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## Some Correlations between Semantic Plurality and Quantifier Scope

Paul Elbourne  
*Massachusetts Institute of Technology*

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## Some Correlations between Semantic Plurality and Quantifier Scope<sup>1</sup>

Paul Elbourne

Massachusetts Institute of Technology

### 0. Introduction

It is well-known that in British English certain nouns which denote groups can take either singular or plural verbal agreement. Thus the two sentences in (1) are equally grammatical.

- (1) a. The Government is ruining this country  
b. The Government are ruining this country

As far as I know, however, it has not previously been noted that this special plural agreement has systematic effects on quantifier scope. In particular, while (2a), with singular agreement, is ambiguous in the normal way, (2b), with the peculiar British plural agreement, can only have wide scope for the subject with respect to the lower scope-bearing element.

- (2) a. A northern team is likely to be in the final      (*a* > *likely*, *likely* > *a*)  
b. A northern team are likely to be in the final      (*a* > *likely*, \**likely* > *a*)

This paper aims to investigate this fact, and to see what conclusions can be drawn from it concerning the nature of the quantifier lowering effect in sentences like those in (2).

### 1. Theories of Quantifier Lowering Effects

Four theories have been proposed to explain the availability of non-surface scope in sentences like (2a). I will briefly describe each in turn, so that we will be in a position to see which deals most effectively with the facts in (2).

Quantifier Lowering properly so-called was proposed by May (1977, 1985). He proposed that covert movement is not necessarily to a c-commanding position, and that it could thus undo the scopal effects of overt raising. Given a PF like that in (3a), Quantifier

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Lowering could produce the LF in (3b), where the subject has been adjoined to the IP complement of *likely*.

- (3) a. A hippogryph is likely to be apprehended  
 b.  $e_1$  is likely [<sub>IP</sub> [a hippogryph<sub>1</sub>] [<sub>IP</sub>  $e_1$  to be apprehended]]

Of course one now has to account for the fact that the sentence is grammatical on the reading represented by (3b) even though the trace left in the matrix subject position by the lowering operation is unbound. May (1985: 99 - 102) argues that in fact this empty category is a null expletive comparable to the overt expletive in *it is likely ...*.

The second theory of quantifier lowering effects is afforded by the copy theory of movement, as used, for example, in Chomsky (1993). On this theory, movement leaves a copy of the phrase in question in its base position. Then the interpretive component can look at either copy, producing different readings if a scope-bearing element intervenes.

- (4) a. A hippogryph is likely to be apprehended  
 b. A hippogryph is likely [~~a hippogryph~~ to be [a hippogryph apprehended]]  
 c. ~~A hippogryph~~ is likely [~~a hippogryph~~ to be [a hippogryph apprehended]]

In (4b), the highest copy is left undeleted by the interpretive component, producing the reading in which *a hippogryph* has scope over *likely*. In (4c), the lowest copy is left undeleted, producing the converse reading.

The third theory is "semantic reconstruction", as applied to raising sentences in von Stechow (1991: 133-4). (Other important references for semantic reconstruction include Cresti (1995) and Rullmann (1995).) The idea is that a trace of a moved QP can be either of type  $e$  or of type  $\langle et, t \rangle$ , the same type as the moved phrase. So, for example, simplifying slightly, the truth conditions for the sentence in (5a) would be calculated either as in (5b) or as in (5c). (Only partial derivations are shown.)

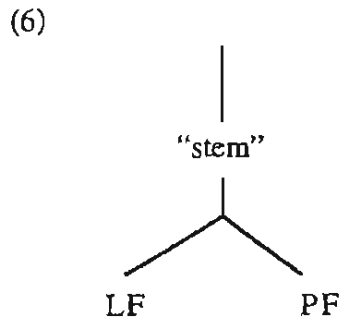
- (5) a. A unicorn<sub>1</sub> seems to be  $t_1$  in the garden

