

# More on Scope Illusions

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## Abstract

This paper extends Fox & Sauerland's (1996) analysis of scope illusions and argues that what looks like inverse scope readings in clefts with indefinite NP pivots are really illusory cases of scope inversion. Instead, inverse scope comes about due to generic quantification over situations. Furthermore, the present paper adds to Fox and Sauerland by observing differences between *a* and *some* indefinites, where only the former yields illusory scope.

## 1 Introduction

The sentence in (1) can be understood to say that every swimming competition was won by an American, possibly a different American for every swimming competition. I will call this reading the 'dependent reading', which is similar to the 'standard' inverse reading in (2). All the sentences with the dependent reading will have present tense morphology, which in this case is an indication of genericity. Therefore I will say that (1) is an instance of 'generic quantification'.

- (1) At the Olympic games, it is an American that wins every swimming competition.  $(E > \forall, \forall > E)$ <sup>1</sup>
- (2) An American wins every swimming competition.  $(E > \forall, \forall > E)$

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<sup>1</sup> There is variability among native speakers as to whether they get the dependent reading in cases like (1), but the majority of the speakers I have consulted get the readings. The judgments I will be reporting in the present paper are the ones the majority of the consulted speakers have.

This might be represented by letting *every swimming competition* take scope over *an American*. This would be an island violation for *wh*-movement and assuming that QR obeys the same island restrictions (e.g., Lakoff 1970, Farkas 1981; pace Rodman 1976), QR should in the present cases not be able to move beyond the finite clause. It is well known that certain indefinites do not behave as standard generalized quantifiers in terms of locality constraints (e.g., Cooper 1979, Fodor & Sag 1982, Ruys 1992, Abusch 1994, Reinhart 1997, Winter 1997, Kratzer 1998, Schwarzchild 2002, Matthewson 2005), but a similar case has not been made for *every*. In fact, as Reinhart (1997) argues, hardly any such examples involving universal quantifiers are attested. Thus it seems problematic and stipulative to argue that *every* actually undergoes QR out of the finite clause in a cleft construction as in (1). Interestingly, the sentence in (1) contrasts with the one in (3), which does not have a dependent reading.

- (3) At the Olympic games, it is some American that wins every swimming competition.  $(\exists > \forall, * \forall > \exists)$

The contrast between *some* and *a* is robust, and I will return to it in section 4.

The paper is organized as follows. In section 2 I outline the data reported in Fox and Sauerland (1996) (henceforth, F&S) and sketch their analysis. Section 3 shows how F&S's analysis can be extended to the data in (1). In section 4, I elaborate on the difference between *some* and *a*. Section 5 concludes the paper.

## 2 Fox & Sauerland (1996)

F&S discuss a number of cases that they called ‘scope illusions’ (see also Alexopoulou 2009 and Sauerland 2009 for developments of these ideas in a different direction). These are cases where it looks like a quantifier has undergone QR, but it actually turns out that there is no QR. F&S argue that this is because of universal quantification over situations, and they provide many examples of such scope illusions. Here I will focus on two cases.

The sentences in (4) and (5) are scopally unambiguous (F&S: 72).

- (4) Yesterday, a guide ensured that every tour to the Louvre was fun.  $(\exists > \forall, * \forall > \exists)$
- (5) When we entered the conference, a grad student was checking that everybody had a badge.  $(\exists > \forall, * \forall > \exists)$

The sentence in (4) is only true if there is one guide who ensured that all the tours were fun and not if the guides vary with the tours. Now, compare (4) to the following sentences in (6)-(7) (F&S: 72).

- (6) In general, a guide ensures that every tour to the Louvre is fun.  $(\exists > \forall, \forall > \exists)$
- (7) At linguistics conferences, a grad student checks that everybody has a badge.  $(\exists > \forall, \forall > \exists)$

Aside from the adverbials and tense, the sentences in (6)-(7) are identical to the ones in (4)-(5). However, as we can see, the truth conditions are different in another dimension as well. (6) could mean that whenever there is a tour to the Louvre, there is a guide that ensures that the tour is fun. It is possible for the guides to vary with the tours. This could be interpreted as a case where the embedded universal quantifier

scopes over the matrix existential, but F&S instead argue that this dependent reading is the result of generic quantification over minimal situations. Let us see how this argument is made.

Consider the contrast in (8) from F&S.

- (8) a. Yesterday, I gave a tourist every leaflet.  $(\exists > \forall, * \forall > \exists)$   
 b. In general, I gave a tourist every leaflet.  $(\exists > \forall, \forall > \exists)$

Consider the episodic (8a). In this case, the sentence is only true if there is a single tourist who gets all of the leaflets. The sentence is not true in a situation where every leaflet is given to a different tourist. Based on this observation, Larson (1990) argues that the relative scope of the indirect object and the direct object is fixed. From this perspective, (8b) is a puzzle. The innovation that F&S suggest to get the dependent reading is that instead of viewing the relevant portion of the world as one situation, we divide the world into minor portions and say the following: In each situation in the world, there is a tourist who gets every leaflet, but the situation is small enough that it only contains one leaflet. Hence, there is a tourist who gets all of the leaflets *in each situation*, and this world is still true as a general description of situations such as (8b). That is, in each situation that contains just one leaflet and one tourist, every leaflet (i.e., the one leaflet in that situation) goes to one individual.

