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The Semantics and Pragmatics of Complex Demonstratives

Ernest Lepore
Rutgers Center for Cognitive Science,
Rutgers University
lepore@ruccs.rutgers.edu

Kirk Ludwig
Philosophy Department,
University of Florida
kludwig@phil.ufl.edu

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Center for Cognitive Science (RuCCS)
Rutgers University, Busch Campus
Psychology Building Addition
New Brunswick, NJ 08903

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Misled by grammar, the great majority of logicians who have dealt with this question have dealt with it on mistaken lines. They have regarded grammatical form as a surer guide in analysis than, in fact, it is.

—Bertrand Russell

1 Introduction

Ever since Russell, simple demonstratives[1] have been championed as the paradigm of a singular referring term whose meaning on an occasion of use is simply the object to which it refers. Russell thought at one time that demonstratives were the only genuine logically proper names, and that only thoughts expressed using them were genuinely singular thoughts. Demonstratives have long been thought – as on Russell's view – to be the primitive form of contact between thought and the world as it is expressed in language. Complex demonstratives, expressions of the form 'That F', 'Those Fs'[2], etc., have been traditionally assimilated to simple demonstratives, that is, like simple demonstratives, they too have been treated as logically proper names in Russell's sense. (Indeed, philosophers discussing simple demonstratives often use *complex* demonstratives in examples without remark.) Those philosophers who have treated complex demonstratives as singular referring terms – the majority – have often seen in them a key to understanding how thought reaches out to the world, a key to, in McGinn's phrase, "the mechanism of reference."[3]

Complex demonstratives differ from simple demonstratives by virtue of a nominal. The central question about their semantics is how to understand the contribution of this nominal to sentences in which complex demonstratives occur. This, in turn, is at least the first step in understanding the structure of the thoughts we express using complex demonstratives, and is key to determining whether an understanding of complex demonstratives in particular will give us insight into how thought reaches out to the world.

Our primary aim in this paper will be to present a novel account of the semantics of complex demonstratives. The proposal has implications for a wide range of discussions in the philosophy

of language and mind. But it will not be our aim to trace these out here.

There have been a variety of proposals, each in response to different, and apparently conflicting, intuitions about the way in which the nominal contributes to the semantics of a sentence of the form 'That F is G' (or, more generally, to sentence of the form ϕ(that F), where '...' in 'ϕ(...)' represents any noun phrase location). In a recent discussion, Larson and Segal[4] distinguish four such ways. (1) It can contribute to the sentence's truth conditions; (2) it can constrain what the demonstrative expression refers to; (3) it can do both; or (4) it can do neither. Larson and Segal argue for the weakest alternative, (4). Likewise Schiffer and Perry hold that complex demonstratives are singular terms which can contribute *only* their referents to the propositions expressed by uses of sentences in which they occur.[5] On this view, the nominal 'F' in 'that F' plays only a pragmatic role in bringing our attention to what the speaker is demonstrating with his use of 'that', an object which may still be picked out even if the nominal fails to apply to it. In contrast, Kaplan[6] defends alternative (2), arguing that 'that F' contributes *no* object to the proposition expressed by a sentence of the form 'That F is G' *unless* its referent is F. On Kaplan's view, in uttering 'That man is a thief', if the object one tries to demonstrate with an utterance of 'that' is not a man, nothing is demonstrated. On this account, the complex demonstrative in use functions rather like a picture with an arrow attached to it; the picture filters out objects other than those that fit it in the direction the arrow points. McGinn, Peacocke, Davies, Braun, Recanati, and Borg likewise adopt a view according to which the contribution of the nominal in 'That F is G' is to restrict which object 'is G' is evaluated with respect to.[7]

All these authors agree that the nominal in a complex demonstrative contributes nothing to the truth conditions of sentences in which it occurs. In contrast, Richard[8] argues that, in addition to restricting what can be the referent, the nominal contributes to the truth conditions of sentences containing the complex demonstrative; in particular, the sentence 'That F is G' cannot be true unless the referent of the demonstrative is F, and is false if the referent is not. In effect, Richard is defending (3). So (2)-(4) are occupied by some philosopher or other.

