DOES SYNTAX REVEAL SEMANTICS?
A CASE STUDY OF COMPLEX DEMONSTRATIVES

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0. Introduction

Following Aristotle (who himself was following Parmenides), philosophers have appealed to the distributional reflexes of expressions in determining their semantic status, and ultimately, the nature of the extra-linguistic world. This methodology has been practiced throughout the history of philosophy; it was clarified and made popular by the likes of Zeno Vendler and J.L. Austin, and is realized today in the toolbox of linguistically minded philosophers. Studying the syntax of natural language was fueled by the belief that there is a conceptually tight connection between the syntax of our language and its semantics, and the belief that there is a similarly tight connection between the semantics of our language and metaphysical facts about the world. We are less confident than our colleagues about the relation syntax has to semantics and metaphysics. In particular, we do not believe that the current status of theoretical syntax (or semantics or metaphysics) provides much support for either of the above two beliefs. We will illustrate our view with a case study regarding the status of complex demonstratives. We will show that a recent and particularly subtle syntactically based argument for the semantic/metaphysical status of complex demonstratives does not in fact show what semantic category complex demonstratives are in. Since the devil always lies in the details, we cannot extract a general method for undermining any argument that is similar in spirit. However, our case study will act as a cautionary note against any theory that attempts to derive important philosophical consequences from the shapes of sentences.

1. The status of complex demonstratives

Ever since Russell, simple demonstratives, e.g., 'this' and 'that', have been championed as paradigms of singular referring terms. Complex demonstratives—i.e., expressions of the form 'That F' and 'This F'—differ from simple demon-

stratives by virtue of a nominal. Traditionally, they have been semantically assimilated to simple demonstratives. So the central question about their semantics is how, if at all, does the nominal contribute to the meaning of sentences in which complex demonstratives occur? First, do these nominals play a role in determining the referent of the complex demonstrative in which they occur? Must a person be a crook in order to be the referent of an utterance of 'that crook'? Second, what do these nominals contribute to the contents of sentences in which complex demonstratives occur? Does an utterance of 'That crook is untrustworthy' express a proposition that has the property of being-a-crook as a constituent? Or, does the phrase 'that crook' contribute only its referent to the proposition expressed?

Some researchers hold that complex demonstratives are singular terms which contribute *only* their referents to the propositions expressed by uses of sentences in which they occur (e.g., Larson/Segal (1995, sec. 6.4.1), Schiffer (1981, pp. 73–74, 79–80), and Perry (1997)). 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'. In contrast, Kaplan (1978, 1989a, p.515, 1989b, p. 583) argues that 'that F' fails to contribute an object to the proposition expressed by a sentence of the form 'That F is G' unless its referent is F. So, in uttering 'That man is a thief', if the object one *tries* to demonstrate with an utterance of 'that' is not a man, nothing gets demonstrated—i.e., the use of 'that F' is vacuous. Most contributing authors to this debate follow Kaplan's lead (e.g., McGinn, 1981, p. 162, Davies, 1982, Braun 1994, pp. 209–210; Recanati, 1993, p. 13, notes 16, 17, and 19, and Borg, 2000).

What authors on both sides of this debate agree about—whether they hold that the content of the nominal determines the referent of the complex demonstrative or not—is that the nominal contributes *nothing* to the truth conditions of sentences in which it occurs. The only contribution to what's said or expressed by a use of a complex demonstrative is its referent. However, Richard (1993) and Lepore/Ludwig (2000) argue that the nominal does contribute to the truth conditions of sentences containing the complex demonstrative. In particular, they argue that the sentence 'That F is G' is true only if the referent of the demonstrative is F, and that it is false if the referent is not F.

This classification over whether the meaning of the nominal contributes to truth conditions and whether it constrains reference, though seemingly exhaustive, is deficient. The classification fails to elicit the most important division among theories about complex demonstratives because it presupposes that complex demonstratives are singular terms. Though this view is dominant, there are dissenting voices. A number of authors have argued primarily on semantic grounds that complex demonstratives are quantifiers much like: 'every man', 'the present King of France', and 'someone in the rain' (Taylor 1980, Keenan and Stavi 1986, Barwise and Cooper, 1981, p. 177, 184, Neale 1993, §9).[1] In this paper, we will discuss and evaluate various *syntactic* arguments for a quantificational treatment of complex demonstratives. We will argue that the various syntactic data adduced to support a claim about the syntactic structure of

complex demonstratives fails, and that furthermore, this syntactic data is compatible with a referential treatment of complex demonstratives.

Before turning to the details, we first need to say what a quantificational account of complex demonstratives is. A quantificational account of complex demonstratives treats the nominal F in 'that F' as serving to restrict the scope of quantification. It treats the word 'that' in 'That F is G' as expressing a relation between the meanings of F and G. This sort of treatment of quantifiers as higher-order relations is standard. For instance, 'all' is often treated as a two-place relation that holds between a pair of denotations (e.g., the subject nominal and the predicate, as in 'All Fs are Gs') just in case the first denotation is a subset of the second. The quantifier 'some' expresses a two-place relation (as in 'Some Fs are Gs') that holds iff the intersection of the two denotations is nonempty. A quantificational account treats 'that' in 'That F is G' as expressing a relation that holds between the denotations of F and G iff certain conditions hold. Whatever context sensitivity a complex demonstrative exhibits is built in as a further restriction on the scope of the quantifier 'that'. Very roughly, when pointing to a man, saying 'That man is happy', its meaning is that some unique object is both the object you demonstrated and a man, and it is happy. We now address the question of whether syntax demands that we assign complex demonstratives this sort of semantic treatment.

2. Does the syntax of complex demonstratives reveal their semantics?

One of the most striking analogies between demonstratives and quantifiers is that demonstratives are *determiners*; like quantifier words, and unlike indexicals[2] such as 'I', 'you', 'now', 'there', demonstratives combine with nominals to form complex noun phrases.[3] Thus, compare (1)–(3).

