English Comparatives and an Indexed Phrase Structure Grammar
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I. Introduction

In this paper[1], I propose a new analysis of English comparative constructions, based on a few observations including a new classification of "Comparative Deletion (CD) and Comparative Ellipsis (CE)" and other related issues. The theoretical framework used is an "Indexed Phrase Structure Grammar (IPSG)", which introduces stacked indices into a GPSG framework. The basic idea behind this approach is that comparative elements (*-er, more, as* etc.) themselves have the property of licensing the compared phrases (*than/as*-phrases).

II.1. Comparative Deletion and Subdeletion

A variety of ellipses are involved in comparatives. First, we have such independently motivated ones as VP Ellipsis, Null Complement Anaphora, Gapping, Pseudo-gapping, and Right Node Raising (cf. Napoli 1983, sec. 1). Second, there are (obligatory) comparative-particular deletions:

(1) a. Mary is taller than Joan is (*x tall*).
    b. John eats more apples than Mary eats (*x-many apples*).
(2) a. Mary is taller than Joan is (*x*) thin.
    b. John has more books than Mary has (*x-many*) records.

The deletion of the elements in the parentheses has been the center of study in comparatives, which are handled by the so-called CD rules. Third, there is another group of ellipses which are dealt under the name of CE rules:

(3) a. John is taller than Mary. b. Mary was fatter at 15 than at 21.
    c. John eats more apples than oranges. d. John is more tall than thin.

The ellipses in this group seem to be motivated neither by independently motivated ellipses nor by comparative-particular ones.

The ellipsis phenomena in the first and third groups can be characterized as "omission under identity of a non-contrastive phrase". In this paper, we will focus on the analyses of the comparatives containing the second and third group ellipses. For the second group, we will explore the idea that CD is responsible for the omission of only *x(-many)* in (1-2). For the third group, we will pursue the idea of "base generation" in line with most GPSG approaches, which implies that our account would have far fewer ellipses than in traditional approaches.

As for the second group of comparative-particular deletions, it has been assumed in the literature that there are two different kinds of obligatory deletion rules involved

(Bresnan 1973, Chomsky 1977, etc.): a CD rule for the data in (1) and a Comparative Subdeletion (CSubD) rule for (2). Even though Bresnan (1977) posits a single rule for these two cases by using a variable, the deletion of A (and N) is still a part of the CD rule. However, I will argue that CD is responsible only for the omission of a Degree Phrase (DP) (*x* in (1-2a)) or a Quantity Phrase (QP)(*x-many* in (1-2b)). In addition, I posit that the deletion of Adj *tall* in (1a) is motivated by its distributional characteristics and hence the resulting gap is not due to CD itself. By factoring out this independently existing deletion, we can provide a unified account of CD phenomena, without positing separate CD rules for (1) and (2).

To begin with, we see a contrast in the acceptability of the following sentences:

(4) a. *Mary is taller than Joan is tall.
b. ?John eats more apples than Mary eats apples.

First of all, both of these sentences violate a general (semantic, cf. Gazdar 1980: 166) constraint against repetition of non-contrastive phrases. But sentence (b) is not so bad, especially with a contrastive stress on *John* and *Mary*, while sentence (a) is still bad. To see the difference here, notice that Adj *tall* has a "neutral meaning" rather than the normal "polar meaning" and that the neutral meaning arises only when an Adj (or Adv) occurs as the head of comparative elements and other degree expressions such as *this/that* and *how* (cf. Bresnan 1973: 323).

It is true that both *tall*'s in (4a) occur with degree elements, *-er* in the former and empty DP *x* in the latter. This empty DP gives a neutral meaning to Adj *thin* in (2a). However, the effect of empty DP is not as strong as that of explicit comparative elements in providing neutral meaning to its head. Its effect can be nullified in special contexts (Chomsky 1977: 122, Gazdar 1980):

(5) What is more, this desk is higher than that one is HIGH.

Here the height of the desk in the compared phrase is 'high' in its polar sense. With a special intonation we can cancel out the effect of the omitted degree word.

