Abstract This squib presents a rebuttal to two of King's (2001) arguments that complex demonstratives are quantifier phrases like “every man”. The first is in response to King's argument that because complex demonstratives induce weak crossover effects, they are quantifier phrases. I argue that unlike quantifier phrases and like other definite determiner phrases, complex demonstratives in object position can corefer with singular pronouns contained in the subject determiner phrase. This generalization also goes against Harley's (2002) observation that antecedent-contained deletion within a definite description induces weak crossover effects. I argue that King’s and Harley’s data supports the view advocated in this squib: all definite determiner phrases could undergo LF-movement, but the ruling out by weak crossover is empirically undetectable. The second rebuttal is in response to King's argument that because complex demonstratives allow antecedent-contained deletion, they are quantifier phrases. I present data showing that along with quantifier phrases, complex demonstratives pattern with proper names in allowing antecedent-contained deletion with restrictive modification, but usually not with non-restrictive modification.

Key Words complex demonstratives, definite DPs, WCO, ACD, coreference, binding, quantifier raising
Kaplan (1977) argues that complex demonstratives like “that man” are directly referential expressions: the semantic value of a complex demonstrative in a given context is the object it denotes in that context. This view has been challenged in King (2001), where it is argued that complex demonstratives are quantifier phrases (QPs) like “every man”; “that”, as used in a given context, always contributes a two-place relation between properties to propositions.\(^1\) The aim of this squib is to examine weak crossover (WCO) and antecedent-contained deletion (ACD) data that King claims to be syntactic evidence for his view. Contra King I argue that unlike QPs and like other definite determiner phrases (DPs), complex demonstratives in object position can corefer with singular pronouns contained in the subject DP. This generalization also goes against Harley’s (2002) observation that ACD within a definite description induces WCO effects. I argue that King’s and Harley’s data supports the view advocated in this squib: all definite DPs could undergo LF-movement, but the ruling out by WCO is empirically undetectable since coreferential and bound variable readings in the examples provided are truth conditionally equivalent.

\(^1\) The view that complex demonstratives are not contextually sensitive devices of direct reference is also advocated in King (1999, 2002), Roberts (2002), Wolter (2006), etc.
Moreover, I suggest that the source of error in both King’s and Harley’s empirical judgments has to do with the fact that these authors consider the relevant sentences out of context. I provide novel data illustrating that coreference between complex demonstratives and pronouns often involves complex discourse inferences, which can be influenced by whether the demonstrative is focused and whether “this” or “that” is the head of DP. I suggest that these facts potentially explain why coreference sometimes appears to be unavailable.

Finally, I reject King’s argument that because complex demonstratives allow ACD, they are inherently quantificational. I present data showing that along with quantifier phrases, complex demonstratives pattern with proper names in allowing ACD with restrictive modification, but usually not with non-restrictive modification.

2. **The QP status of complex demonstratives and other definite DPs**

2.1. *King’s claim*

According to King (2001), QPs and complex demonstratives show different effects than proper names in constructions such as (1)-(3).

(1) His mother loves every man.
(2) His mother loves John.
(3) His mother loves that man with a goatee. (King 2001: 18-19)

King argues that unlike the pronoun in “Every man is loved by his mother”, the pronoun in (1) cannot be interpreted as being anaphoric to (or bound by) “every man”. On the other hand, the pronoun in (2) can be interpreted as being anaphoric to (or coreferential with) “John” just like the pronoun in “John is loved by his mother”. To predict these facts, King assumes that unlike proper names, QPs like “every man” undergo *Quantifier*


Raising (QR). In traditional terms, the QP “crosses over” a co-indexed pronoun, thereby inducing a *WCO effect*.

(4)  *[IP [DP every man][IP His_i mother loves t_i]]

Finally, King claims that unlike the pronoun in “That man with a goatee is loved by his mother”, the pronoun in (3) cannot be interpreted as being anaphoric to “that man with a goatee”. King writes (King 2001: 19): “Surely it is striking and suggestive that ‘that’ phrases cluster with quantifier phrases and not with referential expressions with respect to weak crossover effects…here we have some syntactic evidence that ‘that’ phrases are quantificational and not directly referential.”

In the next section, I argue that the judgment regarding (3) is incorrect. I argue that unlike QPs and like other definite DPs, complex demonstrative can corefer with singular pronouns.

2.2.  *Definite DPs, pronouns and coreference*

What distinguishes QPs like “every man” in (5a) from proper names and complex demonstratives is that “every man” cannot corefer with a singular pronoun if we assume there is more than one man; (5a) does not have the interpretation in (5b).