- b.
- |   |                         |
|---|-------------------------|
| $\llbracket [a \text{ unicorn}_1 \text{ seems to be } t_1 \text{ in the garden}] \rrbracket$  |                         |
| $\llbracket [a \text{ unicorn}] \rrbracket (\llbracket [1 \text{ [seems } [t_1 \text{ in the garden}]] \rrbracket]$   | by Func. Appl.          |
| $\llbracket [a \text{ unicorn}] \rrbracket (\lambda x \in D_e. \llbracket [seems [t_1 \text{ in the garden}]]^{11 \rightarrow x1} \rrbracket)$  | by $\lambda$ -abstract. |
| $\llbracket [a \text{ unicorn}] \rrbracket (\lambda x \in D_e. \llbracket [seems]^{11 \rightarrow x1} (\llbracket [in the garden]^{11 \rightarrow x1} (\llbracket [t_1]^{11 \rightarrow x1} \rrbracket)) \rrbracket)$ | by FA                   |
| $\llbracket [a \text{ unicorn}] \rrbracket (\lambda x \in D_e. \llbracket [seems]^{11 \rightarrow x1} (\llbracket [in the garden]^{11 \rightarrow x1} (x) \rrbracket)$  | by Traces Rule          |

- c.
- |   |                         |
|---|-------------------------|
| $\llbracket [a \text{ unicorn}_1 \text{ seems to be } t_1 \text{ in the garden}] \rrbracket$  |                         |
| $\llbracket [1 \text{ [seems } [t_1 \text{ in the garden}]] \rrbracket (\llbracket [a \text{ unicorn}] \rrbracket)$   | by FA                   |
| $\llbracket [\lambda X \in D_{\langle et, t \rangle}. \llbracket [seems [t_1 \text{ in the garden}]]^{11 \rightarrow x1} (\llbracket [a \text{ unicorn}] \rrbracket)$   | by $\lambda$ -abstract. |
| $\llbracket [\lambda X \in D_{\langle et, t \rangle}. \llbracket [seems]^{11 \rightarrow x1} (\llbracket [t_1]^{11 \rightarrow x1} (\llbracket [in the garden]^{11 \rightarrow x1} \rrbracket)) \rrbracket (\llbracket [a \text{ unicorn}] \rrbracket)$ | by FA                   |
| $\llbracket [\lambda X \in D_{\langle et, t \rangle}. \llbracket [seems]^{11 \rightarrow x1} (X (\llbracket [in the garden]^{11 \rightarrow x1} \rrbracket)) \rrbracket (\llbracket [a \text{ unicorn}] \rrbracket)$                                    | by Traces Rule          |
| $\llbracket [seems]^{11 \rightarrow x1} (\llbracket [a \text{ unicorn}] \rrbracket (\llbracket [in the garden]^{11 \rightarrow x1} \rrbracket))$  | by $\lambda$ -converts. |

Notice that, if the trace is taken to be of type  $\langle et, t \rangle$ , as in (5c), the raised subject ends up being interpreted in its trace position by lambda-conversion.

The fourth theory of Quantifier Lowering effects is the PF movement theory of Sauerland (1997). Sauerland assumes the Y-model of the architecture of the grammar proposed by Chomsky and Lasnik (1977) and used in much subsequent work, including Chomsky (1995). This model is shown in (6); note Sauerland's term "stem".



Within this model, Sauerland says, it is natural to suppose that a movement which is heard but which does not have any effect on the semantics takes place in the PF branch. The previous three theories have proposed that there are "reconstruction" operations possible in the LF branch or in the semantic calculation of truth-conditions. According to Sauerland, there are no such operations available for a constituent which has undergone A-movement. Instead, A-movement can optionally be delayed until the PF branch, after the syntactic object under construction has been sent off to the semantics. (Referring to Fox (1998), Sauerland does accept, however, that the copy theory of movement must be the correct account of A'-movement.) Thus, for example, the sentence in (7) could receive two derivations, one as in (8) and one as in (9).