Then we can see why the repetition of *tall* in (4a) is worse than that of *apples* in (4b). What is required in the compared phrase is 'tall' in its neutral sense. But the empty DP is not strong enough to keep this neutral meaning salient. Hence, the Adj is likely to be associated with the regular polar meaning. This conflict can be easily resolved by avoiding repetition in the compared phrase when Adj (or Adv) is the head of empty DP/QP. Notice that there is no polar vs. neutral distinction when the head of a comparative word is a N as in (4b). In sentence (6),

(6) Henry is taller than 6 feet (tall). (Rusiecki 1985: 48)

the repetition of *tall* is natural. The reason here is that we have an explicit QP *6 feet*, which gives the neutral meaning of the Adj without any interference from the polar meaning, unlike the case where there is an implicit QP. This constitutes an independent motivation for the distributional deletion of As (Adjs and Advs) in

comparatives. This distributional fact leads to a natural account of the almost-obligatory deletion of Adj in (1a), and of the difference between (1a) and (5). It also means that we cannot account for the deletion of A as a part of CD itself.

One potential problem of the present approach is that the omission of Adj in the compared phrase seems to be obligatory when the Adj is used attributively as in (7) (Carl Pollard, p.c.):

(7) a. John has smarter friends than Bill has [x (*smart/*stupid)] enemies.
b. We have more intelligent consultants than they have [x (*intelligent/*competent)] engineers.
(8) John doesn't have such a kind brother as Mary has a *(nice) sister.

However, not all attributive Adjs are omitted. On the contrary, the construction in (8) requires one. We can account for the phenomena in (7) with reference to the distributional difference between *-er/more* and DP/QP gaps (i.e. *x* and *x-many/much*):

(9) a. i) a smarter boy, *smarter a boy.
ii) a very/more pleasant boy, *very/??more pleasant a boy.
b. i) *a this/so/such big boy, this/so/as big a boy.
ii) *a such kind friend, such a kind friend.

The data in (a) show that *-er*, *more*, and *very* have the same pattern of distribution (i.e. [Det - [[DP-Adj] - N']]). But *this/so/as* and *such* have different patterns (i.e. [[DP-Adj] - [Det - N']] and [DP - Det - Adj - N'], respectively) as we can see from the data in (b)[2]. Based on this difference, we can assume that the DP/QP gap belongs to the second group in its distribution. Then the sentences in (7) are ungrammatical with Adjs because the order required by the head of comparison (i.e. the first pattern) is different from that which is required by the DP gap (i.e. one of the second patterns). We have independent evidence for our approach:

(10) a. John has as kind a friend as Mary has x vicious an enemy.
b. *Paul has a longer table than Sue has a wide desk.

In sentence (a) the order that is imposed by DP *as* is the same as that imposed by the DP gap in the compared phrase. But there is an order conflict in sentence (b) (*a x wide* vs. *x wide a*).

II.2. The Status of the Compared (*than*-) Phrase

Now focusing on comparatives involving the third group of ellipses (cf. (3)), I will argue that *than* has three different functions in comparatives, contrary to traditional two-way distinctions (Hankamer (1973), Napoli (1983) and Ryan (1986)): P(reposition), Comp(lementizer) and (Coordinating) Conj(unction). The three-way distinction here is similar to Pinkham's (1982) classification: "clausal" and "base-generated" comparatives", the latter of which is further classified into "parallel" and

prepositional comparatives.

The compared phrase is a PP when only an NP follows *than*, regardless of this NP's interpretation as subject or object. There are several pieces of evidence for the PP analysis. First, we have expressions like *different from/than NP, superior/inferior to NP* and *taller than me/*I*. Here *than* alternates with a P, words which have comparative meaning have PP complements, and the accusative form of a pronoun occurs after *than* for many speakers of English, respectively. Second, the NP can be fronted as in (11) (Hankamer 1973):

(11) a. Mary is taller *than Joan.* b. (?)*Who* is Mary taller *than*?
(12) John thinks [Mary$_i$ is taller than herself$_i$/*her$_i$].

