

The Proper Role of Movement and Ellipsis in Discontinuous Coordination

Abby Kaplan

University of California Santa Cruz

1. Introduction

Among their many functions, the words *both* and *either* can mark the left edge of the first conjunct in a coordinate structure (a use I call “discontinuous coordination”):

- (1) a. Harvey plays both the saxophone and the accordion.
- b. Harvey either sings opera or plays jazz.

However, when serving this function, these particles (which I refer to collectively as C1) often seem to appear to the left of this position – that is, there is more material between C1 and the conjunction than there is between the conjunction and the right edge of the coordination¹:

- (2) a. Harvey plays both the saxophone and accordion.
- b. Either Harvey sings opera or plays jazz.

I will refer to constructions of this type as “unbalanced” coordinations in which C1 is “displaced”.

There are two strands of analysis in the literature with respect to the nature of the displacement of C1 in unbalanced sentences. On one account (Larson 1985; den Dikken 2006), C1 moves from its base-generated position to the left, resulting in a structure like that illustrated in (3)²:

- (3) Harvey either_i likes [t_i jazz or polka] .

On another account (Schwarz 1999), some type of ellipsis occurs in the second coordinate, resulting only in the *appearance* of left-displacement of C1:

- (4) Harvey [either [likes jazz] or [~~likes~~ polka]] .

In fact, there is evidence for the surprising conclusion that *both* accounts are right: ellipsis is the appropriate model for left-displacement involving DPs, while movement is the appropriate model for clauses³. §2 presents syntactic evidence for this distinction; §3 presents semantic evidence.

*Many thanks to Pete Alrenga, Pranav Anand, Vera Gribova, Jorge Hankamer, Sarah Hulsey, Jason Merchant, Jim McCloskey, Kyle Rawlins, and the participants in the 2007 instantiations of Linguistics at Santa Cruz, the Research Seminar, Syntax Circle, and WCCFL for helpful discussion. Special thanks to everyone who gave grammaticality judgments, including many of those already mentioned and especially Aaron Kaplan. All errors are my own. This work was supported by an NSF Graduate Research Fellowship.

¹The behavior of *both* and *either* is slightly different; for reasons of space, I treat them here as a unified class.

²For den Dikken, C1 is actually base-generated in its displaced position. For the purposes of this section, this is equivalent to the movement analysis (as opposed to the ellipsis analysis); see §4.1 for evidence that the base-generation approach is in fact correct.

³Others, including Han and Romero (2004) and Hofmeister (2007), have proposed that displacement of C1 requires reference to both mechanisms, but none make the distinction proposed here.

2. Clauses and DPs are different: Syntactic evidence

2.1 Coordination of subconstituents

The movement and ellipsis accounts differ with respect to the constituents that they posit as underlyingly coordinated in unbalanced structures. For example, in a structure like (5), the ellipsis account posits underlyingly coordinated DPs, while the movement account posits coordinated NPs:

- (5) either the saxophone or accordion
 a. [DP either [DP the saxophone] or [DP the accordion]]
 b. either_i the [NP *t_i* [NP saxophone] or [NP accordion]]

Similarly, in a structure like (6), the ellipsis account once again posits underlyingly coordinated DPs (with accompanying right-node raising), while the movement account posits coordinated APs (or DegPs):

- (6) either the tenor or alto saxophone
 a. [DP either [DP the tenor *t_i*] or [DP the alto *t_i*] saxophone_i]⁴
 b. either_i the [AP *t_i* [AP tenor] or [AP alto]] saxophone

The base-generated versions of (5b) and (6b), however, are ungrammatical (see also Hendriks (2004, 5, 22-23); Huddleston and Pullum (2002)):

- (7) a. * the either saxophone or accordion
 b. * the either tenor or alto saxophone

Huddleston and Pullum (2002, 1306) note cases in which constructions like (7b) seem marginally acceptable; it is possible that the restriction on discontinuous coordination of prenominal modifiers is simply a special case of the dispreference in English for "heavy" syntactic elements in that position. However, to the extent that (7b) is grammatical, it does not mean the same thing as (6): (6) refers to two saxophones of different kinds, while (7b) refers to a single saxophone whose exact nature is undetermined.