(5)  a. His mother loves every man.
    b. Every man’s mother loves every man.

Proper names and complex demonstratives, however, can corefer with singular pronouns. For example, the discourse in (6) makes the coreferential reading with the proper name salient; the capital letters indicate the location of the nuclear stress in the sentence.

(6)  Speaker A: John's mother hates her only son.
    Speaker B: That's not true. **His mother LOVES John.**

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The fact that coreference is possible in (6) validates King’s judgment. However, the fact that the pronoun can be interpreted as being coreferential with the complex demonstrative in (7) and (8) is surprising given King’s judgment; the bolded sentences uttered by Speaker B have the interpretations available in “That man with a goatee is LOVED by his mother” and “That man is LOVED by his wife” respectively.

(7) Speaker A: The mother of that man with a goatee hates her only son.
Speaker B: That’s not true. **His mother LOVES that man (with a goatee).**

(8) Speaker A: That man's wife loves another man, right?
Speaker B: No way! **His wife LOVES that man.**

One question that arises is the source of error in King’s judgment regarding “His mother loves that man with a goatee”. A possible answer is that King put the nuclear stress (or focus) on the complex demonstrative in this sentence. Although the availability of coreference is orthogonal to the stress placement in the sentence, coreferential readings with focused complex demonstratives often involve complex discourse inferences. For example, while coreference between the pronoun and the focused proper name is salient in (9), at first glance it appears that no such anaphoric relation is possible in (10).

(9) Speaker A: John's mother loves nobody.
Speaker B: That's not true. **His mother loves JOHN.**

(10) Speaker A: John’s mother is incapable of loving anyone with a goatee.
Speaker B: That’s not true. **His mother loves THAT MAN with a goatee.**

However, upon a closer inspection, it is clear that accidental coreference is possible in a context involving mistaken identity. For example, imagine a scenario in which speaker B has not seen John since he was a baby and does not know that John currently has a goatee. In this context, the complex demonstrative could denote John.³

³ For more discussion of coreference involving mistaken identity, see Reinhart (1983a,b).
Moreover, as noted by Mats Rooth (p.c.), coreference between a pronoun and a focused complex demonstrative is sometimes easier to get when “this” is the head. Rooth’s observation is illustrated by the contrast in (10) and (11):

(11) Speaker A: That man's wife loves another man, right?  
Speaker B: #No way! His wife loves THAT MAN.

(12) Speaker A: This man's wife loves another man, right?  
Speaker B: No way! His wife loves THIS MAN.

The infelicitous utterance in (11) suggests that unless Speaker B is mistaken about who Speaker A is referring to, the pronoun cannot corefer with the focused complex demonstrative headed by “that”; the alternative response “Yes. His wife loves THAT MAN”, which forces disjoint reference, is felicitous in this discourse. On the other hand, the felicitous utterance by Speaker B in (12) suggests that the pronoun can corefer with a focused complex demonstrative headed by “this” even in a context that does not involve mistaken identity.

Determining the precise role that context plays in allowing coreference would take us too far a field and is left open for further research. For the current purposes of this squib, the crucial observation is that complex demonstratives in object position can corefer with a singular pronoun contained in the subject DP. However, the fact that coreferential readings with complex demonstratives often involve complex discourse

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4 Greg Kobele (p.c.) notes that coreference is evident when the focused complex demonstrative is an epithet as in (i)- (ii). For example, (ii) is a felicitous response to Speaker A in (11).

(i) His mother loves THAT LITTLE BASTARD.
(ii) No way! His wife loves THAT FUCKING BASTARD.

Moreover, as noted by an anonymous reviewer, coreference is also possible when “only” associates with the focused complex demonstrative. For example, (iii) is a felicitous response to Speaker A in (11). However, see Postal (1993) and Potts (2001), where it is argued that adding focus particles introduces additional complications, e.g. focus particles alleviate certain WCO effects.

(iii) No way! His wife only loves THAT MAN.
inferences, which can be influenced by whether the demonstrative is focused and whether “this” or “that” is the head of DP, potentially explains King’s source of error.\(^5\)

Finally, it is worth noting that King admits that in sentences like (13), complex demonstratives can corefer with a singular pronoun.

(13) Someone who liked her asked that woman wearing a red jacket to the dance.

However, given King’s incorrect judgment about “His mother loves that man with a goatee”, he writes:

> “Exactly why this occurs [in (13)] is not clear. But in any case, it does not constitute evidence that ‘that’ phrases are not quantificational. For other phrases that most philosophers of language take to be quantifier phrases exhibit the same behavior as ‘that’ phrases...‘Someone who liked her asked the woman wearing a red jacket to the dance’ has a reading on which ‘her’ is anaphoric on the definite description...” (King 2001: pp. 176).