Third, the NP in the compared phrase behaves like an element in the same clause as the head of comparison as in (12) (Napoli 1983: 164-5). Lastly, there are comparatives where the NP in the compared phrase is an explicit DP or QP ("measure phrase NPs"):

(13) a. The car was travelling faster than 90 mph.
b. Mary bought more records than ten.
c. Max is older than the forty years they reported him to be.

The underlined DP/QPs here can combine with Ps (e.g. *at ten, over 90 mph*, etc.) but never with Comp or Conj. And we cannot assume that any DP/QP element is omitted from the compared phrase. This is different from those cases where the compared phrase is introduced by Comp or Conj *than*.

Than is a Comp when a clause (which has at least a subject and a predicate) follows, as in the examples in (1-2). There is evidence for this assumption:

(14) a. *Who is Mary taller than t is? b. Mary is [taller than Joan is].

From (a) we can see that *than* is not a P. In (b) *taller than Joan is* forms a constituent. Hence *Mary is taller* cannot be a constituent, which means that *than* is not a Conj either. Consider the following data:

(15) a. Did you buy more apples than John bought oranges?
cf. *Did you buy some apples and John bought some oranges?
b. *Did you buy more apples than did John buy oranges?
cf. Did you buy some apples and did John buy some oranges?

As we can see, *than* here shows different properties from those of Conj *and*. It shows exactly the same set of properties as other Comps. The compared phrase is not affected by "operations" on the higher clause.

Thus far, we have observed that comparative *than* functions as a P when an NP follows and as a Comp when a clause follows. But there are many other comparative sentences which do not fit into these two categories. I will now argue that it

functions as a Conj in these sentences. Typical examples of Conj *than* are those in which the focus of comparison itself is the head of comparison:

(16) a. The company needs [more trucks] than [(*x-many*) cars].
b. John bakes [better cakes] than [(*x-good*) pies].
(17) a. John is more tall than thin. b. This car runs more fast than smoothly.

(More) apples in (16a) is the focus and, at the same time, head of comparison. The examples in (17), which are called "meta-comparatives", have the same characteristics as those in (16) in the sense that these also induce a coordinate structure. But they have different characteristics in other respects and will be discussed in section III.

Comparatives with Conj *than* show a strong parallelism between the two conjuncts. Napoli (1983, sec. 2.1.) lists some pieces of evidence for Conj-hood of *than*. First of all, this construction obeys the "Coordinate Structure Constraint"[3]:

(18) a. Nancy Reagan, I've seen [more pictures of] than [books about].
b. *Who did you see more pictures of than books about Ronald?
c. *Who did you see more pictures of Nancy than books about?

Second, *than* can introduce elements of any major syntactic category. This will become evident when we discuss other examples, especially meta-comparatives. Third, items which have limited distribution can appear in the compared phrase when the conditioning context is present in the sentence:

(19) The team made/*liked [more noise] than [(*x-much*) headway].

Notice that *headway* is a part of the idiom chunk *make headway*. But *like headway* is not a possible expression.

Apart from those cases where the focus of comparison is the same as the head of comparison, there are other cases for which we should assume that *than* is Conj:

(20) a. I bought [a bigger car today] than [e yesterday].
b. Mary was [fatter at 15] than [e at 21]. (Ryan 1986)
c. John listens [to folk music more often] than [to jazz e].
d. John gave [more books to Shirley] than [e to Fred].

If we assume that only constituents can be conjoined, the first conjunct would be the smallest constituent which contains both the head and focus of comparison. For example, in (20a) the first conjunct would be *bought a bigger car today*. But if we assume that non-constituents can also be conjoined (cf. Dowty 1988), the first conjunct would be a string which contains only the head and the focus of comparison. For example, that of (20a) would be *a bigger car today*. I favor this second analysis because we would need to posit sentence (21) as the source of (20a), which is ungrammatical, under the first analysis:

(21) *I bought a bigger car today than bought e yesterday.

