

Local Dependencies in Comparative Deletion

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1. Comparative Deletion*

The focus of this paper is the derivation and interpretation of comparative deletion (CD) in English. Comparative deletion constructions include comparatives in which the comparative clause (the complement of *than* or *as*, henceforth the ‘c-clause’) contains some clausal material, but is “missing” an adjectival, adverbial or nominal constituent, as illustrated by (1)-(3), (4)-(5), and (6)-(7), respectively (see Bresnan (1975) for general discussion of this phenomenon).

- (1) Jupiter is more massive than Saturn is ____.
- (2) A neutron star is less dense than a black hole is ____.
- (3) The mission wasn’t as successful as we expected it to be ____.
- (4) Light travels more quickly than sound travels ____.
- (5) Jones drives as carelessly as Smith flies ____.
- (6) Jones saw more stars than Smith saw ____.
- (7) Uranus has fewer rings than Saturn has ____.

Comparative deletion constructions contrast with examples of comparative subdeletion, like (8)-(10), in which only a degree word is “missing” (see Bresnan (1975), Grimshaw (1987), Corver (1993), Izvorski (1995)).

- (8) The space telescope is longer than it is (*that/very/2 meters) wide.
- (9) Jones drives as carelessly as Smith drives (*so/quite/too) carefully.
- (10) Jones saw more stars than Smith saw (*two/many/few) planets.

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The traditional analysis of CD derives examples like (1)-(7) from underlying representations that are structurally parallel to the corresponding subdeletion constructions in (8)-(10) (Lees (1961), Chomsky (1965, 1977), Bresnan (1973, 1975), Napoli (1983), von Stechow (1984), Heim (1985), McCawley (1988), Moltmann (1992a), Izvorski (1995), Hazout (1995)). For example, adjectival CD constructions like (1)-(3) are assigned underlying representations along the lines of (11)-(13), where the boldfaced material is left unpronounced in the surface forms in accord with principles of ellipsis.

- (11) Jupiter is more massive than Saturn is **massive**.
- (12) A neutron star is less dense than a black hole is **dense**.
- (13) The mission wasn't as successful as we expected it to be
successful

This analysis has two very compelling aspects. First, nothing special needs to be said about CD; instead, it can be viewed as an instance of a more general ellipsis operation in English that targets adjectival (and other) predicates, as in (14) (see Napoli (1983)).

- (14) Jupiter is massive, and Saturn is __ too.

Second, this analysis supports a very straightforward mapping between structure and interpretation, given a few apparently well-motivated assumptions. The first, which captures the dependency between comparative morpheme and c-clause marker (*more/less ... than* vs. *as ... as*), is that the comparative morpheme and the c-clause are a constituent at the level of interpretation (see e.g. Chomsky (1965), Bresnan (1973), Jackendoff (1977), McCawley (1988)). The second, based on facts like (15)-(17), which show that the c-clause is sensitive to syntactic islands (enclosed in brackets), is that the c-clause is a type of *wh*-construction in which a null operator binds a position inside the elided adjectival constituent (Chomsky (1977); see Bresnan (1975) for an alternative analysis, however).

- (15) a. Mercury is closer to the sun than I thought it was.
b. *Mercury is closer to the sun than I knew [who said it was].
- (16) a. Hale-Bopp was brighter than Karl claimed it would be.
b. *Hale-Bopp was brighter than [Karl's claim that it would be].
- (17) a. The solar flares were more energetic than the sunspots were.
b. *The solar flares were more energetic than we were amazed
[when the sunspots were].

