the two treatments are equivalent.

A friend of direct reference might claim that we are so familiar with the extensional similarities between non-deictic demonstratives and definite descriptions that we fail to track the intensional differences at all. When we encounter the rare case which does require disambiguation, we make a mistake, assimilating what, strictly speaking, we should treat as a rigid designator to the more common model provided by definite descriptions.

The possibility of offering an error theory along these lines might at first appear to be more promising than the possibility of developing an ambiguity theory for *that*; assuming that people are broadly cognitively similar, the error theory, for example, would generalize more plausibly across languages. Like the ambiguity theory, however, there are reasons to doubt that the error theory will ultimately provide a satisfying account of the phenomenon it is meant to explain.

As noted earlier, data from English show that definite description-type interpretations are not available for every syntactically well-formed demonstrative. But the error theory is poorly positioned to explain that fact. If carelessness were the source of the description-type interpretation for that cleric who crowned him, we would expect similar readings to be available for demonstratives like the following:

(51) #Sir Walter Scott was that author of Waverly.
(52) #Mt. Everest is that tallest mountain in the world.

The fact that these sentences are infelicitous suggests that the real story about non-deictic demonstratives is more complex than the error theory would make it; the fact that minor changes to the examples render them felicitous provides further support for that conclusion.1.5

(53) Sir Walter Scott was that guy who wrote Waverly.
(54) Mt. Everest is that mountain which is taller than any other.

### 1.5 A preliminary conclusion

I began the argumentative portion of this chapter by claiming that we can test the viability of a directly referential semantics for demonstratives by evaluating the modal profile of those expressions; if direct reference is true, then demonstratives are rigid designators. I rehearsed an argument from King (2001, 2008) that aims to undermine direct reference by showing that not all demonstratives can be successfully treated as rigid designators, and responded to a complaint Salmon (2008) raises about that argument. I provided new data (including attested examples) that I claim clearly favor King over Salmon.

Having established that direct reference gets the truth conditions of sentences involving non-deictic demonstratives wrong, I turned my attention to the ways in which philosophers have attempted to explain those sentences away. I argued that none of their deflationary strategies are

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27 For a detailed consideration of the differences between (51)/(53) and (52)/(54), see chapter 2.
successful, and gave reasons for thinking that any plausible semantics for demonstratives will have to address both deictic and non-deictic instances.

Although it might sound strange to say so, coming on the heels of that summary, I hope the real upshot of the chapter will be positive; on my view, the data I discuss bring out features of the terrain that philosophers have not fully appreciated, and serve to roughly delineate the constraints that should shape an adequate semantics for demonstratives.

The truth conditions we get when we embed non-deictic demonstratives under modals, for example, do more than just suggest that direct reference is wrong; they suggest that rigidity must not be built into the lexical specification of the demonstrative determiner. Once we recognize that demonstratives are sometimes interpreted rigidly, sometimes not, it becomes sensible to ask: what explains the difference between the two cases?

That question becomes even more interesting when we consider it in the light of the cross-linguistic data, which suggest that we should aim to give a single semantics that can handle both the classic referential interpretations and the non-referential readings of demonstratives. Instead of chalk ing the rigid/non-rigid distinction up to lexical choice, the cross-linguistic data invite us to search for an explanation rooted in something more basic. Actually giving that explanation will require asking (hopefully illuminating) questions about the nature of the objects of our discourse, about our relations to those objects, and maybe about the structure of discourse itself. To these questions, we turn in the chapters to come.

To keep the discussion focused, I limited my attention so far in this chapter to the most familiar cluster of views about the semantics of complex demonstratives; i.e., views on which the propositional contribution of a demonstrative of the form \( \text{that } F \), uttered in an appropriate context, is a certain object from the context that is \( F \). It is important to be clear, however, that the arguments I make there apply to a wide variety of alternative views about the semantics of demonstratives. Below, I discuss particular issues raised by several prominent alternative semantic theories.

### 1.6 Generalizing the argument against direct reference

**Appositive views**

Corraza (2003) and Dever (2001) develop versions of a semantic theory that denies that complex demonstratives are really complex in the way more familiar theories hold. Instead of analyzing instances of the form \( \text{that } F \) as expressions that designate individuals, they treat them as though they express complete propositions, formed from a simple demonstrative and a predicate. In turn, they treat sentences of the form \( \text{that } F \text{ is } G \) as though they involved bifurcation of a sort that some theorists associate with apposition (compare: \( \text{that}, \text{which is } F, \text{ is } G \)).

Imagine, for example, that someone points towards the building that houses the Russian Ministry of Foreign Affairs and says:

(55) That building is a fine example of Stalinist architecture.

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28In general, any view that stipulates that demonstratives must be interpreted rigidly is undermined by the data that show how non-deictic demonstratives frequently require non-rigid interpretations.
Corrazza and Dever claim that instead of expressing the single proposition that the building in question is a fine example of Stalinist architecture, the speaker of (55) expresses the two discrete propositions that would be expressed if she were to utter (56) and (57) in sequence:

(56) That is a building.
(57) That is a fine example of Stalinist architecture.

Both theorists use the machinery of direct reference to analyze the demonstrative element, so—if we let ‘α’ be a meta-language name for the building that houses the Russian Ministry of Foreign Affairs—(56) and (57) express the following propositions:

(58) α is a building.
(59) α is a fine example of Stalinist architecture.

While the ‘appositive theory’ of complex demonstratives might handle data involving a narrow class of deictic demonstratives plausibly well, examples like the ones we have considered so far show that the view cannot be sustained. Recall sentence (27), repeated, for example:

(27) If Simonei had won the election, shei would definitely have embraced that elector who cast the deciding vote.

Neither Corrazza nor Dever provides a detailed analysis of a case in which a complex demonstrative occurs in non-subject position, but the following is a likely candidate dual-proposition paraphrase of (27):

(60) *If Simonei had won the election, shei would definitely have embraced that.
(61) If Simonei had won the election, that would be the elector who cast the deciding vote.

(60), however, is simply not an acceptable string of English when the demonstrative is understood to refer to a person. Although you can point at a certain man while uttering (62), you cannot express the same proposition using (63):

(62) He came to our party the other night.
(63) *That came to our party the other night.

The simple demonstrative from (61), on the other hand, could in principle be used deictically to refer to a person. Compare the following ‘presentational’ use of a simple demonstrative, uttered while pointing at a certain famous motorcyclist:

(64) That is who won the 2012 WSBK race at Sears Point.

In the context in which (27) is uttered, however, no person is ostended, which makes a presentational analysis of the simple demonstrative from (61) implausible.

Even if we set that point aside for the sake of argument, it is clear that if the string could be felicitously used, its truth conditions would diverge from those we require for (27). If we take

Note that Corrazza (2003) describes a potential extension of the theory to what King (2001) called ‘no description, no speaker-reference’ demonstratives. There is no room here to consider this extension.
either the person who in fact cast the deciding vote, or some person ostended by the speaker to be the propositional contribution of that, we will have no way of generating the definite-description type reading (27) requires.

Parallel considerations apply to a wide variety of similar constructions. The fact that we cannot point at an inventor and say:

(65) *That lived on a farm.

should make us wary of treating the demonstrative from (66):

(66) That guy who invented bifocals lived on a farm.

as though it involved the simultaneous expression of each of:

(67) *That lived on a farm.
(68) That is a guy who invented bifocals.

Finally, it is important to note—as Dever does on p. 305 of his (2001)—that the apposition view simply rules out demonstratives that involve binding, like our (2):

(2) [Every king], cherished that cleric who crowned him.

since, even if we set aside the inanimacy violations they involve, there is no way to recover a bound reading from the strings:

(69) *Every king cherished that.
(70) That is who crowned him.

A hybrid view

Lepore and Ludwig (2000, p. 215), keen to do justice to intuitions that suggest both that complex demonstratives are singular terms and that they are quantifier expressions, develop a semantics that treats them as quantifier expressions that involve singular terms as constituents:

In effect, we treat English sentences of the form “That \( F \) is \( G \)” as sharing interpretive truth conditions with English* sentences of the form “[The \( x : x = \text{that} \) and \( x \) is \( F \)](x is \( G \))”. Our desiderata have led us to postulate that sentences of the form “That \( F \) is \( G \)” are semantically equivalent to restricted existentially quantified sentences, the restrictive clause of which contains a singular referring term, to wit, a demonstrative.

The semantics they give for the referential component of that depends on the following clause:

For all speakers \( s \), times \( t \), speech acts \( u \), and objects \( x \), if \( s \) demonstrates \( x \) at \( t \) using “that” in \( u \), then \( \text{Ref}_{[s,t,u]}(\text{“that”}) = x. \) (2000, p. 232, ex. 62)
Lepore and Ludwig’s proposal is designed to allow quantification into complex demonstratives. Importantly, however, the proposal allows such quantification only in certain limited circumstances. Suppose, for example, that someone points to the presenter at a conference and says:

(71) Every man in this room admires that woman whom he sees standing at the podium.\(^{30}\)

On Lepore and Ludwig’s semantics, the demonstrative from (71) is equivalent to:

(72) \([\text{the } x: (x = \text{that}) \text{ and } (x \text{ is a woman he sees standing at the podium})]\)

In the situation described, the reference clause quoted earlier applies to that, and returns the woman who is ostended by the speaker. He is bound by the higher quantifier phrase \textit{every man in this room} in the ordinary way, and the result is as we would expect, that the whole sentence will be true just in case every person in the relevant room admires the person at the podium.\(^{31}\)

Because the Lepore and Ludwig semantics requires analyzing complex demonstratives as though they involved simple deictic demonstratives, however, it cannot be extended to cover most cases of quantification into a complex demonstrative, or to cover other varieties of non-deictic demonstratives. Our (2, repeated), for example, clearly does not mean that every king cherishes the unique individual that crowned all of the kings and who is demonstrated in the context of utterance:

(2) \([\text{Every king}, \text{ cherished that cleric who crowned him}].\)

If the arguments made earlier successfully establish that a single semantics must cover both deictic and non-deictic demonstratives, data like (2) make Lepore and Ludwig’s semantics untenable.

**Rigidified descriptions**

Neale (1993, p. 108) describes a way in which truth conditions for sentences involving deictic complex demonstratives that are similar to the truth conditions predicted by direct reference can be derived without claiming that such demonstratives are themselves devices of direct reference. On that view, complex demonstratives are treated as a certain kind of rigidified definite description:

…on the assumption that ‘I’ is a rigid referring expression, we might consider analyzing a complex demonstrative ‘that \(F\)’ in terms of, or at least as equivalent to, a description such as ‘the actual \(F\) I am demonstrating’.

This proposal goes wrong in the same way as Lepore and Ludwig’s: it straightforwardly rules out non-deictic demonstratives.

Even if the proposal were amended, though, so that demonstrations were treated as optional, instead of required, the proposal would be undermined by the stipulation that all demonstratives be interpreted rigidly. Suppose we took the proposal to be that instances of \(\text{that } F\) should be interpreted as though they were equivalent to ‘the actual \(F\) I am demonstrating, if I am demonstrating such,
and the actual $F$, if I am demonstrating nothing at all or something that is not $F'$. This proposal could be applied to non-deictic demonstratives, like the one from our (27, repeated):

(27) If Simone$_i$ had won the election, she$_i$ would definitely have embraced that elector who cast the deciding vote.

But, as we have seen, the demonstrative from (27) has to be interpreted non-rigidly. So the example, along with others discussed here, and many more besides, undermines the ‘rigidified description’ semantics for complex demonstratives.
Chapter 2

A semantics that gets it done

2.1 Introduction

As we saw in the previous chapter, philosophers’ interest in complex demonstratives has traditionally been focused on deictic instances; i.e., instances on which a demonstrative is used to pick out an object from the context of utterance, as in:

(73) That river looks treacherous (while pointing at a river).

Most philosophical work on the topic has revolved around the question of how to represent the semantic contribution of the pointing gesture or its equivalent, and how to represent the contribution of the predicate from which the complex demonstrative is formed.\(^1\)

It is a striking fact about complex demonstratives that not all uses conform to the familiar deictic paradigm. The demonstratives from sentences like the following, for example, appear to be interpreted like definite descriptions:

(74) Every king, cherishes that cleric who crowned him,

(75) That candidate who receives the most certified votes will become mayor.

Examples like (74) and (75), which involve what have been called ‘non-deictic’ or ‘non-referential’ demonstratives, or ‘demonstrative descriptions’, have recently become the subject of significant controversy in the philosophical literature.\(^2\) Some philosophers take such data to show that demonstr- 


\(^2\) In the terminology introduced by King (2001), (74) is an example of a “quantifying-in” or “QI” demonstrative, while (75) involves a “no demonstration, no speaker reference” or “NDNS” instance. For present purposes, establishing a taxonomy of non-deictic uses is less important than noticing that unlike (73), both (74) and (75) admit readings on which they are truth-conditionally equivalent to the variations that would be formed if the word the were substituted for that. Although it is not a perfect diagnostic tool, non-deictic demonstratives tend to take parenthetical disclaimers like ‘if such there be’ or ‘whoever he is’ more naturally than deictic demonstratives, which by their nature involve reference to a particular individual.
stratives are more semantically similar to definite descriptions than had traditionally been assumed, while others deny that non-deictic demonstratives are really demonstratives at all.³

Although it has been pointed out several times, the parties on both sides of this issue have mostly overlooked a key piece of information: the range of demonstrative constructions that support description-type interpretations is limited.⁴ Despite the fact that the demonstrative from sentence (77) involves what we might expect to be an insignificant variation on the one from sentence (76), the latter can be interpreted as though it were equivalent to a definite description, while the former cannot.⁵

(76) That guy who wrote Waverley also wrote Ivanhoe.
(77) # That author of Waverley also wrote Ivanhoe.

No mainstream semantic theory for demonstratives is capable of explaining this contrast. Theories that aim to explain non-deictic data, as well as theories that aim to explain them away, wrongly predict that (76) and (77) should pattern exactly like definite descriptions, which are felicitous in either of the following configurations:

(78) The guy who wrote Waverley also wrote Ivanhoe.
(79) The author of Waverley also wrote Ivanhoe.

In this chapter, I will show how the contrast between (76) and (77) tells against existing thinking.⁶ I treat that contrast as a source of semantic insight, and I sketch an approach to complex demonstratives that can explain it.


⁴Compare Maclaran (1982) and Wolter (2006, 2007, 2009). Wolter (2006) offers both a sustained discussion of the problem and potential solution that is, in its broad outlines, similar to the one I will describe here, which was developed independently.

⁵I use the hash sign to flag sentences that are infelicitous under the relevant interpretation. It is important to note that there are certain ‘emotive’ uses of demonstratives, which Partee (p.c.) claims are often used to create or attempt to create a kind of evaluative solidarity between speaker and listener, that would make that author of ‘Waverley’ felicitous even when interpreted non-deictically. Compare: That (darn) author of ‘Waverley’—he turns up everywhere in philosophy, doesn’t he?! Since emotive uses raise issues we cannot settle here, I have tried to structure my examples in a way that defeats emotional shading. For discussion, see Lakoff (1974), Wolter (2006), and Potts and Schwarz (2010).

⁶I focus my discussion on examples (76) and (77) for the sake of clarity and concreteness. On the view I will describe, the relative clause guy who wrote ‘Waverley’ is structurally different from the relational noun construction author of ‘Waverley’ in a way that licenses one but rules out the other. Crucially, I am not claiming that the phenomenon involved is unique to relative clauses or relational nouns, much less to my particular example sentences. Whether there are other constructions that would meet the semantic and structural constraints I describe, or which constructions those might be, will have to remain a question for future work. Wolter (2006, pp. 141-146) provides a more complete survey of the possibilities, some of which I consider in section 2.4.
2.2 Overgeneration

Two basic strategies for handling data involving non-deictic demonstratives have been described in the philosophical literature. Both significantly overgenerate, predicting that non-deictic interpretations should be available for demonstratives generally.