To anticipate, we will defend something like (1), namely, that the nominal does not semantically constrain what the demonstrative refers to, yet it does contribute to the truth conditions of any sentence in which it occurs. We say *something like* (1), because, as will

emerge, we reject an important presupposition of this taxonomy.

The classification between (1)-(4), though it looks exhaustive, is in an important way deficient, because it fails to elicit the most important division among theories about complex demonstratives. It presupposes they are singular terms.[9] (This is the presupposition that we will eventually reject, though in a novel way.) Though this has been the dominant view, there are dissenting voices. For complex demonstratives also exhibit many features more usually associated with quantified noun phrases, such as 'All philosophers', 'The King of France', and 'Someone in the rain'. Since it is difficult to see how to accommodate these features if complex demonstratives are singular referring terms, some authors have been led to treat all demonstrative expressions as quantifiers in order to provide a unified account of both their simple and complex forms. Taylor,[10] for example, endorses this view, basing his position largely on data provided by complex demonstratives, data we will review below. Barwise and Cooper[11] suggest that all noun phrases are generalized quantifiers, including demonstrative constructions. More recently, Neale[12] has suggested that all *complex* noun phrases should be treated as quantificational, and that demonstratives in particular might be treated as equivalent to a certain sort of rigidified definite descriptions in order to bring complex demonstratives into conformity with this thesis. (Davidson[13] may be construed as anticipating a quantificational treatment similar to Neale's.) Another recent suggestion along these lines, though rather different in some respects from Neale's, is made in King.[14]

It would be fair to conclude from this quick survey that we do not yet understand very well the semantic role of complex demonstratives; we have not yet, to borrow an apt phrase from Higginbotham, seen through "the haze of usage." We will argue that no position which has been held up to now is correct, though each major camp has identified essential features of complex demonstratives. The difficulty for each camp has been that they have either denied or ignored the evidence on which the other bases its view. Kaplan, on the one hand, whom one foremost associates with the vast literature on demonstratives, goes astray because he focuses too much on simple demonstratives to the exclusion of considering how they enter into more complex constructions, and has consequently taken simple demonstratives as a paradigm for all demonstrative constructions. Those authors, on the other hand, who want to treat demonstratives

as quantifier-expressions have tended to ignore Kaplan's insights. They too, in a way, have failed to take a broad enough view of the use of demonstratives in natural languages. Both camps have insights that any adequate account of complex demonstratives *must* accommodate. We will show how to reconcile the view that *demonstratives* are genuinely singular referring terms with the view that *complex* demonstratives function like (restricted) quantifiers.

In developing our argument, we will first consider evidence for treating demonstrative expressions as quantifiers (and not as singular terms), and then consider how one might try to integrate this suggestion into a semantics for demonstratives. Seeing why the attempt fails will help to uncover the limit of the analogies between the functioning of demonstrative expressions and true quantifiers. We then offer a semantic account which explains the quantifier-like features of complex demonstratives, while retaining the intuitively compelling view that simple demonstratives–everywhere they occur–are themselves simply context sensitive singular referring terms. Our account sheds considerable light on a number of conflicting intuitions about the role of, e.g., 'man' in 'That man was once a teacher of mine'. In particular, it accommodates the views that one can successfully refer to an object using this sentence without its being a man, that the nominal plays a role in helping an auditor to figure out what is being demonstrated, and that the object must be a man in order for an utterance of this sentence to be true. In the appendix, we complete our account of the semantics of demonstratives by formulating a reference clause for simple demonstratives.