The view advocated in this squib is that (13) is not different from any other sentence involving complex demonstratives considered thus far. It is a general fact about complex demonstratives that they can corefer with pronouns and (13) constitutes further evidence for this generalization.\(^6\)

With regard to definite descriptions like “the woman wearing a red jacket,” King assumes that these elements are quantificational like “every woman wearing a red jacket” and concludes that quantificational elements can be anaphoric to singular pronouns as in

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\(^5\) See Zeevat (1999) for an analysis of complex demonstratives within Discourse Representation Theory and Poesio and Modjeska (2005), where it is argued that complex demonstratives (headed by “this”) are usually used to refer to non-topical discourse referents.

\(^6\) Johnson and Lepore 2002 express a similar concern to King with regard to the seemingly quirky behavior of complex demonstratives. Although Johnson and Lepore accept King’s judgment regarding “His mother loves that man with a goatee”, they argue that there is “…relative inconsistency of judgments regarding structurally similar sentences. For example, [unlike King’s sentence] ‘Its collar is choking that dog’ is perfectly natural when ‘its’ is bound by ‘that dog’” (pp. 24). Given the discussion above, it is clear that judgments regarding these sentences are consistent once contextual factors are controlled.
(14). This conclusion is important because it allows King to further conclude that the availability of the anaphoric relation in (13) does not constitute evidence that complex demonstratives are not quantificational.

(14) Someone who liked her asked the woman wearing a red jacket to the dance.

The semantics of definite descriptions is highly non-trivial; many analyses have been proposed by philosophers and linguists in the last one hundred years. One analysis that is relevant for the purposes of this squib comes from Harley (2002), who argues based on (15)-(17) that in some constructions definite DPs are quantificational (type $<$e,t>,t$>$), but not in others.

(15) His mother loves John.
(16) His mother loves the boy that Sue dislikes.
(17) His mother loves the boy that Sue does.

Harley argues that the pronoun in (15) and (16) can corefer with object DP, which does not undergo QR since this would result in a WCO violation. She writes (pp. 661): “The self-evident reason that they don't undergo QR is that definite DPs [in (15) and (16)] are not, in fact, quantificational, and hence don't need to move to be appropriately interpreted.” On the other hand, Harley argues that the definite description in (17) is quantificational based on the observation that the pronoun cannot corefer with the definite description. Consequently, she proposes that there are two possible enumerations which can generate the strings in the sentences above: one with a non-quantificational DP and one with a quantificational DP. In (15) and (16), only the enumeration without a quantificational DP converges (the other induces a WCO violation at LF). In (17), however, neither enumeration converges since “the quantificational DP type will trigger

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7 Note that Harley assumes that movement is never optional; it is motivated by the need to check features.
movement and produce a WCO violation and the non-quantificational DP type will result in no movement and make the ACD structure uninterpretable” (pp. 662).

While I share Harley’s empirical judgments regarding (15) and (16), the same cannot be said about (17). As made salient in (18), the pronoun in (17) can corefer with the definite description.  

(18) Speaker A: That boy’s mother hates her only son even although Sue loves him dearly.
Speaker B: That’s not true. **His mother LOVES the boy that Sue does.**

Therefore, even if we assume that an analysis of ACD involves QR of the object DP as is generally assumed (see next section for discussion), it does not follow that WCO rules out the coreferential reading in (17). That is, the LF representation of (17) could be the one in (19) where the definite DP has undergone movement, but it does not bind the pronoun; the free pronoun can denote any (salient) individual, and in particular, the individual denoted by the definite description.

(19) [IP [The boy that Sue [vP loves t$_i$]]$_i$] [IP His$_j$ mother loves t$_i$]]

Note, however, that it is a general fact about definite DPs that they can bind pronouns. For example, as was first observed in Jacobson (1972), (20) has a bound

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8 Note that some native speakers of English marginally allow ACD with definite DPs. However, these speakers do not find a contrast between (16) and (17), which is the view advocated here. Moreover, note that Isac (2006) provides the example in (i) and argues that the pronoun cannot corefer with the definite description; Isac concludes that (i) constitutes evidence that definite descriptions are QPs. However, as made salient in (ii), the pronoun in (i) can corefer with the definite description.