It is clear, then, that the underlying structures posited by the movement account do not otherwise surface as grammatical. To say that NPs and prenominal APs may be coordinated only if C1 surfaces further to the left seems inelegant (not to mention difficult to implement); it is much simpler to prohibit discontinuous coordination of these categories altogether and propose that examples like (5) and (6) are the result of ellipsis rather than movement.

Clauses do not exhibit the same problem; the "unmoved" versions of (8a) – (8d) are just fine:

- (8) a. (i) Harvey either_i likes [DP *t_i* [DP jazz] or [DP polka]] . (DPs)
 (ii) (cf. *Harvey likes either jazz or polka.*)
 b. (i) Harvey either_i likes to [VP *t_i* [VP dance] or [VP sing]] . (VPs)
 (ii) (cf. *Harvey likes to either dance or sing.*)
 c. (i) Either_i Harvey is [AP *t_i* [AP talented] or [AP incompetent]] . (predicate APs)
 (ii) (cf. *Harvey is either talented or incompetent.*)
 d. (i) Harvey either_i sang [PP *t_i* [PP at the park] or [PP in the restaurant]] . (PPs)
 (ii) (cf. *Harvey sang either at the park or in the restaurant.*)

Since various subconstituents of CPs may be freely coordinated, there is no obstacle to positing left-displacement in these cases.

2.2 Right-displacement of C1

Further syntactic evidence for the distinction between clauses and DPs is that displacement of C1 is not exclusively to the left; sometimes C1 occurs to the right of the left edge of the first conjunct:

⁴RNR in such structures is independently allowed; examples like (i) are abundant in the Treebank corpus:

- (i) This is not a mutually exclusive plan; there is no one point in a man's career at which he must select [either [the technical *t_i*] or [the managerial *t_i*] [path upwards]_j] . (Marcus et al. 1999, ce32.pos)

- (9) [Harvey either likes jazz] or [he likes polka] .

Such examples are very common. As noted by den Dikken (2006, 697) and Schwarz (1999, 340), ellipsis is structurally incapable of deriving these sentences; there is simply nothing missing from (9). Since an analysis in terms of ellipsis is therefore unavailable, a movement account immediately suggests itself; this in turn suggests that movement may be responsible for *left*-displacement of C1 in clauses as well.

But although right-displacement of *either* is common in clauses, it is impossible into DPs⁵:

- (10) * Harvey plays [DP t_i [DP the *either* _{i} saxophone] or [the accordion]] .

If C1-movement across a DP edge is forbidden altogether, the ungrammaticality of (10) follows directly.

3. Clauses and DPs are different: Semantic evidence

3.1 Scope of coordination

There is semantic as well as syntactic evidence for a distinction between C1-displacement in clauses and DPs. The first piece of semantic evidence comes from scope phenomena. The ellipsis account predicts that the scope of coordination will always be at least as high as left-displaced C1, since all the relevant structure is actually present underlyingly; in fact, semantic phenomena along these lines were in fact the original motivation for the operation of “Conjunction Reduction” (Lakoff and Peters 1969). However, in the Treebank corpus we find naturally-occurring examples of coordination scoping below left-displaced C1; note that these examples run counter to the claim of Larson (1985) that the position of left-displaced *either* correlates with the scope of disjunction:

- (11) I either want to do it in the fall or spring.
(Marcus et al. 1999, sw2248.pos)
a. # I [VP either [VP want to do it in the fall] or [VP ~~want to do it in the~~ spring]] (...and my therapist is helping me figure out which).
b. I *either* _{i} want to do it in [DP t_i [DP the fall] or [DP ~~the~~ spring]] .
- (12) First City said that it either had to expand its holdings or sell them.
(Marcus et al. 1999, wsj_1791.pos, modified)
a. # First City said that it [VP either [VP had to expand its holdings] or [VP ~~had to~~ sell them]] (...and soon the board of directors would tell them which).
b. First City said that it *either* _{i} had to [VP t_i [VP expand its holdings] or [VP sell them]] .

The speaker of (11) is not unsure of his desires; rather, he has a single want but is indifferent as to when that event takes place. Similarly, the company mentioned in (12) does not anticipate being subjected to one of two possible requirements; rather, First City is required to satisfy one of those alternatives, but has the freedom to choose between them. The structures posited by the ellipsis account (illustrated in (11a) and (12a)) cannot derive the appropriate meanings for these sentences; only movement can.