Here is how F&S relate this to generic quantification and scope illusions: ‘We get the illusion that a universal quantifier has wide scope relative to an existential quantifier because the generic operator allows the existential to pick out a different individual in each relevant portion of the world’ (F&S: 75; see also Krifka et al. 1995).

I will assume that the generic operator (see Krifka et al. 1995 for much discussion) always has a restrictor and that this restrictor often is determined by pragmatic factors. In the present case, the choice of the restrictor is constrained by focus (see F&S for their account). We can see this in (9), which F&S take from Krifka (1995) (see also Rooth 1985 on focus).

- (9) a. Planes disappear in the BERMUDA TRIANGLE.  
 b. PLANES disappear in the Bermuda Triangle.

The assertions are different in these two cases. (9a) asserts that in every case in which planes disappear somewhere, this place is in the Bermuda Triangle. (9b), on the other hand, asserts that in every case in which something disappears in the Bermuda Triangle, it is a plane. We can give situation-semantic paraphrases of these sentences as in (10) (F&S: 76-77).

- (10) a. Every situation  $s$  such that [a plane disappears **somewhere** in  $s$ ]<sub>RESTRICTOR</sub>  
 is a situation in which [a plane disappears in the B-T]<sub>NUCLEUS</sub>  
 b. Every situation  $s$  such that [**something** disappears in the B-T in  $s$ ]<sub>RESTRICTOR</sub>  
 is a situation in which [a plane disappears in the B-T]<sub>NUCLEUS</sub>

Now we are ready to see how F&S get scope illusions. Consider (11).<sup>2</sup>

<sup>2</sup> There are two open questions at this point.

One question concerns *many*. F&S notice that the trick of getting wide scope via domain-shrinking trivialization of the quantifier does not work with a quantifier like *many*:

- (i) In general, a guide ensures that many tours are fun ( $\exists > \text{MANY}$ ,  $*\text{MANY} > \exists$ )

However, sentences with numerals point in another direction:

- (ii) In general, I give a tourist two leaflets. ( $\exists > 2$ ,  $2 > \exists$ )

- (iii) In general, it was a pig that ate two pizzas. ( $\exists > 2$ ,  $2 > \exists$ )

(11) In general, I give a tourist every leaflet.

It is necessary to know what the focus value of the sentence in (11) is. Let us suppose that focus is placed on *a tourist* in (12a). This will restrict the operator to situations in which there is someone to whom I give every leaflet (12b), thus the situations satisfy the restrictor of (12b) (F&S: 78).

- (12) a. In general, I give A TOURIST every leaflet.  
b. Every situation *s* such that [I give **someone** every leaflet in *s*]<sub>RESTRICTOR</sub>  
is a situation in which [I give **a tourist** every leaflet]<sub>NUCLEUS</sub>

In the next section, I will apply this analysis to the cleft cases.

### 3 Clefts and scope illusions

It is well known that generic quantification over situations gives rise to quantificational variability (Lewis 1975, Berman 1987, Kratzer 1989, Heim 1990, von Stechow 1994). (13) and (14) suggest that this might be what is going on in the present case as well (the lead-ins are drawn from Bhatt 1999).

(13) Yesterday, at the apple-eating contest, it was a pig that ate every apple.

$(E > A, *A > E)$

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Another issue that may be related is that the restrictor of a universal quantifier cannot be a singleton in plain cases, as seen in (iv) (thanks to an anonymous reviewer for raising this issue).

- (iv) a. John loves [his mother]/\*[every mother of his]  
b. \*Every nose of the victim was red.

(14) In those days, it was a pig that ate every apple.  $(\exists > \forall, \forall > \exists)$

Overt adverbials favor the episodic reading (11) to the universal/generic reading (12). When we force an episodic interpretation with the adverbial *yesterday*, the dependent interpretation disappears. This suggests that the latter comes about because the existential depends on generic quantification over minimal situations (see Berman 1987 and Heim 1990 on the latter), a reading which we can paraphrase as ‘In every case of an apple-eating, a pig is the food-eater’. The account would say that for each minimal situation, a pig was the food-eater. That is, the reading varies by situations, not by the universally quantified DP.<sup>3</sup> This parallel suggests that F&S’s analysis can be extended to clefts as well. Let us see how.

The pivot carries focus and thus restricts the generic operator such that we get the scope illusion similar to (11). An example is shown in (15).<sup>4</sup>

- (15) a. It is a DOG that eats every apple.  
b. Every situation *s* such that  
[it is **someone** that eats every apple in *s*]<sub>RESTRICTOR</sub>  
is a situation in which [it is **a dog** that eats every apple]<sub>NUCLEUS</sub>

The reading says that in each situation a single dog eats every apple in that situation.