Ambiguity theories

The first approach, which is typically endorsed by direct reference theorists, is to claim that non-deictic demonstratives are not really demonstratives at all. As we saw in the previous chapter, the standard way of developing this line is to say that the determiner *that* is lexically ambiguous. *That*₁ is used to form bona fide demonstratives, while its homonym, *that*₂ is interpreted just like the definite article.⁷ On this treatment, some apparent demonstratives, like the one from (76, repeated), turn out to be definite descriptions in disguise:

(76) That guy who wrote *Waverley* also wrote *Ivanhoe*.

Ambiguity theorists explain the non-deictic reading of this sentence by offering disambiguations like the following:

(80) That₂ (= the) guy who wrote *Waverley* also wrote *Ivanhoe*.

To the best of my knowledge, the only reason anyone has given for endorsing this view is that it would insulate directly referential semantic theories from a significant class of counter-example. This strikes me as an unacceptable motivation, but it is difficult to see what else could be said for the ambiguity theory. In the previous chapter, I argued that empirical evidence makes the idea of a lexical ambiguity extremely implausible; in a wide variety of languages, deictic and non-deictic demonstratives are formed using phonologically-indiscernible determiners. To explain this fact, the ambiguity theorist must make the incredible claim that parallel ambiguities recur in unrelated and distantly-related languages.⁸

The contrast between examples (76) and (77) (repeated) undermines the ambiguity theory even more directly:

(76) That guy who wrote *Waverley* also wrote *Ivanhoe*.

(77) #That author of *Waverley* also wrote *Ivanhoe*.

Since (77) would be felicitous if *that* were replaced by *the*, there can be no question of *that*₂ being equivalent to *the*. Of course, a determined ambiguity theorist might respond to this sort of data by offering a more sophisticated version of the theory. Instead of saying that *that*₂ is semantically equivalent to *the*, she might claim that it is equivalent to a hitherto unremarked determiner that appears to be semantically like *the* but which is only licensed in certain environments. In order to make

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⁷Dever (2001) and Georgi (2012) explicitly defend this treatment, which is also implied by remarks from Kaplan (1977), Corrazza (2003), and Braun (2008).

⁸For additional historical considerations that recommend against an ambiguity theory, see Roberts (2002).
the right predictions about the distribution of those environments, however, the ambiguity theorist will have to offer a treatment on the order of complexity of the one described here. Developing such a sophisticated account of structural licensing only to attach it as a footnote to the familiar direct reference semantics for deictic demonstratives, however, would take a view that was unpalatably ad hoc to begin with and make it completely desperate. I will assume going forward that the only serious contenders are theories that can generate both deictic and non-deictic interpretations using the same basic mechanisms.

**Hidden argument theories**

The other prominent approach to the non-deictic demonstrative data involves what I will call a ‘hidden argument’ treatment. On the hidden argument theory, all complex demonstratives have the same basic semantic structure:

\[ (81) \quad \text{that } F = \text{the } x: [F(x) \& G(x)] \]

King (2001) defends a Russellian version of the hidden argument theory, on which *that* combines with two arguments to make a generalized quantifier, while Elbourne (2005) develops a Fregean version, on which *that* takes two arguments and returns the unique individual that satisfies both.

When a demonstrative is used deictically, both authors say that the *G* argument place is saturated by a hidden argument that corresponds to an identificational property. For King, that property is determined by the speaker’s referential intention, while for Elbourne, the hidden argument place is occupied by a variable over identificational properties, the value of which is set by a contextually-determined assignment function. On either version of the theory, if someone standing in the Desolation Wilderness points up at Mount Agassiz and says:

\[ (82) \quad \text{That mountain is lovely!} \]

her demonstrative will be represented along the following lines:

\[ (83) \quad \text{the } x: [\text{mountain}(x) \& \text{identical-to-Mount-Agassiz}(x)] \]

For King, when a demonstrative is used non-deictically, the *G* argument place is saturated by a trivial property, like the property of being self-identical. Elbourne does not explicitly address the case of non-deictic demonstratives. One of the aims of his semantics, however, is to unify the treatment of demonstratives and definite descriptions. To derive the attributive reading for typical definite descriptions, he proposes saturating the determiner’s second argument position with a trivial property. So, it is not much of a stretch to think that on either hidden argument theory, the demonstrative from (76, repeated):

\[ (76) \quad \text{That guy who wrote } \text{Waverley also wrote } \text{Ivanhoe.} \]

would be represented roughly as per:

\[ (84) \quad \text{the } x: [\text{guy-who-wrote-}\text{Waverley}(x) \& \text{self-identical}(x)] \]
Since every object is self-identical, the second argument essentially drops out of the derivation, and the demonstrative is interpreted as though it were equivalent to the definite description:

\[(85)\] the guy who wrote *Waverley*

Although the hidden argument theory easily generates a reading on which the demonstrative from (76) is truth-conditionally equivalent to a definite description, the theory offers no way of ruling out such a reading for the demonstrative from (77, repeated):

\[(77)\] # That author of *Waverley* also wrote *Ivanhoe*.

If the hidden argument theory were right, we would expect to be able to produce such an interpretation by representing the demonstrative as follows:

\[(86)\] the \(x\): [\(\text{author-of-}Waverley(x) \& \text{self-identical}(x)\)]

The infelicity of (77) shows that the hidden argument theory is wrong; non-deictic interpretations are not the result of merely replacing a substantive argument with a trivial one.

### 2.3 A better semantics for demonstratives

**The problem, intuitively**

The basic idea behind the hidden argument theory is an attractive one. Instead of explaining the behavior of demonstratives by deploying (for example) sui generis operators that take a definite description and make it directly referential, the hidden argument theorist claims that demonstratives involve the same semantic operations as other determiners. She also promises to explain a wider range of data than her competitor; her analysis is designed to cover both familiar deictic uses of demonstratives as well as non-deictic uses.

As we have just seen, however, the hidden argument theory is not empirically adequate as it stands. We can fix this problem without abandoning the basic two-argument architecture if we modify some of the details. In order to appreciate the way the required modifications work, we will have to look more closely at the possible semantic structures that might be associated with the demonstratives from (76) and (77). Before doing that, however, it will be helpful to establish some context, by looking broadly at the role demonstratives typically play in our communicative practices.

In the most familiar cases, demonstratives supply answers to the question ‘which one?’ Consider a butcher-shop vignette:

\[(87)\]

A: Number 49?
B: Yes, I’d like a rib-eye steak, please.
A: Which one?
B: That one, please. (pointing)
This dialogue illustrates an extremely common pattern of use of deictic complex demonstratives. By saying ‘rib-eye steak’, B calls attention to a particular class of individuals, and by pointing, selects one from among them. Many people with whom I have discussed data involving demonstratives have the intuition that this is why (singular) demonstratives were put on the Earth: to allow speakers a way of selecting one individual from a set of candidates. In the case of complex demonstratives, the candidates are provided by the predicate from which the demonstrative is formed.

This intuition suggests a way of distinguishing the felicitous (76) from the infelicitous (77):

(76) That guy who wrote *Waverley* also wrote *Ivanhoe*.
(77) # That author of *Waverley* also wrote *Ivanhoe*.

At first glance, it seems like (76) might admit an interpretation on which the relative clause is used to perform the kind of restricting work that would ordinarily be done by a pointing gesture; there are many objects that satisfy the predicate *guy*, and the relative clause provides a way of selecting just one. On the other hand, there does not appear to be any way of saying the same thing about (77), since there is no way of restricting the predicate *author of ‘Waverley’*, which already picks out a single individual. Indeed, a common reaction to the contrast between examples 4 and 5 is to point out this difference.

Existing versions of the hidden argument theory are not well-positioned to implement an explanation along these lines, however. Neither King (2001) nor Elbourne (2005) offer a specific analysis of the structure of restrictive relative clauses, but it is clear that both authors subscribe to some version of the familiar picture on which a relative clause and the noun that it modifies combine to form a single property-type constituent.9

King (2001) says that the non-deictic demonstrative from (88) has the logical form of (89), which, given standard assumptions about syntax and about semantic composition, we might expect to be derived by way of a structure along the lines of (90):10

(88) That hominid who discovered fire was a genius.
(89) The property of being a hominid who discovered fire and the property of being self-identical are uniquely jointly satisfied by an object $x$ and $x$ is a genius.
(90) 

---

9Heim and Kratzer (1998) credit Quine (1960) with an early description of this idea, which, in various syntactic guises, is the contemporary standard. See note 11 on page 35 for more.

10I use strikeout notation to indicate unpronounced material.
Elbourne says that the hidden argument associated with a demonstrative expression is supplied by an index on the determiner:

(91) \[[\text{that}_i] F\]

With regard to an assignment that maps $i$ to the property $G$, (91) is interpreted as though it were equivalent to:

(92) \[\text{the } x: [F(x) \& G(x)]\]

This treatment suggests that the demonstrative from (88) would be represented as per:

(93) \[[\text{that}_i \text{ hominid-who-discovered-fire}]\]

To derive a non-deictic interpretation, (93) would have to be evaluated with regard to a variable assignment that maps the demonstrative index to a property like the property of being self-identical. Such an assignment would result in something equivalent to:

(94) \[\text{the } x: [\text{hominid-who-discovered-fire}(x) \& \text{self-identical}(x)]\]

Regardless of how exactly we develop the hidden argument story, as long as we think that the relative clause and the noun it modifies combine to form a single argument, we will have to rely on trivial properties of the sort King and Elbourne do in order to make our semantic derivation converge. If we lop the XP off of (90), the determiner will find only one of the two arguments it needs in order to yield a generalized quantifier of the sort King expects. If we fail to interpret (93) with regard to a variable assignment, the extension of \text{that hominid who discovered fire} will be undefined. If we use an assignment that maps $i$ to a non-trivial property, we might be able to make the derivation converge, but we will not end up with the expected non-deictic result.

As we saw in the previous section, however, relying on the availability of trivial arguments to explain non-deictic demonstratives causes our theory to overgenerate. In order to avoid this problem, it seems like we need some way of separating a noun from the relative clause that modifies it; with regard to our example (76), that is, we need some way of treating \text{guy} and \text{who wrote ‘Waverley’} as two separate arguments for the determiner.

A syntactic interlude

History

As it turns out, a syntactic configuration that would allow us to do exactly this has long been the topic of discussion in the linguistics literature. Ross (1967) described a structure for restrictive relative clauses that Schachter et al. (1973) say was the standard for the time. On that structure, a determiner combines with a noun to form a constituent, which in turn combines with the relative clause:
(95)

\[
\begin{array}{c}
\text{DP} \\
\phantom{\text{DP}} \downarrow \\
\text{D} \quad \text{NP} \\
\text{the} \quad \text{guy} \\
\text{CP} \\
\text{who wrote } \text{Waverley}
\end{array}
\]

Partee (1975) argued that this configuration—which, because of the syntactic categories that were in use at the time, came to be known as the ‘NP-S’ configuration—would violate compositionality, and could thus be ruled out on semantic grounds. The problem, as she saw it, was precisely that guy and who wrote ‘Waverley’ do not form a constituent. If the is understood along familiar lines, and if guy and who wrote ‘Waverley’ simply pick out the properties of being a guy and having written Waverley, respectively, this means there will be no way of deriving the expected extension:

(96)

\[
\begin{array}{c}
\text{DP} \\
\phantom{\text{DP}} \downarrow \\
\text{DP}_{(e)} \\
\phantom{\text{DP}_{(e)}} \downarrow \\
\text{D}_{(e,t)} \quad \text{NP}_{(e,t)} \\
\text{the} \quad \text{guy} \\
\text{CP}_{(e,t)} \\
\text{who wrote } \text{Waverley}
\end{array}
\]

If there is only one guy, the higher DP from (95) will have a truth-value as its extension, instead of picking out the unique author of Waverley. If there is more than one guy, the extension of (95) will be undefined. Neither of these results is acceptable.

Bach and Cooper (1978), however, showed that this objection could be avoided, by describing a simple way of making the NP-S structure produce the expected compositional outcome. Their solution was to effectively raise the type of the determiner, by inserting a variable over properties into its semantic representation. When a relative clause occurs in the NP-S configuration, they say, instead of:

\[(97) \quad [\text{the}] = \lambda f. \iota x : f(x) = 1\]

the determiner is interpreted as per:

\[(98) \quad [\text{the}] = \lambda f. \lambda g. \iota x : f(x) = 1 \quad \text{and} \quad g(x) = 1\]

In a structure like (95), the denotation of the lower DP would be:

\[(99) \quad \lambda g. \iota x : x \text{ is a man and } g(x) = 1\]

which means that the denotation of the higher DP would be:

\[(100) \quad \iota x : x \text{ is a man and } x \text{ wrote } \text{Waverley}\]
Intuitively, this is the right result.

Bach and Cooper argued that the NP-S structure is required to explain the composition of relative clauses in Hittite. Where English is concerned, however, they saw their work as a proof of concept, since the data involving definite descriptions that they were concerned to explain could just as easily be handled using the view that is standard today, on which a noun and a relative clause combine to form a constituent.\footnote{For representatives of three prominent contemporary ways of unpacking this idea, see Kayne (1994), Heim and Kratzer (1998), and Sauerland (2003). Larson (1982) shows how Bach and Cooper’s analysis can be extended to deal with a certain variety of relative clause construction in Walpiri.}

In my view, the contrast between (76) and (77) provides precisely the kind of argument Bach and Cooper would have needed to argue that their structure has a role to play for English, too. Regardless of whether you think the difference between the demonstratives that license non-deictic interpretations should be explained in terms of presupposition, as I will argue here, or alternative semantics, as I can imagine someone arguing, or differences in the binding domain of situation variables, as Wolter (2006) argues, if there is no way of separating the NP from the relative clause, there will be no way of solving the puzzle. If guy and who wrote ‘Waverley’ form a constituent, it picks out a property which, for all the determiner cares, is the same as the property picked out by author of ‘Waverley’.

Importantly, however, the contrast between (76) and (77) is not the only reason for thinking that English relative clauses sometimes occur in the familiar low configuration, and sometimes high, in the NP-S configuration. Before moving on to see how a certain lexical semantic proposal about that can be used to make all the right predictions once we allow NP-S structures, it will be worth taking a moment to consider some independent arguments for those structures.

**Demonstratives with relative clauses in Chinese**

Lin (2003) and Del Gobbo (2003) use data involving Chinese demonstratives to show that restrictive relative clauses are interpreted differently depending on which of two syntactic positions they occupy.\footnote{I am indebted to Peter Jenks for bringing these data to my attention.} Consider the following examples from Del Gobbo (2003, pg. 63):\footnote{Del Gobbo uses the abbreviation “CL” to indicate a classifier, and “DE” the word de, which is a modification marker.}

\begin{align*}
(101) & \text{ na-yi-ge [chouyan de] ren} \\
& \text{ that-one-CL smoke DE person} \\
& \text{ ‘That person that smokes’} \\
(102) & \text{ [chouyan de] na-yi-ge ren} \\
& \text{ smoke DE that-one-CL person} \\
& \text{ ‘The person that smokes’}
\end{align*}

Unlike in English, the word order in Chinese allows us a simple way of determining how high the attachment site of the relative clause is. On Del Gobbo’s analysis, in example (101), the noun and
the relative clause combine to form a constituent, which the demonstrative determiner takes as a single argument:

\[(103)\]

\[
\begin{array}{c}
\text{DP} \\
nage \\
\text{NP} \\
\text{CP} \\
[\text{Op}_{t_i} \text{chouyan de}] \\
\text{ren}_{i}
\end{array}
\]

In example (102), the demonstrative takes the noun as its first argument, and the relative clause as its second:

\[(104)\]

\[
\begin{array}{c}
\text{DP} \\
\text{CP} \\
[\text{Op}_{t_i} \text{chouyan de}] \\
nage \\
\text{NP} \\
\text{ren}_{i}
\end{array}
\]

The first striking feature of these constructions is that (103) is structurally analogous to the standard analysis of English relative clauses, while (104) matches Bach and Cooper’s NP-S structure. The Chinese data, in other words, show at the very least that the NP-S and standard relative clause configurations are not in complementary distribution in modern languages.