(7) Two people are likely to win

- (8)
- |            |                           |              |   |  |
|------------|---------------------------|--------------|---|--|
| a. Stem:   | _____                     | T are likely | [ <sub>IP</sub> [two people] <sub>i</sub> win]] | to [ <sub>VP</sub> [two people] <sub>i</sub> win]] |
| b. Stem:   | _____                     | T are likely | [ <sub>IP</sub> [two people] <sub>i</sub> win]] | to [ <sub>VP</sub> t <sub>i</sub> win]]            |
| c. Stem:   | [two people] <sub>i</sub> | T are likely | [ <sub>IP</sub> t <sub>i</sub> win]]            | to [ <sub>VP</sub> t <sub>i</sub> win]]            |
| d. LF, PF: | [two people] <sub>i</sub> | T are likely | [ <sub>IP</sub> t <sub>i</sub> win]]            | to [ <sub>VP</sub> t <sub>i</sub> win]]            |
- (9)
- |          |                           |              |                                      |  |
|----------|---------------------------|--------------|--------------------------------------|--|
| a. Stem: | _____                     | T are likely | [ <sub>IP</sub> _____                | to [ <sub>VP</sub> [two people] <sub>i</sub> win]] |
| b. LF:   | _____                     | T are likely | [ <sub>IP</sub> _____                | to [ <sub>VP</sub> [two people] <sub>i</sub> win]] |
| c. PF:   | [two people] <sub>i</sub> | T are likely | [ <sub>IP</sub> t <sub>i</sub> win]] | to [ <sub>VP</sub> t <sub>i</sub> win]]            |

In (8), the subject is raised above the raising predicate in the stem, that is before the split into the LF and PF branches. Since no reconstruction is possible, *two people* must have scope over *likely*. In (9), however, the option is taken of delaying the A-movement until the PF branch. Thus *two people* is below *likely* when the sentence is sent off to LF, resulting in non-surface scope. The constituent raises in the PF branch (9c). It follows that the verification that the EPP is fulfilled must take place in the PF branch.

## 2. A Corollary of the PF Movement Analysis

The PF movement analysis has an implication for the way in which subject-verb agreement takes place in the different readings of scopally ambiguous raising sentences such as (10).

(10) A Russian seems to be in the final (a > seems, seems > a)

Following Chomsky (1993, 1995), I will assume that subject-verb agreement crucially involves checking of phi-features on T by the phi-features of the subject. Let us take as an example the sentence in (10), and see how the phi-features on matrix T would be checked in the two readings of the sentence, according to the Sauerland (1997) theory.

With wide scope for the subject, this sentence will have received a derivation like that in (11).

- (11) a. Stem:                    \_\_\_ T seems to be [<sub>sc</sub> [a Russian] in the final]  
 b. Stem:           [a Russian]<sub>1</sub> T seems to be [<sub>sc</sub>    t<sub>1</sub>           in the final]  
 c. LF, PF:       [a Russian]<sub>1</sub> T seems to be [<sub>sc</sub>    t<sub>1</sub>           in the final]

The subject moves into [Spec, TP] in the stem. Since [Spec, TP] is in the checking domain of T, the uninterpretable phi-features on T will be checked at this point by the phi-features of the subject, and the derivation is free to converge at the LF interface (Chomsky 1995). The phi-features on T, then, are checked in the stem if there is wide scope for the subject.

If there is narrow scope for the subject, (10) will have received a derivation like that in (12).

- (12) a. Stem:                    \_\_\_ T seems to be [<sub>sc</sub> [a Russian] in the final]  
 b. PF:               [a Russian]<sub>1</sub> T seems to be [<sub>sc</sub>    t<sub>1</sub>           in the final]  
 c. LF:               \_\_\_ T seems to be [<sub>sc</sub> [a Russian] in the final]

- (13) There seems to be a Russian in the final

The subject remains in the Small Clause in the stem and at LF. Only in the PF branch does it raise to matrix [Spec, TP]. This means that the uninterpretable phi-features on matrix T will not have been checked in the stem. If the derivation is not to crash at the LF interface, then, they must be checked in the LF branch. In the Chomsky (1995) theory, which I follow here, feature checking in the LF branch does not involve whole category movement, but only feature movement. So the unchecked phi-features on matrix T will attract the phi-features of the subject and will hence be checked. Note that this is exactly the mechanism by which the phi-features on matrix T will be checked in the corresponding *there*- expletive sentence (13).