When left-displaced C1 is at the edge of a DP, coordination can *never* scope low; compare (13) and (14):

- (13) In addition, Courtaulds said the moves are logical because they will allow both the chemicals and textile businesses to focus more closely on core activities.
a. ... [DP both [DP the chemicals t_i] and [DP ~~the~~ textile t_i] businesses _{i}] ...
b. # ... *both* _{i} the [DP t_i [DP chemicals] and [DP textile]] businesses...

⁵Treebank contains two possible exceptions, both of which involve multiple disfluencies that suggest performance error. (ii) also has an alternative analysis in which *something like that* is coordinated with (*on*) *drugs*:

- (i) I mean I have met [DP t_i [DP people that, uh, *both* _{i} that, that just want to maintain a, the standard of living] and [DP those that, that really need the job]] . (Marcus et al. 1999, sw4360.pos)
- (ii) But you know, you can counsel a kid eight hours a day and then he goes home and, and, uh, you know, in the, in worst cases he's got [DP t_i [DP parents *either* _{i} on drugs] or, or [DP something like that]] . (Marcus et al. 1999, sw2744.pos)

(14) ...the businesses in [_{DP} both [_{DP} chemicals] and [_{DP} textiles]] ...

(13) refers to two kinds of businesses, one kind that works in chemicals and one that works in textiles; the ellipsis analysis, illustrated in (13a), derives this meaning. It cannot (as (14) does) refer to a single class of businesses, those that deal with both chemicals and textiles; this is the meaning derived by the movement analysis, illustrated in (13b). These facts are not limited to prenominal modifiers (where discontinuous coordination is independently disallowed); the same facts hold for postnominal adjuncts:

(15) ...both the businesses in chemicals and textiles...

- a. [_{DP} ... both [_{DP} the businesses in chemicals] and [_{DP} ~~the businesses in~~ textiles]] ...
 b. # ... both_i the businesses in [_{DP} *t_i* [_{DP} chemicals] and [_{DP} textiles]] ...

Thus, where the ellipsis approach was too restrictive with respect to the readings that it allowed in clauses, the movement approach is too permissive, predicting low-scope readings in DPs that are not actually available. Thus, ellipsis, not movement, is the appropriate way to understand unbalanced coordinations in DPs.

3.2 De se and de re

The second piece of semantic evidence for the distinction between clauses and DPs has to do with the *de se/de re* distinction (Cresswell and von Stechow 1982; von Stechow 1982; Anand 2006). A sentence like (16) has two different interpretations, even when *John* and *he* corefer:

- (16) John_{*i*} thinks he_{*i*} will win the election.
 a. John thinks, "I will win the election." (*de se*)
 b. John thinks, "That guy will win the election," not knowing that "that guy" is actually himself. (*de re*)

The *de se* reading in (16a) arises when John's belief is about himself and he realizes this. The *de re* reading in (16b) arises when John's belief is about some individual (perhaps seen in a mirror or a picture) who, unbeknownst to John, is actually himself. This latter reading can be facilitated by following (16) with "...although he doesn't know it."⁶

Interestingly, ellipsis does not require identity with respect to the *de se/de re* distinction.⁷ The following scenario demonstrates this fact for VP Ellipsis:

- (17) John is running for office. On election night, he goes to a local bar to watch the election returns. The news airs a debate John participated in earlier that day, but John is so drunk that he doesn't recognize himself on television. He's very impressed with his performance in the debate and thinks, "That guy will win the election!" Bill, John's opponent, is in the same bar but has drunk far less. Bill thinks, "That drunken lout will never get elected. I'm going to win the election."
 a. John thinks he_{*de re*} will win the election, and Bill does ~~think he_{*de se*} will win the election,~~ too.

(17a) can be used to describe the scenario given in (17), despite the fact that (at least some of) the structure involved in the interpretation with respect to *de se/de re* appears only once on the surface. Similarly, Gapping allows "mixed" *de se/de re* readings:

- (18) A television network executive enters the scene described in (17) and explains to John and Bill that footage from the debate is going to be aired in a country where it is considered indecent for a man to show his left ear in public. She says that the network plans to "black out" the offending body parts before re-airing the debate but has not yet decided what shapes to superimpose on the candidates' ears. Bill quickly requests that his own ear be obscured with a square. John immediately adds, "And that other guy would look great with a triangle over *his* ear!"
 a. John wants a triangle over his_{*de re*} ear, and Bill wants a square over his_{*de se*} ear.