2 Quantifier-like features of demonstrative expressions

One of the most striking analogies between demonstratives and quantifier words is that they are *determiners*; like quantifier words, and unlike other indexicals[15] such as 'I', 'he', 'she', 'now', 'there', etc., demonstratives combine with nominals to form complex noun phrases.[16] Thus, compare [1]-[3].

[1]	Some professor bored us stiff.	Quantifier word + nominal => noun phrase
[2]	That professor bored us stiff.	Demonstrative + nominal => noun phrase
[3]	*John professor bored us stiff.	Name + nominal *=> noun phrase

[3] is ill-formed, whereas [1] and [2] are not. If possible, a theory of complex demonstratives should explain why demonstratives can combine with nominals to form noun phrases that play the

same grammatical role as complex quantifier phrases. An appealing hypothesis for why this is so is that [2] is an instance of the same rule that leads to [1], that is, demonstratives are quantifier words and complex demonstratives are quantified noun phrases.

The appeal of this hypothesis is increased by the observation that the nominal in a complex demonstrative does not appear to be semantically inert. Thus, if a determiner has existential import, as with 'some', 'few', 'the' (represented as '$\text{Det}_\exists$'), then instances of the following inference schema are semantically valid:

$\text{Det}_\exists$ F is/are G

So, some F is G

So then are instances of the schema:

$\text{Det}_\exists$ F is/are G

So, something is F and G

This suggests that demonstrative determines are quantifier words with existential import since the inference schemes hold for them as well.

Furthermore, sentences such as [4]-[7] do not strike us as ill-formed, and it is easy enough to imagine appropriate contexts of utterance (see §5).

[4] Someone loathes that man to *his* right.

[5] The man in the white hat hates that man addressing *him*.

[6] Each woman in this room admires that man whom *she* sees at the podium.

[7] All of the students hated that professor who flunked *them*.

These data are all perfectly ordinary; each involves a pronoun in the complex demonstrative being bound by the quantifier outside of it. It is difficult to see how to make sense of quantification into complex demonstratives on the assumption that they are singular referring terms. In this respect, complex demonstratives exhibit important similarities to quantified noun phrases. Compare [4] with [8].

[8] Someone loathes a man to his right.

If demonstratives were quantifier words, and complex demonstratives were quantified noun phrases, we would have a ready explanation of the intelligibility of [4]-[7].

In addition, pronouns outside the complex demonstrative can be anaphoric on quantifier

phrases inside the nominal of a complex demonstrative, as illustrated in [9].

[9] That shark that took a swimmer off Flager beach last summer attacked him inside the sandbar.

In [9], 'a swimmer off Flager beach last summer', which is a part of the nominal of the complex demonstrative, binds the pronoun 'him' in the predicate.

Clearly, we ordinarily associate these features with restricted quantifiers, as in [10]-[11].

[10] Every man who has a son loves *him*.

[11] The woman standing beside a bus is going to board *it*.

We would have an explanation of these phenomena if 'that' were a quantifier word.

It is not clear what account could be given of the phenomena exhibited in [4]-[7], and [9] if 'that F' is treated as a singular referring term, for that would be to treat a sentence of the form 'That F is G' as constructed from the matrix 'x is G' by replacing 'x' with a singular term whose role is to provide an argument for the function expressed by the matrix. This renders mysterious how the material in the nominal could interact semantically with the rest of the sentence.

3 Demonstratives as quantifiers

These analogies between complex demonstratives and restricted quantifiers cast doubt on the traditional view that demonstratives are context sensitive singular terms. Indeed, in view of their grammatical role as determiners, it is not implausible that demonstratives are context sensitive quantifier words, and not context sensitive singular terms. But, then, it should be possible to provide a semantic treatment for demonstratives parallel to that for (restricted) quantifiers. In this section, we consider how one might try to extend the standard treatment of (restricted) quantifiers to demonstrative expressions. We take 'that' as a representative of the demonstrative determiners. First, we consider and argue against the view that 'that' itself might be a quantifier word. We then consider whether it can be treated as a kind of specialized context sensitive definite description. We reject this identification as well. This leaves us the task of explaining why complex demonstratives exhibit systematic analogies with quantifiers, the topic of §4.