(1) Some professor bored us stiff.   Quantifier + 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. (Hereinafter '*' means unacceptable, and '?' means questionable.) If possible, a theory of complex demonstratives should explain why demonstratives combine with nominals to form noun phrases that play the same grammatical role as complex quantifier phrases. Taylor 1980, Keenan and Stavi 1986, Barwise and Cooper 1981, and Neale 1993 have all been impressed by this data. However, we want to focus our attention on an argument due to Jeffrey King (King 2001), because he employs much more sophisticated linguistic evidence in support of his view that complex demonstratives are quantificational. A substantial portion of his evidence comes from three types of linguistic constructions, which we shall refer to as "King's grammatical evidence". In all three of these constructions, complex demonstratives behave like quantifiers and unlike singular terms. Although we disagree

with King that the evidence shows that complex demonstratives are quantifier phrases, he is undoubtedly right to explore this kind of evidence while theorizing about complex demonstratives. Indeed, a large part of our contribution will be developed by following King's lead in this respect. We turn directly to his evidence.

King's first piece of grammatical evidence appeals to what are known as 'Weak Crossover effects'. Here, he claims, the interpretive possibilities of quantifiers and complex demonstratives differ from those of proper names. In (4a), there is no reading on which 'his' can be interpreted as bound by the quantifier 'every man'. In contrast, though, if 'every man' is replaced by a proper name, as in (4b), then 'his' can be bound by the object.

(4) a. His mother loves every man.
    b. His mother loves John. (King 2001, pp. 18–19)

Thus, we have a contrast: in Weak Crossover constructions, quantifiers in the object position cannot bind the pronoun that is part of the subject, but proper names can. King then claims that in (5) 'his' cannot be bound by 'that man with the goatee'.

(5) His mother loves that man with the goatee (King 2001, p. 19).

If this is right, then complex demonstratives behave like quantifiers in these constructions, and not like proper names.

King's second bit of grammatical evidence concerns 'Antecedent-Contained Deletion'. To explain what this construction is, consider (6), where a verb phrase (VP) has been elided and replaced with a dummy verb 'do'.

(6) Janet flunked every student that Robert did.

It is natural to suppose that the interpretation of an elided expression is effected through a process of 'reconstruction' (e.g., May 1985, Hornstein 1995). For example, it is natural to interpret 'Ann kissed Kate after Ben did' by replacing the dummy verb do to get 'Ann kissed Kate after Ben kissed Kate'. But suppose we were to follow this procedure and simply replace the missing VP with the VP it is anaphoric on. In such a case, a copy of the elided VP will be contained in the reconstruction, since the VP that replaces 'did' itself contains 'did' (7):

(7) Janet [$_{VP}$ flunked every student that Robert [$_{VP}$ flunked every student that Robert did]].

Clearly, the structure in (7) is not going to yield the desired interpretation. So something about quantifiers enables them to avoid the disaster in (7), and in-

stead yield a form which gives the meaning: for all students x such that Robert flunked x, Janet flunked x. This feature of quantifiers does not appear to be possessed by proper names. If we take a construction that corresponds as nearly as possible to (6), but use proper names instead of quantifiers, the result is ungrammaticality:

(8) *Janet flunked Holmes, who Robert did (King 2001, p. 18, fn. 16).

The contrast between (6) and (8) sets up another test for complex demonstratives. The fact that,

(9) Janet flunked that student that Robert did.

is grammatical like (6) and unlike (8) is another case where complex demonstratives behave like quantifiers and unlike proper names.

King's final piece of grammatical evidence concerns so-called 'Bach-Peters' sentences. These are sentences with two quantifiers, where each serves to simultaneously restrict the scope of the other. For example:

(10) Every friend of yours who studied for it passed some math exam she was dreading.

Assume that 'it' is bound by 'some math exam she was dreading', and 'she' by 'every friend of yours who studied for it'. Bach-Peters sentences are distinctive primarily because of the mutual interaction between the quantifiers. Interestingly, complex demonstratives also exhibit the same distributional effects.

(11) That friend of yours who studied for it passed that exam she was dreading (pp. 12–13).

The subject of (11) is not just any friend of yours, but the demonstrated one who studied for a particular exam. Similarly, (11) says that the demonstrated exam is in particular one that that friend of yours was dreading. So, complex demonstratives are just like quantifiers in that their nominal material allows for a delicate interaction (quantifying in) with other elements in the sentence. Since proper names lack nominal material, there is simply nothing for them that corresponds to a Bach-Peters construction. Here then is a third case where complex demonstratives behave like quantifiers and unlike proper names.

King's grammatical evidence is both interesting and important for the study of complex demonstratives. However, we disagree with him that it supports a quantificational account of them over a singular term account.[4] Our argument for this claim will take some time to develop, but it starts with a fairly simple observation. The observation is that all three pieces of King's grammatical evidence only support the claim that quantifiers and complex demonstratives share some of the same *syntactic* properties. The evidence does not directly support

any claim about what semantic properties quantifiers and complex demonstratives share. Instead, the evidence only shows that since both quantifier phrases and complex demonstratives have the form: [Det N′] (where 'Det' is the place for determiners (like 'the', 'no', 'some', 'that', etc.), and N′ is the place for nominals (like 'man', 'dog', 'tall person who was here yesterday', etc.), they will share certain interpretive properties. But sharing some interpretive properties is a far cry from being members of the same semantic kind. King's own discussions of his grammatical evidence are themselves purely syntactic in nature. Thus, we doubt that he would want to dispute our claim that the grammatical evidence only shows that quantifiers and complex demonstratives share many syntactic properties. Instead, we think he would appeal to the plausibility argument that we will turn to presently. However, even though King might not dispute that the phenomena in question admit of syntactic explanations, others might. For them, we have included an Appendix with further discussion of this matter.

3. Plausibility arguments from syntax to semantics

Although the grammatical evidence only directly supports a claim about the syntax of complex demonstratives, it is natural to see this claim as providing the crucial premise in a plausibility argument about the semantic properties of complex demonstratives. To facilitate our discussion, it will be helpful at this point to introduce a bit of terminology. We say that SYN denotes those expressions of the same relevant *syntactic* type as the classical quantifiers (e.g., 'no dog', 'some cities', 'all circuits', 'few women'). On the other hand, QUANT denotes the expressions of the same relevant *semantic* type as those quantifiers. In short, SYNs have the same syntax as quantifiers, and QUANTs have the same semantics. At this point we leave it open whether SYNs are QUANTs and/or *vice-versa*.