⁶For convenience, I will mark the different readings with a subscript on the relevant pronoun.

⁷Similar observations are made in Chierchia (1989, 11, 18-23) and Reinhart (1990, 3-4).

The type of mixed reading available in (17a) and (18a), then, can be used to test for the presence of ellipsis. Where such mixed readings are available, they indicate the presence of multiple instances of the relevant structures underlyingly; where they are absent, they indicate at most as much underlying structure as actually appears on the surface (and therefore no ellipsis). The following scenario allows us to test for ellipsis in discontinuous coordinations with clauses:

- (19) John is the candidate from the scenario in (17). Luckily, he isn't so drunk that he's forgotten the happy fact that he is engaged to Pamela Anderson.
- a. # John both_i thinks he_{de re} will [VP *t_i* [VP win the election] and [VP marry Pamela Anderson]] .
 - b. * John [IP both [IP thinks he_{de re} will win the election] and [IP thinks he_{de se} will marry Pamela Anderson]] .

It is impossible to describe this situation with the sentence *John both thinks he will win the election and marry Pamela Anderson*. As illustrated in (19a) and (19b), the only available reading for this sentence is the one derived via the movement analysis (sketched in (19a)) but inconsistent with the scenario of (19); the desired mixed reading, which requires ellipsis, is not available, suggesting that the structure sketched in (19b) is actually disallowed.

For DPs, the story is entirely different; it is perfectly possible to get mixed readings of pronouns where only one relevant element actually appears on the surface. The following scenario illustrates:

- (20) In addition to admiring his performance in the debate described in (17), John admires his fashion sense, saying, "That guy's tie is really sharp!" A few minutes later, John catches a glimpse of himself in the bathroom mirror and thinks, "This shirt looks really good on me."
- a. # John thinks both_i his_{de re} [NP *t_i* [NP tie] and [NP shirt]] are becoming.
 - b. John thinks [DP both [DP his_{de re} tie] and [DP his_{de se} shirt]] are becoming.

The mixed reading, where John's thought is about a shirt that he knows he himself looks good in and a tie that he doesn't, is allowed. This reading requires a structure with ellipsis, as illustrated in (20b); otherwise only one instance of the relevant structure and only one kind of interpretation (either *de se* or *de re*) would be available (as illustrated in (20a)).⁸

4. Saying it more precisely

4.1 What kind of movement?

We have seen that unbalanced discontinuous coordination seems to arise differently in clauses and DPs: in clauses, it is the result of movement, while in DPs, it is the result of ellipsis. The mechanisms behind both processes, though, remain to be made more precise. This section is devoted to a more detailed articulation of the relevant movement process; §4.2 is devoted to ellipsis.

Den Dikken (2006) offers a third possibility to the movement-or-ellipsis debate: C1 is base-generated in its surface position, subject to locality restrictions with respect to the left edge of the first conjunct. Since the tests in §2 and §3 are sensitive only to the presence of unrealized underlying material in the second conjunct, they do not distinguish between the movement and base-generation approaches. In fact, some facts about comparatives suggest that the base-generation approach is correct. Consider (21a):

- (21) a. Harvey is more excited about jazz than polka.
b. Harvey is more_i excited about *t_i* jazz than polka.

(21a) seems analogous to the unbalanced coordinations we have been considering. However, there are reasons to be skeptical of a movement analysis along the lines of (21b). First, the underlying form of (21b) (*Harvey is excited about more jazz than polka*) does not mean the same thing as (21a); it means that Harvey is excited about a preponderance of jazz relative to polka in some situation. Second, the surface

⁸Similar effects can be seen even in the absence of an overt *both*; this fact suggests that, *contra* Heycock and Zamparelli (2000), ellipsis may in fact be involved in "split" readings of apparent NP conjunction.

position of *more* is highly restricted (it must appear before an adjective, mass noun, or plural count noun). These appear to be positions of selection, best described not by restrictions on the movement of *more* but by the underlying structures it licenses.