Whichever of these two possible analyses we choose, we need a Conj *than* rather than a Comp *than* because Comp can introduce only clausal units. We will see further evidence for the Conj analysis when we deal with meta-comparatives.

Incorporating what we have observed thus far, we can summarize comparative constructions schematically as follows:

(22) L). A + *-er*; $more_1$ + A
M). $more_2$ (+ N^1)
} { P). $than_P$ + NP
Q). $than_{COMP}$ + clause
R). $than_{CONJ}$ + X

The parentheses in (M) indicate that $more_2$ can also be used as an NP or as an Adv. The symbol X in (R) represents the assumption that it might not be a constituent.

Schema (22), first, shows that there are six interrelated constructions:

(23) LP: John is taller than Mary.
LQ: John is taller than [Mary is (*x tall*)].
LR: John has [smarter friends] than [(*x smart*) enemies].
Mary was [fatter at 15] than [(*x fat*) at 21].
MP: John eats more apples than Mary.
MQ: Mary eats more apples than [Mary eats (*x-many apples*)].
MR: John eats [more apples] than [(*x-many*) oranges].
John gave [more books to Shirley] than [(*x-many books*) to Fred].

Notice that the italicized elements in the parentheses are not explicit expressions. Second, the schema shows that there are 2 *more*'s (observed thus far). The one in (22L), $more_1$, which is a morpho-phonologically conditioned variant of *-er*, is a DP and induces degree comparatives (the same with the *as...as* construction). The *more* in (23M) is a QP and induces quantity comparatives.

I can show that the DP vs. QP distinction is responsible for the contrast among the following expressions (cf. Bresnan 1973: 322-7):

(24) a. *John is taller than thin. *John is as tall as thin.
b. John has more apples than oranges.
(25) a. John is taller than he is thin. John is as tall as he is thin.
b. John is as much tall as (he is) thin.
(26) John is more tall than (he is) thin.

In a "single-scale comparative" as in, for example, *John is taller than Mary*, we are comparing the heights of John and Mary on a single scale of 'tallness'. When there is only one scale involved, we can compare what is represented by two points of degree because the comparison is done within the same scale. We can see the relative positions of these points by just looking at them on the given scale. But when there are two different scales involved as in (24a), the comparison of two degrees would

be logically impossible because we cannot compare 'tallness' and 'thinness' directly without referring to the quantities of them. In (24b), however, we are comparing two quantities rather than two degrees. Notice that *more* here is a QP rather than a DP.

The sentences in (25a) do not have quantity expressions even though two scales are involved. But they are grammatical unlike those sentences in (24a). But there is a difference between these two groups of sentences, which is related to the issue of providing quantities. In (25a) we can get the quantity of 'thinness' by referring to a specific entity 'he', which is in the scope of comparison (the constituent containing both the head and the compared phrase). In this case we know how much 'thinness' we are talking about. The 'tallness' and 'thinness' are compared on the scale of 'tallness' by referring to the quantity of 'thinness' indirectly provided. In (25b), we can get the quantities of both 'tallness' and 'thinness' directly because we have an explicit quantity expression *much*. The expressions in (26) have nothing to do with degree or quantity. These meta-comparatives will be handled in the following section.

III. Meta-comparatives

It has been pointed out that the comparatives in (17) and (26) have different characteristics from the others we have observed thus far (Pinkham 1982, Napoli 1983 and Ryan 1986 among others). But the focus of study has been on semantic differences. In this section, I will show similarities and differences between the two groups from a syntactic point of view. These properties will be described with reference to the properties of *more* and *than*.

First of all, any (phrasal) categories of the same type can be connected by *(more)...than...* in meta-comparatives (AdjP, AdvP, NP, VP and PP):

(27) a. Mary is [more very tall than very thin].
b. It was a [more social than intellectual] affair. (Pinkham 1982: 152).
(28) a. This car runs more very fast than very smoothly.
b. He played more passably than extremely well. (Ryan 86: 91)
(29) a. Mary is more a linguist than a sociologist.
b. She more than he understands how to proceed. (Napoli 83: 681)
(30) John is more trying to win acceptance than (he is) trying to get rich.
(31) The airport is located more to the east than to the north.