Our concession that complex demonstratives are SYNs seems to supply the crucial premise for a very powerful plausibility argument to the effect that complex demonstratives are QUANTs. The argument employs the general principle that if two expressions are of the same syntactic class, that is evidence that they are of the same semantic class. The resulting argument, which we name Argument A, goes as follows:

Argument A
(i) There is a syntactic class, the SYNs, which contains complex demonstratives and lots of other expressions: 'every F', 'most Fs', 'some Fs', 'no F', etc.
(ii) There is a semantic class of expressions, the QUANTs, that lots of SYNs are in (e.g., 'every F', 'most Fs', 'some Fs', 'no F').
(iii) Thus: Since complex demonstratives are SYNs too, the default hypothesis is that they are also QUANTs.

For the purposes of this discussion, we accept Argument A and agree with the default hypothesis. (Note, however, that not all researchers would agree that quantifiers fall into the same semantic or syntactic classes; e.g., Beghelli and Stowell 1997.) Given argument A, the burden of proof is on anyone who wants to deny that complex demonstratives are QUANTs. We now turn to that task.

Our main argument for doubting that complex demonstratives are semantically like other SYNs uses two background assumptions, which we will shortly discuss in detail. The first background assumption is that the determiner 'that' also appears as a singular term in simple demonstratives, e.g., 'That is a potato'. The second background assumption is that any account that aims to uncover the structure of language should explain the similarity of meaning of 'that' when it occurs in simple and complex demonstratives. A natural approach is to identify the two occurrences of 'that'. But then if 'that' also appears as a singular term, we can create an argument (parallel to the one in Argument A) for the conclusion that complex demonstratives are referring terms. It goes as follows:

> *Argument B*
> (i) (By the first background assumption:) There is a syntactic class, the pronouns, which contains simple 'that' and many other expressions: 'I', 'we', 'he', 'they', 'she', 'you', etc.
> (ii) There is a semantic class of expressions, the referring pronouns: 'I', 'we', 'he', 'they', 'she', 'you', etc.
> (iii) Thus: The default hypothesis is that simple demonstratives are also referring terms (because they are referring pronouns).

So, by the identification of the occurrences of 'that' in simple and complex demonstratives, it follows that the 'that' of complex demonstratives is also a referring term.

Together Arguments A and B generate a stalemate between those who hold that complex demonstratives are QUANTs and those who hold that 'that' is a referring term. If both arguments are sound, then there is no default hypothesis whether or not complex demonstratives are quantifiers. In this case, the grammatical evidence does not support the claim that complex demonstratives are QUANTs. We think Argument B effectively undermines the evidential support that King's grammatical evidence might supply to a quantificational view. In order to allay doubts about it, we will discuss some objections one might make to our background assumptions. Our general aim is not so much to endorse Argument B as to defend its plausibility. That is, we do not want to show that the grammatical evidence we have reviewed does not provide reason for thinking that complex demonstratives are quantifiers. We instead want to show that one can perfectly well acknowledge this grammatical evidence, and yet interpret it within a plausible syntactic and semantic theory in such a way that it does *not* support any claims as to the semantic status of complex demonstra-

tives. If we are right, then one can plausibly resist treating complex demonstratives as quantifiers.

The first objection concerns our second background assumption, namely, that any account which aims to uncover the structure of language should explain the similarity of the meaning of 'that' when it occurs in simple and complex demonstratives. Arguments A and B are in conflict only if the 'that's of simple and complex demonstratives are treated as the same word. Perhaps simple and complex demonstratives should receive distinct analyses. If so, then the conclusions of Arguments A and B are perfectly compatible, because they are about different expressions. The view that simple and complex demonstratives may or must be given distinct analyses has been widely endorsed (e.g., King 2001, Neale 1993, Richard 1993, Kaplan 1989, Higginbotham 1988).[5] Thus, it is important for us to show that simple and complex demonstratives should receive a unified semantic treatment.

There are three reasons for thinking that a theory of simple and complex demonstratives should be semantically unified. The first reason is that there is cross-linguistic evidence that the same word appears in both simple and complex demonstratives. Demonstrative elements corresponding to 'this' and 'that' can appear either alone or with a nominal in such diverse languages as English, German, Italian, Spanish, Rumanian, Sardinian, Serbo-Croatian, and Spanish. In short, the similarity between simple and complex demonstratives is a cross-linguistic phenomenon, one which may well be part of the design of natural language.

A second reason is that both constructions are extremely similar in meaning. Both kinds of demonstratives stand in place of the speaker's demonstrative intention (or demonstration) in the syntactic environment of a sentence, where the complex demonstrative adds some further information about whatever item is demonstrated. Such strong similarity of meaning would be mysterious were the two occurrences of 'that' distinct words like 'sum' and 'some'. (Notice that the similarity is deeper than their shared context-sensitivity. It could have turned out that complex demonstratives mean whatever they do, while simple demonstratives always denote the same thing as the last noun phrase the speaker uttered.)

The third reason for a unified treatment of simple and complex demonstratives is based on facts about language acquisition. Words such as 'this', 'that', 'here', and 'there' are notable from a developmental perspective because children acquire them very early on. In fact, at least one of these words is usually among the child's first twenty words, and they figure into childrens' earliest two word utterances (Clark and Sengul 1978, p. 459, Clark 1993, p. 89, Ingram 1989, pp. 143–7, Pinker 1984, p. 99, Bloom 2000, p. 122, Nelson 1973). When young children produce utterances like 'That dirty', it is natural to interpret them, for some demonstrated object x, as meaning that x is dirty. Such an approach falls neatly into step with the fact that around one year of age children often possess a demonstrative element like 'ah', 'eh', or 'da', which is accom-

panied by a pointing gesture (Clark and Sengul 1978, pp. 458–9, Grieve and Hoogenraad 1979, p. 99).[6] The child's task of learning the meaning of 'that' is fairly easy if we assume that the meaning of 'that' is constant in its various forms. In such a case, the child need only learn the demonstrative meaning of 'that', and how it figures syntactically into a sentence.[7] In the case of complex demonstratives, the child will have to learn how the determiner and nominal combine to form a single expression, but here the general structural principles of predication may be assumed to apply (e.g., Kayne 1994, Longobardi 1994, Williams 1980).