Modern Greek offers further evidence against a movement account. Here, the comparative agrees with the compared nominals when it surfaces prenominally as in (22a), but not when it surfaces preverbally as in (22b)⁹. It is not clear why movement should result in this morphological difference.

- (22) a. O Giannis *ðiavazi pjo polla/*poli vivlia apoti efimeriðes.*
 the Giannis reads more many.N.PL/SG book.N.PL than newspaper.F.PL
 ‘Giannis reads more books than newspapers.’
 b. O Giannis *pjo *polla/poli ðiavazi vivlia apoti efimeriðes.*
 the Giannis more many.N.PL/SG reads book.N.PL than newspaper.F.PL
 ‘Giannis reads more books than newspapers.’

An ellipsis analysis of unbalanced *more...than...* comparatives is no more plausible than the movement analysis. Most tellingly, these constructions can also turn up at the clausal level:

- (23) Harvey is more confident that Joe will sing than dance.

However, we have already seen that ellipsis is excluded from clauses in the case of unbalanced discontinuous coordination. If unbalanced comparatives were really the result of ellipsis, they should be restricted to DPs and possibly other non-clausal categories (such as PPs and APs). In addition, mixed *de se/de re* readings are not possible in unbalanced comparatives:

- (24) John, the candidate from the scenario in (17), decides after several beers to propose to his girlfriend, Pamela Anderson. He knows she cares for him, but unfortunately, he is nervous and isn’t sure how she will respond.
 a. #John is more_i certain that he_{de re} will [VP *t_i* [VP win the election]] than [VP marry Pamela Anderson]] .
 b. *John is [AP more [AP certain that he_{de re} will win the election]] than [AP ~~certain that he_{de se} will marry Pamela Anderson]] .~~

It is not possible to describe the scenario given in (24) (in which one of John’s beliefs is *de re* and the other is *de se*) with the sentence *John is more certain that he will win the election than marry Pamela Anderson*; thus, ellipsis cannot be the explanation for unbalanced comparative structures.¹⁰

If neither movement nor ellipsis is a plausible account for the genesis of unbalanced comparatives, the only remaining alternative is that *more* is always base-generated in its surface position, subject to locality restrictions constraining how far from the smaller phrases linked by *than* it can appear. The result would be a DegP along the following lines:

- (25)
-
- ```

graph TD
 DegP --> Deg
 DegP --> AP
 Deg --- more
 AP --> A
 AP --> PP
 A --- excited
 PP --> P
 PP --> DP
 P --- about
 DP --- jazz
 DP --- than_polka["than polka"]

```

The structure in (25) immediately raises two questions. The first (and more difficult) has to do with the

<sup>9</sup>Thanks to Jason Merchant (p.c.) for these examples.

<sup>10</sup>As Lechner (2001) demonstrates, certain ellipsis processes such as Gapping may in fact apply to comparative constructions, just as they may apply to full coordinated clauses. It is possible that some “unbalanced” comparative structures (including some phrasal comparatives) may be derived via Gapping, but this cannot be the whole story.

location of *than polka*. Although there is no consensus on the proper attachment site for *than*-clauses (and -phrases), *than polka* is almost certainly located higher than indicated here (Rullmann 1995). For expository purposes, however, I will adopt (25) as a working assumption, for reasons explained below.

The second question raised by (25) has to do with its implications for a compositional semantics. The main obstacle to a straightforward analysis is that the pivot and the standard, *excited about jazz* and *excited about polka*, “share” a great deal of syntactic structure, which must somehow be used to compute two separate properties in the semantics.<sup>11</sup> In the appendix, I sketch how Hamblin semantics can derive appropriate denotations for such structures.

Since unbalanced comparatives and unbalanced discontinuous coordinations exhibit similar properties (see also Lechner (2001)), it is reasonable to suppose that they reflect the same mechanism; the evidence from unbalanced comparatives suggests that this mechanism is one of locality restrictions on the base-generated position of the comparative/C1 rather than one of movement.

#### 4.2 What kind of ellipsis?

Hankamer (1979) distinguishes between ellipsis processes that eliminate a constituent, leaving everything else behind (such as VP Ellipsis) and those that leave behind one or more constituents, eliminating everything else (such as Gapping, on some accounts). The type of ellipsis needed for unbalanced discontinuous coordination is clearly of the latter type; the material left behind by this process is some constituent, while everything else is eliminated.