The really remarkable thing about the Chinese data, however, is that the two structural configurations produce two distinctive interpretations that correspond exactly to those that we would expect to find in English if the hidden argument theory were broadly correct, and if English admitted both relative clause structures. This is a strong piece of evidence in favor of the idea that the contrast between (76) and (77) is the product of the sort of deep-rooted cross-linguistic generalization described by Matthewson (2004), and not just a simple coincidence.\(^{14}\)

Both Lin and Del Gobbo claim that the demonstrative from (102) admits only a non-deictic reading, i.e., a reading on which it is equivalent to a definite description. Both authors explain this reading by saying that the demonstrative determiner is looking for two property-type arguments; Lin (2003) offers a Fregean semantics on which the determiner takes two arguments and returns

\(^{14}\)Yang (2004) describes data involving Mandarin possessor phrases that can be used to mount an argument similar to the one sketched here. Those possessor phrases can attach either high or low with regard to a demonstrative element, with the attachment site marked by word order. Partee (2006) analyzes the high-attached possessors as non-deictic demonstratives. Importantly, Chinese is not the only language that makes the attachment site of relative clauses explicit. According to Peter Jenks (p.c.), Thai demonstratives involving relative clauses are syntactically the mirror image of their Chinese counterparts.
their unique joint satisfier, while Del Gobbo (2003) treats the determiner in quantificational terms, in roughly the way King (2001) does. For both authors, the demonstrative finds its first argument low in tree (104), at NP, and its second argument high, at CP.

Neither Lin nor Del Gobbo offer much detail about the nature of the semantic mechanism that is responsible for guaranteeing that a demonstrative uttered while pointing at a certain person come to pick out that person. Both do say, however, that demonstratives like the one from (101) can only be interpreted deictically. If (103) provides the right structure for (101), as they claim, a simple explanation for the distribution of interpretations emerges: when the noun and the relative clause form a constituent, they jointly occupy only one of the two argument places introduced by the demonstrative determiner, making the second available for contextual saturation.

As we will see in section 2.4, this is exactly the pattern of explanation we need to explain the distribution of the data from English; English complex demonstratives are interpreted non-deictically when the relative clause attaches high and saturates the determiner’s second argument place, and deictically when it attaches low, leaving the second place available for saturation by other means.

**Hydrae / split antecedents**

Perlmutter and Ross (1970) offer a simple and powerful argument in support of the idea that some English restrictive relative clauses attach high in the tree, as is suggested by the NP-S analysis. The argument involves constructions like the following, which Link (1983, 1984) memorably termed ‘hydrae’:

(105)  A man entered the room and a woman went out who were quite similar. (Perlmutter and Ross, 1970, pg. 350)

Since the predicate *be quite similar* requires a plural antecedent, the relative clause cannot be generated ‘downstairs’, as it were, to modify either *man* or *woman*:

(106)  *A man who were quite similar entered the room and a woman went out.
(107)  *A man entered the room and a woman who were quite similar went out.

Link (1984) shows how reciprocal pronouns bring out a similar difficulty:

(108)  Landlords and tenants who hate each other will always find something to argue about. (pg. 143)

With the right prosodic contortion, I think it is possible to get a reading of (108) on which it means that the group of landlords-who-hate-each-other will always find something about which to quarrel with the group of tenants, or that the group of landlords will always find a quarrel with the group of tenants-who-hate-each-other. By far the more natural reading, however, is the one on which pairs of objects such that one is a landlord and the other a tenant figure in a relation of mutual hatred.

---

15 This argument, too, was pointed out to me by Peter Jenks, to whom I am extremely grateful.
To derive this reading, however, the relative clause cannot be interpreted as a sister to landlord or tenant; it has to be interpreted in a position that is higher than either of the NPs that form the conjunction.

A simple permutation of Link’s example reveals that in the case of relative clauses with split antecedents, the clause attaches above the determiners involved:

(109) A/the/some/every man and a/the/some/every woman who wrote poems about each other showed up at the conference.

While the exact syntactic mechanism whereby strings like (105), (108), and (109) are generated is apparently the subject of ongoing debate, from our perspective, the important point is that they show that relative clauses do not always form a constituent with the nouns they modify; even in English, there are data that suggest that restrictive relative clauses sometimes occur higher in the tree than is typically supposed.16

A job for presupposition

Before taking a detour into syntax, our aim was to explain the contrast between (76) and (77). We wanted to do so by saying that the predicative material from the former is structured in a way that allows a non-trivial restriction operation, while the material from the latter is not. We needed something like the NP-S structure to make that explanation compositionally possible. Now, with that structure in hand, we are in a position to pull the rest of the pieces together.

As we have seen, King (2001) and Elbourne (2005) invite us to think of demonstratives as definite descriptions that sometimes take an identificational property as the value of a hidden argument, and sometimes a trivial property. This flexibility allows them to cover both deictic and non-deictic data, but as we saw, it causes their theories to overgenerate. If we add a certain presuppositional restriction to the basic architecture of the hidden argument analysis, we can retain its breadth of application while avoiding the overgeneration problem.

Like the hidden argument theorist, I propose that we treat demonstratives that appear to have the form:

(110) that F

as though they really involved the determiner’s taking two arguments, F and G, and performing a description-type operation on them, so that (110) is interpreted:17

(111) the x: [F(x) & G(x)]

17 I stick with this crude formulation instead of a more precise characterization in lambda notation to call attention to the fact that I would prefer to remain agnostic about how the should be understood. In my discussion, I will assume a Fregean approach to definite descriptions so that I can talk simply about ‘the referent’ of a certain demonstrative instead of about a function from properties to truth values. As far as I can tell, however, none of the relevant features of my proposal depend on this assumption.
As on the hidden argument theory, I take the property that occupies the first argument place in the schema, $F$, to be supplied by the predicative material from which the complex demonstrative is formed.

Instead of following the hidden argument theorist in saying that the property that occupies the second argument place, $G$, is always covert, I claim that it is covert in deictic cases, but overt in non-deictic cases. The fact that certain syntactic and semantic environments make an explicit second argument available, while others do not, will play an important role explaining the curious pattern in the data concerning non-deictic demonstratives.

The key difference between my proposal and the hidden argument theory, however, concerns not the overt or covert status of the two arguments taken by the determiner *that*, but the relationship between them. The hidden argument theory places no constraints on this relationship; it simply predicts that the extension of the demonstrative will be whichever object uniquely satisfies both properties. Instead of letting *that* return the singleton intersection of any two properties, I propose limiting its application along the following lines:

$$(112) \quad \text{that } F = \left\{ \begin{array}{ll} \{x: [F(x) \& G(x)]\} & \text{iff } (F \cap G) \subset F \\ \text{otherwise undefined} & \end{array} \right.$$  

(112) is meant to capture the intuition that when someone utters a (singular) complex demonstrative, the predicate she uses introduces a set of candidates from which a single individual is to be picked. Our formulation works by adding a new presupposition to the presupposition of uniqueness that is standardly supposed to be a part of the semantics of *the*.$^{18}$ This presupposition requires that the demonstrative's second argument restrict its first argument in the following sense:

**Definition 1** A property $G$ is a **restrictor** on another property $F$ just in case the intersection of $\{x : F(x)\}$ and $\{x : G(x)\}$ is a proper subset of $\{x : F(x)\}$.

### 2.4 Extensional results

#### Paradigmatic deictic data

If we apply our analysis to a typical deictic demonstrative, we can quickly verify that it makes intuitively accurate extensional predictions. Suppose, to take a standard sort of example, that someone utters (113) while pointing towards Maryam Mirzakhani:

$${\text{The German philosopher Frege lived in Jena for many years.}}$$

$${\text{The author of ‘Concept and Object’ Frege lived in Jena for many years.}}$$

$${\text{The author of ‘Concept and Object’, Frege, lived in Jena for many years, results in a grammatical string, but one with significantly different semantics. A similar constraint seems to apply to relative clauses, as evidenced by the contrast between examples like: the philosopher who wrote ‘Concept and Object’ and the author of ‘Concept and Object’ who wrote ‘On Sense and Reference’. I hope to address these similarities in future work.}}$
That woman won a Fields medal.

On our view, the property of being a woman saturates the first argument place introduced by the determiner, and the property of being identical to Mirzakhani saturates the second. Since there are women other than her, the property of being identical to Mirzakhani is a restrictor on the property of being a woman, according to our definition; in other words, \( \{ \text{woman} \} \cap \{ \text{Mirzakhani} \} \subset \{ \text{woman} \} \). Once we verify that the restriction presupposition is met, we apply our schema and end up with the following representation for the demonstrative:

\[
\text{(114)} \quad \text{the } x: [\text{woman}(x) \& \text{identical-to-Mirzakhani}(x)]
\]

Mirzakhani is the unique object that is a woman and that is identical to Mirzakhani, so our treatment predicts that she herself will be the extension of *that woman*, when the expression is uttered in the context described.

How exactly does the property of being identical to Mirzakhani come to saturate the second argument place associated with the demonstrative determiner? Although this question is interesting and important, it raises issues that are outside the scope of the present line of inquiry, and which will be addressed separately in chapter 3. There, I will argue that the most plausible account of this process will involve the idea that the semantic representations for deictic demonstratives feature variables over individuals—variables that could be type-shifted by something like Partee’s (1986) `ident` functor. If I am right, deictic demonstratives are sensitive not to the context of utterance, per se, but to the pragmatically-determined value of an assignment function. For present purposes, however, I cannot see any reason for thinking that the details matter. Let the value of the hidden argument be set by a speaker’s referential intentions, by her gestures, or by whatever mechanism is described in your favorite theory. The upshot, as far as anything I hope to establish here is concerned, is an assignment-sensitive representation that looks something like this:

\[
\text{(115)}
\]

With regard to an assignment that maps \( i \) to Mirzakhani, (115) amounts to:

\[
\text{(116)}
\]
Acceptable non-deictic data

The major advantage of our view over the hidden argument theory becomes evident when we consider non-deictic data; adding the restriction presupposition to our semantics gives us a way to explain the pattern that obtains in those data. On our view, English non-deictic demonstratives are derived in the same way as their Chinese analogues, by means of a high-attached relative clause (example repeated from page 34):

\[(95)\]

\[
\text{DP} \rightarrow \text{DP} \rightarrow \text{CP} \rightarrow \text{D} \rightarrow \text{NP} \rightarrow \text{that guy who wrote 'Waverley'}
\]

Standard assumptions about local semantic composition allow us to use structure (95) to derive the result we expect for non-deictic demonstratives. In this structure, \textit{that} finds both of the arguments it requires in the syntax; \textit{guy} saturates one argument place, and \textit{who wrote 'Waverley'} saturates the second.

To compute the extension of the string, we start by checking to see that it satisfies our restriction presupposition. Since there are guys who did not write \textit{Waverley}, the expression \textit{who wrote 'Waverley'} is a reductor on \textit{guy}, according to our definition, which means the derivation can proceed. The next step is to apply the schema from (112), which yields the following representation:

\[(117) \quad \text{the } x: [\text{guy}(x) \& \text{wrote-'Waverley'}(x)]\]

The unique object that satisfies the predicates \textit{guy} and \textit{wrote 'Waverley'} is Scott himself, which means that on our theory, \textit{that guy who wrote 'Waverley'} picks out just what we expect it to.

Unacceptable non-deictic data

In addition to making the right predictions about demonstratives that allow non-deictic interpretations, if we combine our presupposition requirement with the idea that relative clauses can occur in two different positions, we open up a way to make the right predictions about those demonstratives which do \textit{not} allow such interpretations. Consider our example (77, repeated):

\[(77) \quad \#\text{That author of 'Waverley' also wrote 'Ivanhoe'.}\]

In a nutshell, the problem with (77) is that it only makes a single argument—\textit{author of 'Waverley'}—available to the demonstrative determiner. Since overgeneration errors rule out the idea of using trivial properties to fill the second argument place introduced by \textit{that}, this means that the relevant constructions end up with semantic representations that are incomplete.

On standard thinking, the matrix of the demonstrative from (77) involves two semantically significant constituents. The first—the word \textit{author}—is what is sometimes called a ‘relational’
noun; it picks out the two-place relation that obtains between authors and the things they write. The second—the word Waverley—is a proper name for the book which, after the constitution of the United States and perhaps certain texts of religious significance, is likely the most-discussed unread piece of writing in history. The entire expression author of 'Waverley' is formed when author takes Waverley as an argument (there are good reasons to think of is merely a phonetic marker of the argument relation in this construction). In the demonstrative from (77), in other words, the x-wrote-y relation is partially saturated by the book Waverley, and the result is an expression that picks out the property of having written Waverley.

If we follow standard practice and treat author of 'Waverley' as though its extension is a property, we can use that property to saturate one of the argument places introduced by the demonstrative determiner. The result, however, is the semantically incomplete:

(118) the x: [author-of-Waverley(x) & G(x)]

If we split the expression into its basic constituents, on the other hand, we end up with a two-place relation and an individual, not the two properties we need to fill out our template for demonstratives.

The significance of this problem can be made vivid by contrast with the relative clause case. While it is important that availability of high attached relative clauses makes it syntactically plausible for us to separate nouns from the restrictive relatives that modify them, the real key to our explanation of the viable non-deictic examples is the semantic fact that the guy who wrote Waverley is both a guy and is a thing that wrote Waverley. Even if the syntax allowed it—which it does not—a parallel treatment of relational genitives would result in nonsense: the author of Waverley is not the unique thing that is both an author-of-y and which is identical to the novel Waverley.

Importantly, this explanation of the difference in acceptability between (76) and (77) (repeated):

(76) That guy who wrote Waverley also wrote Ivanhoe.
(77) #That author of Waverley also wrote Ivanhoe.

is not intended to apply only to relational genitives and relative clauses. A survey of all the possible syntactically well-formed complex demonstrative configurations is beyond the scope of the present work, but if our theory is correct, we should expect any given configuration to license a non-deictic interpretation only if there is a way to extract two arguments of the appropriate type from it and if those arguments are compatible with the presupposition described here.20

For the sake of illustration, consider how the strategy might be applied in the case of superlatives:

(119) The fastest rider will take a hefty purse.
(120) #That fastest rider will take a hefty purse.
(121) That rider who rides faster than all the rest will take a hefty purse.

19 Although there is broad support for the standard treatment of relational nouns among both linguists and philosophers, a reviewer has pointed out to me that there are dissenters. See Adger (2012), chapter 4 for discussion.

20 For a discussion of the range of constructions that license non-deictic interpretations—all of which I take to be compatible with the account offered here—again, see Wolter (2006, pp. 141-146).
(119) is a perfectly ordinary that involves a definite description. If we replace the definite article from that description with the demonstrative determiner, the result—contrary to what would be predicted by the standard approaches to non-deictic data—is the degraded (120). The felicity of (121) shows that it is not the property of being faster than everyone else, per se, that causes this problem.