The previous paragraph suggests that if the meaning of 'that' is the same in both its complex and simple occurrences, then the child's learning task is straightforward, and we have an easy explanation of how and why they begin using complex demonstratives early on in the acquisition process (sometimes around 28 months) (Maratsos 1979, Brown 1973). In contrast, if children must learn distinct semantic rules for simple and complex demonstratives, then the learning task will have to be *prevented* from taking this easy course. For if simple demonstratives have meaning M1, and complex demonstratives have meaning M2, the child will have to learn that when 'that' modifies a nominal, it no longer has meaning M1. This means that the child will need to be prevented from simply treating complex demonstratives as having meaning M1 composed with the nominal material. In particular, if the child treats 'that' as having a single meaning, then it's unclear if anything could ever tell the child she was wrong.[8] (To anticipate an upcoming discussion, it is unclear that even the syntax of simple and complex demonstratives differs enough for the child to exploit it when learning the two expressions.)

The three considerations just given lend considerable support to the second background assumption of Argument B. It is, of course, conceivable that this support could be undermined somehow, although we know of no such plausible account. We conclude that it is plausible to expect that a theory of demonstratives should give a single treatment of the 'that' (or 'this') of both simple and complex demonstratives.

We now turn to an objection to the first background assumption of Argument B, i.e., that the demonstrative 'that' can appear as a singular term. The objection focuses on the similarities between simple and complex demonstratives. We have just seen that simple and complex demonstratives are very similar in many ways. But perhaps they are too similar. We hinted above that simple demonstratives may actually be determiners. In fact, even simple demonstratives may have a phonologically unrealized nominal element. In such a case, the syntactic structure of the sentence 'That is G' is something like:

(12) $[_S [_{NP}$ That $[_N$'e]] $[_{VP}$ is G]]

where *e* is the phonologically null nominal. (This view is suggested, but not explored, by King.) If simple demonstratives have the form given in (12), then

it may be best to treat all demonstratives as complex. If all demonstratives are complex, then it might appear that Argument B is flawed because the first premise is false: there is no simple demonstrative to share any properties with pronouns.

An initial study of the present objection has yielded two responses. In the first place, we believe that, appearances to the contrary, it is plausible that 'that' is in the determiner position even when it appears as a simple demonstrative. That is, we believe that even simple demonstratives appear in the syntactic position that is typically occupied by quantifiers. However, our second response is that the proper semantic treatment of demonstratives seems to remain nevertheless undecided. We discuss these two responses in turn.

Evidence that simple demonstratives are determiners comes by way of an independently motivated generalization about the appearance of possessive constructions. Consider the following data:

(13) a. Many students raised their hands; all were convinced that the right answer was 27.
  b. *Many students raised their hands; all's answer was 27.
  c. Your mother's house is bigger than Mary's mother's.
  d. *Your mother's house is bigger than Mary's (i.e., bigger than Mary's mother's house).

In both of the above paradigms, the possessive (realized in English by 's) does not appear at the end of an NP where the noun has been elided. Interestingly, we get the same grammatical distribution for simple and complex demonstratives:

(14) a. This dog's collar is blue.
  b. That dog's collar is blue.
  c. These dog's collars are blue.
  d. Those dog's collars are blue.
(15) a. *This's collar is blue.
  b. *That's collar is blue.
  c. *These's collars are blue.
  d. *Those's collars are blue.

The similarity of the patterns in (13) and (14)–(15) suggest that 'that' is a determiner even when it is a simple demonstrative. This hypothesis would subsume the patterns in (13)–(15) under a single generalization.[9] In contrast, if we assume that simple demonstratives are not determiners, but are ordinary NPs like 'John' or 'the doctor', then it will be hard to explain why simple demonstratives resist the possessive, but 'John's new car' and 'the doctor's office' are fine.

Leaving many issues aside, let us simply assume that the evidence supports the claim that "simple" demonstratives are in fact complex demonstra-

tives. Is Argument B thereby jeopardized? The first premise of Argument B states that simple demonstratives are in the same syntactic category as pronouns, but we have just seen evidence that even simple demonstratives are determiners. Thus, it looks like Argument B is unsound. Worse yet, if both simple and complex demonstratives are determiner phrases, then, since we have already argued for a unified analysis of the two, aren't we therefore obligated to treat them quantificationally? After all, we have agreed that Argument A shows that the default hypothesis is that complex demonstratives are quantifiers, and we appear to have lost any counterbalancing support from Argument B. What further reason could there be for resisting a quantificational treatment of complex demonstratives?

We believe Argument B has not yet been undermined. That is, we believe that its first premise is still viable. Since we have conceded that the demonstrative 'that' is found in the determiner position, the only plausible way to maintain Argument B is to argue that the determiner position can also house singular terms like pronouns, etc. We claim just that: it is plausible that many other expressions besides demonstratives (and quantifier words) are found in the determiner position. If this is so, then merely being in the determiner position does not secure the quantificational status of a word. In fact, our argument will show that one may plausibly hold that singular terms are found in the determiner position. We turn now to a defense of this position.

4. Singular terms as determiners?

What other words besides quantifiers and demonstratives could appear in the determiner position? For one thing, it is plausible to hold that all pronouns occur as determiners. This claim has been maintained for various languages, including Italian, English, Rumanian, Serbo-Croatian, and Welsh (*cf.*, Longobardi 1994, Progovac 1998, Cornilescu 1992, Postal 1969, Koopman 1999). There is even some evidence in English that pronouns other than demonstratives are located in the determiner position. For instance, pronouns can sometimes be modified by nominals, just like quantifiers:

(16) a. We philosophers have no need for jet-skis.
    b. You students who got a 'C' or lower need to see me after class.
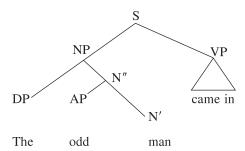
Evidence that the material following the pronouns is a constituent of a noun phrase comes from the observation that it can give a value to 'one', a nominal pronoun (cf., Postal 1969):

(17) a. We moral members of the community are not obliged to tolerate the immoral ones.
    b. It's important for you outgoing campers to help out shy ones.

If this is right, then the linguistic material after 'we' in (17a), e.g., is nominal in nature, and not something else hiding in a nominal's clothing.[10] Further evidence for the view that pronouns are located in the determiner position comes from the fact that adjectives can appear in front of nominals, but not in front of determiners:

(18) a. The odd man came in.
 b. * Odd the man came in.
 c. * The man odd came in.
 d. Odd men came in.