Given these two assumptions, the derivation and interpretation of CD can be characterized as follows. The constituent headed by the comparative morpheme raises out of AP at LF, leaving behind a constituent of the appropriate syntactic type to supply the value of the elided material in the c-clause. In particular, this constituent contains an empty category that can be bound by the null operator in the c-clause, as shown by (18), the LF of (1) on this analysis.¹

- (18) [more than [Op_x Saturn is [AP e_x **massive**]]]_x [Jupiter is [AP e_x massive]]]

This syntactic representation can be mapped onto an interpretation in which the comparative introduces quantification over degrees (either existential quantification, as in e.g. Hellan (1981), Heim (1985), Lerner and Pinkal (1995), and Gawron (1995), or universal quantification, as in Cresswell (1976), Moltmann (1992a), and Hendriks (1995)), and gradable adjectives like *massive*, *energetic*, and *bright* denote relations between objects and degrees (Seuren (1973), Cresswell (1976), von Stechow (1984), etc.). For example, in Heim's (1985) analysis, the LF in (18) is assigned the interpretation in (19), whose truth conditions can be paraphrased as follows: for some degree *d* such that *d* exceeds the degree to which Saturn is massive, Jupiter's mass equals *d*.

- (19) $\exists d[d > \text{id}'.\text{massive}(\text{Saturn}, d')][\text{massive}(\text{Jupiter}, d)]$

In its core respects, this analysis of CD is the same as the standard analysis of antecedent-contained VP-deletion constructions like (20), which has the LF in (21) and the interpretation in (22) (see Sag (1976), Larson and May (1990), Fiengo and May (1994), Kennedy (1997b)).

- (20) Jones saw every meteorite Smith did.
 (21) [every Op_x meteorite Smith did [VP **saw** e_x]]]_x [Jones [VP saw e_x]]
 (22) $\forall x[\text{meteorite}(x) \& \text{saw}(\text{Smith}, x)][\text{saw}(\text{Jones}, x)]$

The goal of this paper is to show that this analysis of CD, compelling as it appears to be, is fundamentally incorrect. In particular, the missing constituent in CD cannot be analyzed as the target of an ellipsis operation. Two arguments will be presented in favor of this claim, the first

¹I will assume here that elided material in comparatives is recovered by a copying operation at LF, though this is not crucial. See Kennedy and Merchant (1997) for arguments that this must be the case, however.

empirical, the second more theory-internal. Focusing on examples involving adjectival predicates, such as (1)-(3), I will start out by showing that the interpretation of the missing material in CD shows a local dependency not observed in true ellipsis constructions; specifically, the missing material in the c-clause must receive its interpretation from the adjective that heads the comparative predicate. I will then show that a syntactic analysis of the adjectival projection in which the adjective projects extended functional structure headed by degree morphology – an analysis which is independently supported by a range of empirical and theoretical considerations (see Abney (1987), Corver (1990, 1997), Grimshaw (1991)) – is incompatible with an ellipsis analysis of CD. I will conclude by presenting an alternative analysis of CD in which the missing constituent is the target of a movement operation, rather than ellipsis. Specifically, I will claim that the null operator in the c-clause directly binds an empty category corresponding to the predicate rather than a (degree) position inside AP, as in the standard analysis outlined above. I will demonstrate that this alternative analysis is both compatible with the syntax of extended projection, and, when coupled with the right semantic analysis, derives the local dependencies in comparative deletion.

2. Two Problems for an Ellipsis Analysis

2.1 Local Dependencies in Comparative Deletion

A well-known characteristic of ellipsis is that the antecedent of an elided expression must be found in some local segment of discourse, but it need not immediately precede the ellipsis site. This characteristic is illustrated by the second sentence in (23), which can have either the interpretation in (24a) or the one in (24b), depending on which VP in the first sentence is taken to be the antecedent for the elided VP in the second.

- (23) Smith said she would launch the rocket before she ate her lunch. I don't know if she has yet.
- (24) a. I don't know if she has **launched the rocket** yet.
b. I don't know if she has **eaten her lunch** yet.

Examples of antecedent-contained VP-deletion display the same sort of interpretive variability, as shown by (25), in which the second conjunct can have either the interpretation in (26a) or the one in (26b).