As we did in the case of the construction involving a relational noun—and again, holding in abeyance worries raised by the syntactic implausibility of treating *fastest* and *rider* as two separate arguments—we can explain the markedness of (120) by pointing to the fact that the fastest rider is not the unique object that is both fastest and a rider. In order for the word *fastest* to work the way we expect, it has to modify *rider*, which means that the demonstrative determiner takes the constituent *that rider* as a single argument, leaving the second argument position unsaturated.\footnote{Similar reasoning will rule out any construction that would rely on a non-intersective adjective to saturate one of the required argument places.}

A reviewer wonders whether pre-nominal adjectives should make a non-deictic interpretation available. I imagine the answer will depend on the syntactic possibilities offered by the language in question, as well as on the choice of adjective; if the pre-nominal adjective is not a restrictor on the first argument to the determiner, our semantics will leave the extension of the demonstratives undefined, and even if it is a restrictor, the two arguments must be jointly satisfied by a unique individual. In English, however, as Wolter (2006) observes, pre-nominal adjectives do not admit non-deictic interpretations:

(122) #That unhelpful person will be fired.
(123) #Those friendly applicants will be hired.
(124) #Those legal immigrants were granted citizenship. (all adapted from Wolter 2006, pg. 143)

If the account developed here is right, this is exactly the result we should expect. The prenominal adjective forms a constituent with the noun it modifies and returns a single property-type argument for the determiner. In order for the complex demonstrative to have the expected semantic type, this means a second argument must be supplied. So, we should expect the demonstrative from (122), for example, to be felicitous only when used deictically. In fact, this is what we find:

(125) That unhelpful person will be fired. (pointing at a certain person)

(Somewhat) more complicated cases

Two-author scenarios

So far, we have been primarily concerned to explain why the expression *that author of ‘Waverley’* does not admit the same non-deictic readings as the semantically similar *that guy who wrote ‘Waverley’*. Our discussion raises a few issues that deserve clarification.

One of those issues concerns the possibility of using *author of ‘Waverley’* to form a deictic demonstrative. As far as the syntax we have relied on is concerned, a structure like the following should be permissible:
If the theory we have described so far is correct, however, we should expect (77) to be marked even in a context in which someone utters it while pointing towards Sir Walter Scott. After all, since there is only one author of *Waverley*, there is no way to restrict the predicate *author of ‘Waverley’*, and thus no way of satisfying the presupposition demonstratives introduce. In fact, this prediction appears to be borne out by the data; *that author of ‘Waverley’* is just as bad taken deictically as it is taken non-deictically.\footnote{A violation of the restriction presupposition is not the only thing that makes this demonstrative bad; I claim in section 2.5 that the predicate from which a demonstrative is formed is supposed to help listeners figure out which object a speaker has in mind. Since the property of having written *Waverley* is not one that Scott wears on his sleeve, so to speak, *that author of ‘Waverley’* fails in this regard, too.}

Another point that deserves emphasis is that the considerations advanced above do not rule out strings involving relational nouns, full stop. If the account we have offered is right, *that author of ‘N’* should be perfectly acceptable in a context that would support a restriction on the extension of *author of ‘N’*.

Since we know that only Scott wrote *Waverley*, example (77) will not help in making this clear. If we take up the case of a book we know had two authors, however, the situation changes; this provides an additional source of evidence that our presupposition requirement is on the right track.\footnote{It also suggests that the presuppositions in play might have to be understood relative not to ‘the facts’, as it were, about the extension of a predicate, but relative instead to some kind of epistemic background. People who believe that *Waverley* was a collaboration, for example, would presumably have different intuitions about the felicity of the deictic demonstrative from people who know that it was Scott’s work.}

Imagine that we show up at a book signing hosted by Russell and Whitehead. In such a scenario, you might say to me:

(127) *That author of Principia* (gesturing at one) looks friendly, but I wouldn’t try to get an autograph from that one (gesturing at the other).

On our theory, the first instance of *that author of ‘Principia’* from (127) would be interpreted:

(128)  \( \text{the } x: [\text{author-of-Principia}(x) \& \text{identical-to-Whitehead}(x)] \)

by way of the following structure:
(129)  

\[
\text{DP} \\
\text{DP} \\
\text{D} \\
\text{NP} \\
\text{that} \\
\text{author of Principia} \\
\text{XP} \\
=\text{Whitehead}
\]

Since there are two objects in the scenario described that each satisfy the property of having written *Principia*, the property of being identical to Whitehead counts as a restrictor in the sense of our (112), which means the demonstrative presupposition is met. The unique object that wrote *Principia* and is identical to Whitehead is Whitehead, so we predict that the demonstrative will be felicitous and refer to Whitehead, just as our intuitions demand.

Similar considerations would allow the expression *that author of ‘Principia’* to be used non-deictically in a linguistic environment that provided a way of picking out just one of the authors. Consider:

(130)  That author of *Principia* who spent time in jail was famous for his political views.

(131)  

\[
\text{DP} \\
\text{DP} \\
\text{D} \\
\text{NP} \\
\text{that} \\
\text{author of Principia} \\
\text{CP} \\
\text{who spent time in jail}
\]

As before, the first step in our derivation is to check that the predicate from which the demonstrative is formed is multiply-satisfied. Then we check to see whether there is an appropriate restrictor; since only Russell spent time in jail, the relative clause can serve in that role. The only thing that wrote *Principia* and served time in prison was Russell, so we predict that the demonstrative from (130) picks him out.

**Deixis with relative clauses**

The analysis of demonstratives offered here depends on the fact that relative clauses are at least sometimes found in a syntactically high position, in the NP-S configuration. Making the analysis work, however, does not require claiming that all relative clauses take that structure. In fact, to make the right predictions about deictic demonstratives that involve relative clauses, we need the
clauses to be available in the familiar lower position, too. Consider the demonstrative from the following sentence:

(132) See that guy who just topped out with no rope? (pointing towards Alex Honnold)

In order to derive a deictic interpretation for (132), we rely on a structure that makes *guy who just topped out with no rope* a single argument, so that the second argument position can be saturated by an identificational property, i.e., the property of being identical to Alex Honnold:

(133)

\[
\begin{array}{c}
\text{DP} \\
\text{DP} \\
\text{D} \\
\text{that} \\
guy \text{ who just topped out…}
\end{array}
\]

Anaphora

There are uses of demonstratives that do not fit neatly into either of the categories described here so far. Consider the following examples.\(^\text{24}\)

(134) a: Some jerk’s been playing loud music at six every morning.
    b: (later) That jerk was playing music again this morning.

(135) a: A friend of mine is dreading her final exam.
    b: (later) That friend of yours passed the final she was dreading.

These demonstratives do not involve pointing gestures or reference to an individual that is perceptually salient in the context of utterance; in this way, they are unlike the most familiar deictic uses. On the other hand, these demonstratives do not appear to be equivalent to complete definite descriptions, either; in this way, they are unlike the non-deictic uses we have discussed. While I doubt that there is much to be gained by agonizing over the question of which category these examples would fit into better, it is worth taking a moment to emphasize that they are not a threat to our semantics.

If the proposal described here is correct, the expressions *jerk* and *friend of mine* each contribute a property-type argument that saturates the first argument position introduced by the demonstrative determiner. To make our semantic derivation converge, we need to supply the determiner with a second argument. In an ordinary deictic case—as we saw—that argument would take the form of

\(^{24}\)Thanks to Brian Leahy (2014) for these data.
an identificational property supplied by the context. In an ordinary non-deictic case, the second argument would be present in the syntax.

Offering a definitive explanation of cases like (134) and (135) would require taking a stand on issues that outrun the scope of the present work. Our framework, however, can be made to work with a variety of approaches to the phenomenon in question. Consider the following alternatives to dialogues (134) and (135):

(136)  
   a: Some jerk’s been playing loud music at six every morning.  
   b: Do you know which apartment he lives in?

(137)  
   a: A friend of mine is dreading her final exam.  
   b: Do you think she’ll pass?

The pronouns from (140) and (141) depend anaphorically on the expressions some jerk and a friend of mine. On one prominent way of explaining this fact, the antecedent expressions are said to introduce variables, with which the pronouns—their antecedents also represented as variables—are co-indexed. In other words, (140) and (141) have logical forms that we might paraphrase using the following strings of Loglish (a variation on English on which variables are made explicit):

(138)  
   a: $x_{11}$ is a jerk and $x_{11}$ has been playing loud music at six every morning.  
   b: Do you know which apartment $x_{11}$ lives in?

(139)  
   a: $x_{18}$ is a friend of mine and $x_{18}$ is dreading her final exam.  
   b: Do you think $x_{18}$ will pass?

If this is the right analysis of pronominal anaphora, we can easily adapt our semantics for demonstratives to fit it. Instead of saying that context supplies an identificational property like the property of being identical to Maryam Mirzakhani, we can say that the identificational property involved is the property of being identical to $x_{11}$, or $x_{18}$, or whichever variable is introduced by the antecedent.

On another leading analysis of pronominal anaphora, the pronouns involved introduce definite descriptions formed from covert predicative material. According to this analysis, the dialogues from (140) and (141) are really semantically equivalent to the following:

(140)  
   a: Some jerk’s been playing loud music at six every morning.  
   b: Do you know which apartment [he = the jerk who has been playing loud music] lives in?

(141)  
   a: A friend of mine is dreading her final exam.  
   b: Do you think [he = the friend of yours who is dreading her final exam] will pass?

If this is the right approach to pronominal anaphora, we should expect to be able to employ it in order to explain the data involving demonstratives, too. Other things being equal, it would be reasonable to assume that whichever process makes covert material available to construct a definite description should make the same material available to serve as the second argument to that. So, we should expect to be able to analyze (134) and (135) as per:

26 Compare Evans (1977) and Elbourne (2005).
(142)  a: Some jerk’s been playing loud music at six every morning.
    b: Do you know which apartment [that [jerk] [who has been playing loud music]] lives in?

(143)  a: A friend of mine is dreading her final exam.
    b: Do you think [that [friend of yours] [who is dreading her final exam]] will pass?

2.5 Intensional results

Non-deictic data

The apparent truth conditions of sentences involving modal operators and non-deictic demonstratives favor the hidden argument theory over traditional direct reference semantics for demonstratives. Our semantics offers a similar advantage.

Recall the following example from chapter 1 (renumbered here):

(144) If Simone had won the election, she would definitely have embraced that elector who cast the deciding vote.

Understood naturally, (144) is true just in case, in the nearest world in which Simone wins the election, she hugs whichever individual from that world cast the deciding vote. In other words, if the nearest world in which Simone wins the election is one in which Elizabeth Warren cast the deciding vote, the sentence will be true just in case Simone hugs Elizabeth Warren at that world.

This interpretation is easily derived if we treat the demonstrative from (144) in the way we have suggested here. We say the relative clause who cast the deciding vote serves as a restrictor on the set of electors, and we predict that the truth-conditional contribution of demonstrative will be the same as the contribution made by the definite description from the following variation:

(145) If Simone had won the election, she would definitely have embraced the elector who cast the deciding vote.

If we were to endorse a theory that treated all demonstratives as rigid designators, on the other hand, we would have no way of generating the required interpretation for (144). Suppose, for example, that Antonin Scalia in fact cast the deciding vote, and that the conservative candidate therefore won the election instead of progressive Simone. If we treat that elector who cast the deciding vote as though its extension at every world were the same as its extension at the actual world, we would end up having to say that (144) is true just in case Simone hugs Scalia at the nearest world in which she wins the election. While there might be circumstances in which someone would want to express this idea—maybe the speaker intends to communicate that a victory would be so significant that Simone would even reconcile with Scalia—the most natural reading of (144) is the reading on which the claim made is the claim that Simone would have hugged whoever it turned out to be that handed her the victory.
Deictic data

As we saw in chapter 1, one of the primary motivations for direct reference is the intuition that deictic demonstratives are rigid designators. If someone points out Semyon, who is wearing a poncho, and says:

(146) That guy in the poncho might have been late.

most people will agree that the proposition expressed is true just in case there is an accessible world in which Semyon is late.\(^\text{27}\)

It is easy to make the intuitive prediction using our semantics. We say that the demonstrative from (146) is essentially equivalent to:

(147) the \(x\): [guy-in-a-poncho(\(x\)) & identical-to-Semyon(\(x\))]

Because this representation involves the property of being identical to Semyon, there is no chance that our demonstrative will pick out some other individual at some other world; if the demonstrative picks out anything anywhere, it picks out Semyon.\(^\text{28}\) If we say that the identificational property is supplied by means of a variable over individuals—perhaps one that is type-raised along the lines suggested here in section 2.4—our formalism will make clear why this would be: individual variables are not sensitive to the permutations of the world of evaluation that are wrought by modal operators.

The fact that our analysis involves the idea that demonstratives are a special kind of definite description, however, will likely make some philosophers uneasy. Definite descriptions are commonly supposed to give rise to what are known as ‘scope ambiguities’. Consider the following example:

(148) I could have had lunch with the president.

Sentence (148) appears to admit both of the following two paraphrases:

(149) The president is such that there is an accessible world in which I have lunch with him.
(150) There is an accessible world in which I am having lunch with whichever person is the president at that world.

It is standard practice to explain these two readings by saying that sentences like (148) are ambiguous at the level of semantic representation; (149) is the result of treating the definite description as though it has scope over the modal operator, while (150) is the result of treating the definite description as thought it scopes under the operator.\(^\text{29}\)

\(^{27}\)I assume a typical semantic framework for the sake of discussion; as far as I can tell, none of the details about counterfactuals affect any of the claims I make.

\(^{28}\)Compare Devitt’s (2004) notion of weak rigidity.

\(^{29}\)The classic source on the subject is Russell (1905). For recent alternatives, compare Percus (2000) and Keshet (2010).
If demonstratives are semantically similar to descriptions in the way we have proposed here, as long as other things are equal, we should expect them to occur in both scope configurations. In fact, we have already looked at a case that suggests that they do occur in both positions. In the previous section, we saw how non-deictic demonstratives are most naturally interpreted non-rigidly. As with definite descriptions, we allow the extension of a non-deictic demonstrative to vary across possible worlds by embedding the expression under a modal operator. If the non-deictic demonstratives takes wide scope with regard to the operator, on the other hand, the result is a rigid reading. For non-deictic demonstratives, the narrow scope readings are the most natural, but it is not hard to hear that both are available.

In the case of deictic demonstratives, tracking the possibilities is less straightforward. As we have seen, our intuitions suggest that deictic demonstratives admit only rigid readings. But, on the view we have developed here, that is what we would expect regardless of the scope options, since deictic demonstratives are formed from identificational properties. Consider (146) and (147) again:

(146) That guy in the poncho might have been late.
(147) \[\text{the } x : [\text{guy-in-a-poncho}(x) \& \text{identical-to-Semyon}(x)]\]

As long as we use (147) to interpret the demonstrative from (146), the two scope paraphrases will come out truth-conditionally indiscernible in most cases:

(151) The guy in the poncho who is identical to Semyon is such that there is an accessible world in which he is late.
(152) There is an accessible world in which the guy who is wearing a poncho and who is identical to Semyon is late.

With regard to worlds in which Semyon is wearing a poncho, (151) and (152) amount to the same thing. The question about scope possibilities is still an important one, though, because unless Semyon’s relationship with his poncho is a basic fact of metaphysics, we should not expect him to be wearing it at every world.

Consider the following example:

(153) That guy in the poncho could have worn a jacket instead.