The distribution of grammaticality judgments in (18) suggests that the structure of (18a) is:

That is, it looks like (in English) an adjective can only appear before the noun, and not before the determiner or after the noun. If this is right, then the distribution in (19) strongly suggests that pronouns and demonstratives are determiners:

(19) a. *Odd she came in.
 b. *Odd that came in.
 c. We rich are becoming even richer.
 d. *Rich we are becoming even richer.

Just as *'odd the man' is ungrammatical, so is * 'odd she'. Although there might be some other reason why *'odd she' is ungrammatical, there is certainly a case to be made that 'she' is a determiner. Further evidence for this claim comes from the fact that noun phrases typically cannot take multiple determiners (e.g., *'many some men', *'few all women', *'the a dog', etc.). As is predicted, we have the judgments in (20):

(20) a. *The shes I met yesterday were nice.
 b. *The that I met yesterday was nice.
 c. *The older he was sleeping.[11]

The present phenomena can be contrasted with proper names in English, which appear as nouns, and thus can take adjectives and determiners to their immediate left:

(21) a. Odd Mary came in (cf. (19c, d)).
　　 b. There are three Marys in my physics class.
　　 c. The older Timothy was sleeping.

The structure that we see in English is supported by data from other languages. In Italian, the sentence 'Only she showed up' can take only one of three forms (cf., Progovac 1998, pp. 167–8; Longobardi 1994, pp. 625–6):

(22) a. *La sola lei　　si e presentata.
　　　　 The only she　showed up.
　　 b. Lei sola　　　si e presentata.
　　　　 She only　　 showed up.
　　 c. *Sola lei　　 si e presentata.
　　　　 Only she　　 showed up.

In contrast, to state 'the only girl present was dislikable', one uses a form that was illegitimate in (22):

(23) La sola ragazza　　presente era antipatica.
　　 The only girl　　　present was dislikable.

Moreover, for 'Only Mary showed up', the judgments are different:

(24) a. La sola Maria　si e presentata.
　　　　 The only Mary　showed up.
　　 b. Maria sola　　 si e presentata.
　　　　 Mary only　　 showed up.
　　 c. *Sola Maria　　si e presentata.
　　　　 Only Mary　　 showed up.

　　In short, it is far from obvious that if demonstratives are determiners, then they must be treated quantificationally. The argument here is quite simple. It is plausible to treat pronouns like 'he', 'she', 'we',' you',' I', etc., as referring terms. It is also plausible that pronouns can appear in the determiner position. Thus, the determiner position is not the home of only quantifiers. Hence, there is reason not to treat the syntactic fact that 'that' is a determiner as evidence that it is a quantifier.

　　Two final comments are relevant to the above argument. First, some researchers have suggested that in addition to pronouns, even proper names end up in a determiner position. Longobardi 1994 uses data like (24) to argue that

in Italian, proper names occur overtly in the determiner position when there is no definite article modifying them. Such a hypothesis would explain why 'sola' appears in front of the name 'Maria' only when the definite article 'la' is filling the determiner position. Longobardi's hypothesis adds to the overall picture that pronouns are determiners, suggested by (22). Secondly, as Longobardi and others have argued, in certain cases the same expression is sometimes found in the determiner position, and it is sometimes found in other positions. If being found in the determiner position is adequate evidence for an element's being a quantifier, then (24a-b) should have different meanings. Our Italian informants tell us that this is simply not so. Even worse, the "same" morpheme in one language may consistently be of a distinctly different sort in another language. We have discussed at length that 'that' is a determiner in English. This fact explains why 'that big book' is grammatical, but *'big that book' is not. In Korean, however, 'that' is an adjective, and both of the Korean versions of the forms given above are acceptable (O'Grady 1997, pp. 345–6; cf., also Fukui 1995, pp. 104–8, who argues that demonstratives in Japanese are not determiners, either). In Attic Greek (the dialect of Plato and Aristotle), 'that' behaves like an adjective, too: to say 'that man', Plato frequently used the expression 'ho ekeinos anthropos', which is translated 'the that man'.

What about our original datum, the ungrammaticality of *'She woman is happy'? Given the fact that pronouns in general behave like determiners across languages in many different constructions, it is not unreasonable to treat the ungrammaticalities in question as "a minor, more or less morphophonemic fact", as Postal suggests (Postal 1969, p. 217). It is unclear to us why some pronouns can accept nominal modification and others cannot. Nevertheless, in the absence of a better understanding of this question, the discussion based around (16)–(24) provides good reason to believe that pronouns (including demonstrative *that* in both its simple and complex form) are typically determiners. Thus, someone who wants to deny that complex demonstratives are quantificational has some legitimate syntactic and semantic precedent for doing so, assuming that the other pronouns are referring terms. On the other hand, there is a substantial project remaining for anyone who wants to maintain that the fact that complex demonstratives are SYNs supports the claim that they are also quantifiers. The remaining project will involve showing either that the pronouns (and perhaps proper names as well) are quantifiers, or that the pronouns do not after all appear in determiner position, or that complex demonstratives are somehow *sui generis* in this respect. And of course, one will have to explain why demonstratives in Korean, Japanese, and Greek have the semantic properties they do, despite the fact that they are not determiners. While none of these options has been logically ruled out, none appears to be especially promising. If this is right, then the grammatical evidence we have reviewed does not favor a quantificational treatment of complex demonstratives, and a defender of such a view will need to look elsewhere for support.[12]

In summary, we hope to have established what we think is an important moral for theorizing about language. The moral is that while syntax can often be a good guide to the semantics of an expression, and often it may be the best or only guide, *given the state of theoretical understanding of language, there is simply no guarantee that the syntax of an expression completely reveals its semantics.*

5. An important loose end

We have argued that King's grammatical evidence does not support the claim that complex demonstratives are quantifiers. There is, however, an additional phenomenon that King leans on heavily in his arguments, and it would be remiss of us not to discuss it, even if only briefly. This phenomenon is illustrated in (25).

(25) Every professor remembers that publication of his.

(25) appears to be ambiguous: read one way, 'that publication of his' will have the same semantic value for each professor who is doing the remembering. But it also has a reading where the semantic value of 'that publication of his' seems to vary from professor to professor. So it looks like complex demonstratives have a reading where they can be "quantified into", in just the way that 'some boy' in 'Every girl likes some boy' can. Following King, we shall say that when a quantifier can be quantified into in this way, it has a QI reading.[13] That complex demonstratives have QI readings is yet another case where they appear to behave like quantifiers.