- (25) Smith saw every alien I did, and she met every alien Jones did.
- (26) a. ... she met every alien Jones **met**.
b. ... she met every alien Jones **saw**.

That (25) is ambiguous is unsurprising: according to the standard analysis of ACD, the LF of this sentence should be (27), in which case both VP_1 and VP_2 are potential antecedents for the elided VP in the second conjunct.

- (27) [every alien I did __][Smith [VP_1 saw e]] and [every alien Jones did __][she [VP_2 met e]]

Although readings in which the closer, “local” VP provides the antecedent seem to be preferred in neutral contexts, the “nonlocal” reading can be brought out by constructing examples in which the local reading is in some way anomalous, as in (28).

- (28) Jones didn’t meet all the aliens he wanted to, but I bet he liked the ones he did.

The local interpretation of the elided VP in (28) corresponds to a tautology (*I bet he liked the ones he liked*); as a result, the nonlocal reading (*I bet he liked the ones he met*) emerges quite clearly.

If CD involves ellipsis, then it should give rise to the same ambiguity as VP-deletion in contexts that include more than one potential antecedent for the elided constituent. Surprisingly, however, this expectation is not realized. The second conjunct in (29), for example, is *not* ambiguous: the interpretation of the missing adjectival constituent must be recovered locally, as in (30a); the nonlocal interpretation paraphrased in (30b) is unavailable.

- (29) This spaceship is wider than Smith’s spaceship is, but it’s not longer than hers is.
(30) a. This spaceship is not longer than Smith’s spaceship is **long**.
b. *This spaceship is not longer than Smith’s spaceship is **wide**.

The absence of an ambiguity in (29) is completely unexpected if CD is derived in the same way as ACD. According to this analysis, the LF of (29) should be (31), which is structurally parallel to (27), and both AP_1 and AP_2 should be potential sources for the missing AP in the second conjunct.

- (31) [er than Smith’s is __][this ship is [AP_1 e wide]] but [er than hers is __][it’s not [AP_2 e long]]

The impossibility of the nonlocal reading in (29) cannot be blamed on contextual factors (or lack thereof). Even when we construct examples which strongly prefer a nonlocal reading (analogous to (28) above), the relevant interpretation remains unavailable:

- (32) #Now that the remodeling has been completed, the space station is longer than it used to be, and it's even wider than it is.
- (33) #The spaceship is longer than it used to be, and now it's as wide as it is, too.

The oddity of (32) and (33) is due to the fact that the local interpretations are contradictory (*the space station is even wider than it is wide*) and tautological (*the spaceship is not as wide as it is wide*), respectively. In contrast, the nonlocal interpretations, paraphrased in (34) and (35), make perfectly reasonable claims (and moreover correspond to grammatical sentences), but are nevertheless unavailable.

- (34) The space station is even wider than it is long.
- (35) The spaceship is as wide as it is long.

The descriptive generalization that emerges from these facts is that the interpretation of the “missing” adjective in CD must be recovered locally, from the adjective that heads the entire comparative construction. If CD and ACD constructions are derived in the same way, however, this local dependency is completely unexpected. This problem is independent of the analysis of ellipsis – whether it involves syntactic identity at LF (as in e.g. Hazout 1995) or recovery of meaning (as in e.g. Gawron (1995)). Any analysis that attempts to analyze CD in terms of more general principles of ellipsis in English will fail to derive the interpretive contrast between comparative deletion and VP-deletion illustrated by these facts.