Nothing important will be lost, and considerable convenience gained, if we devise, as is customary, our semantics for a regimented language, English*, which is like English except that variables are systematically introduced into argument places explicitly along with devices for

indicating scope relations among quantifiers. We will represent an English sentence such as 'Everyone brought someone' as in [12].

[12] [For every x][there is some y](x brought y).

[12] makes explicit the order in which its quantifiers are to be evaluated. For sentences such as 'Few philosophers are rich' we will adopt the standard notation for restricted quantifiers , as in [13], read as 'Few x *such that* x is a philosopher are such that x is rich'.[17]

[13] [Few x: x is a philosopher](x is rich).

To formulate the suggestion that 'that' functions as a quantifier word, rather than a genuine singular referring term, we first regiment English sentences of the form 'That is F' and 'That F is G' into English* as '[That x](x is F)' and '[That x: x is F](x is G)', respectively.

In order to provide a semantics for demonstrative sentences in English*, we need to choose a framework in which to articulate our various semantic theses. We will adopt a truth-theoretic approach to giving semantics for natural languages pioneered by Davidson.[18] The theories of complex demonstratives we will be discussing throughout this paper, including the one we will endorse in the next section, do not depend in any way, so far as we can tell, on the truth-theoretic framework we are adopting. However, once we adopt a truth-theoretic approach to the semantics of demonstratives, and also opt to treat demonstrative expressions as quantifiers, then we must identity a structure to be *used* in the metalanguage which when applied to functions assigning objects to variables mimics the demonstrative expression *mentioned* in object language sentences for which we are providing satisfaction conditions. To this end, we will first indicate the context relativity of the English* 'that' by introducing in our metalanguage the term '$\text{that}_{[s,t]}$', whose relativization to speaker, *s*, and time, *t*, is indicated by the subscripted variables. A first proposed truth-theoretic treatment, then, of 'that' as a quantifier word (couched in a metalanguage which is English* as well), is [14],

[14] For all functions f, f $\text{sat}_{[s,t]}$ '[That x](x is F)' iff $\textit{that}_{[s,t]}$ 'x'-variant[19] f' of f $\text{sat}_{[s,t]}$ 'x is F', where 'f' ranges over functions that assign an object to each variable. '$\text{Sat}_{[s,t]}$' is read as 'satisfy(ies) as potentially used by s at t in English*'.[20] As a notational convenience, we suppress universal quantifiers over speakers and times; they will be understood to take wide scope over any other quantifier. The relativization to speaker and time is cashed out in terms of the speaker's

demonstrative[21] intentions, and, in particular, those which determine which object, if any, the predicates are to be evaluated with respect to. Thus, we might read 'that$_{[s,t]}$ "x"-variant f' of f' as 'that "x"-variant f' of f demonstrated by s at t'.

Two difficulties are immediately apparent for the proposal in [14]. The first difficulty arises because demonstratives are evaluated relative to demonstrative intentions. Therefore, we cannot perform semantic ascent in the truth theory in the way we normally do for quantifiers. This is because an instantiation of the right hand side of [14] is true only if *functions* are demonstrated by the speaker at the time. But speakers don't typically use demonstratives to demonstrate functions. An utterance of 'That is a brown horse', e.g., does *not* typically involve any demonstrative reference to a function mapping variables to objects. Thus, [14] will render false most if not all uses of sentences with demonstratives, and, hence, render false many uses of sentences with demonstratives which are in fact true. One might try to trace the source of this difficulty to our choice of using a truth-theory in which to articulate the thesis that demonstrative expressions are quantifiers; the same cannot be said for the next difficulty.