We have, then, the following corollary of the PF movement analysis of Quantifier Lowering effects. In a raising sentence, the phi-features on matrix T will be checked by whole category movement in the stem if the subject has wide scope; but if the subject has narrow scope they will be checked by feature movement in the LF branch, just as in the corresponding *there*- expletive sentence. We predict, then, that if a process affects subject-verb agreement in such a way as to render ungrammatical a *there*- expletive sentence, the corresponding raising sentence will be ungrammatical on the interpretation with narrow scope for the subject; but it need not be ungrammatical on the interpretation with wide scope for the subject, since the necessary checking operation here operates in a different way. By contrast, the other three theories of Quantifier Lowering effects assume that the subject of a raising sentence will always arrive in matrix [Spec, TP] by whole category movement in the stem, this movement later being reversed in some manner. They predict, then, that the two readings of the raising sentence will pattern alike as far as subject-verb agreement goes, and that if there is any difference at all in this area it will be between them and the corresponding *there*- expletive sentence. There is, then, a sharp difference between the predictions made by the PF movement analysis, on the one hand, and the other three theories of Quantifier Lowering effects, on the other. It will turn out that the British

English data which are the subject of this study provide an ideal field in which to test these predictions.

### 3. British English “Semantic” Plurality

I will start with a brief review of the phenomenon. As far as I know there has been little previous generative work on it. A few of the facts set out here are mentioned in Pollard and Sag (1994: 70-71) and Munn (1998).

The basic fact is that in British English certain singular nouns which are names of groups can behave as if they were plural. They behave this way by a variety of diagnostics. For example, they can be used with *each*, as in (14).

(14) The committee each received a pay-rise

They can license plural anaphors, as in (15).

- (15) a. I want the battalion to get themselves under cover  
b. The Labour Party scare each other

They can bind plural pronouns, as shown by (16), which is ambiguous between strict and sloppy readings.

(16) The rugby team like their coach and the football team do too (Strict/Sloppy)

(17) {3,5,7,9} This set are all odd

(18) *Cabinet, committee, platoon, (political) party, pride, hive, team, regiment, battalion, bank, government, group, family, faculty, Senate, House (of Lords, Commons, Representatives), set, squad*

And, of course, they can be used with plural verbal agreement, as shown in (15b), (16) and (17). An incomplete list of nouns which behave like this is given in (18).

However, these nouns are also morphologically and semantically singular. They are morphologically singular in terms of overt morphology: *committee*, not *committees*, and so on. They are semantically singular in that it is still clear, in sentences like (14) - (17) above, that only one committee, battalion or set is being referred to. There is a reflex of this fact in the singular demonstrative *this* in (17), where *these* would be ungrammatical. Furthermore, as well as being able to bind plural pronouns, as shown in (16), these nouns can also bind singular pronouns when used with plural verbal agreement, as shown in (19).

- (19) a. All the battalion are carrying its mascots and all the team are too  
b. All the members of the battalion are carrying the mascots of the battalion, and all the members of the team are also carrying the mascots of the battalion  
c. All the members of the battalion are carrying the mascots of the battalion, and all the members of the team are carrying the the mascots of the team

(19a) is ambiguous between strict and sloppy readings, as paraphrased in (19b-c). The availability of the sloppy reading is of course indicative of the pronoun being bound.

It seems, then, that any adequate account of the behaviour of these nouns will have to find some way of portraying them as simultaneously singular and plural. I propose to do this by suggesting that the category of a feature and the value it takes figure separately in its representation, a device suggested for independent reasons in Chomsky (1998). By “category” I mean things like person, number, gender, Case; by “value”, I mean things like “1st”, “2nd” and “3rd” in the case of person, “singular” and “plural” in the case of number. I propose, then, that we should represent features as in (20).

- (20) [Number: singular]  
 [Person: 1]  
 [Case: Accusative]

In fact, such representations make sense already in the terms of Chomsky’s 1995 theory, where there is the principle that “Mismatch of features cancels the derivation” (Chomsky 1995: 309). For example, we want to rule out a derivation in which the direct object, bearing accusative case, is merged in [Spec, VP] and then raises to [Spec, TP], in the checking domain of the [Nominative] feature of T. This is done, of course, by the principle that mismatch of features cancels the derivation. There is mismatch between the [Nominative] feature of T and the [Accusative] feature of the DP. But how is the derivation to know that this is a case in which non-identity equates with mismatch? After all, there is no mismatch between, say, a [Nominative] feature and a [Plural] feature, even though they are not identical. The answer is obviously that mismatch is caused when the values of features *of the same category* fail to match. But then the most straightforward way to build this into the derivational system is to have features wearing their category on their sleeve. The alternative would presumably be to posit the existence of lists of features of the same category to which the computational system would refer every time a checking configuration arose in the course of a derivation, with the proviso that the derivation would have to be cancelled if any two non-identical members of the same list occurred together in the checking configuration. Such an alternative is conspicuously less economical than the present proposal, which requires examination only of the features present in the checking configuration.