This is a characteristic of a coordinate structure. Actually this construction shows the same characteristics as those of the construction in (16) and (18) as far as the behavior of *than* is concerned (cf. the MR construction in (22)).

A real difference between the MR construction and the meta-comparative construction lies in the behavior of *more* rather than *than*. We argued above that there are two *more*'s: DP and QP. But *more* in a meta-comparative is neither DP nor QP because it has nothing to do with degree or quantity. I will argue that it is a Conj. Strictly speaking, it is the first part of a split Conj *more ... than*. We can say that it has the same function as *neither ... nor, either ... or*, etc.

There are some other pieces of evidence for this assumption besides the semantic

fact that the (first) Adjs in a meta-comparative have polar meanings. First, as was pointed out by Pinkham (1982: 150-1), meta-comparative *more* cannot be modified:

(32) a. Mary was even more angry than she was sad.
b. Mary was three times more angry than she was sad.

These sentences have only the literal meaning, i.e. only the DP/QP reading of *more*. She used [+metacomparative] and [+numerical] to account for this fact in (32). But meta-comparative *more* cannot be modified for the simple reason that it is a Conj in the present analysis. No stipulation is necessary.

Second, the compared phrase in meta-comparatives does not have any DP/QP gap, not only from a semantic point of view but also from a syntactic point of view:

(33) a. Mary is more very tall than very thin.
b. *John is more tall than I think he is thin.

If we assume that *more* in meta-comparatives is a Deg word, we cannot account for the fact that two Deg words occur in (33a). Notice that a DP has the characteristic of closing an AP (cf. Gazdar et al. 1985). As meta-comparatives do not have any gaps, there would be no unbounded examples of meta-comparatives. This is apparent as we can see from sentence (33b). But regular comparatives with sentential compared phrases can be unbounded.

To account for the observations in this section we can revise the schema in (22) as follows:

(34) L). A + *-er*; $more_1$ + A
M). $more_2$ (+ N^1)
} { P). $than_P$ + NP
Q). $than_{COMP}$ + clause
R). $than_{CONJ}$ + X

N). $more_{CONJ}$ + XP ——— R'). $than_{CONJ}$ + XP

There are seven interrelated comparative constructions. We can divide these into two groups: N-R' vs. the others. The major difference between these two groups of constructions is due to the functional difference of *more*: Conj vs. DP/QP. This difference is responsible for the syntactic and semantic differences between regular comparatives and meta-comparatives.

IV. An IPSG Approach

Thus far we have observed that the comparative word *more* has three different functions: DP, QP and Conj. And *than* also has three functions: P, Comp and Conj. We have noticed that DP and QP *more* induce gaps in those compared phrases which are introduced by Comp and Conj *than*. But we have not looked at the nature of the gaps induced by DPs and QPs. There is enough evidence which shows that these gaps are different from NP (and other) gaps, which are usually represented by SLASH (/) or other similar notations in the literature. The force of DP or QP gaps seems to

be far weaker than that of other gaps in the sense that their existence is not so significant as others either syntactically or semantically. We have already seen one case where the effect of a DP gap is canceled out in (5).

First, DP/QP gaps do not obey the Generalized Left Branch Constraint as in (35) (Carl Pollard, p.c.):

(35) a. John is taller than Mary is [x thin].
b. *How is John [x tall]? cf. [How tall] is John e?
(36) a. ?More caviar was eaten at the party than I thought that [(*x-much*) smoked salmon] would be.
b. *More caviar was eaten at the party than I thought that [e] would be[4].

In wh-questions, which involve SLASHes, the whole constituent should be extracted when the left-most element of the constituent is a wh-word. Second, the empty DP/QP has no ECP effect as is shown in (36) (Gueron & May 1984: 20). We can see the ECP effect only when other elements are deleted together with the DP as in (36b). Third, Gazdar (1980: 177) points out that in some dialects there is a contrast between (37) and (38):

(37) a. Fido is more cowardly than Rover is e nowadays.
b. *Fido is more cowardly than Rover's e nowadays.
(38) a. Fido is more cowardly than Rover is x careful nowadays.
b. Fido is more cowardly than Rover's x careful nowadays.