The second difficulty with the proposal framed in [14] lies with the demonstrative on its right hand side. Since we seek a satisfaction clause which does not express different propositions on different occasions of use, our truth theory, and hence [14], cannot employ context sensitive expressions. To do so would be to prevent different theorists from expressing the same theory. But if the demonstrative on the right hand side of [14] means the same as its object language 'that', then we have failed to produce a context *in*dependent specification of the satisfaction conditions of object language demonstrative sentences. (Notice that treating it as a context sensitive term would also leave it open that the theorist gives incorrect truth conditions, since what the metalanguage term picks out will depend on what the theorist's intentions are, and not those of a speaker to whom the theorem is instantiated.)

To get around this difficulty we need to introduce in the metalanguage a context *in*sensitive quantifier word appropriately relativized to a speaker and time, that is, we must provide a quantificational paraphrase of 'that' which avoids using it (or a translation) in specifying satisfaction conditions for sentences with demonstratives. This is in effect the approach adopted by a number of authors, who have suggested that demonstratives are equivalent to a specialized

definite description.[22] They assume that sentences with demonstratives can be paraphrased into sentences with quantifiers. So, their aim is to construct a quantifier expression in the metalanguage which functions like a demonstrative to serve as its paraphrase, thereby avoiding the pitfalls of treating 'that', as in [14], as itself a quantifier word *used* in the metalanguage in giving recursive satisfaction conditions, as is customary for 'all', 'some', 'the', 'few', etc.[23]

The most natural suggestion is to treat 'that' as equivalent (semantically) to a 'the object actually now demonstrated by me'. This ensures that the definite description has intuitively the right denotation when a speaker uses a demonstrative successfully, i.e., the object the speaker then demonstrates. Thus, a truth theory for English*, with obvious axioms, would issue in a theorem like [15].

[15] '[That x](x is G)' is $\text{true}_{[s,t]}$ iff *the* x actually[24] demonstrated by s at t is G.

Complex demonstratives are then handled by treating the nominal as an addition to the restriction on the definite article.

This proposal has the virtue of clearly delivering the right truth values for sentences in which simple and complex demonstratives are successfully used. This is not surprising, since the definite description chosen to paraphrase the demonstrative was designed to pick out its referent when used successfully. But this isn't enough for it to deliver the right semantic account of demonstrative expressions, whose semantic properties differ in several important ways from the proposed paraphrases. This can be illustrated in a number of ways. The key to understanding these objections is to recognize that this account is asking us to take seriously the idea that a language like English which has demonstrative expressions can be paraphrased in a language without demonstrative expressions. By so doing, the account will (i) fail to account for the fact that there are vacuous uses of demonstratives, (ii) will saddle our uses of demonstratives with scope readings they don't have, and (iii) with entailments they don't have. In short, the account will fail to correctly interpret English demonstratives.

(i) A singular term is vacuous if it has no referent. An utterance of a sentence containing a vacuous term fails to have a truth value. Suppose that MacBeth, hallucinating and pointing to the empty air before him, had asserted [16].

[16] This is a dagger I see before me.

Intuitively, MacBeth would have failed to secure any object for him to go on to say something about. He has not said something false, as the description paraphrase approach would require, but has failed to say anything true or false at all. The culprit is clearly MacBeth's use of 'this', to which no referent can be assigned. This point about demonstratives, that they can have vacuous uses, is one that Kaplan has emphasized repeatedly, and which their treatment as quantifier words cannot accommodate.

This point extends straightforwardly to the description paraphrase approach to complex demonstratives. Someone who gestures to his right saying, 'That philosopher is a gymnosophist', when nothing is to his right, has not said something false, but has failed to say anything at all. The description paraphrase approach would require him to have said something false about *himself*. But this is just as counterintuitive as in the case of simple demonstratives. That the speaker, in failing to demonstrate anything in order to say of it that it is a gymnosophist, fails to say anything truth evaluable, is shown clearly enough by the fact that if he comes to see that his demonstrative intentions failed to pick out an object, he will not insist that he has said something, albeit false, but regroup. He would not say, even if he is prone to falsehood, 'Oops, wrong again!'. He would not pay off a bet that the next thing he says will be false if he had said, 'That philosopher is a gymnosophist', but failed to demonstrate anything–he would count himself lucky and try again.