Such a conception of features is useful in the present case because it opens up the possibility that the same set of values may be the values of more than one category. As illustrated above, we need to say that the *committee*-type nouns in British English are simultaneously singular (somehow) and plural (somehow). This is especially obvious in sentences like (17), where the noun takes a singular determiner but a plural verb, and (19), where the noun takes a plural verb but binds a singular pronoun. Now we cannot simply say that there are undifferentiated [singular] and [plural] features simultaneously present on these nouns. This is because it is not the case that these nouns can do everything that normal plural nouns can do. For example, as mentioned above, they cannot take plural determiners, even when they are used with plural verbs. Thus, to repeat the example, we have the contrast in (21).

- (21) a. This set are all odd  
 b. \*These set are all odd

This fact could not be captured if we said that there was simply a [singular] feature and a [plural] feature on these nouns, and processes sensitive to number could refer to either. Then we would predict that (21b) would be good. Instead, we need to say that certain processes, such as verbal agreement, can refer to either feature, while others, such as determiner concord, can refer only to a particular one.

What I suggest is that in British English there are two feature categories which have as values [singular] and [plural]. One is the conventional Number feature, which for any nominal predicate indicates how many such things are being referred to. So in (21a), *set* is [Number: singular], since only one set is being referred to. The other feature I will call *Mereology*. It indicates whether or not the entity under discussion is being conceived of as consisting of more than one member. So in (21a), *set* is [Mereology: plural]. We are now in a position to offer at least a preliminary account of the phenomena we have seen so far: certain processes, like verbal agreement and the licensing of singular and plural anaphors and pronouns, can refer to either the Number feature or the Mereology feature; but determiner concord refers only to the Number feature. It remains to be seen whether any deeper account can be offered of this discrepancy; my purpose here is only to motivate the assumption of the Mereology feature.

Again working basically within the Chomsky (1995) system, we might imagine that subject-verb agreement with *committee*-type nouns works as follows. On T there are uninterpretable Number and Mereology features which are checked by the corresponding features of the subject when it raises to [Spec, TP]. We face the normal problem about how uninterpretable features checked in the overt syntax nevertheless have a PF reflex (Chomsky 1995: 385, note 50), since in this case we are dealing with overt verbal morphology. One option would be to use the distinction between deletion and erasure (Chomsky 1995: 280), saying that these features are deleted when checked but not erased. This means that they would be invisible at the LF interface, and hence would not cause the derivation to crash, but would still be accessible to the computational system. In particular, they would be visible to the morphological operation which copies phi-features from T and manifests them in finite verb endings. In British English, as well as the person feature, this operation copies either the Number feature or the Mereology feature but not both. Thus we have the optionality illustrated in (1) above.

#### 4. Mereology and Feature Movement

It is crucial for this study to note that, unlike the Number feature and other phi-features, the Mereology feature does not seem to be able to raise in covert feature movement. I illustrate here with the particularly relevant example of *there*-expletive sentences.

- (22) a. A committee was holding a meeting in here  
 b. There was a committee holding a meeting in here  
 c. A committee were holding a meeting in here  
 d. \*There were a committee holding a meeting in here
- (23) a. Every week, another political party arrives at the conference centre  
 b. Every week, there arrives another political party at the conference centre  
 c. Every week, another political party arrive at the conference centre  
 d. \*Every week, there arrive another political party at the conference centre

In (22d) and (23d), there must be [Mereology: plural] feature on T in order for the verb to be plural. The fact that these sentences are ungrammatical indicates that the Mereology feature of the associate cannot raise. If it could, the corresponding feature on T would be checked, and there would be no difference in grammaticality between these and the (b) sentences.