Intuitively, this sentence should be true in a context like the one described above just in case there is an accessible world in which Semyon is wearing a jacket instead of a poncho. We have no trouble generating these truth-conditions using (147); we simply say that the demonstrative takes wide scope with regard to the modal. But if both scope positions are structurally available, we might expect there to be another reading of the sentence, too. We might expect there to be a reading on which the sentence is either false or ‘gappy’, depending on whether the description is understood along Russellian or Fregean lines. Other things being equal, that is, we might expect (153) to admit both of the following paraphrases:

(154) The guy in the poncho who is identical to Semyon is such that there is an accessible world in which he is wearing a jacket. (OK)
There is an accessible world in which the guy in the striped poncho who is identical to Semyon is wearing not a poncho but a jacket. (Contradiction!)

It is very difficult, however, to hear (153) as expressing anything but the straightforwardly contingent proposition expressed by (154). Is this a problem for our semantics? Are we committed to generating a class of ‘missing’ defective readings for sentences like (153)?

The answer to both questions is ‘no’. In general, when a particular construction admits a felicitous reading, it is notoriously difficult to determine whether it admits defective alternatives, too, and arguments based on the existence of such alternatives must be taken with a significant dose of salt. Even if we set this point of method aside for the sake of argument, though, there is a convincing explanation of the absent narrow scope readings. In fact, the scope possibilities licensed by deictic and non-deictic demonstratives parallel the possibilities licensed by definite descriptions.

Rothschild (2007) employs the following data, among others, to show that definite descriptions do not uniformly admit two scope possibilities with regard to modal operators:

(156) Mary-Sue could have been married to the president.

(157) Hans might have been the person I talked to the whole time.

(156) clearly admits both scope options. If Grover Cleveland were president, someone could use the sentence to say that there is an accessible world in which Mary-Sue marries Cleveland. Alternatively, (156) could be used to make a claim about how well Mary-Sue does in high-stakes social events; it can easily be understood to mean that there is an accessible world in which she is married to whoever happens to be the president at that world.

(157), on the other hand, seems to admit only a reading on which the description takes wide scope with regard to the modal. For example, it is easy to imagine relying on the availability of the wide-scope reading to express an epistemic claim. If someone notices that I spent the entire costume party talking to a particular individual and asks who it was, I might answer with (157). I might say use the sentence, in other words, to say that:

(158) The person I talked to is such that for all I know, he might have been Hans.

As Rothschild points out, however, if it was in fact the case that I divided my attention at the party equally among the guests, (157) sounds bizarre. There is no reading of the sentence on which it expresses the idea that there is a world accessible from the context in which I spent all my time talking to a single person, Hans. This is a surprising result, however. If a narrow-scope reading of the description the person I talked to the whole time were available, we would expect (157) to serve as a vehicle for exactly that proposition. On standard assumptions about the way parties go, such a world should be accessible in most contexts. So why can we not hear (157) this way?

Rothschild’s answer is that a difference in the presuppositions associated with the two descriptions is responsible for the different scope possibilities. The description from (156), the president,
CHAPTER 2. A SEMANTICS THAT GETS IT DONE

is an example of what he calls a ‘role-type’ description; in normal conversational situations, it will be part of the common ground that at any world of evaluation, a unique individual will satisfy this description. The description from (157), on the other hand, is ‘particularized’; unless the conversation has provided a specific reason to think otherwise, it will not typically be assumed that the description the person I talked to the whole time will pick out anyone at all. As Rothschild puts things, “we naturally think that over a relevant set of possibilities” (2007, pg. 93) there will be a unique president in each, while we have no reason to expect there to be a unique person I spent the whole party talking to.

When we go to evaluate the claim made by (156), it is easy to see that the uniqueness presupposition introduced by the is met, whether we interpret the description with wide or narrow scope.\(^{32}\) When we go to evaluate (157), however, we are left to confront a stark contrast. If we take the description to have wide scope, we can accommodate the presupposition introduced by the relatively straightforwardly, by assuming that there must in fact have been a unique individual the speaker spent the party with.\(^{33}\) The accommodation that would be required to license the narrow-scope reading, on the other hand, is (usually) a bridge too far. Unless it is somehow clear—maybe because of the history of the conversation, maybe because of mutual knowledge of the way I typically allocate my time at parties—that the counterfactual possibilities we are countenancing are all possibilities in which there is just one person I talk to, the uniqueness presupposition will not be met across the range of worlds that are live options, and the description will result in infelicity.

Our data involve deictic and non-deictic demonstratives exhibit just the pattern of readings Rothschild’s data do, and they appear to admit of the same explanation. Non-deictic demonstratives, like the following (repeated), license both wide-scope and narrow-scope interpretations:

(144) If Simone had won the election, she would definitely have embraced that elector who cast the deciding vote.

The demonstrative that elector who cast the deciding vote is a paradigm role-type description: in the context of a conversation about elections, we naturally assume that in any given counterfactual scenario, there will be a unique person who cast the deciding vote.\(^{34}\)

Deictic demonstratives, on the other hand, are the limit case of particularized descriptions. Since deictic demonstratives involve an identificational property, the only way to coerce a role reading is to change the semantic type of the demonstrative, as arguably takes place when you point at a person doing something no one would want to do and say:

---

\(^{32}\)Rothschild’s account treats the as introducing a presupposition about salience, but this does not materially affect the applicability of his idea in the present connection, as far as I can tell.

\(^{33}\)That accommodation can occur here is highlighted by the fact that it is natural to imagine someone responding to (157) by saying I didn’t realize you’d talked to just one person.

\(^{34}\)Of course, there may be metaphysical or epistemological questions about what it takes to be the person who cast the deciding vote. I do not mean for the discussion to turn on them, and invite people to substitute alternative demonstratives if they find that this one raises such worries.
(159) Don’t be that guy.

If we take a typical deictic demonstrative, like (153, repeated):

(153) That guy in the poncho could have worn a jacket instead.

we can see how a presupposition failure comes into play to explain the ‘missing’ narrow scope reading. The presuppositions introduced by the guy who is wearing a poncho and who is identical to Simon—a rough paraphrase of the sort of thing we use to analyze the demonstrative—are only met at worlds where there is a unique poncho-wearing Simon. But those worlds hardly form a natural class, much less the class the typical conversational participants would have in mind when encountering (153).

It is instructive to compare (153) with the following variation involving a description:

(160) The guy in the poncho could have worn a jacket instead.

Sentence (160) admits exactly the scope possibilities (153) does. If it is uttered in the context we described earlier, it can be used to say that Semyon could have worn a jacket. But there is no defective reading of the sentence, i.e., no reading on which it means that there is an accessible world in which there is a unique guy in a poncho who is wearing a jacket instead of a poncho. No one will claim that this ‘missing’ reading impugns the guy in the poncho’s status as a description, and no one should believe that the absence of a defective reading tells against the idea that that guy in the poncho is a kind of description, either.

2.6 The upshot

We began this chapter with two empirical questions:

a. What licenses a non-deictic reading for the demonstrative from (76)?

(76) That guy who wrote Waverley also wrote Ivanhoe.

b. What rules out such a reading for the demonstrative from (77)?

(77) #That author of Waverley also wrote Ivanhoe.

So far, we have seen how leading semantic proposals—the classical semantics for demonstratives and the hidden argument theory—fail to provide a satisfactory answer to those questions, and we have developed the outlines of an alternative that succeeds.

Our alternative shows that the characteristic behavior of demonstratives can be explained using what we might think of as ‘off-the-shelf’ components, instead of the special operators that have typically been employed. The idea that determiners check the cardinality of their complements, for example, is familiar from standard treatments of the, many, both, and so on, while the crucial structural innovation we rely on—the NP-S analysis of relative clause—was developed for reasons totally independent of the ones discussed here.
From a theoretical perspective, however, perhaps the most significant advantage our view offers is that it opens up the possibility of treating the demonstrative determiner and the definite article as parametric variations on one another. A unified treatment of the two expressions is tempting for many reasons. In addition to the fact that non-demonstrative definite articles are typically historically derived from demonstratives, the interpretations they allow overlap in a suggestive way.\footnote{Compare Roberts (2002).} We have seen here that there are many cases in which demonstratives are interpreted like classical definite descriptions. Cases in which the converse is true are just as common; i.e., cases in which definite descriptions are interpreted like deictic demonstratives.

Consider the following example, which involves what many philosophers have called an ‘incomplete’ definite description:

(161) Put the book away, please.

Imagine a context in which there are many books piled on a table, but one is particularly salient (say, because it has recently been the topic of particular attention). In such a context, (161) may be used to express a request that could otherwise be put by saying:

(162) Put that book away, please.

On Elbourne’s (2005) semantics for definite descriptions, the description from (161) is analyzed using the same strategy we applied to deictic demonstratives. In other words, instead of:

(163) the \[book(x)\]

Elbourne says the correct representation is:

(164) the \[x: \{\text{book}(x) \land x = \alpha\}\]

where \(\alpha\) is a meta-language name for the relevant book.

Of course, not all definite descriptions are interpreted deictically; the data that have received the most attention from philosophers involve what Donnellan (1966) called ‘attributive’ readings, i.e., readings on which a definite description is used to pick out whichever object uniquely satisfies its restrictor. Elbourne explains attributive definite descriptions along the same lines as the hidden argument theory discussed here. He says the definite article can take a trivial second argument, producing a structure like:

(165) The author of \(\textit{Waverley}\)

\[= \text{the } x: [\text{author of } \textit{Waverley}(x) \land x = x]\]

If this is a viable analysis of definite descriptions, our work on demonstratives suggests that the primary difference between the two types of expression comes down to the fact that the demonstrative determiner carries with it the restriction presupposition introduced in section 2.3, while the definite article does not. Without that presupposition—recall—we have no way of ruling out the sort of trivial arguments which caused the hidden argument theory to over-generate. Where definite descriptions are concerned, however, we have no reason to rule such arguments out, as the felicity of the description \textit{the author of ‘Waverley’} shows.
Chapter 3

Index, context, content redux

In chapters 1 and 2 our attention was focused primarily on data involving complex demonstratives. This is because the syntactic and semantic complexity manifest when the demonstrative determiner interacts with a predicate offers valuable clues about how demonstratives work. In order to round out the theory developed so far, however, we have to say something about how it is that the identificational properties we relied on to explain deixis make their way into our semantic representations. To do that, it will make sense to turn our attention here to simple demonstratives—demonstratives that occur unadorned by predicative material. In addition to providing a unified treatment of demonstratives in their various guises, we will see that when we look closely at the basic interpretive challenge simple demonstratives pose, the role of context-sensitivity turns out to be less obvious than is typically assumed. This is a result with potentially far-reaching theoretical consequences.

3.1 Introduction

Suppose we are standing on some high ground near Castle Crags in Northern California. The weather is good, and we can see Mount Shasta to the north and Lassen Peak to the south. If I utter (166) while pointing at Shasta, you will have the intuition that I have said something about Shasta, and if I utter the sentence while pointing at Lassen, you will have the intuition that I have said something about Lassen:

(166) That is the southernmost peak in the Cascade Range.

One of the selling points of the direct reference paradigm—the dominant force in the philosophical literature on demonstratives—is that it offers a straightforward explanation of these intuitions. If direct reference is true, the semantic value of a demonstrative, with regard to a context, just is its contribution to assertoric content. By identifying contents and semantic values, the direct reference theorist turns pedestrian intuitions about the apparent truth conditions of sentences involving demonstratives into a guide to the semantics of those expressions.\(^1\)

\(^1\)Direct reference is so-called because it does away with the idea that some kind of third entity mediates the rela-
The pattern of explanation the content identification thesis makes available, however, comes at a steep price. Lewis (1980), Stanley (1997), MacFarlane (2003, 2014), Yalcin (2007, 2014), Ninan (2010) and others have pointed out that the identification conflates two very different theoretical aims. Rabern (2012), furthermore, has shown that the contents that feature in the touchstone implementation of direct reference, Kaplan’s (1977), cannot in fact be derived compositionally.

Fortunately for everyone who hopes to give a systematic account of how language works, abandoning the identification of semantic values and assertoric contents does not mean throwing up our hands in the face of intuitions like those elicited by (166). Lewis (1980) showed how a simple picture of communication—I know \( P \), want you to believe \( P \), and thus assert something that depends for its truth on whether \( P \)—can be maintained even after we distinguish semantic value and assertoric content, as long as we think of the two as being related in a certain way.

Rabern (2012) employs a strategy of this sort to show how familiar intuitions about sentences like (166) might be derived from a simple and compositionally-plausible theory about the semantics of demonstratives. In a nutshell, the idea is to treat demonstratives semantically as though they were simply free variables. To extract a proposition with determinate truth conditions from the semantic value of a demonstrative sentence in a context, this means the sentence must be evaluated with regard to an assignment of values to variables. If we accept the notion that a particular variable assignment is initialized by the context in which a demonstrative sentence is uttered, we can easily do justice to the intuitive truth conditions, while respecting the distinction between compositional semantic processes and those that MacFarlane (2003) calls post-semantic.

I agree with the recent consensus view that nothing but confusion can come from failing to distinguish the question of what is required to provide a compositionally-plausible account of the behavior of some expression type from the question of how instances of that type come to play the role they do in communication. (I will mostly take this point for granted in my discussion.) I agree, furthermore, that from the perspective of the compositional semantics, the best approach to demonstratives is to treat them simply as variables.

As I see things, however, philosophers who explain the intuitive demonstrative data by invoking the idea that a context of utterance determines a particular variable assignment play things too safe. My goal here will be to show that the constraints they place on the relationship between semantic values and objects of assertion are neither theoretically appealing, nor required to explain the relevant data.

I will proceed by showing that the considerations that make the variable assignment an indispensable piece of our theoretical architecture do not support using it to model the sorts of features of context that might plausibly restrict the intuitive reference of a demonstrative. Then I will argue that there would be little to gain by linking contexts and variable assignments anyway; the important data about demonstratives can (and should) be explained with regard to general pragmatic constraints imposed by the nature of the interpretive task people face when they encounter demonstratives in the wild.\(^2\)

\(^2\)The view I eventually describe is similar to a view described by Dever (1998). The kinds of considerations I
3.2 The status quo: context-sensitivity

The standard theory

As we have seen already, nearly everyone with a horse in the race thinks that simple demonstratives are context-sensitive devices of direct reference. On the standard view, that is, giving a semantics for demonstratives essentially amounts to formulating a rule that takes a context of utterance and returns an individual.

It is not hard to imagine why this would be. The data around which the literature on demonstratives crystallized are data that involve our intuitions about what the truth conditions of certain sentences would be in certain hypothetical contexts of utterance. On reasonable assumptions about compositionality, those intuitions seem to provide direct support for claims about what the extension of a demonstrative would be in the contexts in question. Since the extensions of garden variety demonstratives appear to vary as a function of the context of utterance, it is natural to explain that variation using a semantic representation that invokes the context.