Possible vacuity is a distinctive feature of singular terms. Quantifiers have no vacuous uses, since every quantified sentence (other linguistic infelicities aside, such as vagueness or incidental demonstratives elsewhere in the sentence) has a truth value, even if, like 'The first bud of April is the herald of spring', it fails to secure an object about which one can say something. Quantifiers do not themselves involve any reference to individuals, so we can say all sorts of things using them without having any particular things in mind. This is in large part where their utility lies.

(ii) 'that' does not permit the same scope ambiguities as its alleged paraphrase. [17], for example, has only one reading,

[17] John believes that that is thin,

whereas replacing the demonstrative 'that' with 'the object now demonstrated by me' in [17] allows the non-equivalent readings [18] and [19].

[18] John believes [the object now demonstrated by me is thin].

[19] The object now demonstrated by me is such that [John believes it is thin].

In addition, if an utterance of [19] is true at t, it follows that something at t is such that John believes it to be thin. No such inference is warranted from the truth of [18], where the description has narrow scope, as used on an occasion, since [18] could be true even if on the occasion on which someone uses it he fails to demonstrate any object.[25]

Neale[26] suggests that such scope data could be explained on the assumption that 'that', construed as a definite description, always takes wide scope.[27] What is right is that *if* 'that' functioned like a definite description, then the data we just surveyed would compel us to treat 'that' as always taking wide scope. But we would have no explanation for why this should be so. In this sense, Schiffer's and Neale's restriction seems *ad hoc*. So the data constitute a *prima facie* objection to treating simple demonstratives as quantifiers. On the other hand, treating demonstratives as singular referring terms readily explains why if someone truly utters [17], then [19] (taken relative to the same contextual parameters) is true, where the description has wide scope, and why [17] entails that someone was believed by John to be thin at that time.

(iii) Finally, the description approach is saddled with entailments the demonstrative sentences it analyzes don't have. If John said, 'That is thin' (or 'That man is thin'), then one could, if the description approach were correct, truly say, 'John said something which entails that something was demonstrated by him'. But while it *may* be true that John demonstrated something, and, if he was sincere, that he intended to, nothing he *said* (or expressed) entails that he did, anymore than anything he *said* (or expressed) entails that he was *speaking English*.

The description approach is a form of mimicry, piggy-backing on an independent means for securing a referent for predication as a way of imitating the behavior of demonstratives. It attempts to treat 'that' as a quantifier by treating the means by which its referent is determined, namely, by demonstration, as a general condition to be met for singling out an object by way of a definite description. But the fact that it must appeal to an independent means of securing an object for predication shows that it is a counterfeit of the hard coin of demonstration. The same work is being done twice over, but less well the second time around. The act of demonstration itself secures the object for predication. It would be pointless to go on to try to secure it a second time by means of the matrix 'x is demonstrated by s at t'.

The case against treating demonstrative expressions as quantifiers seems decisive. There remains the question of how in the light of this are we to explain the analogies between complex demonstratives and quantifier expressions consistently with seeing demonstratives as genuine singular referring terms, and, in particular, how to give a semantics for sentences containing complex demonstratives compatible with this constraint. It is to this task we now turn.