It might be objected that we do not know for sure that there is a [Mereology: plural] feature on the associates in these examples. After all, there are certain contexts where the



value of the Mereology feature on the relevant type of noun does not seem to be able to be [plural]. An example is given in (24).

- (24) a. This committee was formed by the Vice-Chancellor  
 b. \*This committee were formed by the Vice-Chancellor  
 c. This committee was chosen by the Vice-Chancellor  
 d. This committee were chosen by the Vice-Chancellor

In (24a) and (24b), the meaning of the idiom *form a committee* ensures that the committee is conceived of as one abstract entity. (Contrast (c) and (d), where committee-members, as well as committees, can be chosen.) It seems that when the subject is conceived of as one abstract entity it is not possible to have a [Mereology: plural] feature. This is entirely expected, given the definition of the feature offered above. But if possible we should now show that some similar disambiguation cannot be taking place in the *there*-expletive sentences relevant to the present point.

In fact there are examples that show this. In (25a), we see a *committee*-type noun licensing the use of a plural anaphor.

- (25) a. Was there a team drinking each other under the table?  
 b. \*Were there a team drinking each other under the table?
- (26) a. There's some books on the table  
 b. \*Is there some books on the table?

It seems, then, that *team* in (25a) must be [Mereology: plural]. But here again, the plural verb agreement is not available (25b). Note also that (25a) is a question. This is designed to rule out the possibility that singular verbal morphology is available not by actual agreement but as a default or frozen form, as in (26). We do have evidence, then, that Mereology cannot raise in covert feature movement.

This has a consequence for our conception of the mechanisms of feature checking. In Chomsky (1995), it is suggested that "Move F carries along FF[F]" (Chomsky 1995: 265). That is, whenever any formal feature is attracted by any higher feature, it is supposed to pied-pipe all the other formal features of the head to which it belongs. But if this were true, then, say, the Case feature on T in (25a) could attract the Case feature of the associate, which would pied-pipe all the other formal features of that head, including the Mereology feature. The Mereology feature would arrive in the checking domain of T, then, even if it could not be attracted itself. It therefore cannot be the case that "Move F carries along FF[F]", in any unqualified sense. (Mereology is undoubtedly a formal feature in the sense of Chapter Four, since it enters into the  $N \rightarrow \lambda$  calculation (Chomsky 1995: 230-31).)

I do not have an answer at this point to the question why Mereology should not be able to raise in covert feature movement. In order to produce a satisfactory answer, it would be necessary to search for other cases in which a formal feature did not raise, to see if the cases had anything in common.

We should not leave this area, however, without noting another point of relevance for current minimalist theory. In his most recent version of the Minimalist Program, Chomsky has proposed the abolition of the Spec-head relationship (1998: 36-42). The phi-features on T would be deleted in exactly the same manner in both (27a) and (27b).

- (27) a. An unpopular candidate T-was elected *t*  
 b. There T-was elected an unpopular candidate
- (28) T be elected an unpopular candidate

The idea is that when the derivation reaches the point in (28), the phi-features on T would seek deletion by matching with some lower set of identical phi-features. This would take place, and then the EPP feature of T would be satisfied either by merge of *there* (if this is in the numeration) or by movement of *an unpopular candidate* (if there is no expletive available). Thus the phi-features on T are deleted in an identical manner in (27a) and (27b). (I have not given a full account here of all the changes in this area which are proposed in Chomsky (1998).) It is evident, however, that this proposal faces serious problems with the present data. The Chomsky (1995) framework, which I have adopted in this paper, can allow the discrepancy between (29c) and (29d), since in (29c) the phi-features on T are checked by whole category movement and in (29d) they would have to be checked by covert feature movement. We can say, then, that the Mereology feature is pied-piped in whole category movement (which carries along even phonological features) but cannot raise in covert feature movement, even if, as I have just admitted, we do not know yet why this should be.

- (29) a. A committee was holding a meeting in here  
 b. There was a committee holding a meeting in here  
 c. A committee were holding a meeting in here  
 d. \*There were a committee holding a meeting in here
- (30) T be [a committee holding a meeting in here]

But in the Chomsky (1998) theory, the phi-features on T in (29c) and (29d) would be checked in an identical manner, at the stage in the derivation shown in (30). There is no evident way, then, to account for the difference in grammaticality between these two sentences in this theory.