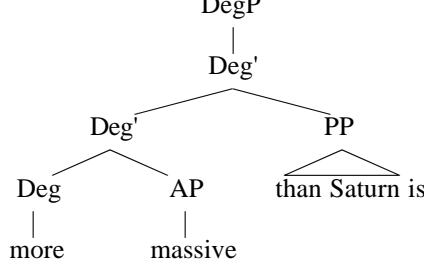
2.2 The DegP Hypothesis and Problems of Identity

Recent work on the syntax of the adjectival projection has challenged some of the traditional assumptions discussed in section 1, in particular, the hypothesis that the comparative morpheme and comparative clause form a constituent exclusive of the adjective. This work claims instead that adjectives, like nouns and verbs, project extended functional structure, which in the case of adjectives is headed by degree morphology (see Abney (1987) and Corver (1990, 1997) for extensive empirical evidence in support of this analysis; see Grimshaw (1991) for more meta-theoretical arguments). For example, the structure of a typical predicative comparative such as (36) in this analysis is (37), where the *than*-constituent is a selected adjunct.²

²Alternatively, the *than*-constituent could be a second complement of Deg^0 , resulting in a ternary-branching structure (as in Abney (1987)). The question of which structure is the correct one is independent of the current discussion.

(36) Jupiter is more massive than Saturn is.

(37)



Like the traditional syntactic analysis, the *DegP* analysis also supports a straightforward interpretation, provided we slightly modify our assumptions about the interpretation of gradable adjectives and comparatives. Specifically, as shown in Kennedy (1997a), we need to adopt a model in which gradable adjectives denote functions from objects to degrees (rather than relations between objects and degrees, as standardly assumed; cf. Bartsch and Vennemann (1973)) and comparatives denote properties of individuals characterized as relations between degrees, rather than expressions that quantify over degrees. With these modified assumptions, the compositional interpretation of structures like (37) is simple and direct. The semantics of the comparative morpheme *er/more* is given in (38) (*less* and *as* have similar analyses, with an appropriate change in ordering relation), where *G* is a gradable adjective meaning (a function from objects to degrees), *d* is a degree, and *x* is an individual.

$$(38) [\text{Deg er/more}] = \lambda G \lambda d \lambda x [G(x) > d]$$

Assuming that the comparative clause is interpreted as a definite description of a (maximal) degree (Russell (1905), von Stechow (1984), Rullmann (1995), Kennedy (1997d)), the interpretation of *DegP* is (39): the property of having a degree of mass that exceeds that of Saturn.

$$(39) \lambda x [\text{massive}(x) > \iota d [\text{massive}(\text{Saturn}) = d]]$$

Predicating this expression of the subject gives the expression in (40) whose truth-conditions can be paraphrased as follows: the degree to which Jupiter is massive exceeds the degree to which Saturn is massive.

$$(40) \text{massive}(\text{Jupiter}) > \iota d [\text{massive}(\text{Saturn}) = d]$$

An important part of this analysis is that the comparative clause is

interpreted as a description of a degree.³ A question that needs to be answered is how this interpretation is derived: where does the adjective meaning in the description come from? In other words, what is the analysis of comparative deletion in the context of the DegP analysis of the adjectival projection? The simplest solution would be to adopt a slightly modified version of the traditional answer to this question and say that CD involves some kind of “DegP ellipsis” in the c-clause. The Logical Form of an example like (41) would be (42), where the null operator binds a degree variable inside DegP (e.g., the position occupied by the measure phrase in a sentence like *Benny is 4 feet tall*).

- (41) Pluto is [DegP colder than [Mercury is]]
- (42) Pluto is [DegP colder than [Op_x Mercury is [DegP e_x cold]]]

The problem with this approach is that (42) is not a possible LF for (41), given standard assumptions about identity in ellipsis. As observed in section 1, CD involves antecedent-containment. As a result, in order to eliminate the infinite regress problem and license ellipsis, a constituent containing the elided material must raise out of DegP at LF. Assuming that the c-clause is the constituent that moves (the argument is the same if the entire *than*-constituent moves), the LF of (41) is not (42), but rather (43).

- (43) [Op_x Mercury is [DegP colder than e_x]][Pluto is [DegP colder than e_x]]

Since ellipsis requires identity, the recovered DegP in (43) must include the comparative morphology on the matrix DegP. As a result, (43) maps onto an interpretation with the wrong truth conditions for the comparative. Assuming as above that the c-clause denotes a definite description of a (maximal) degree, the interpretation of the c-clause in (43) should be something like “the maximal degree *d* such that Mercury is colder than *d*”.