4 Semantics for complex demonstratives[28]

In light of the difficulties encountered in treating 'that' as a quantifier word, it might seem prudent to reconsider the suggestion that complex demonstratives function as singular referring terms, and that the nominal in the complex demonstrative does not contribute to the truth conditions of the sentence. This might be recommended by the observation that when we use sentences of the form 'That F is G' we are clearly most interested in saying of some demonstrated object that it is G. In fact, it seems that we can succeed in demonstrating an object in order to say it is G, using 'That F is G', even when it fails to be F (*contra* Kaplan, et. al.). For example, if someone says, pointing to a white horse, 'That unicorn is white', it seems to make perfect sense to say in response, 'That's white alright, but it's not a unicorn'. This indicates that we think the speaker has succeeded in demonstrating something, which we in turn demonstrate, even though it is not a unicorn. The nominal, it might be suggested, plays only a pragmatic role in helping an auditor to determine which object the speaker is demonstrating to say of it that it is G. If the nominal played a semantic role as well, surely whether an object is demonstrated would depend on its being F; and, in addition, we have an explanation for the role 'F' plays that does not depend on its being semantic.

However, while an adequate account should explain the possibility of demonstrating an object when uttering a sentence of the form 'That F is G' which fails to be F, and should accommodate the idea that the nominal plays a role in helping an auditor to determine what object is being referred to, the suggestion that the nominal plays no semantic role seems incompatible with the data surveyed in §2. Such a view would require us to deny that expressions of the form, Det + Nominal + Predicate, comprise a homogeneous semantic class, because this form functions quite differently depending on whether Det is a quantifier word or a demonstrative. Where expressions seem to be constructed in identical ways out of terms in identical categories, there is a presumption that a compositional semantic theory should exhibit them as sharing similar semantic

structures.

Furthermore, someone who advocates that the nominal plays no semantic role would be committed to saying that all sentences of the form 'That F is G', no matter what substitutes for 'F' (for some fixed replacement for 'G'), have the same (relativized) truth conditions! This view is incompatible with semantic entailment relations into which such sentences enter. As noted in §2, for any determiner with existential import, $Det_{\exists}$, '$Det_{\exists}$ F is(are) G' semantically entails 'Some F are G', and, hence, 'There are some F' (fixing contextual variables). In fact, it seems we can infer either of 'That clown is funny' and 'That is a funny clown' from the other, when the demonstrative picks out the same thing.[29] Similarly, 'All Fs are Gs' entails 'That F is G', e.g., 'All aviators wear sunglasses; therefore, that aviator wears sunglasses' (again, fixing contextual parameters). And while someone could say, without fear of formal contradiction, 'That is not a clown', if he says 'That clown is not a clown', he could only be understood intelligibly if we took him to intend 'clown' in different senses in the two occurrences. Likewise, we will accept as true such necessitated conditionals as, 'Necessarily, if it was that clown in the aviator sunglasses who won the prize, then someone in aviator sunglasses won the prize', which requires us to think of the nominal of the complex demonstrative contributing to the truth conditions of the sentence in the antecedent.[30]

Furthermore, again appealing to data presented in §2, the nominal can interact with other elements in the sentence in which the complex demonstrative appears. One can quantify into the nominal, and terms in the sentence can be anaphoric on quantifier expressions in the nominal. It seems not to be an option, then, to treat the nominal as pleonastic, or even to restrict its semantic role to placing a necessary condition on securing a referent for predication. We must take seriously the parallel between the treatment of sentences of the form 'That F is G' and those of the form 'Q F is/are G', where 'Q' is replaced by a quantifier word.

In light of these considerations and our arguments against treating 'that' as a quantifier word, we propose the following desiderata on any adequate account of complex demonstratives.

(i) The account must exhibit 'that' as a singular referring term and not as a quantifier word.

(ii) The account must show how 'that' can be used in 'that F' to demonstrate an object even though the object demonstrated is not F.

(iii) The account must explain how the nominal in 'that F' can play a pragmatic role in helping an auditor to determine what the speaker intends to be referring to.

(iv) The account must exhibit the nominal 'F' as contributing to the truth conditions of a sentence of the form 'That F is G', and in particular the account should explain the entailment relations into which 'That F is G' may enter.