Kaplan’s (1977) is the classic example of such a treatment. Again, as we have seen, according to Kaplan, the simple English demonstrative ‘that’ is really a complex semantic object, built from an operator (‘dthat’) that takes a singular term and makes it directly referential. Kaplan is not completely precise about how the singular term makes its way into the semantic representation when a simple demonstrative is used deictically, but he suggests that the gestures that typically occur together with demonstrative utterances somehow contribute a constituent with the semantic type of a definite description. The description can be paraphrased along roughly the lines of ‘the object ostended by the speaker of the context’. So, on Kaplan’s view (together with some benign assumptions about semantic composition):

\[
\text{that} \overset{c,w}{=} \text{the object intended by the speaker of } c / \text{pointed at by the speaker of } c / \text{etc.}
\]

Over the years, most philosophers—including Kaplan (1989) himself—have come to think of a speaker’s gestures as less important than her referential inten
tions. At the same time, an increasing interest in natural language semantics per se—as opposed to interest confined to the logical properties of demonstratives—has resulted in a consolidation of the work done by the operator and the definite description. So, instead of (167), nowadays we are more likely to see formulations like the following:

\[
\text{that} \overset{c,w}{=} \text{the object intended by the speaker of } c / \text{pointed at by the speaker of } c / \text{etc.}
\]

Nothing we have to say here will turn on the differences between what we might call ‘operator contextualism’ and ‘lexical contextualism’; our discussion will concern the basic Kaplanian adduce in support of that view are similar to considerations raised by Bach (1987, 2012, 2016), Schif
er (2003), and Neale (2004).
framework, which continues to be the industry standard, rather than any particular implementation thereof.

The classical contextualist semantics allows the practitioner to offer a straightforward explanation of the intuitions examples like (166, repeated) elicit:

(166) That is the southernmost peak in the Cascade Range.

As before, most of us have the intuition that if (166) is uttered by someone pointing at Lassen Peak, what she says is true, since Lassen Peak is the southernmost peak in the Cascade Range. In a context in which the speaker points at Shasta, we take her to say something false, since Shasta is not the southernmost peak in the Cascades. In other words, the basic intuitive datum about demonstratives appears to be: same sentence, different contexts, different extensions.

If we analyze the demonstrative expression along broadly Kaplanian lines, we can handle this phenomenon easily. In the first hypothetical context, the speaker points at Lassen, and in the second, at Shasta. If we use a description like ‘the object pointed at by the agent of the context’ to fix the reference of the demonstrative, we predict—as we expect—that its extension in the first case will be Lassen, and in the second, Shasta. In the first case, the semantic value of ‘that’, together with plausible semantic values for the other constituents, determines the proposition that Lassen is the southernmost Cascade, and in the second, the proposition that Shasta is. So, the output of the classical semantics turns out to be something that is or will easily determine just the truth condition we expect for the sentence in question in the context in question.

**Problems for the classical contextualist semantics**

Although it may have played a useful role during early work on their logical properties, the idea that natural language demonstratives involve hidden definite descriptions that occur under the scope of an operator that takes a singular term and makes it directly referential strains credibility. There is no evidence for syntactic constituents of the sort that would presumably be involved, no reason to expect such semantic complexity, and no clear story about how the preferred description would make its way into the representation instead of any other. If we want to be contextualists, then, we should be lexical contextualists.

Lexical contextualism, however, is itself a problematic semantic theory. King (2001), Roberts (2002), and Nowak (2014) show that complex demonstratives are not uniformly interpreted as rigid designators. Consider, for example, the following variation on an example used several times in this dissertation:

(169) If Cruz had won, he would certainly have embraced that elector who cast the deciding vote.

Suppose Sotomayor in fact cast the deciding vote for Cruz’s opponent. If we interpret the demonstrative expression from (169) as though it rigidly picks out the elector who cast the deciding vote in the context of utterance, we expect the sentence to be true in a context just in case at the nearest accessible world where Cruz wins, he hugs Sotomayor. But that is hardly the most natural interpretation of (169); someone who utters this sentence is much more likely to be saying that Cruz
would hug whoever it was that caused him to win, rather than that his victory would cause him to reconsider his deeply-principled conservative political stance.

As we saw in chapter 1, since the standard ways of extending the classical contextualist treatment to cover complex demonstratives—turning ‘the object intended by the speaker of the context’ into ‘the $F$ intended by the speaker of the context’, for example—involve a fundamental commitment to a rigid modal profile, they make it impossible to produce the required reading. To the extent that we expect a substantial degree of parity between the semantics of simple and complex demonstratives, then, data like (169) militate against classical contextualism.

By explicitly yoking the extension of a demonstrative to the speaker’s intentions in the way that the most plausible form of lexical contextualism requires, we also make it hard to see how the theory will be able to cover anaphoric uses of demonstratives, like the following:

(170) If you have a pencil, bring that with you to the test.\(^4\)

Explaining the interpretations produced by pseudo-bound or donkey anaphoric constituents like ‘that’ as it appears in (170) is admittedly difficult for everyone, and I will not defend an analysis of the phenomenon here. Data like (170), however, clearly 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 (170) involve claiming that the antecedent introduces quantification over contexts, or attributing referential intentions to the speaker that are much more complicated than the familiar sort. I suspect few classical contextualists will be tempted by either option.

The apparent similarities between referential pronouns and simple demonstratives pose another problem for the contextualist demonstrative semantics semantics. As we saw in chapter 1, one of the fundamental constraints on a semantics for pronouns is that it explain both referential and bound occurrences:

(171) He looks sleepy.
(172) Every man here, worries that he, looks sleepy.

The cross-linguistic availability of referential and bound readings for what appear to be the same lexical items has led most theorists to treat pronouns as variables, and to say that the differences in interpretation are due to differences in the linguistic environments in which they occur (i.e., whether they occur under the scope of an assignment-shifting operator). This means that if we give a contextualist semantics for demonstratives, we will end up with disparate treatments for what appear to be very similar referential phenomena.

Finally, in addition to these local semantic problems, classical contextualism involves some unattractive global properties. As noted in the introduction, the best argument for contextualism about demonstratives comes from the fact that if the view were true, it would explain the intuitive data about demonstratives. But this is not a compelling pattern of reasoning. As we will see here, other views can explain the relevant data, too, and can do so in a way that is more compositionally plausible as well as more theoretically efficient.

\[^4\]Thanks to Seth Yalcin for this example.
3.3 Parametric contextualism

A simpler semantics

Consider the following alternative semantic hypothesis for demonstratives:\(^5\)

\[
(173) \quad \sem{\text{that}, i}^g = g(i)
\]

From the perspective of the compositional semantics, the treatment from (173), which I will call ‘variablism about demonstratives’ or ‘variablism’ for short, represents a significant improvement over classical contextualism. Since variablism requires no hidden definite descriptions, it raises no questions about where those descriptions should be located syntactically (or if they ought to be syntactically realized at all), how their distribution should be restricted, how the distribution of the operator they occur under should be restricted, and so on.

Variablism can be easily extended to cover complex demonstratives by using machinery like the machinery described in chapter 2, and since variablism does not make rigidity a stipulative feature of demonstratives, it does not rule out the natural interpretation for sentences like the voter sentence, (169).\(^6\) A variablist treatment of demonstratives is also much more likely to permit an explanation of anaphora than the classical semantics is; for the variablist, there are real questions about how the assignment applied to a particular variable might be affected by constituents that do not have syntactic scope over that variable, but the idea of this sort of semantic ‘action at a distance’ is much less odd than the idea that speakers’ intentions should cover all the possible pencils test-takers might bring with them to tests. Finally, the variablist semantics makes it possible to offer a unified treatment of both demonstratives and pronouns, the expressions that appear most semantically similar to demonstratives (but which indisputably occur both in both free and bound constructions).

Although it brings a host of advantages at the level of the compositional semantics, the variablist treatment makes it less obvious how the intuitive data involving demonstratives should be explained. Even on the most traditionally-minded unpacking of the variablist proposal, the semantic value of a sentence like (166 repeated) with regard to a context will turn out to be not a proposition, but a function from variable assignments (or richer indices) to propositions:

\[
(166) \quad \text{That is the southernmost peak in the Cascade Range.}
\]

For the variablist, in other words, the truth conditions associated with demonstrative sentences are not fixed once a context is given. On even the simplest incarnation of the view, truth conditions would be fixed only with regard to both a context and a variable assignment. To explain peoples’ intuitions about demonstrative sentences, then, the variablist will have to say something about how

\(^5\)Variations on this idea appear in Kaplan (1989), Heim and Kratzer (1998), Elbourne (2005), and Rabern (2012), among others.

\(^6\)One extension would involve claiming that simple ‘that’ just introduces a variable into the semantic representations it is associated with, while complex ‘that’ is a determiner that takes a variable as one of its arguments. Another extension would treat both instances of ‘that’ as determiners, while treating the variables involved as variables not over individuals, but over individual properties. Compare Elbourne (2005).
they arrive at a particular variable assignment. The standard way of doing this involves linking contexts and variable assignments by means of a certain kind of post-semantic bridge principle; i.e., a principle that takes a semantic value in a context and issues in an assertoric content.

Post-semantic determination of the variable assignment

Recall this simple picture of communication from Lewis (1980):

The foremost thing we do with words is to impart information, and this is how we do it. Suppose (1) that you do not know whether $A$ or $B$ or ...; and (2) that I do know; and (3) that I want you to know; and (4) that no extraneous reasons much constrain my choice of words; and (5) that we both know that the conditions (1)–(5) obtain. Then I will be truthful and you will be trusting and thereby you will come to share my knowledge. I will find something to say that depends for its truth on whether $A$ or $B$ or ... and that I take to be true. I will say it and you will hear it. You, trusting me to be willing and able to tell the truth, will then be in a position to infer whether $A$ or $B$ or .... (pg. 80, emphasis added)

As we have just seen, variablist semantic values are not the sorts of things that depend straightforwardly for their truth on whether $A$ or $B$. If we want to keep this simple communicative framework on the table, then, we will have to explain how those values figure in the production of the contents speakers express when they use demonstratives. How, that is, do we get intuitive truth conditions for demonstrative sentences out of the variablist semantics?

Lewis, while not explicitly concerned with demonstratives or variablistism, provides the outline of an answer to this question. Lewis says that while assertoric contents and semantic values are (or at least could be) distinctive sorts of things, the latter determine the former:

[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 $i^w_c$ that results if we take the index $i_c$ of the context $c$ and shift its world coordinate to $w$. (pg. 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 (1980, pg. 79). 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:
(174) Socrates is currently sitting.

Intuitively speaking, when uttered on June 14, 2016, (174) 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 to propositions.

Lots of smart people think that in addition to a world, time, and location, contexts determine an assignment of values to variables.\(^7\) Heim and Kratzer (1998), for example, use the variable assignment to model the kinds of facts classical contextualists aim at with their semantic clauses:

> 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. (pg. 243)

One time-slice of Kaplan (1989) 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. (pg. 591)

And Cumming (2008) writes:

> It is standard—since Kaplan (1989)—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). (pp. 540-541)

Rabern (2012) shows how we can explain the intuitive data about demonstratives by putting together a.) the variablist semantics for demonstratives, b.) the Lewisian idea that contexts determine indices, and c.) the view that variable assignments are one of the indexical parameters that is determined by context. Recall our well-worn example:

\(^7\)Thanks to Brian Rabern (2016) for emphasizing the importance of this point, and for providing the references I offer to support it here.
(166) That is the southernmost peak in the Cascade Range

Unlike on the classical contextualist story, on the view Rabern describes—which I will call ‘parametric contextualism about demonstratives’ or ‘parametric contextualism for short’—the compositional semantic value of (166) is the same in the context where the speaker points at Lassen and in the context where the speaker points at Shasta; in both cases, it is a function from variable assignments to propositions. The same semantic value is implicated in the derivation of distinct assertoric contents in the two contexts, however, because the first context initializes a variable assignment that maps the variable introduced by the demonstrative to Lassen, while the second context introduces a variable assignment that maps the variable to Shasta. This means the proposition associated with (166) in the first context is the set of worlds in which Lassen is the southernmost Cascade, and the proposition associated with the sentence in the second context the set of worlds in which Shasta is the southernmost Cascade. On this way of setting things up, demonstratives turn out to be indirectly or post-semantically sensitive to the context of utterance.

3.4 Moving away from context-sensitivity

Semantically speaking, the parametric contextualist treatment of demonstratives involves a liberalization of the classical contextualist picture. On the classical picture, the restrictions that govern the way demonstratives can be used to refer to objects are encoded semantically, either at the level of the lexicon, or at the level of logical form (in virtue of the particular sort of definite description that occurs under the scope of the demonstrative operator). On the parametric view, these restrictions are expunged from the semantics; work that was formerly done lexically or in logical form is moved downstream, as it were, to the post-semantics.

In my mind, there is no contest between the classical contextualist and the parametric contextualist treatments of demonstratives; as we have seen, the variablist semantics is simpler and has a better empirical range. The real question, as I see things, is whether the liberalization we have looked at here goes far enough; I will argue that it does not. In addition to liberalizing the semantics, we should dispense with the parametric contextualist’s post-semantic reference-fixing stipulations, too.

The problem we faced in the previous section was about how, as variablists, to explain the fact that people’s intuitions about the truth conditions of demonstrative sentences appear to vary over contexts in a systematic way. The parametric contextualist answer was to say that contexts determine a particular variable assignment. In a moment, I will show how the basic structure of the task interpreters face when they encounter demonstratives provides enough of a constraint. We do not need—and therefore should not postulate—a bridge principle linking contexts to a privileged

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8Thanks to Seth Yalcin for the name. As comes out clearly in Yalcin (2007), you could be a parametric contextualist about lots of things; you are a parametric contextualist about a parameter $x$ if you think $x$ is initialized by the context of utterance.

9Compare Rabern (2012, pg. 18).

10Thanks to Brian Rabern (2016) for making it clear to me that this is what I am talking about.
variable assignment. Before doing so, however, I will say something about why we should be glad to dispense with a principle of this sort.

**The ‘assignment of the context’ is ad hoc**

For the parametric contextualist, a sentence determines a proposition with regard to both a context of utterance and a point of evaluation, like a Lewisian index. To see why we should drop the idea that the context initializes the variable assignment parameter, it will be helpful to take a moment to remind ourselves why the output of a semantic theory should be sensitive to indices in the first place.

Lewis (1980) provides the following argument:

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 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. (pg. 86)

In other words, we need index sensitivity in addition to context sensitivity because there are natural language operators that perform operations that cannot reasonably be treated as permutations of the context of utterance (since not all permutations of the features that make up a context are themselves possible contexts). Lewis’ examples of ‘forevermore’ and ‘necessarily’ might be controversial, but it is widely accepted that there are operators in natural language that shift the values of parameters that track features more fine-grained than contexts.

Many linguists and philosophers take this pattern of reasoning to show that quantification requires treating variable assignments as one of the components of an index. Recall the familiar semantics we give for quantifiers in first-order logic. In order to determine whether a sentence like:

\[
\forall x Fx
\]

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

\[
Fx
\]

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), 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:
Every king, cherishes that cleric who crowned him.

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

(178) $x_1$ is a king

is also an assignment that would satisfy:

(179) $x_1$ cherishes that cleric who crowned $x_1$

Both Lewis’ reasoning and the standard reasoning about quantification, then, involve a version of the principle: ‘if your language has an operator that shifts the value of some parameter, that parameter deserves to be considered part of your index’. 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.\footnote{See MacFarlane (2014), chapter 4 for discussion.} I will not take up either of those issues here; the point that is crucial for our purposes is that the ‘shifty’ principle does not justify treating 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 and Kratzer propose. The proper treatment of quantification may involve sequences of objects, but there is no reason to think that the composition of those sequences should result from a psychologically substantive selection procedure. Consider an example:

(180) All dogs are mammals.

To see whether (180) is intuitively true in a context, 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 obviously require that there be such thing as an initial assignment.\footnote{In certain cases, like cases involving multiple quantifiers, it might be important to keep track of output of some operation involving the variable assignment. This does not suggest, however, that assignments are ever initialized by the context of utterance.} Contrast the case of the time parameter. Imagine that someone says:

(181) Forevermore, Socrates will sleep.