³Although I claimed above that the c-clause denotes a definite description of a degree, the basic approach to the semantics of DegP presented here is also compatible with an analysis of the c-clause as a restriction on a universal quantifier, as in e.g. Lerner and Pinkal (1995) and Gawron (1995) (though see Kennedy (1997d) for arguments against this analysis). The interpretation of (36) would be something like (i): for every degree *d* such that Saturn is *d*-massive, Jupiter is more massive than *d*.

- (i) $\forall d[\text{Saturn is } d\text{-massive}][\text{massive}(Jupiter) > d]$

Even if we allow for the possibility that there is such a degree (and if scales are dense (Bierwisch (1989), Kennedy (1997c)), there isn't, with the result that the c-clause should fail to denote), we incorrectly predict that (41) would be true in a context in which Pluto and Mercury are cold to the same degree, since the comparative would require only that Pluto be colder than the highest degree d such that Mercury is colder than d .

An alternative analysis, which would appear to avoid the problem of incorrectly recovering degree morphology, would be to say that CD targets only AP. That CD must in some cases target at least DegP, however, is shown by an example like (44), which can have the interpretation in (45).

- (44) Poseidon wants the ocean to be 40 degrees colder than Zeus does.
- (45) Poseidon wants the ocean to be 40 degrees colder than Zeus wants it to be.

In order to derive the interpretation in (45), the missing material in the c-clause receives its interpretation from the VP headed by *want*. Since this VP includes the comparative DegP, an ellipsis analysis of CD would have to maintain that there is some mechanism for “ignoring” the comparative morphology (as well the measure phrase) in the antecedent, otherwise (44) would run into the same problems as (41). This mechanism would have to be restricted to comparatives only, however: in other contexts, recovery of an elided comparative DegP *must* include comparative morphology and measure phrases. This is shown by an example like (46), which has only the interpretation in (47)a, not the one in (47)b, in which the comparative morpheme and measure phrase in the antecedent are ignored.

- (46) Mercury is 60 million miles closer to the sun than Earth, and Venus is, too.
- (47) a. ...Venus is 60 million miles closer to the sun than Earth, too.
b. *...Venus is close to the sun, too.

The conclusion to be drawn from this discussion is that in order to maintain both an ellipsis analysis of comparative deletion and the DegP syntactic analysis of the adjectival projection, it would be necessary to weaken the constraints on identity in ellipsis in comparatives to a degree which does not hold for ellipsis of DegP constituents in other constructions (such as (46)). Since the local dependency facts discussed in section 2.1 raised independent empirical problems for an ellipsis analysis of CD, the broader conclusion to be drawn is that an alternative to an ellipsis analysis of CD should be sought. In the next section, I will introduce just such an alternative analysis, which both avoids the problems of identity outlined here and derives the local dependency facts discussed in section 2.1.

3. A Movement Analysis of Comparative Deletion

My goal in this section is to show that the problems for the traditional analysis discussed in section 2 can be resolved by adopting an analysis in which the missing DegP constituent in comparative deletion is analyzed not as the target of an ellipsis operation, but rather as the target of movement: the operator in the comparative clause directly binds a DegP position, rather than a degree position within DegP, as in the traditional analysis (see Moltmann (1992b); see also Bresnan (1973)). In other words, the “missing” material in CD constructions is an empty category throughout the derivation, not an ellipsis site whose content is recovered at LF. (48)-(50) illustrate the LFs of examples (1)-(3) (which are identical to the surface representations) on this analysis.

- (48) Jupiter is more massive than [Op_x Saturn is e_x]
- (49) A neutron star is less dense than [Op_x a black hole is e_x]
- (50) The mission wasn't as successful as [Op_x we expected it to be e_x]

This analysis clearly avoids the problems discussed in section 2.2: if no ellipsis is involved in the recovery of DegP content in CD, then the problem of introduction of unwanted comparative morphology into the interpretation of the comparative clause disappears. More importantly, this analysis also provides a means of deriving the local dependency facts discussed in section 2.1.