(i) His teacher flunked the student that Robert did.
(ii) Speaker A: That boy’s teacher would never flunk his only student since Robert already flunked him twice.
Speaker B: I wish that was true. However, his teacher flunked the student that Robert did.
variable interpretation in which the contrasting proposition evoked by the focus is of the form “x is loved by x’s mother.”\textsuperscript{9}

(20) \textbf{JOHN} is loved by his mother.

Therefore, if we assume that LF movement is always possible (Heim & Kratzer 1998: 210), it would be predicted that (17) could have a bound variable interpretation that is ruled out by WCO. That is, (17) could have the LF representation in (21), which is the one Harely provides to account for her (incorrect) judgment.

(21) \texttt{*[IP [The boy that Sue [VP loves t_i]]; [IP His; mother loves t_i]]}

The ruling out in (21), however, is empirically undetectable since it has the same truth conditions as a variant in which the definite DP is moved but doesn’t bind the pronoun viz. (19). That is, the coreferential and bound variable readings are truth conditionally equivalent in examples such as (17), as well as all the other examples considered thus far involving definite DPs in object position.

In sum, I have argued in this section that unlike QPs and like other definite DPs, complex demonstratives in object position can corefer with singular pronouns contained in the subject DP. Moreover, I have showed that King’s and Harley’s data supports this generalization. In the next section, I reject King’s argument that because complex demonstratives allow ACD, complex demonstratives are quantificational. I present data

\textsuperscript{9} As illustrated in (i) and (ii), definite descriptions and complex demonstratives can bind the singular pronoun analogous to the proper name in (20); the contrasting proposition evoked by the focus in (i) is of the form “the x that Sue dislikes is loved by x’s mother”; the contrasting proposition evoked by the focus in (ii) is of the form “x is loved by x’s mother.”

(i) \textbf{The BOY} that Sue dislikes is loved by his mother.

(ii) \textbf{THAT MAN} is loved by his mother.

Other evidence for the view that definite DPs can bind pronouns comes from data involving sloppy identity in ellipsis constructions (Reinhart 1983a,b) as well as data involving association between a focused definite DP and a focus particle such as \textit{only} (Rooth 1985).
showing that along with quantifier phrases, complex demonstratives pattern with proper names in allowing ACD with restrictive modification, but usually not with non-restrictive modification.

3. **QPs and DPs Allow ACD**

May (1985) holds that the interpretation of an elided expression is effected through a process of *reconstruction*. For example, it is natural to interpret (22a) by replacing “do” with “birdied,” yielding “Tiger birdied every hole that Michael birdied.” However, replacing the elided verb phrase with the antecedent verb phrase results in a problem of infinite regress. This is illustrated in (22b), which is a representation of (22a) after reconstruction has taken place:

(22)   a. Tiger birdied every hole that Michael did. (King 2001: pp. 17)
       b. Tiger [VP birdied every hole that Michael [VP birdied every hole that Michael did]]

May offers a solution to the problem of infinite regress by claiming that QPs like “every hole that Michael did” undergo QR, yielding the following representation at LF after reconstruction has taken place:

(23)   [IP [Every hole that Michael [VP birdied t_i]]; [IP Tiger birdied t_i]]

In (23), the QP is no longer contained within its antecedent, and the structure can be straightforwardly interpreted (see Sag 1976 for details): *for every hole x such that Michael birdied x, Tiger birdied x.*

With this analysis in mind, consider the sentence in (24), which appears to support King’s view that complex demonstratives behave like QPs in ACD constructions.

(24)   Tiger birdied that hole that Michael did. (King 2001: pp. 17).
Following May, King takes the acceptability of (24) to be syntactic evidence that complex demonstratives behave like QPs. In other words, King assumes that analogous to the QP in (22), the complex demonstrative in (24) undergoes QR and, therefore, the infinite regress problem is resolved. However, as noted in the previous section, complex demonstratives could undergo QR but this does not constitute evidence that they have \(<<e,t>,t>\) as their basic type. What would constitute evidence for such a view, given May’s theory, is if non-quantificational DPs did not allow ACD. For example, it is well known that proper names don’t allow ACD in examples like (25).

(25)  *Copp flunked Holmes, who Jubien did. (King 2001: pp. 175)

King correctly points out that if the ungrammaticality of (25) is due to the fact that “Holmes, who Jubien did” does not undergo QR, then assuming May’s analysis, the contrast between (25) and (22a) & (24) would be evidence that complex demonstratives are quantificational. However, King incorrectly claims that examples like (25) are “the nearest examples [to (24)] involving referring expressions” since proper names like “Holmes” are always modified by appositive relative clauses. As noted by Ken Safir (p.c.), restrictive relatives can modify proper names, and when they do, they allow ACD. For example the sentences in (26) illustrate that in a context where one individual (e.g. Edward Gordon) must be distinguished from another one (e.g. Edward Padnos), restrictive relative modification does not distinguish names from complex demonstratives and QPs.