## 5. Mereology and Scope

We are now in a position to see what conclusions can be drawn from the scope data in (2) above. The full relevant paradigm is given in (31). The missing pieces of data were the *there*-expletive sentences related to the raising sentences. As expected given the examples in the previous section, (31d), with a plural verb and a *committee*-type associate, is ungrammatical.

- (31) a. A northern team is likely to be in the final (*a > likely, likely > a*)  
 b. A northern team are likely to be in the final (*a > likely, \*likely > a*)  
 c. There is likely to be a northern team in the final  
 d. \*There are likely to be a northern team in the final

It can be seen that these data constitute a striking confirmation of the prediction made at the end of section 2. There we noted that the Sauerland (1997) theory of Quantifier Lowering effects had the corollary that the phi-features on matrix T were checked in different ways in a sentence like (31a) according to the reading: with the subject taking scope over *likely*, they would be checked by whole-category movement; with *likely* taking scope over the subject, they would be checked by covert feature movement, as in the related *there*-expletive sentence. This then led to the prediction that if any process interfered with subject-verb agreement in a *there*-expletive sentence, the related raising sentence would be

ungrammatical on the reading with narrow scope for the subject, but would not necessarily be ungrammatical on the reading with wide scope for the subject. This is exactly what we see in (31). By contrast, the other three theories of Quantifier Lowering effects were shown to make exactly the opposite prediction, that the two readings of the raising sentence should behave alike for subject-verb agreement, and that if there was any difference it would be between them and the related *there*-expletive sentence. This prediction is disconfirmed by the data in (31).

Some interesting confirmatory data arise in the area of NPI-licensing. As is well-known, negative polarity items typically have to be c-commanded by negation or some other member of a limited class of operators. (I here ignore as irrelevant to my point the complications involved in determining whether the crucial operators are the downward entailing ones or some other class.) Linebarger (1980, 1987) has shown that negative polarity items can be licensed by reconstruction, in sentences where they are not overtly c-commanded by any relevant operator. Thus (32a) is grammatical even though the NPI *anything* is not c-commanded by anything appropriate on the surface. Presumably it is licensed by reconstruction: at LF it is in its trace position, where it is c-commanded by *not*. Confirmation for this view comes from (32b), where ungrammaticality results from removing this *not*. The same point is illustrated in (33).

- (32) a. [A doctor who knows anything about acupuncture]<sub>1</sub> isn't [*t*<sub>1</sub> available]  
 b. \*[A doctor who knows anything about acupuncture]<sub>1</sub> is [*t*<sub>1</sub> available]
- (33) a. [A doctor with any reputation]<sub>1</sub> is likely not to be *t*<sub>1</sub> available  
 b. \*[A doctor with any reputation]<sub>1</sub> is likely to be *t*<sub>1</sub> available

For our present purposes, it is interesting to note that this type of NPI-licensing is also blocked by British English mereological plurality. (34) shows the *committee*-type noun *people* in the sense in which it is used in (35); note the grammaticality of the plural in (34b) and (35d).

- (34) a. A Germanic people is trying to settle in this land  
 b. A Germanic people are trying to settle in this land
- (35) a. [A people with any tradition of trepanning]<sub>1</sub> has never been discovered *t*<sub>1</sub>  
 b. \*[A people with any tradition of trepanning]<sub>1</sub> have never been discovered *t*<sub>1</sub>  
 c. [A people with a tradition of trepanning]<sub>1</sub> has been discovered *t*<sub>1</sub>  
 d. [A people with a tradition of trepanning]<sub>1</sub> have been discovered *t*<sub>1</sub>

In (35a), the NPI is licensed by reconstruction and nothing else goes wrong, but in (35b), with mereological plural, the sentence is not grammatical. It is difficult to see how this contrast can be accounted for by anything other than the Sauerland theory of A-movement delayed until the PF branch, combined with the observation that the Mereology feature does not raise in covert feature movement. On this view, the necessity of licensing the NPI forces raising of the subject only at PF in (35b), leaving it in its base position below negation at LF; but then the [Mereology: plural] feature that has to be present on T to produce the plural verb agreement in (35b) must be checked by covert feature movement, and we know from previous examples that this cannot happen. Hence the ungrammaticality. Consider now what the consequences are of trying to account for the reconstruction by Quantifier Lowering or the copy theory of movement: the subject raises to [Spec, TP] by whole category movement, and checks the phi-features on T, and the movement is later reversed in some manner. These theories of reconstruction in A-movement predict, then, that there should be no difference in grammaticality between (35a) and (35b).