(v) The account must interpret sentences of the form 'That F is G' in a way that exhibits their structure as parallel to that of sentences of the form 'Q F are G', where 'Q' is replaced by a quantifier expression, and, in particular, the account must enable us to explain how the nominal in complex demonstratives can interact with other elements in a sentence in the same way as the nominal in restricted quantifier expressions.

In effect, (as remarked in note 28) we will meet desiderata (i) and (ii) by assigning 'that' a reference clause (thereby treating it as a singular term) and then by providing a recursion clause for sentences of the form 'That F is G' in which the semantic contribution of 'that' is exhausted by its reference clause. This will meet (ii) because the reference clause will provide conditions for 'that' picking out an object independently of any nominal it is concatenated with to form a complex demonstrative. (This terminology of course is misleading if we are right.) However, as we have seen, there appears to be a tension between (i)-(ii) and (iv)-(v). In what follows, we will reconcile these four desiderata with materials needed to satisfy the pragmatic desideratum (iii).

We rejected semantically interpreting 'that' in a way exactly parallel to how we standardly interpret quantifiers in sentences of the form 'Q F are G' because 'that' is a singular term. On the other hand, we apparently want whatever object 'that' picks out to be, as it were, fed into the construction 'x such that x is F is such that x is G' in a way that parallels restricted quantification. That is, we want to represent the object which is the referent of 'that' as used by the speaker as fed into this construction in a way parallel to the way quantifiers feed objects to this construction. But to do this in full generality within a truth-theory, we must invoke satisfaction, because nominals and predicates are both productive categories, i.e., complex ones can be built up out of simpler ones by the usual recursive devices. Because we must interpret constructions of the form 'That F is G' recursively in terms of how we interpret 'F' and 'is G', we will continue to represent 'That F is G' in English* as '[That x: x is F](x is G)'. What we want, then, is for a function f to

satisfy '[That x: x is F](x is G)' iff a function f' which differs from f at most in that f' assigns to 'x' what is demonstrated by the speaker in using 'that' *and* which satisfies 'x is F' is such that it *also* satisfies 'x is G'. There will in fact be only one such function because of the requirement that it assign to 'x' what 'that' refers to. Exploiting this fact, we can write out our candidate satisfaction clause as in [20].

[20] For all functions f, f $sat_{[s,t]}$ '[That x: x is F](x is G)' iff [the f': f' differs from f at most in that f'('x') = $Ref_{[s,t]}$('that') and f' $sat_{[s,t]}$ 'x is F'](f' $sat_{[s,t]}$ 'x is G').[31]

[20], as a semantic proposal for how to interpret complex demonstratives, meets desiderata (iv) and (v) compatibly with (i) and (ii). Our formulation of [20] is, in fact, *essentially a more precise rewording of our desiderata*. By specifying the semantic contribution of its simple demonstrative constituent using a reference clause, we continue to treat 'that' as a singular referring term. However, at the same time we capture the semantic contribution of its nominal to the truth conditions of the sentence in a way that parallels the standard treatment of restricted quantifiers. 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 = that and x is F](x is G)'.[32]

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. This view neatly handles all of the assorted data we have discussed.

It explains the similarity in form between 'That F is G' and 'Q F are G' by treating the former as having the logical form of '[Qx: ϕ(x,that)](x is G)', where 'ϕ(x,that)' represents a complex predicate that contains a demonstrative in an argument place. It thereby exhibits 'that' as a genuine singular referring term whose contribution to a sentence does not depend on the nominal to which it is conjoined. It explains why 'That F is G' is materially equivalent to 'That is F and G', since '[The x: x = that and x is F](x is G)' semantically implies 'Something is identical with that and it is F and G'. And it explains how, despite the nominal not semantically constraining the referent of 'that' as used by the speaker, it nonetheless enters into the sentence's truth conditions. In the case of an utterance of 'That unicorn is white', we can explain how someone can demonstrate something even though there are no unicorns, and why the utterance is false even