Lewis takes the truth conditions intuitively expressed by (181) in a context to be determined by applying the ‘forevermore’ operator to the semantic value of:

(182) Socrates sleeps.

‘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.\(^{13}\) (181) is true with regard to a context just in case (182) is true with regard to all times \(t\) such that \(t\) is later than the time of the context. If context did not somehow set a value for the time parameter, we would end up with undefined or anomalous truth conditions for (181), instead of those we intuitively associate with the string.

To summarize: the idea that a context of utterance provides initial values for a parameter that tracks the time plays 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.

This is a good thing for the theorist who is motivated by the shiftiness principle, since the idea of a privileged variable assignment is significantly less clear than that of a privileged world, time, or location. If contexts are, as Lewis held, triples of a time, a world, and a location, it is easy to see how a context determines a unique time of the context, world of the context, or location of the context. The time of the context is just an element of the context. Same for the world and the location. In the case of the variable assignment, however, things look very different. Of course, if the variable assignment is (or determines) a sequence of objects, there is a sense in which it, too, is an ‘element’ of the world of the context—the world contains all the objects from the sequence, and every other object besides. The world, time, and location, however, can be distilled from the context in an ‘innocent’ way, while the objects that make up the sequence determined by the variable assignment of the context have to be thought of qua objects of the speaker’s attention.

If the parametric contextualist says that she conceives of variable assignments as sequences determined by peoples’ referential intentions, instead of random strings of objects, nothing we have said here shows that she is wrong. But she cannot say that we need sequences of this sort to explain the behavior of quantifiers—some alternative justification will have to be provided for thinking of the assignment in a way that models speakers’ referential intentions. The most obvious justification I can imagine for thinking of the assignment in such robust terms is that doing so would allow us to explain the intuitive data about the truth conditions of sentences involving demonstratives. But this is not a compelling reason. As I will show in the next section, this substantive conception of the variable assignment is not required to do justice to the data about demonstratives, either.

**The intuitive data can be explained without a privileged variable assignment**

As we saw earlier, while the parametric contextualist does not endorse a semantic theory that maps sentence/context pairs to propositions, she is able to preserve the contours of a familiar model of communication that such a theory would make available. Suppose, in the spirit of Stalnaker (1978), that we represent the state of a conversation at a time using a set of possible worlds, and that we represent the effects of speech acts by updating the composition of that set in various ways. Parametric contextualism makes it easy to see how the assertoric contributions of demonstrative sentences could be modeled as changes in the possibilities that are represented as open for the sake

\(^{13}\)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. In fact, we might be able to dispense with the idea of initialization in general. I will leave this possibility for future consideration.
of the conversation. For any appropriate context of utterance $k$, the semantic value of a demonstrative sentence $\phi$ will determine a proposition when evaluated with regard to the variable assignment initialized by the context, $g_k$. This means we can represent the effect of someone’s asserting $\phi$ in $k$ by intersecting $[\phi]^{g_k}$ with the set of worlds that constitute the conversational state at issue.

My aim here is to argue that we can make sense of the intuitive data involving demonstratives, and offer a broadly similar story about communication, without being parametric contextualists, and without giving up on the variablist semantics. We have just seen one reason for thinking this possibility worth investigating—using the variable assignment to model referential intentions does not fit naturally with using it to explain quantification. The argument I will develop in the sections that follow turns primarily on considerations of parsimony. I will sketch two ways in which we might invoke pragmatic considerations to explain how communication involving demonstratives would be possible even without an initialized assignment. Instead of arguing for one of the strategies over the other, I will treat their feasibility as a proof-of-concept. Both strategies depend on pragmatic mechanisms that we will need to have on hand to explain other phenomena anyway, which I take to show that we can get away without claiming that context initializes a particular variable assignment.

The basic approach I will take involves reasoning that is familiar from Kripke (1977):

I propose the following test for any alleged counterexample to a linguistic proposal: if someone alleges that a certain linguistic phenomenon in English is a counterexample to a given analysis, consider a hypothetical language which (as much as possible) is like English except that the analysis is stipulated to be correct. Imagine such a hypothetical language introduced into a community and spoken by it. If the phenomenon in question would still arise in a community that spoke such a hypothetical language (which may not be English), then the fact that it arises in English cannot disprove the hypothesis that the analysis is correct for English.

Consider a hypothetical language—English*—on which demonstratives are represented in the semantics simply as free variables, and on which there is stipulated to be no bridge principle linking context to a particular assignment of values to variables. Our question is whether a community of language-users otherwise like us could use English* to do what we do with demonstratives. In other words, would they take speakers who point at Lassen to say things about Lassen, and speakers who point at Shasta to say things about Shasta? If the answer is ‘yes’—as I will claim—then by Kripke’s reasoning, the hypothesis that English* is just English should be considered a live option.

**Propositional radicals**

Consider our basic test case again. Speaking English*, I utter (166), which is represented semantically using some appropriately-formalized variation on (183):\(^{14}\)

\(^{14}\)By ‘appropriately-formalized’, I mean something that could plausibly be taken to represent a bona fide LF, instead of a hybrid of English and logic. Something like $[\lambda y. y = \text{most southerly Cascade}](x_1)$ would probably do as a first approximation.
That is the southernmost peak in the Cascade Range.

$x_1$ is the southernmost peak in the Cascade Range

Let us suppose that my goal is to convey to you that a certain object—i.e., Lassen Peak—is the southernmost peak in the Cascade Range. At the time of my utterance, nothing has ruled out the alternative possibility, that Mount Shasta is the southernmost peak in the Cascade Range. So, in the terms of our Stalnaker-style conversational model, both possibilities are open at the start of the conversation, and I am trying to get you to discard the set of worlds in which Shasta is the southernmost peak in the Cascades.

The obvious way of getting you to rule some options out would be for me to utter a sentence that determines a proposition that you can intersect with the conversational context set. By our current hypothesis, however, this is not something I can do with (166), which does not determine a set of worlds. Another tactic I might try would involve extra-linguistic activity. As Stalnaker (1978) notes, if I pull a goat out of my bag, I alter the conversational context by adding to it the proposition that there was a goat in my bag. No one would say that an instance of goat-pulling is evaluable for truth, but at the same time, it is clear that the action will affect the information parties to a conversation mutually presuppose. It does not seem crazy to think that there could be linguistic actions that fall somewhere between these two extremes. Indeed, we might think if ever there were sentences that involve the interplay of linguistic and non-linguistic effects, they would be demonstrative sentences. We can use this idea as the basis for a pragmatic story about demonstrative sentences.

Bach (1987) thought that sentences involving demonstratives expressed not propositions, but propositional radicals, or ‘gappy’ propositions. It would be natural for the variablist to say something similar—on her view, sentences involving demonstratives do not determine propositions, but they would determine a proposition if they were evaluated with regard to an assignment of values to variables. Why should she not say that the ‘assertion’ made by someone who utters a demonstrative sentence is an incomplete one? If she does say this, and if she says that the gaps are ‘filled in’ by her listeners’ pragmatic reasoning, the result will be a picture that is broadly similar to the parametric contextualist’s, but which does not involve the stipulation that context determine a particular assignment.

Suppose, to walk through an example, that we are standing in view of Lassen, and that I know and you know (and I know that you know, and so on) that (166) has the semantics of (183), and that it does not, therefore, determine a truth-evaluable content with regard to the context. What will happen if I point towards Lassen while uttering the sentence (or if I raise my eyebrows, or count on the salience of the mountain, or whatever)?

If you are an attentive and cooperative listener, you will ask yourself ‘what could he be trying to get me to do by saying that is the southernmost peak in the Cascades?’ Your semantic knowledge tells you that ‘that’ supplies a variable over individuals, and that ‘is the southernmost peak in the Cascade Range’ is true of an object just in case it is the southernmost peak in the Cascade Range. The obvious hypothesis about my intention, then, is that I am trying to get you to act as though I have just made an assertion about a certain object. But which object?
If you are a cognitively normal adult, you will have little difficulty answering this question. You know a lot about me and people like me. You know what we have been talking about recently and what the environment is like. You know that I will do whatever I can to draw your attention to the object that I am trying to say something about. You know that I know that by pointing at an object, I can draw your attention to it. So, other things being equal, you will (correctly) infer that I am trying to get you to accept the proposition that Lassen is the southernmost peak in the Cascades.

In other words, even if we balk at saying there is such a thing as the proposition expressed in a context by a speaker who utters a demonstrative sentence, we can still explain communication by relying on peoples’ general pragmatic abilities. Even if you don’t hear my demonstrative at all—suppose it is a very windy day at the crag and you only hear ‘(garbled) is the southernmost peak in the Cascades’—you will know how the rest of the sentence constrains the plausible updates on the conversational context, because you will have a clear idea of which hypotheses about my intentions are most likely.

World/assignment pairs

On the view just described, there is no general rule that maps the semantic value of a demonstrative in a context to an assertoric content; demonstratives make assertoric contributions that are indeterminate with regard to contents, and interpreters must rely on their pragmatic competence to ‘fill in the gaps’, as it were, in order to arrive at a proposition.

If we model the state of a conversation at a time using sets of world/assignment pairs, instead of sets of worlds, we can make the basic picture sketched in the preceding section more precise, in a certain way, by making it possible to give a rule that states exactly how the assertoric content associated with a demonstrative sentence affects the conversational context. To see how to do this, consider a conversational context in which two parties are discussing the location of a prize that is hidden behind one of two doors. Before anyone says anything about where the prize is, we might represent the relevant part of the informational state of such a conversation as follows:

\[
\begin{align*}
\mathcal{c}_0 &= \{ (w_L, g_L), (w_L, g_R), (w_R, g_L), (w_R, g_R) \} \\
\text{(184)}
\end{align*}
\]

Let \( w_L \) be a world in which the prize is located behind the left-hand door, and \( w_R \) a world in which it is behind the right-hand door. Let \( g_L \) be a variable assignment that maps \( x_7 \) to the left-hand door, and \( g_R \) be a variable assignment that maps \( x_7 \) to the right-hand door. Suppose A says:

\[
\begin{align*}
\text{(185)} \quad &\text{That is the door with the prize. (pointing at the left-hand door)} \\
\text{If we are variablists about demonstratives, and represent her utterance semantically as per:}
\end{align*}
\]

\[
\begin{align*}
\mathcal{c}_1 &= \{ (w_L, g_L), (w_R, g_R) \}
\end{align*}
\]

then we can update \( \mathcal{c}_0 \) by intersection; we represent the assertoric content of (185) as the set of world/assignment pairs such that the object assigned to \( x_7 \) satisfies ‘is the door with the prize’ in the world in question. So, after A’s utterance, we are left with:

\[
\begin{align*}
\mathcal{c}_1 &= \{ (w_L, g_L), (w_R, g_R) \}
\end{align*}
\]
This is progress, of a sort. As Rothschild and Yalcin (forthcoming) show, updates of this sort can be used to model the transmission of non-trivial information; if the initial set of possibilities left open by the conversation had been larger, for example, and A had said more about the door in question, she could have realized a more substantial winnowing of the options. It is clear, however, that what we have said so far does not quite capture the intuition that someone who utters (185) while pointing at the door on the left transmits determinate information about where the prize is. As we have set things up, the assertoric content of A’s utterance amounts to something like ‘either the prize is behind the left door, and the variable assignment maps the variable from the sentence in question to the left door, or the prize is behind the right door, and the assignment maps the variable in question to the right door’.

In order to do justice to the intuitive data about demonstratives, then, we will have to say a bit more. One strategy would be to invoke the pragmatics again. Recall the idea from the previous section about peoples’ ruling out possibilities that were not strictly ruled out by any of the assertions made in a context. The same idea can be put to work here. If A utters (185) while pointing at the left-hand door, and it is mutually known that the demonstrative is a semantically free variable, and mutually known that the assertion she makes can be paraphrased ‘either the prize is behind the left door, and the variable assignment maps the relevant variable to the left door or the prize is behind the right door, and the assignment maps the variable to the right door’, the sensible thing to do would be to treat A as though she were trying to get you to rule out the right door possibility. Of course, it would be very strange for her to explicitly vocalize the paraphrase. But if it were mutually known that something along the lines of the paraphrase were the best option allowed to her by the semantics and the assertion rule for demonstratives, it seems clear that people would be able to use that knowledge to narrow the possibilities down in the required way.

**Totting up**

We began this section by considering a hypothetical language, English*, which is like English, but which by stipulation involves no bridge principle linking contexts of utterance to a particular assignment of values to variables. Formally speaking, interpreters of English* are faced with a different task from the one the classical and the parametric contextualist take them to be faced with when speaking English. The classical contextualists thinks your aim as an interpreter is to determine which context is actual, so that you can apply a context-sensitive rule and thus determine an extension. The parametric contextualist thinks your job is to figure out which context you are in, so that you can tell which variable assignment it determines.

For the speaker of English*, the only role played by context is the role it plays providing you with information about who is speaking, who is looking where, and so on. You are not equipped with any rules that take a context and output a traditional proposition. Instead, your goal is to figure out which variable assignment you should apply, or which pairs of worlds and assignments you should focus on in order to make the most sense of your interlocutor. The upshot, however, at least where intuitions about the truth conditions of sentences (166) are concerned, is the same. If I utter the sentence in the context described while speaking English*, you will have the intuition that what I have said is true just in case Lassen is the southernmost peak in the Cascades. If I were to utter
the sentence in a different context, your intuitions would be different, and we have every reason
to expect the variation in those intuitions to follow the pattern we get when we use the traditional
semantics; if I point at Lassen while uttering (166), you will take me to have said something about
Lassen, and if I point at Shasta, you will take me to be talking about Shasta.

To summarize: if there were a language in which demonstratives had the semantic properties of
free variables, and in which the variable assignment were not constrained by any context-sensitive
bridge principle, we would still expect speakers of that language to have the same sorts of intuitions
that we have about the truth conditions of sentences involving demonstratives, at least in the kinds
of cases that are likely to produce successful communication according to traditional semantic
thinking. We would expect speakers of such a language to have those intuitions because we would
expect them to be able to rely on familiar pragmatic processes to converge on shared interpretations
for demonstrative expressions.

I will use the term ‘mad-dog variablism’ to refer to the view that results from combining a
variablist semantics for demonstratives with a post-semantic treatment that foregoes a bridge prin-
ciple linking contexts with a particular variable assignment. In the next section, I will argue that
since mad-dog variablism does what we want a theory of demonstratives to do, and is simpler than
classical or parametric contextualism, we should accept it.

3.5 Explanatory efficiency

I can imagine someone arguing against mad-dog variablism by claiming that the view achieves
simplicity in one area at the cost of complexity in another. ‘The kind of referential restrictions that
I encode in the semantics’, the objector might say ‘you still have to encode pragmatically’.

This, however, is not a good objection to the mad-dog view. The pragmatic resources the mad-
dog variablist relies on are resources that are required on independent grounds; since we need those
resources to handle a range of phenomena that have nothing to do with demonstratives, using them
to analyze demonstratives is sound theoretical economics. In fact, even for the contextualist, it is the
sort of pragmatic reasoning sketched in the previous section that does the real work explaining how
demonstratives are used. The mad-dog variablist, then, should respond to the objector as follows:
‘What I do just one time in the pragmatics, you do once in the semantics, and then once again in
the pragmatics. So my view is simpler’.

Lexical ambiguity

Consider the phenomenon of lexical ambiguity.\footnote{Neale (2004) also takes the resolution of lexical ambiguity to tell against semantic theories that traffic in contents.} Suppose you overhear an utterance of the
following sentence:

\begin{equation}
(188) \quad \text{My friend Janna has been at the bank all day.}
\end{equation}

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 clearly depends on a number
of things. Your job as an interpreter is to weigh them up and come to a decision about which hypothesis you think makes the most sense. Large among the considerations, no doubt, will be your degree of familiarity with the parties to the conversation, and of the particular course it has taken. 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 been used to say something about a place by the water. If, however, (188) was immediately preceded by a tirade 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.