A possible objection to this whole line of argument goes as follows. Perhaps the British English mereological plural is not licensed by wide scope after all, but by something which often correlates with wide scope, namely specificity on some definition. (This in fact was an intuition offered by one of my British informants.) It is certainly true that, for example, (34b) is most naturally interpreted as being about some particular Germanic people that the speaker has in mind. But then this would take the phenomenon out of the realm of scope and feature checking and into a different one. But as it happens there are examples in which there is mereological plurality but no specificity. So, for instance, (36a), with free-choice *any*, is completely acceptable, and many speakers find no difficulty with the generic (36b) and the donkey-sentence (36c).

- (36) a. Any committee worth their salt are going to have looked into that  
 b. A rugby team are likely to break up the furniture  
 c. If a team have a good coach, they do what he says

(The relevant reading of (36b) claims that whenever any rugby team stay at this hotel, there is a good chance that its members will break up the furniture.) In none of these examples is the subject specific, and yet the plural agreement is grammatical. What these examples do have in common with those we have looked at previously is a subject which moves to [Spec, TP] in the stem by whole category movement. It seems likely, then, that this is the critical factor in allowing mereological plurality.

## 6. Conclusion

The British English "semantic plurality" data offer striking support for Sauerland's (1997) account of Quantifier Lowering effects. They also indicate that there is merit in the now traditional distinction between long distance agreement and agreement in the Spec-head relationship; this presents a problem for one aspect of Chomsky's latest (1998) revision of the Minimalist Program, and suggests that in this respect the Chomsky (1995) proposals may be preferable.

## References

- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. Kenneth Hale and Samuel Jay Keyser, 1-52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1995. Categories and Transformations. In *The Minimalist Program*, 219-394. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1998. Minimalist Inquiries: the Framework. MIT Occasional Papers in Linguistics 15. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Chomsky, Noam, and Howard Lasnik. 1977. Filters and Control. *Linguistic Inquiry* 8: 425-504.
- Cresti, Diana. 1995. Extraction and Reconstruction. *Natural Language Semantics* 3: 283-341.
- Fox, Danny. 1998. Economy and Semantic Interpretation - A study of scope and variable binding. Doctoral dissertation, MIT, Cambridge, Mass.
- Linebarger, Marcia. 1980. The Grammar of Negative Polarity. Doctoral dissertation, MIT, Cambridge, Mass.
- Linebarger, Marcia. 1987. Negative Polarity and Grammatical Representation. *Linguistics and Philosophy* 10: 325-387.

- May, Robert. 1977. *The Grammar of Quantification*. Doctoral dissertation, MIT, Cambridge, Mass.
- May, Robert. 1985. *Logical Form: Its structure and derivation*. Cambridge, Mass.: MIT Press.
- Munn, Alan. 1998. *First conjunct agreement: against a clausal analysis*. Ms., Michigan State University.
- Pollard, Carl, and Ivan Sag. 1994. *Head-Driven Phrase Structure Grammar*. Chicago: University of Chicago Press.
- Rullmann, Hotze. 1995. *Maximality in the Semantics of wh- Constructions*. Doctoral dissertation, University of Massachusetts at Amherst.
- Sauerland, Uli. 1998. *Scope Freezing*. In *the proceedings of North East Linguistic Society* 28: 169-182.
- von Stechow, Arnim. 1991. *Syntax und Semantik*. In *Semantik. Ein internationales Handbuch der zeitgenössischen Forschung*, ed. Arnim von Stechow and Dieter Wunderlich, 90-148. Berlin: Walter de Gruyter.

Paul Elbourne  
Department of Linguistics and Philosophy  
MIT  
Cambridge, MA 02139

elbourne@mit.edu