Schwarz (1999) has attempted to reduce unbalanced coordinate structures to Gapping, an approach that faces a number of serious difficulties. First, as we have seen, the type of ellipsis at work in unbalanced discontinuous coordinations does not apply to clauses, while Gapping applies to both clauses and DPs. Second, the salient characteristic of Gapping is that it leaves behind two remnants, the first of which precedes the elided material and the second of which follows it:

- (26) a. [IP Either [IP Harvey likes jazz ] or [IP Dean ~~likes~~ polka ] ] .  
 b. Harvey protested [DP either [DP Dean’s review of his concert ] or [DP Lester’s ~~review~~ of his CD ] ] .

In unbalanced coordinate structures, on the other hand, what is left behind is *one* constituent:

- (27) Harvey protested [DP either [DP Dean’s review of his concert ] or [DP ~~Dean’s review of his~~ CD ] ] .<sup>12</sup>

Schwarz (1999, 354) argues that gapping can in fact leave behind a single constituent, producing the structures known as “split coordinations”:

- (28) Harvey played jazz at the concert, and polka.

However, assimilating structures like (28) to Gapping seems even less plausible than assimilating unbalanced coordinate structures; not only does (28) require a special prosodic break before the second conjunct (not required in either (26a) or (26b)), but the mixed *de se/de re* test does not indicate that the proposed elided structure is actually present in (28). For example, given the scenario from (19), in which John’s thoughts are *de re* with respect to winning the election but *de se* with respect to marrying Pamela Anderson, it is impossible to utter (29):

- (29) \* [IP [IP John thinks the voters love him<sub>de re</sub>, ] and [IP ~~John thinks that~~ Pamela Anderson loves him<sub>de se</sub> ] ] .

<sup>11</sup>Essentially the same problem arises if *than polka* is attached to some higher constituent such as  $\bar{D}eg$ . Given such a structure, we would have to complicate the semantics of *than* in order to enable it to locate in the structure to which it is adjoined the entity being compared (*jazz*) and abstract over it so that it can compose the denotation of *excited about polka* in addition to that of *excited about jazz*.

<sup>12</sup>In addition, Gapping in this DP may not leave behind less than the full PP *of his CD*, unlike the process in question here; c.f. \**either Dean’s review of his concert or Lester’s ~~review of his~~ CD*. Thanks to Masaya Yoshida (p.c.) for this observation.

Since the process at work in unbalanced coordinate structures cannot be assimilated to any other known ellipsis process, it must be a “new” (rather, previously undescribed) member of the second family of ellipsis processes. For lack of a better term, I will call it Conjunction Reduction (Lakoff and Peters 1969) after what, to my knowledge, is its closest analogue in the literature. The remainder of this section is devoted to a preliminary sketch of what the restrictions on Conjunction Reduction are.

First, Conjunction Reduction apparently targets a constituent in some domain and eliminates everything else in that domain. The remaining constituent must be final:

- (30) a. [DP either [DP the song about love ] or [DP ~~the song about~~ flowers ] ]  
 b. \* [DP either [DP the song about love on the album ] or [DP ~~the song about~~ flowers ~~on the album~~ ] ]

Schematically, then, Conjunction Reduction looks something like this:

- (31) [D ...  $\alpha$  ... [T ...  $\beta$  ... ] ]  $\Rightarrow_{CR}$  [D ...  ~~$\alpha$~~  ... [T ...  $\beta$  ... ] ]  
 where D is the domain of Conjunction Reduction and T is its target

Second, we have seen that Conjunction Reduction does not apply to clauses. In terms of the schema in (31), this means that Conjunction Reduction cannot take an IP as its domain:

- (32) \* John both<sub>i</sub> thinks [IP *t<sub>i</sub>* [IP ~~he<sub>de re</sub>~~ will win the election ] and [IP ~~he<sub>de se</sub>~~ will marry Pamela Anderson ] ] .

Similarly, (33) demonstrates that Conjunction Reduction cannot take a CP as its domain:

- (33) \* John thinks [CP both [CP that ~~he<sub>de re</sub>~~ will win the election ] and [CP ~~that he<sub>de se</sub>~~ will marry Pamela Anderson ] ] .

On the other hand, sentences like (20b) have shown that Conjunction Reduction *does* apply to DPs.