The first thing to observe about the LFs (48)-(50) is that they are “deficient” in a very specific way: there are no adjectives in the comparative clauses. According to the semantics for DegP outlined in section 2.2, the c-clause introduces a definite description of a degree which is supplied as one of the arguments of the ordering relation denoted by the comparative morpheme (the other argument is the degree derived by applying the adjective that heads the comparative construction to the subject). For example, the interpretation of the c-clause in (48) should be “the (maximal) degree to which Saturn is massive”. But if there is no occurrence of the adjective *massive* in the LF to supply the adjective meaning in this description, where does this meaning come from?

The answer that I will pursue here, building on the empirical observations in section 2.1, is that this missing adjective meaning comes from the adjective that heads the comparative DegP, and, crucially, that it is supplied to the c-clause as part of the compositional semantics of comparatives. This type of approach was first adopted by Klein (1980) in a GPSG framework, who analyzed the missing material in CD as an empty category licensed by a SLASH feature (see Gazdar, Klein, Pullum, and Sag (1985); Klein's analysis was later recast in GB terms (and slightly modified)

in Larson (1988)).⁴ What has not been noticed before is that this analysis derives the local dependency facts presented in section 2.1 (since the facts themselves have not been previously discussed)

The proposal can be implemented in the framework outlined in section 2.2 by assuming that the interpretation of the c-clause in CD constructions is not a definite description of a degree, but rather a function from a gradable adjective meaning to a definite description of a degree. This hypothesis can be formalized by assigning the comparative operator the semantic analysis in (51), where C corresponds to the interpretation of C'.

$$(51) \quad [\text{DegP Op}] = \lambda C \lambda G (\text{id}C(\lambda x[G(x) = d]))$$

Applying this to (48) gives (52) as the interpretation of the c-clause: a function from an adjective meaning G to the degree to which Saturn is G .

$$(52) \quad \lambda G (\text{id}[G(\text{Saturn}) = d])$$

We then need to revise the interpretation rule for the comparative morpheme as shown in (53), so that it not only applies the function denoted by the adjective that heads the comparative DegP to the subject, deriving one of the degrees that stand in the comparison relation, but also supplies this function as the argument to the comparative clause.

$$(53) \quad [\text{Deg er/more}] = \lambda G \lambda D \lambda x [G(x) > D(G)]$$

This gives (54a) as the interpretation of DegP in (48); lambda-conversion derives (54b), which is equivalent to (39) above: the comparative DegP denotes the property of having a degree of mass that exceeds that of Saturn.

- $$(54) \quad \begin{aligned} \text{a. } & \lambda x[\text{massive}(x) > \lambda G (\text{id}[G(\text{Saturn}) = d]))(\text{massive})] \\ \text{b. } & \lambda x[\text{massive}(x) > \text{id}[\text{massive}(\text{Saturn}) = d]] \end{aligned}$$

This analysis thus provides a descriptively adequate semantics for CD (see Kennedy (1997a) for more detailed discussion of other types of comparatives); its most important empirical consequence is that it also

⁴Klein's analysis of the meaning of gradable adjectives and the semantics of comparatives is quite different from the one proposed here, however. Klein analyzes gradable adjectives as vague predicates (McConnell-Ginet (1973), Kamp (1975)) and comparatives in terms of conjunction and negation (Seuren (1973)). See Kennedy (1997a) for arguments against a vague predicate analysis of the meaning of gradable adjectives.

derives the local dependency facts. Since the interpretation of the adjective that heads the comparative is supplied as the argument to the c-clause as part of the compositional interpretation of DegP, the fact that the “missing” adjective must have the same interpretation follows. More generally, this result shows that an analysis of comparative deletion in terms of DegP movement, originally adopted to satisfy the constraints imposed by the syntax of the extended adjectival projection, supports an explanation of a set of facts that constitute a puzzle for the traditional ellipsis analysis of CD.