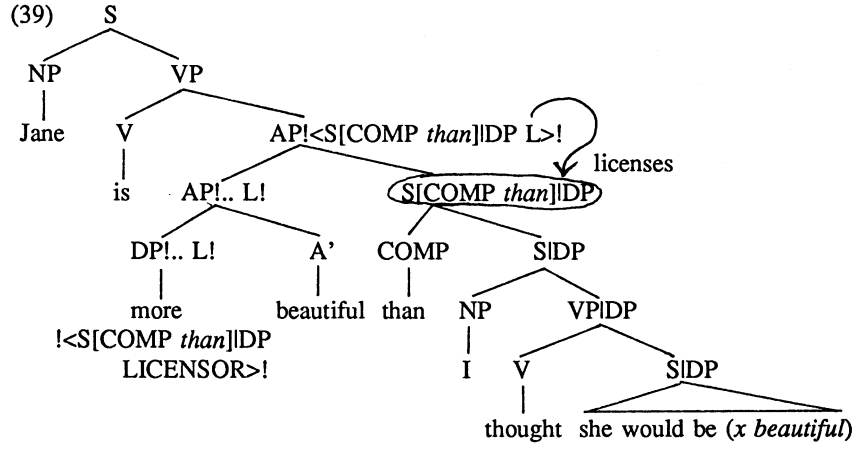
It is well-known that contraction of the tensed auxiliary is not allowed when a (real) gap follows. But (38b) indicates that the DP gap does not obey this constraint. From these observations, we can argue that DP/QP gaps are different from other gaps. We can also see that DP/QP gaps show different characteristics when they are alone from those cases when they are combined with other gaps. Only in the latter case, the (string of) gaps involved behave like normal gaps (cf. Pinkham 1982: 2).

Now we can give a formal account of the relationship between the comparative element and the compared phrase. The basic idea is that the former has the (lexical) property of licensing the latter. I have been exploring a theoretical framework which employs a FOOT feature LICENSOR to capture the relationship between particular lexical items and what is licensed by these items (Chae 1990, 1991, and in prep). This framework, which I will call an "Indexed Phrase Structure Grammar (IPSG)", introduces stacked indices into a GPSG framework. This work is inspired by Gazdar (1988), which explores applicability of Indexed Grammars to the analysis of some English discontinuity phenomena[5].

We will use USLASH (Upright SLASH: |) rather than SLASH to represent the DP/QP gaps. We have seen before that this gap is different from other gaps. Then, under the present framework, we can say that *-er* and $more_1$ have the property of licensing PP[PFORM *than*], S[COMP *than*]|DP or X[CONJ *than*]|DP. $More_2$ licenses PP[PFORM *than*], S[COMP *than*]|QP or X[CONJ *than*]|QP. And Conj *more* licenses XP[CONJ *than*]. The idea here can be easily formalized by using a LICENSOR

feature, which is a stacked FOOT feature. For example, *-er* has <PP[PFORM *than*] LICENSOR> in the lexicon as a part of its syntactic information. This feature propagates through the tree by way of a stack and pops out of the stack when it licenses PP[PFORM *than*].

Let us see how the present system accounts for the following example:



I am using !...! to represent a stack. The LICENSOR feature on the node of the higher AP pops out of the stack and licenses the S[COMP *than*]|DP node under the principle that the LICENSOR feature of a node licenses one of its daughters when its value specification is the same as that of this daughter node. The upward propagation of the LICENSOR feature stops at the moment when it pops out of the stack because it propagates only through a stack. The |DP on the node of S[COMP *than*] cannot propagate upward because it is licensed by the LICENSOR feature. Licensed features are different from freely instantiated features. Notice that USLASH in |DP is responsible only for the omission of *x* in the lowest clause. Adj *beautiful* is omitted due to other factors as noted above. And the USLASH is a mechanism for the account of unbounded dependencies in comparatives.