Unfortunately, it is difficult or impossible to apply the *de se/de re* test to other categories, since it depends on the ability of a third-person pronoun to occur initially in that category. If the relevant pronoun does not occur initially, it is always possible to analyze the structure as involving Conjunction Reduction at a lower level plus leftward movement of C1.

## 5. Conclusion

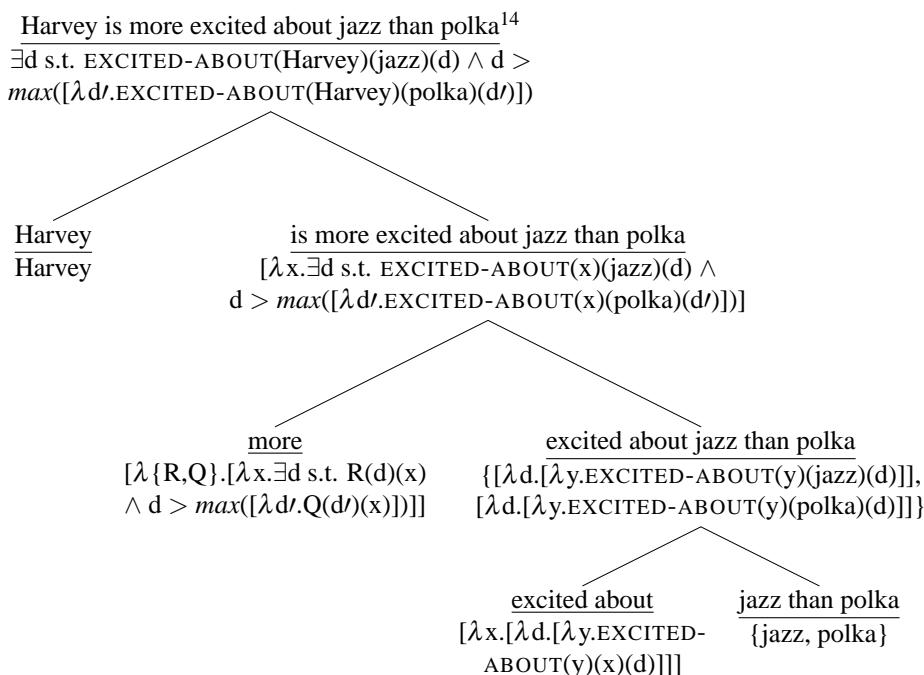
Unbalanced discontinuous coordinations of the kind discussed here result from two distinct processes: when DPs are coordinated, a previously undescribed kind of ellipsis applies to the second conjunct, while in clauses, C1 is displaced from the left edge of the first conjunct. This latter displacement is likely due to base-generation of C1 in a range of positions, subject to locality restrictions with respect to its canonical position; analogous displacement can be seen in comparatives.

## 6. Appendix: The semantics of comparatives

If *more* is always base-generated in its surface position, we must allow for structures like (25). The difficulty is in deriving two separate degrees in the semantics (the degree to which Harvey is excited about jazz and the degree to which he is excited about polka) from a significant amount of “shared” syntactic structure.

Hamblin semantics (Hamblin 1973) offer a promising approach. Suppose *than* induces an alternative-set containing the two things being compared. Subsequent nodes combine with the members of that set via pointwise function application (that is, function application applies to each member of the set, and the result is another set). *More* closes out this set by establishing the appropriate semantic relationship between the things being compared (the two members of the set).<sup>13</sup>

<sup>13</sup>Since it matters which member of the set is the pivot and which is the standard, this extension of Hamblin semantics actually requires ordered lists rather than sets.