It does not say that in that situation a different dog eats every apple.

#### 4 Quantificational variability: *a* versus *some*

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<sup>3</sup> I set aside how situation variables relate to event variables. See Kratzer (2009) for discussion.

<sup>4</sup> I set aside how clefts should be analyzed. See e.g., Percus (1997) for both a syntactic and semantic analysis that also accommodates the obligatory presupposition in clefts: if we say that it was John who did *x*, the sentence presupposes that someone did *x*.

In principle, the account developed so far in this paper should extend to all indefinites, yet that expectation turns out to be incorrect. We know that indefinites behave non-uniformly (e.g., Strawson 1974, Farkas 1994, 2002, Becker 1999),<sup>5</sup> and this is also true in the present case. As seen in (3), repeated as (16), *some* does not prompt the illusion that *a* does.

(16) In general, it is some pig that eats every piece of food. ( $\exists > \forall, * \forall > \exists$ )

Notice that there is a difference where the stress is put for *a* and *some*. In the former case, stress is put on the noun, whereas in the latter case it is put on the quantifier.

Interestingly, the contrast between *some* and *a* also obtains for the cases that F&S discuss. This is shown in (17)-(18).

(17) In general, I give some tourist every leaflet. ( $\exists > \forall, * \forall > \exists$ )

(18) In this restaurant, the waiter serves some foreigner every meal. ( $\exists > \forall, * \forall > \exists$ )

In this section, I will present more data and sketch a couple of possible analyses.

Consider the following contrast:

(19) a. It is some pig that eats every piece of food. ( $\exists > \forall, * \forall > \exists$ )

b. It is some pig or other that eats every piece of food. ( $\exists > \forall, \forall > \exists$ )

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<sup>5</sup> Just to remind the reader of one such difference, which, as far as I can see, is independent of the data on clefts: (i) shows that there is a difference between *some* and *a* related to implications.

(i) a. Most of the time, an officer danced with a ballerina.  
b. Most of the time, some officer danced with a ballerina.

(ia) can imply that ‘most officers danced with ballerinas’ whereas (ib) cannot have this implication.



We see that if we replace *some pig* with *some pig or other*, the latter acts like *a pig*. *A certain* also makes (20) very similar to a sentence where we replace the indefinite with a proper name or a definite description (21).

(20) It was a certain soccer player who scored every goal in the match. (E>A, \*A>E)

(21) It is John/the man that eats every piece of food. (E>A, \*A>E)

Given the data in (21), I argue that a focused *some NP* phrase is interpreted as a specific NP.

There is evidence that focus and stress may be what are forcing the surface scope reading for *some* (cf. Milsark 1974). It turns out that if one de-stresses *some*, the dependent reading appears.<sup>6</sup> (22)-(23) illustrate this.<sup>7</sup> The judgments were obtained by explicitly asking speakers not to put stress on *some*, and always together with a sentence with stressed *some*, so that the contrast was as perspicuous as possible.

(22) It is sm dessert that every dog wants. (E>A, A>E)

(23) It is sm books that every student reads. (E>A, A>E)

This fact supports an analysis where focus and stress force a specific (wide scope) reading. There are various ways one can implement this formally, either through a singleton analysis (Portner 2002, Schwarzschild 2002) or through a (Skolemized)

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<sup>6</sup> Carlson's (1977: 55) argument that *sm* is the plural of *a* might be of relevance here, though I will not explore that possibility.

<sup>7</sup> Simple count nouns are not possible:

(i) \*It was sm book that every student read.

The generalization seems to be that plurals and mass nouns are the ones that allow de-stressed *some*.

choice function analysis (Reinhart 1997 and the following literature; though see Schwarz 2004 for problems). I leave it to the reader to decide which of these is the better as the main point here is to present the data and make the point that *some* and *a* behave differently.

## **5 Conclusion**

The main aim of this paper was to elaborate on F&S's analysis of scope illusions. The paper has discussed clefts where the pivot is headed by an indefinite and where the embedded clause has a generic quantifier that seems to scope over the indefinite. If the indefinite is *a*, the surprising dependent reading appears, whereas if the indefinite is *some*, this dependent reading does not appear. I have argued that the dependent reading should not be accounted for by way of QR out of the finite embedded clause, but rather as a scope illusion due to generic quantification over situations, as in F&S's analysis. I have also discussed why this illusion does not occur with stressed *some*, and suggested a link between focus and stress and the emergence of dependent readings.

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## Acknowledgements

Thanks to members of the Department of Linguistics for providing judgments, in particular to Brad Larson. Thanks also to two anonymous reviewers, Chris Barker, Atle Grønn, Jeremy Hartman, Paul Pietroski, Roger Schwarzschild, Kjell Johan Sæbø, and especially Danny Fox and Alexander Williams for their helpful comments.

Special thanks go to Valentine Hacquard for encouraging me to work on this topic, and for providing many detailed comments on several drafts of this paper.

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