The simplest story we can tell about ‘bank’ is to say that there are really two distinct lexical items—bank\textsubscript{1} and bank\textsubscript{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.\textsuperscript{16} When faced with a sentence involving the phonetic sequence ‘bank’, interpreters rely on their pragmatic competence to choose the lexical item that would make the most sense in the context as they take it to be.\textsuperscript{17}

This is clearly not the only approach we might employ. It is not difficult to imagine a language—call it English′—on which there is just one lexical item, ‘bank’, which picks out the property of being a certain kind of financial institution if that is what was intended by the speaker of the context and which 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. In English′, then, ‘bank’ is a context-sensitive expression—which property it picks out on a given occasion depends on the context.

We can generate permutations on English′ by replacing ‘intended by the speaker of the context’ with ‘would make the most sense in the context’, and so on. Following Kripke, 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 thereon, we would have no trouble communicating. Should we take this to show that ‘bank’ is context-sensitive? Is English′ 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. To encode those constraints in the semantics would amount to pointless double-counting.

Exactly parallel considerations apply in the case of demonstratives. There is no reason to stipulate that a demonstrative pick out the object intended by the speaker of the context, since that is precisely the outcome we would predict if the demonstrative were represented semantically as a free variable, to be interpreted with regard to whichever assignment the interpreter thinks makes sense.

\textsuperscript{16}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\textsubscript{1} and bank\textsubscript{2} are not homophonous.

\textsuperscript{17}For related discussion, see Kaplan (1970), pp. 219-221.
Context-sensitivity is a chimera anyway

The classical contextualist aims to explain the intuitive data about demonstratives by employing a simple strategy. You hear a demonstrative, and need to interpret it. You consult your semantic knowledge, which provides you a way of getting a content out of a context, and then you apply the rule to the context you are in. The picture is slightly more complicated for the ersatz contextualist, but the basic idea is the same—one of your basic linguistic competences, presumably, will guide you in moving from a context to the assignment determined by that context.

The interpretive task suggested by standard philosophical examples, however, is importantly different from the interpretive task we face when confronted with demonstratives ‘in the wild’. The differences obscure the interplay between semantics and pragmatics that characterizes real speech situations, and in so doing, make it seem like the context-sensitive piece of the semantics (or post-semantics) does more explanatory work than it in fact does.

Philosophers’ set-piece scenarios typically involve the description of a hypothetical context that is meant to be precise enough to settle intuitions about reference. When real speakers of a natural language encounter demonstratives, however, they are not provided with such descriptions; as anyone who has ever been lost will appreciate, being located in a context does not entail knowing which context that is in any non-trivial way. This means that even if we had it on God’s authority that a context-sensitive semantic treatment were right for a certain expression, the fact of that expression’s being tokened in a particular context would not by itself be enough to settle the question of which object competent language-users will take it to have been used to refer to.

An example in the spirit of Stalnaker (1978) will help to bring out the significance of this point. Suppose, for the sake of argument, that we agree to treat ‘that’ as per Kaplan (1977), i.e., as a directly referential expression that picks out the demonstratum of the context of utterance. Now imagine that we are standing next to a substantial mass of climbing gear; slings and carabiners, nuts and cams, and other expensive sundry are piled all around. I point at a blue Camalot (call it \( \alpha \)) and say:

\[ (189) \text{ That is Sheehan’s.} \]

In this case, in the jargon of the industry, our semantics entails that I express the proposition that \( \alpha \) belongs to Sheehan. Crucially, however, the fact that you are a competent user of English who hears the words I utter does not by itself put you in a position to know that this is the proposition I expressed. In virtue of knowing a semantic rule that maps contexts to the demonstratum of the context, you can arrive at what Stalnaker calls a ‘diagonal proposition’, i.e., the proposition that the demonstratum of the context belongs to Sheehan. But in order to tell what assertion I have made, you must engage in some substantive extra-linguistic reasoning. If you decide that I was pointing at \( \alpha \), you can use your semantic knowledge to arrive at the proposition that \( \alpha \) belongs to Sheehan. If you decide, on the other hand, that I was pointing at a certain belay device, the same knowledge will lead you to take the proposition I expressed to be the proposition that the belay device in question is Sheehan’s.

Examples like this make clear that even for the classical contextualist, the work that goes into employing and interpreting sentences involving indexicals is not primarily semantic work; the real
communicative challenge demonstratives pose is the challenge of solving a coordination problem. For the contextualist, the problem is set up over hypothetical contexts; in order to be able to treat an utterance as the assertion of a determinate piece of information, the listener has to form a hypothesis about which context to treat as actual, by figuring out who is speaking (easy), and which object she intends to refer to (maybe less so). In order to get her point across, the speaker has to do whatever she can to make her intentions clear to her audience.

The tools that are available to solve this coordination problem are exactly the tools the mad-dog variablist uses to explain how speakers and listeners coordinate on a variable assignment. To reprise our example, imagine that you and I are standing somewhere near Castle Crags. I want to tell you that Lassen Peak is the southernmost peak in the Cascade Range. I form the intention to refer to the mountain, and I utter (166, repeated):

(166) That is the southernmost peak in the Cascade Range.

If the Kaplanian approach to demonstratives is right, the semantic value of (166), when it is uttered in the context described, is the proposition that Lassen is the southernmost peak in the Cascade Range. Since you cannot introspectively access my intentions, however, you cannot know this a priori—you have to do some work in order to determine a proposition, since you cannot know the semantic value of ‘that’ until you (i) figure out that I should be counted as the speaker of the context, and (ii) figure out which object I must have intended to refer to.

The first task is simple; if you and I are the only people in the vicinity, and you are awake and alert, you will know that I am speaking. Since my utterance is the one you are interested in interpreting, you treat me as the speaker of the context.

Depending on what else the context is like, the second task may be more or less difficult. If the only peak in the visual field is Lassen, you can use elementary Gricean reasoning to determine that the most likely candidate referent is Lassen. You start by assuming that I am a cooperative interlocutor who is speaking English. You assume, that is, that I know that you know that the extension of ‘that’ with regard to a context is the object I have in mind, and you assume that I will exploit this mutual knowledge for the purpose of getting my point across. Since Lassen is the only obvious peak in the vicinity, and I give no indication that anything tricky is going on, this assumption will make the hypothesis that I intend to refer to Lassen seem like the most probable one. Consequently, you will take me to have asserted that Lassen is the southernmost peak in the Cascades.

If, on the other hand—as is in fact the case from most places in the vicinity of Lake Shasta—there are multiple mountains visible and I do nothing but utter (166), it may not be clear to you how you ought to proceed. If you survey the landscape with any attention, you will notice both Lassen Peak and Mount Shasta. Since the two mountains dwarf the others in the vicinity, you will easily gather that I must have meant to refer to one of them. But which one? Shasta is significantly more prominent than Lassen. Lassen, however, is further south. So, there are things that could be said for either hypothesis.

As a cooperative conversational partner, I will be expected to help you to resolve the difficulty you face here by finding a way to signal my intentions in more detail. The obvious thing for me to do would be to point at one or the other mountain while speaking. By pointing, I make another
simple piece of Gricean reasoning available to you. Of course, there are alternatives that would work just as well, like adding the description ‘the one visible there to the south’, or suggestively raising my eyebrows while gazing towards Lassen.

The important thing to notice here is that regardless of which techniques I employ to get my point across, or how exactly you work your way through your reasoning, the basic outline of the explanation is exactly the same as it was in the case of English*—the mad-dog combination of a variablist semantics and an unconstrained post-semantics. Whether we treat demonstratives as really free variables or as functions that map contexts to extensions, the key to our ability to use and understand them is our mutual knowledge about what is happening around us.

If I utter a demonstrative 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 intend to express is an object—the nature of the interpretive task you face already imposes all of the constraints that the classical semanticist would codify by means of her description, or that the ersatz contextualist would codify with a bridge principle linking contexts and assignments. 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. So, there is no point in building that description—or any other—into the lexical entry for ‘that’. Similarly, there is no point in building that description into a post-semantic bridge principle.

### 3.6 Objections and clarifications

#### Mistaken interpretations

On the view I have argued for, it makes sense to ask what a speaker takes herself to be asserting when she uses a demonstrative, and it makes sense to ask what her listeners take her to be asserting. There is no place in the picture, however, for the familiar notion of ‘what was really said’.\(^\text{18}\) This seems to me to be an advantage of variablistism, as I can identify no significant explanatory role that is played by the familiar notion. I suspect, however, that many philosophers will find this result objectionable.

In an early discussion of ‘dthat’, Kaplan (1970, pg. 222) claims that “erroneous beliefs may lead a speaker to put on a demonstration which does not demonstrate what he thinks it does, with the result that he will be under a misapprehension as to what he has said” (emphasis in original). Examples of this sort have been much-discussed by philosophers. The most famous of them, also from Kaplan, may be the case of the mischievous portrait-swapper:

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\(^{18}\)Compare the idea from Bach (1987, 2012, 2016) that referring is something people do, not something words do on their own.
Suppose that without turning and looking I point to the place on my wall which has long been occupied by a picture of Rudolf Carnap and I say:

(190) D that [I point as above] is a picture of one of the greatest philosophers of the twentieth century. 19

But unbeknownst to me, someone has replaced my picture of Carnap with one of Spiro Agnew. I think it would be simply wrong to argue an ‘ambiguity’ in the demonstration, so great that it can be bent to my intended demonstratum. I have said of a picture of Spiro Agnew that it pictures one of the greatest philosophers of the twentieth century. And my speech and demonstration suggest no other natural interpretation to the linguistically competent public observer.

Kaplan takes this example to show that a speaker can refer to something other than the object she takes herself to be referring to. 20 On the face of things, this might appear to be a problem for the variablist. If there is no fact of the matter about what was said, how could a speaker get it wrong?

The intuition here—that something goes wrong when Kaplan points at Agnew thinking he is pointing at Carnap—deserves respect. Explaining the source of that intuition, however, does not require reifying ‘what was said’ with a demonstrative on an occasion of use. Indeed, Kaplan himself hints at the way the explanation should go when he observes that “[his] speech and demonstration suggest no other natural interpretation to the linguistically competent public observer” (emphasis added).

Recall the distinction we drew earlier between the task of interpreting a demonstrative with regard to a fully-described context and the task of interpreting a demonstrative ‘in real life’, as it were, from the perspective of an interlocutor who is forced to make assumptions about which context is actual. A similar distinction can be invoked to explain the sense in which the portrait-switching leads to a ‘mistake’.

The example is presented from the perspective of a third-party observer; i.e., from the perspective of an observer who encounters an unfamiliar speaker pointing at a picture of Agnew and saying ‘that is a great philosopher’. From that perspective, it would only be natural to take him to have made an assertion about Agnew; if you walk into a room, and see someone pointing at a portrait of Agnew and saying ‘that is a great philosopher’, what else could you take him to be saying?

From Kaplan’s perspective, however, the picture on the wall seems to be a picture of Carnap. So, he takes himself to be saying something about Carnap. One way to explain the intuition that Kaplan gets something wrong would be to say that he in fact makes an assertion about Agnew, despite intending to make one about Carnap. It seems just as plausible, however, to say that the mistake comes from Kaplan’s having said something that any normal observer would take to be about Agnew, despite having intended to say something that a normal observer would take to be

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19Our example (190) is numbered (27) in the original.
20Kaplan’s formulation of the example depends on the idea that the object picked out by a demonstrative is the object demonstrated by the speaker of the context. But the scenario could be reframed to show how misapprehension could crop up even if the semantic clause associated with ‘that’ involved the speaker’s intentions, or whatever.
about Carnap. This alternative explanation does not require there to be a fact of the matter about which person Kaplan ‘really’ referred to.

Suppose the example were set up so that Kaplan’s interlocutor knows that the portraits were switched (we might even imagine an interlocutor who was involved in the caper!), and thus knows that Kaplan meant to express a belief about Carnap. Does this case put any more pressure on the variablist to admit that there must be a fact of the matter about what was said, independent of the facts about what the speaker intended and what the listener assumed? I cannot see how it would. To the extent that Kaplan is willing to admit that he made a mistake after the trick is revealed, again, he can simply point to the fact that what he did—pointing at a picture of Agnew while uttering a demonstrative—was to perform (contra his intention) an action of the sort that in normal circumstances would lead a normal listener to take him to have said something about Agnew.

Before turning to the last set of issues we will take on here, let us consider a final variation on the portrait case, one that suggests that what a speaker picks out on an occasion can diverge both from what she takes herself to pick out, and from what her audience takes her to pick out. Let us recast the Carnap caper, for example, so that the person who overhears Kaplan’s utterance labors under a misapprehension about the relative appearances of Spiro Agnew and John Perry. So, Kaplan points at a picture of Agnew (thinking it is Carnap) and says ‘that is a great philosopher’. His interlocutor looks at the portrait, and thinks he is saying something true about Perry. But we, as observers, have the sense that both Kaplan and his interlocutor have gotten things wrong. We have the sense that he has said something about Agnew. Why?

Again, the answer depends on the information the interpreter in question has access to. The case, as it is described to us, is a case in which someone points at a picture of Agnew and says ‘that is a great philosopher’. This invites the idea that there is Kaplan’s perspective, his listener’s perspective, and the right perspective. But this is an artifact of the way the scenario is presented. Again, as epistemically-privileged interpreters, we encounter a case in which Kaplan points at a portrait of Agnew while saying ‘that’. We rely on our familiarity with the standard pragmatic practice, which is to reason that if someone points at $\alpha$ while uttering a demonstrative, we should use a variable assignment that maps the demonstrative to $\alpha$, and we end up with the intuition that the demonstrative in question refers to Agnew.

$\phi$-features and similar

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 obvious restrictions concerning animacy and proximity, among other things. Witness the contrast between the felicitous (191) and the degraded (192):

(191) He’s really handsome. (pointing at a person or a dog)
(192) #That’s really handsome. (pointing at a person or a dog)
Similarly, compare (193) and (194):

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

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

Do contrasts like these undermine the view developed here so far? The answer to this question is ‘no’. For one thing, none of the data involving restrictions on the reference of a demonstrative are as unequivocal as they might at first appear. Many commentators have noticed, for example, that English demonstratives are frequently used with equative or identificational copular clauses:21

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

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

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

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

(198) That is a professor in the Math Department. (pointing at someone)

(199) 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 (193) and (194) 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 (193)–(199) at face value, though, we can handle them without substantially revising the mad-dog variablist view. It is standard practice in the linguistic semantics literature to treat referential pronouns as free variables that involve presuppositions about number, gender, and similar features. We could take a similar line with regard to demonstratives without giving up the characteristic mad-dog commitment to the idea that the assertoric contents associated with demonstratives are radically underdetermined 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 mad-dog idea is right: it makes sense to think that demonstratives from different language come with a particular presuppositional profile, since the distribution of those demonstratives is different. English demonstratives appear to involve a binary distal/proximal distinction. Korean demonstratives involve a distinction between ‘distal-for-the-speaker’ and ‘distal-for-the-listener’. Spanish demonstratives involve a ternary distinction between degrees of proximity instead of a binary distinction, and so on. 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

21 Some take this fact to show that the demonstratives in question do not really refer to people; see Moltmann (2013) for discussion.
presuppositional profiles, while insisting that at root, demonstrative reference is constrained by the nature of the interpretive task.
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