## References

- Pranav Anand. *De de se*. PhD thesis, Massachusetts Institute of Technology, Cambridge, MA, 2006.
- Gennaro Chierchia. Anaphora and attitudes *de se*. In Renate Bartsch, Jan von Benthem, and Boas van Emde, editors, *Language in Context*, pages 1–31. Foris, Dordrecht, 1989.
- Maxwell J. Cresswell and Arnim von Stechow. *De re* belief generalized. *Linguistics and Philosophy*, 5(4):503–535, 1982.
- Marcel den Dikken. *Either*-float and the syntax of co-or-dination. *Natural Language and Linguistic Theory*, 24: 689–749, 2006.
- C. L. Hamblin. Questions in Montague English. *Foundations of Language*, 10:41–53, 1973.
- Chung-Hye Han and Maribel Romero. The syntax of *whether/Q...or* questions: Ellipsis combined with movement. *Natural Language and Linguistic Theory*, 22:527–564, 2004.
- Jorge Hankamer. *Deletion in Coordinate Structures*, chapter 4: Formal Properties of Deletion Rules, pages 307–428. Outstanding Dissertations in Linguistics. Garland Publishing, New York, NY, 1979.
- Petra Hendriks. *Either, both and neither* in coordinate structures. Ms., University of Groningen, 2004.
- Caroline Heycock and Roberto Zamparelli. Friends and colleagues: Plurality and NP-coordination. In Masako Hirotoni, Andries Coetzee, Nancy Hall, and Ji-Hyung Kim, editors, *Proceedings of NELS 30*, pages 341–352, Amherst, MA, 2000. GLSA.
- Philip Hofmeister. A linearization account of *either...or* constructions. Ms., Stanford University, 2007.
- Rodney Huddleston and Geoffrey K. Pullum. *The Cambridge Grammar of the English Language*. Cambridge University Press, Cambridge, 2002.
- George Lakoff and Stanley Peters. Phrasal conjunction and symmetric predicates. In David A. Reibel and Sanford A. Schane, editors, *Modern Studies in English: Readings in Transformational Grammar*, pages 113–142. Prentice-Hall, Englewood Cliffs, NJ, 1969.
- Richard K. Larson. On the syntax of disjunction scope. *Natural Language and Linguistic Theory*, 3:217–264, 1985.
- Winfried Lechner. Reduced and phrasal comparatives. *Natural Language and Linguistic Theory*, 19(4):683–735, 2001.
- Mitchell P. Marcus, Beatrice Santorini, Mary Ann Marcinkiewicz, and Ann Taylor. Treebank-3. Philadelphia, PA: Linguistic Data Consortium, University of Pennsylvania, 1999.
- Tanya Reinhart. Self-representation. Lecture Delivered at Princeton Conference on Anaphora, October 1990.
- Hotze Rullmann. *Maximality in the Semantics of Wh-Constructions*. PhD thesis, University of Massachusetts, Amherst, Amherst, MA, 1995.
- Bernhard Schwarz. On the syntax of *either...or*. *Natural Language and Linguistic Theory*, 17:339–370, 1999.
- Arnim von Stechow. Structured propositions. Ms., Universität Konstanz, February 1982.

<sup>14</sup>Introduction of the semantically vacuous *is* is omitted for reasons of space; *excited about* is similarly conflated.

# Proceedings of the 26th West Coast Conference on Formal Linguistics

edited by Charles B. Chang  
and Hannah J. Haynie

Cascadilla Proceedings Project Somerville, MA 2008

## Copyright information

Proceedings of the 26th West Coast Conference on Formal Linguistics  
© 2008 Cascadilla Proceedings Project, Somerville, MA. All rights reserved

ISBN 1-57473-423-2 library binding

A copyright notice for each paper is located at the bottom of the first page of the paper.  
Reprints for course packs can be authorized by Cascadilla Proceedings Project.

## Ordering information

Orders for the library binding edition are handled by Cascadilla Press.  
To place an order, go to [www.lingref.com](http://www.lingref.com) or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA  
phone: 1-617-776-2370, fax: 1-617-776-2271, e-mail: [sales@cascadilla.com](mailto:sales@cascadilla.com)

## Web access and citation information

This entire proceedings can also be viewed on the web at [www.lingref.com](http://www.lingref.com). Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Kaplan, Abby. 2008. The Proper Role of Movement and Ellipsis in Discontinuous Coordination. In *Proceedings of the 26th West Coast Conference on Formal Linguistics*, ed. Charles B. Chang and Hannah J. Haynie, 297-305. Somerville, MA: Cascadilla Proceedings Project.

or:

Kaplan, Abby. 2008. The Proper Role of Movement and Ellipsis in Discontinuous Coordination. In *Proceedings of the 26th West Coast Conference on Formal Linguistics*, ed. Charles B. Chang and Hannah J. Haynie, 297-305. Somerville, MA: Cascadilla Proceedings Project. [www.lingref.com](http://www.lingref.com), document #1684.