Ultimately, we suspect the syntactic properties of complex demonstratives explains their ability to have QI readings. The discussion of raising in the appendix provides a general model for how the scopes of multiple determiners can interact. Moreover, note that there are some pronouns that exhibit QI readings: If someone says to an all-school gathering: 'Each professor would like to thank you who are in his class', different collections of students can be picked out for each professor. More importantly, though, it is a genuine question for us whether King's depiction of the data is correct.

One way to measure the success of King's explanation of the QI data is by asking whether his quantificational story can be generalized to other (complex) demonstratives. In particular, we ask: does an appeal to the quantificational status of complex demonstratives account for the QI readings of all complex demonstratives, especially complex demonstratives with 'this'? That is, if King's account is extended to complex demonstratives of the form 'this F', then this class of expressions should have all the same properties that 'that F' has, including the ability to have QI readings, if 'that' really has this feature. But, we claim, 'this F' does not appear to have QI readings. When 'this' is substituted

for 'that' in King's own examples, our judgment is that there is no QI reading where 'every' quantifies into the complex demonstrative:

> (26) a. Every father dreads this moment when his oldest child leaves home.
> b. Most avid snow skiers remember this first black diamond run they attempted to ski.
> c. This professor who brought in the biggest grant in each division will be honored.

The sentences in (26) are restricted to readings in which the semantic value of the complex demonstrative does not vary with particular instances of fathers, snow skiers or divisions.

In contrast to (26), King suggests (p. 139, fn. 18) that 'this' can have QI uses in certain cases. For instance, he argues that (27) is one such case:

> (27) Every NBA game has this moment in it when two very talented teams struggle for control of the game.

What's going on here? Why can (27) have a QI reading, although (26) cannot? We think that the mechanism that allows (27) to take a QI reading is not the same mechanism that allows 'that'-phrases to take these readings. The idea behind this last point is that 'this' can have a certain "indefinite" sense in which 'this F' simply means 'an F'. This indefinite sense appears at the beginning of many jokes: 'This guy walked into a bar...' is a perfectly normal way to start a joke, but 'That guy walked into a bar...' is not, unless the guy in question is salient in the discourse. Moreover, in these indefinite readings of 'this' phrases, there is no requirement that the denotation of 'this F' be unique. It would be perfectly natural to continue (27) with 'in fact there are many such moments in each game'. This is made clear by the following pair.

> (28) a. ?Every NBA game has that moment in it when the players do a fast break.
> b. Every NBA game has this moment in it when the players do a fast break.

(28a) sounds wrong, since there may be more than one fast break per game. But (28b) seems fine, and is true as long as there is at least one fast break per game. (Notice incidentally that there is still a problem for King's account even if there is no difference between (28a–b). King's theory predicts that (28a–b) both say that each game has exactly one moment in it when players do a fast break.)

It is important to see that whatever enables 'this' phrases to have an indefinite sense is a genuinely linguistic mechanism that human grammar is sensitive to. An important test for the indefiniteness of an expression is whether the phrase can appear in so-called "there'-insertion" contexts. These are clauses like those given in (29):

(29) a. There is someone here.
    b. There are a few people who still smoke.
    c. There is a man with a gun in the room.

The crucial feature of 'there'-insertion contexts is that the 'there' means absolutely nothing at all: the sentence has a paraphrase that does not include the word 'there' (e.g., (29a) means that someone is here). Indefinite NPs almost by definition appear in these contexts and definite NPs like 'every one', 'John', and 'that man who likes Sara' do not:

(30) a. *There is everyone here.
    b. *There is John here.
    c. *There is that man who likes Sara.
    d. *There is this man who just bought a bike.

Judgments of acceptability about these constructions are subtle, not least because there are a number of acceptable but irrelevant interpretations of the sentences in (30). The relevant reading of a 'there'-insertion sentence of the form 'There is X' is not 'X is over there'. Nor is the relevant reading the sort that would be a response to a question like 'Who is available?', as in 'Well, there's always X'. Rather the relevant readings of (29)–(30) are ones in which the expression following the copula 'is' is split into a subject and a predicate, and the latter is predicated of the former.[14] For example, it is completely natural to say that someone is in the room by saying 'There is someone in the room'. But speakers do not express that John is here by uttering (30b). Similarly, if you point out some guy to your friend and tell her that this man just bought a bike, you do not do so using (30d) (assuming, of course that 'there' is not being used as a demonstrative). (For general discussion of indefiniteness, cf., the papers in Rueland 1987.) In contrast to (30d), though, the "indefinite" sense of a 'this'-phrase is perfectly natural in this context, unlike its 'that'-phrase counterpart:

(31) a.   There's this guy who walked into a bar...
    b. *There's that guy who walked into a bar...

Notice that (31b) is unacceptable even if that guy is perfectly salient to the conversation. So whatever is wrong with (31b) does not appear to be due to assumptions about the pragmatic context of utterance.

    It appears that 'this' phrases have QI readings only when they have an indefinite reading. For example, if one wants to express (32b), one does not use (32a).

(32) a.   Every girl knows that that guy she likes is here.
    b. *Every girl knows that there is that that guy she likes here.

In contrast, if (33a) has a QI reading at all (our judgments are unclear about this), then it can be expressed using (33b).

(33) a. Every girl knows that this guy she likes is here.
b. Every girl knows that there is this guy she likes here.

The acceptability of (33b) (if (33a) has a reading) suggests that it is something about the indefiniteness effect of 'this' that enables it to have a QI reading.
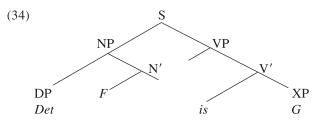
We won't press the issue any further. However, we can conclude that whatever the mechanism of indefiniteness amounts to, it appears to have something to do with the QI behavior of 'this' but not 'that'. Any ability that 'this' has for exhibiting QI behavior appears to trade on a property that it has (or perhaps that another word 'this' has) for taking on an indefinite character. If this is so, then a uniform quantificational treatment of these two expressions along the lines that King proposes is implausible.
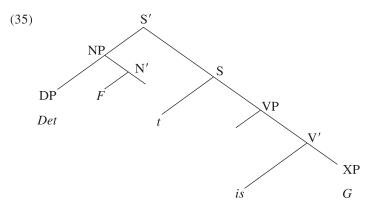
6. Conclusion