4. The Emergence of an Ambiguity

Example (29), repeated below as (55), demonstrated that the missing adjective in CD must receive its interpretation locally: (55) has only the reading in (56a), the reading in (56b) is impossible.

- (55) This spaceship is wider than Smith’s spaceship is, but it’s not longer than hers is.
- (56)
 - a. This spaceship is not longer than Smith’s spaceship is **long**.
 - b. *This spaceship is not longer than Smith’s spaceship is **wide**.

According to the analysis of CD presented in the previous section, the absence of an ambiguity in (29) is due to the compositional semantics of comparatives, which requires the adjective that heads DegP to be supplied as the value of the missing adjective in the c-clause. It comes as quite a surprise, then, that the ambiguity we would expect to see in (55) if CD involved ellipsis actually surfaces in sentences in which the first conjunct involves *subdeletion* rather than CD. (57), for example, quite clearly has the both the local interpretation in (58a) and the nonlocal reading in (58b).

- (57) This spaceship is wider than Jones’ ship is long, and it’s also wider than Smith’s ship is.
- (58)
 - a. This spaceship is also wider than Smith’s ship is **wide**.
 - b. This spaceship is also wider than Smith’s ship is **long**.

In fact, the ambiguity of sentences like (57) is completely consistent with the analysis of CD proposed in section 3. Since structures that involve movement of a null operator from DegP position and structures that involve DegP ellipsis are string identical, the second conjunct in (57) is *ambiguous* between an analysis as a CD construction and a subdeletion construction in which DegP has been elided under identity with the DegP in the first conjunct. The two analyses are shown in (59a) (the CD construction, which corresponds to the local reading) and (59b) (the elided subdeletion construction, which corresponds to the nonlocal reading).

- (59) a. ... it's also wider than [Op_x Smith's ship is e_x]
 b. ... it's also wider than [Smith's ship is [**DegP long**]]

More generally, the analysis of CD as DegP movement predicts that nonlocal interpretations should arise *only* in contexts such as (57), in which the local discourse includes a subdeletion construction. Even though the second conjunct in the unambiguous (55) could in principle be analyzed as an ellipsis construction, since the first conjunct also involves CD, an ellipsis analysis would be structurally (and interpretively) nondistinct from a non-ellipsis, DegP movement analysis: both would have LFs in which a DegP empty category is bound by the null operator.

5. Conclusion

The primary conclusion of this paper, supported by both empirical and theoretical considerations, is that comparative deletion cannot be analyzed in terms of ellipsis of an adjectival (DegP) constituent; instead, it must be analyzed in terms of movement of that constituent. This claim does not mean that comparatives never involve some kind of ellipsis—examples in which a constituent larger than DegP, such as (44) above, presumably involve DegP movement *plus* VP-deletion (see Kennedy and Merchant (1997)). It means only that the mechanisms responsible for the phonological elimination, and ultimate interpretation, of adjectival material in CD fall within the domain of syntactic movement operations, rather than the domain of ellipsis licensing and resolution. This in turn implies that these domains have distinct properties, raising important questions for theories that seek to unify them (see e.g. Chomsky (1995:202-3)).

A final consequence of the analysis presented here is that comparative deletion and comparative subdeletion are distinguished in two ways. Not only do they differ in syntactic derivation (a conclusion reached for independent reasons in Grimshaw (1987) and Corver (1993); see Izvorski (1995) for the opposite view, however), they also have different compositional interpretations (though not different truth conditions; see Kennedy (1997a)): since the c-clause in subdeletion contains an adjective, it can be directly interpreted as a definite description of a degree (see Larson (1988:22) for similar remarks in the context of a Klein-style analysis). Whether this second distinction is justified should be a question for future work.

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