(26)  a. Are you accusing Edward who she AGREED to date or Edward who she WOULDN’T?
    b. Are you accusing that man who she AGREED to date or that man who she WOULDN’T?
    c. Are you accusing every man who she AGREED to date or every man who she WOULDN’T?
Moreover, it is crucial to note that May’s (1985) version of QR does not discriminate between DPs modified by an appositive and restrictive relative clauses. And if we ignore the restrictive/non-restrictive distinction, then the sentence in (27) becomes problematic for King’s claim. That is, by King’s criteria, the ungrammaticality of (27) suggests that complex demonstratives are not QPs (contra to (24)): “that man who Jubien did” does not undergo QR and hence the infinite regress problem is left unresolved.

(27) *Copp flunked that man, who Jubien did.

The contrast between (24) and (27), as well as the data in (26) suggest that what is crucial in allowing ACD is the restrictive/non-restrictive status of the modifiers rather than the quantificational nature of the determiner. Although proposing a theory of ACD in (non-)restrictive relative clauses is beyond the scope of this squib, it is worth noting that Fox (2002) argues that the relevant movement in ACD construal is heavy NP shift, which in its covert manifestation, resembles relative clause extraposition. In turn, it has been argued in the literature that appositives cannot extrapose (Emonds 1979). If such were the case, then the inability of the appositive to extrapose in (27) would explain why the appositive does not allow ACD, given Fox’s theory. However, Stowell (2003: 10) points out potential counterexamples:

(28) A famous movie director met me at the airport (who Susan thinks is a real jerk, by the way).
(29) An Australian airline pilot has just arrived (who you really should talk to).
(30) Lisa had lunch with MAX last week, who was really happy to see her.
(31) Fred got A COPY OF THE KORAN for his birthday, which was presented to him by his great aunt.

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10 To the best of my knowledge, Baltin (1987) was the first to defend the view that the restrictive/non-restrictive distinction with regard to extraposition possibilities correlates with the success of ACD.
In (28) and (29), the head of the appositive is indefinite and extraposition yields a grammatical sentence. In (30) and (31), the head appears VP-internal and is focused; extraposition yields a grammatical sentence as well. If appositives can extrapose, as (28)-(31) indicate, then the ungrammaticality of (27) can no longer reduce to Fox’s theory.

Finally, it is worth noting the puzzling data in (32) and (33) from Wyngaerd and Zwart (1991), who first observed that (32a,b) is dramatically better than (32c). The same goes for the conjoined sentences in (33).

(32)  a. *Copp flunked {Holmes/that man}, who Jubien man did.
     b. ?Copp flunked {Holmes/that man}, who Jubien did too.
     b. ?Copp flunked {Holmes/that man}, who Jubien did not.

(33)  a. *Copp flunked {Holmes/that man/every student} and Jubien did.
     b. Copp flunked {Holmes/that man/every student} and Jubien did too.
     c. Copp flunked {Holmes/that man/every student} but Jubien did not.

The data above provide further complexity that an analysis of ACD must predict. In particular, these data show that in certain instances, non-restrictive modification allows ACD. For the current purposes of this squib, however, the crucial observation is that King’s data has nothing to do with the quantificational status of the determiner, and therefore, no evidence has been given in favor of the view that complex demonstratives are QPs like “every man”.

4. Conclusion

In this squib I argued that unlike QPs and like other definite DPs, complex demonstratives in object position could corefer with singular pronouns contained in the subject DP. I showed that King’s and Harley’s data supports the view advocated in this

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11 The latter observation is due to Jason Merchant (p.c.).

12 For more discussion of similar constructions, see Hornstein (1995) and Lasnik (1999).
squib: definite DPs could undergo LF-movement, but the ruling out by WCO is empirically undetectable since coreferential and bound variable readings in the examples provided are truth conditionally equivalent.

Moreover, I suggested that the source of error in both King’s and Harley’s judgments has to do with the fact that these authors consider the relevant sentences out of context. I provided novel data illustrating that coreference between complex demonstratives and pronouns often involve complex discourse inferences, and suggested that this fact potentially explains why coreference sometimes appears to be unavailable.

Finally, I rejected King's argument that because complex demonstratives allow ACD, they are inherently quantificational. I presented data showing that along with quantifier phrases, complex demonstratives pattern with proper names in allowing ACD with restrictive modification, but usually not with non-restrictive modification.

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