This paper started off with comments about a methodology often associated with Vendler and Austin, and it concluded with worries about indefinites and the syntax of proper names in Italian. We have surely made good on our claim that the devil is in the details. We have also made good on our claim about our case study of complex demonstratives. Until more is known about syntax, semantics, and metaphysics, it does not appear that one can read significant semantic or metaphysical conclusions off the syntax of complex demonstratives. We posed our worry about arguments with syntactic premises and semantic conclusions by showing that current syntactic theory renders it possible to hold a variety of positions regarding semantics. This worry about what one might call the syntactic under-determination of semantics, we think, will find purchase in many areas of research besides just complex demonstratives. (Indeed, part of our argument suggested that differentiating quantifiers and proper names syntactically may not be as straightforward as one would have thought.) Note however, that our conclusion is much stronger than merely that semantics is logically underdetermined by syntax; we have argued that the syntax allows for multiple plausible positions regarding the semantics of complex demonstratives. Finally, we hope our study of complex demonstratives has helped to explain our skepticism about the supposedly conceptually tight connections between syntax and semantics, and between semantics and metaphysics. Our skepticism issues from the fact that language is always more complicated than it appears at first blush. In fact, we suspect that the relation between syntax and semantics is much more complex than is commonly thought. That is, we doubt that it is accidental that the current state of syntactic research fails to support a thesis about the semantic and metaphysical nature of complex demonstratives. We suspect (although of course we can offer no proof) that when all the syntactic

facts are in, syntax still won't answer such questions of semantics and meta-physics. That is, although we believe syntax can be a useful tool, in the end, semantic and metaphysical questions will probably be best answered by doing good semantics and good metaphysics. But isn't that view plausible?[15]

Appendix

We here explain why King's grammatical evidence only exposes the syntactic structure of complex demonstratives. A glance at the shape of a complex demonstrative shows that they are SYNs. Thus, the syntactic structure of a sentence of the form 'That F is G' is something like (34), where 'that' replaces 'Det':

(34)

But (34) is precisely the syntactic structure (*modulo* replacement of 'Det') of a quantified sentence like 'Every F is G', 'Most Fs are Gs', etc. We assume it is a design feature of human languages that *ceteris paribus*, every sentence can (or must) undergo the same movements that any other sentence with the same relevant syntactic structure can (or must) undergo. According to the syntax King adopts (King, p.16, based heavily on May 1985 and Chomsky 1981), a quantified sentence like 'Every F is G' changes at the level of syntax appropriate for semantic interpretation (the level of logical form, or LF). At LF, 'Every F is G' is reconfigured from (34) to a structure in which 'Every F' takes scope (syntactically defined) over the rest of the sentence, as in (35) (where 'Det' is replaced with 'every'):

(35)

Expressions like 'every F' can raise above the clause in which they originate even if not originally in subject position (as in 'John ate every piece of candy'), and even if there are multiple quantifiers in the clause (as in 'Every girl kissed most boys').

    (36) a. [$_{S'}$ [$_{NP}$ every piece of candy]t [$_S$ John $_{VP}$ ate t]]
           b. [S′ [NP [NP$_2$ every girl]t$_2$ [NP$_1$ most boys]t$_1$] [S t$_2$ kissed t$_1$]]

(Here as elsewhere, we will use linear representations of phrase structures, instead of their diagrammatic form. We will also omit irrelevant structural elements.) On King's own assumptions, the position of the QUANTs at LF explains much of their behavior (for discussion, cf., May 1985, Higginbotham and May 1981). But since 'That F is G' has the same basic structure as 'Every F is G', it follows, on our assumption, that 'That F is G' has the structure (35) at LF (*modulo* lexical items).

    The structural similarity of 'Every F is G' and 'That F is G' is key to understanding how syntactic explanations of King's grammatical evidence can be given for complex demonstratives. Thus, for instance, King's explanation behind antecedent-contained deletion is that the quantifier phrase (*sic*, King p.16) raises above the clause before interpretation as in (35). So, in both the case of quantifiers and complex demonstratives, the SYN raises to a position where it takes scope over the rest of the clause, as in (37). Afterwards, the elided VP is replaced, resulting in (38), which are the structures suitable for semantic interpretation:

    (37) a. [Every student that Robert did] [$_S$ Janet [$_{VP}$ flunked t]]
           b. [That student that Robert did] [$_S$ Janet [$_{VP}$ flunked t]]
    (38) a. [Every student that Robert [$_{VP}$ flunked t]][$_S$ Janet [$_{VP}$ flunked t]]
           b. [That student that Robert [$_{VP}$ flunked t]][$_S$ Janet [$_{VP}$ flunked t]]

Thus, the intelligibility of 'Janet flunked that student that Robert did' appears to be due to its syntactic status as a SYN. Its syntactic status allows the complex demonstrative to raise above the main clause, just like quantifiers do. Thus, it is in virtue of being a SYN that complex demonstratives behave like QUANTs. (Incidentally, note that it is not entirely clear that proper names cannot appear in these constructions. Alongside the awkward (8), we also have 'Janet flunked Holmes, who Robert did not', and 'Janet flunked Holmes, who Robert did as well' (cf., Lasnik 1999, p. 171).)

    With respect to Weak Crossover Effects, King himself notes that the syntactic properties of SYNs are typically adverted to when accounting for them (pp. 18–9). There are numerous discussions of how such phenomena can be accounted for syntactically (e.g., Chomsky 1977, Haïk 1984, May 1985, Hornstein 1995, ch. 6, Lasnik 1999). A careful discussion of these proposals would take us too far a field. Details aside, one influential example of a syntactic

explanation of Weak Crossover involves what Chomsky called the "Leftness Condition", which states that a variable cannot be the antecedent of a pronoun on its left. As we saw above, after the SYNs in (4) and (5) have raised, they leave a variable trace behind. But this doesn't happen with (3), because it contains a name. The structures for interpretation that result are as in (39):

(39) a. [[Every man] [His mother loves t]]
   b. [[That man with the goatee] [His mother loves t]]
   c. [His mother loves John]

By invoking a syntactic principle like the Leftness Condition, the properties of Weak Crossover admit of a purely syntactic explanation.