We need some more constraints, which are not necessarily syntactic, to account for other aspects of comparatives. First, there is a strong parallelism between the head of comparison and the corresponding syntactic and/or semantic unit in the compared phrase. The standards based on which we can measure the parallelism is the site of DP/QP in the head and that of omitted DP/QP (if there is one) in the compared phrase. Notice that the information about these two sites is provided by comparative elements and what is licensed by them, which are connected by way of LICENSOR features in our framework.

A corollary of the parallelism requirement is that the head of comparison should be a part of the compared phrase (at least in its interpretation) when the corresponding unit is not present in the compared phrase:

(40) a. I've never seen a man [[taller] than my mother].
b. *I've never seen [[a taller man] than my mother].

In (40) a semantic unit that should be provided in the compared phrase is 'x tall' in (a) and 'x tall a man' in (b). But this latter meaning is incompatible with *my mother*, which is a female.

Second, we need a constraint on the relative linear order of contrastive phrases, i.e. the focus of comparison and the corresponding contrastive phrase in the compared phrase. I will argue that the latter should be to the right-hand side of the former when the compared phrase is introduced by Conj *than*. This is an absolute grammatical constraint when the contrastive phrases are complements:

(41) a. John stored bigger boxes in the basement than in the attic.
b. *John stored bigger boxes than in the attic in the basement.

The PP *in the basement* is an argument of V *store*. In (a) the contrastive phrase in the compared phrase (i.e. *in the attic*) comes to the right of this PP. But it is not the case in (b). The situation is a little more complex when the contrastive phrases are adjuncts. In these cases, sentences are not ungrammatical even though they violate the above-posited constraint. The reversed order just adds difficulties in processing.

V. Conclusion

In this paper we have seen that new observations about the deletion of A (Adj and Adv), and about *more* and *than* lead to a reanalysis of a messy group of comparatives into separate (but closely related) well-defined constructions. First, we have shown that the deletion of A is distributionally motivated rather than an integral part of CD itself. Second, comparative word *more* has three different functions. This distinction is shown to be related to the contrast among **taller than thin*, *taller than he is thin* and *more tall than (he is) thin*. Third, *than* has also three functions. These three-way distinctions led to a good analysis of the whole range of comparatives including meta-comparatives. We were able to capture the similarities and differences between regular comparatives and meta-comparatives within the same set of mechanisms. Then, we have provided a framework to formally represent the relationship between a comparative element and what is licensed by it (i.e. the compared phrase).

<Endnotes>

1. This paper is a condensed version of sec. 6.1, Chae (in prep). I express my sincere gratitude to Jason Frank, Carl Pollard and Arnold Zwicky for their comments on its earlier versions. I also acknowledge the benefit I got from Carl Pollard's manuscripts on comparatives: "Notes on the Syntax and Semantics of Comparatives" and "A Survey of Comparatives in HPNL". His and my approaches share the basic idea that comparative elements license the compared phrases. But there are significant differences in the classification of comparatives and specific mechanisms of analyses.

2. The [[DP-Adj] - [Det - N']] order is also possible for *more*:
(i) Dan is [more competent a manager] than Derek.
If this order is in effect in (7b), the sentence with an Adj in the compared phrase would be OK under our analysis. However, we can maintain our approach because the [Det - [[DP-Adj] - N']] order is far more natural.

3. Carl Pollard (p.c.) told me that the data in (18) do not show that *than* is a Conj. They show only that whatever factors are at work in coordinate constructions that give rise to the so-called Coordinate Structure Constraints are also at work in that construction. But I think we need Conj *than* to account for other data to be discussed shortly.

4. We can see a difference in the behavior of Comp *than* and Comp *that*:
(i) More students ate apples than e ate oranges.
Here Comp *than* is not subject to ECP even though a full NP is omitted.

5. The tradition of adopting stack-valued features into a GPSG-like framework goes back to Maling and Zaenen (1982), Pollard (1984), and early versions of HPSG.

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