(In passing, it is worth noting that the weakness of many judgments regarding Weak Crossover have lead some researchers to conclude that the phenomena are not purely syntactic or semantic, but are substantially influenced by considerations of pragmatics and discourse (e.g., Higginbotham 1987). Some support for this latter view comes from the relative inconsistency of judgments regarding structurally similar sentences. For example, 'Its collar is choking that dog' is perfectly natural when 'its' is bound by 'that dog' (cf., also King, p. 19, fn. 20).)

Finally, the same syntactic mechanism of raising also provides the material for a syntactic explanation of Bach-Peters sentences. Omitting many subtleties, the basic idea is as follows. First, the two SYNs raise, as in (40):

(40) a. $[_{S'} [_{NP'} [_{NP}$ Every x: friend x of yours who studied for y]$[_{NP}$ some y: math exam y x was dreading]] $[_S$ x passed y]].
   b. $[_{S'} [_{NP'} [_{NP}$ That x: friend x of yours who studied for y]$[_{NP}$ that y: math exam y x was dreading]] $[_S$ x passed y]]

According to one influential theory (Higginbotham and May 1981; cf. May 1985 for further discussion), the scope (a purely syntactic notion in this context) of a raised SYN is the entire S′. This assumption would allow each of the pairs of SYNs in (40) to exhibit the kind of cross-binding of the pronouns that generates the correct truth conditions:

(41) a. (x)(y)(friend of yours(x)(x studied for y & math exam(y) & x was dreading y → x passed y))
   b. (That x)(That y)(friend of yours(x)x studied for y & math exam(y) & x was dreading y and x passed y)

(At this stage we stipulate only that the interpretation of '(That x)' is the interpretation of 'that' as it occurs in complex demonstratives. It would be question-begging at this point to assimilate its interpretation to that of '(x)' or '(y)'.) The semantic details of this proposal are carefully studied in Higginbotham

and May 1981. Since our present point is only that the similar behavior of complex demonstratives and quantifiers is due to the syntactic properties they share, we will not rehearse these details here.

Notes

1. Lepore/Ludwig (2000) argue on semantic grounds that any account that treats either the entire complex demonstrative as a singular term, or the demonstrative 'that' as a quantifier is wrong.
2. The possessive construction for both names and indexicals are exceptions to this rule, e.g., 'My hat', 'Mary's dog', etc., as well as numerical quantifiers, such as 'Three men'. We come back to these constructions below.
3. It is largely this feature of demonstratives that lead (Barwise and Cooper 1981) and (Neale 1993) to suggest treating complex demonstratives as quantifier phrases.
4. "A quantificational account of 'that' phrases ought to claim that 'that' is a determiner... . On the semantic side, 'that', like the other determiners, presumably contributes to propositions a two-place relation between properties (p. 25). "We also saw that there is syntactic evidence that 'that' phrases are quantificational" (p. 27).
5. By this we mean that in one's semantics 'that' and 'that F' receive distinct semantic interpretations, e.g., consider the two interpretation rules:

> The semantic value of 'that' in a null syntactic context is the object demonstrated in that context;
> The semantic value of 'that' in a context where its succeeded by a nominal F is the object demonstrated in that context only if it's also F.

These are distinct rules and so 'that' receives different interpretations contingent on whether it's attached to a nominal or not.
6. That the babies were genuinely participating in acts of demonstration, and not just stretching their arms, is suggested by the fact that they will learn to maintain their pointing gesture while trying to catch their audiences' attention by turning their heads or whining or tugging at their clothes (Clark and Sengul 1978, pp. 458–9).
7. These remarks hold for the cases at hand only; 'that' seems to sometimes appear as an adverb, as in 'The test wasn't that hard'. This occurrence may be restricted to predicative uses, though: cf., *'The that hard test is two pages long'.
8. The above argument assumes that there are accounts of demonstratives along quantificational and non-quantificational lines such that both accounts deliver the right truth conditions for sentences containing 'that'. Of course, if there is only one kind of acceptable account of demonstratives, then it is clear what the truth of the matter must be. However, if there are multiple acceptable accounts, then a theory of meaning will have the burden of explaining how children successfully learn the meaning of complex demonstratives, and don't just maintain the meaning of simple demonstratives in the novel environment.
9. The precise character of the explanation behind (14)–(15) is not determined by the data given. One possible generalization is that (*ceteris paribus*) the possessive morpheme cannot appear to the immediate right of a null expression. If this is the correct generalization, then the structure in (12) may be correct for simple demonstratives. On the other hand, it may be that there is no need to posit an empty

nominal in any of (14)–(15). Instead, the relevant generalization may be that the possessive resists attachment to determiners that do not govern nominals. In this case, we might suppose that the relevant expressions in (14) and (15) create an ungrammaticality simply because the possessive is "too close" to a determiner, and not because there is a clash between the possessive and an empty nominal. The resulting syntax for 'That is G' might then be something more like: [$_S$[$_{DP}$ That] [$_{VP}$ is G]]. Although it is surely nontrivial which generalization is correct, we will not explore the issue here.

10. Note, however, that English does not contain *'We tall folks should dance with you ones'. We are unsure why this is so. Note, however, that such complexifying factors do not undermine our position; we only claim that one can reasonably maintain that pronouns are determiners; the fact that there remain open problems for every theory of pronouns is in itself neither surprising nor vitiating.

11. There are certain "partitive" constructions involving particular quantifiers, such as 'all the men' and 'the many men', but these are specific to a very small subset of the possible combinations of quantifiers. Moreover, these constructions do not take pronouns, either: *'all the them', *'the many they'.

12. Paul Pietroski has suggested to us that King's particular application of his syntactic data could also be challenged on the grounds that at best the evidence shows that complex demonstratives and quantifiers are both found in *some* syntactic class. It does not follow from this that complex demonstratives and quantifiers are both found in the same syntactic class(es) that are relevant for semantic interpretation. We are sympathetic to this line of inquiry, although we do not pursue it here. Note, however, that from a certain perspective, our argument is stronger than the one Pietroski suggests. Our argument has been to show that even if complex demonstratives and quantifier words share all the relevant syntactic properties, it is still possible to deny that they are thereby members of the same semantic class(es).

13. See Lepore/Ludwig 2000, for further discussion of QI readings. They argue that on the basis of this data complex demonstratives cannot be singular terms (though the 'that' in such expressions are still singular terms, and so should be treated as such).

14. Not all 'there'-insertion sentences have any obvious predicative material. 'There is no justice' is one such case (cf., Higginbotham 1987).

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