

Subset Comparatives as Comparative Quantifiers

by

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ABSTRACT

This paper motivates and presents a novel analysis of the “subset comparative” construction (e.g. *John saw more phonologists than just Mary; John drank more than just coffee*). I build on Hackl (2000) and Alxatib (2013)’s analyses of comparative quantifiers (*more than three*) to develop a unified account for both. This analysis entails that subset comparatives are formed via ellipsis of a clausal source; I provide evidence for this claim and against previous analyses that give subset comparatives a phrasal analysis.

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1 Introduction

1.1 The phenomenon

This paper is concerned with the meaning of the “subset comparative” construction, which is illustrated in (1a):

- (1) a. John talked to more phonologists than just Mary.
- b. **Assertion:** John talked to more than one phonologist.
- c. **Presuppositions:**
 - John talked to Mary. (prejacent)
 - Mary is a phonologist. (subset presupposition)

Intuitively, (1a) includes the asserted content in (1b) and the two presuppositions in (1c). These presuppositions project in the usual way: the sentences in (2)-(4) all presuppose that Mary is a phonologist that John talked to, and John’s talking to more than one phonologist is what is denied or called into question.

- (2) It’s not the case that John talked to more phonologists than just Mary.
- (3) Did John talk to more phonologists than just Mary?
- (4) If John had talked to more phonologists than just Mary, he might have heard the news sooner.

Together, the assertion and the two presuppositions entail that John talked to other phonologists in addition to Mary.

These constructions were named “subset comparatives” by Grant (2010), who mostly considered cases with bare plurals. The construction in (5) resembles a subcomparative like (6), except that the denotation of the NP in the *than*-clause (the standard) is a subset of the other NP, rather than the two sets being disjoint — hence the name.

- (5) More dogs than just poodles played in the park.
- (6) More men than women came to the party.

In this paper, I will be arguing for a clausal analysis of subset comparatives that treats them as a special case of comparative quantifiers with numerals. On this view, the comparative quantifier in (7) and the subset comparative in (8) have similar syntactic structures.

- (7) More than three students came to the party.
- (8) More students than just John, Mary, and Bill came to the party.

Although (7) and (8) convey the same at-issue content, they initially seem to be quite different in form. The standard in (7) is *three*, an expression that can arguably be thought to refer to a degree, while (8) employs a conjunction of proper names as a standard. This may suggest that the two sentences should receive very different analyses. However, I will argue in section 3 that the similarities between (7) and (8) go beyond their sameness of at-issue content and reveal a deeper structural similarity. Specifically, I will argue that a modification

of the analysis proposed by Hackl (2000) for comparative quantifiers as in (7) can account for the properties of both subset comparatives and numerical comparative quantifiers.

Another difference between (5) and (6) is the presence of the word *just*. Before we go any further, a few words about the role of *just* in subset comparatives are in order.

1.2 A note on *just*

In previous work on subset comparatives (Grant, 2010, 2013; Aparicio, 2014), it has been assumed that *just* does not necessarily have any role of its own in the derivation of the meaning of subset comparatives. The analysis in Aparicio 2014 is based primarily on Spanish, where examples like (9) are fully grammatical without any exclusive particle:

- (9) Juan ha leído más libros que *El Quijote*.
J. has read more books than
lit. ‘Juan read more books than *Don Quixote*.’

There is a considerable amount of cross-linguistic variation in this regard. Many speakers of English and German report that the sentences in (10) and (11) are degraded without their respective exclusive particles.

- (10) John read more books than ??(just) *Don Quixote*.
(11) Ich habe mehr Leute als ??(nur) den Hans gesehen.
I have more people than only the.ACC H. seen
‘I saw more people than just Hans.’

Grant (2010) acknowledges that there are speakers who reject (10) without *just*, but also gives data like the following:

- (12) More dogs than poodles played in the park.

For speakers who reject (10) without *just*, (12) is unambiguously understood to mean the following: the proposition that poodles are not dogs is presupposed, and the sentence asserts that the non-poodle dogs playing in the park outnumbered the poodles. In other words, if we accommodate the presupposition that poodles do not “count” as dogs, the sentence is true iff the dogs (which do not include any poodles) outnumber the poodles. The sentence would be false (still assuming that the presupposition is accommodated) if, for instance, ten poodles and two collies were playing in the park. For other speakers, the sentence is a perfectly natural way of saying that there are other kinds of dogs besides poodles in the park.

The stark contrast between the judgments of these speakers and those reported in Grant 2010 suggests that we are dealing with a dialect difference here. To avoid distraction, subset comparative examples in this paper will be presented with *just*. I will also discuss examples like (12) further in section 4.1.

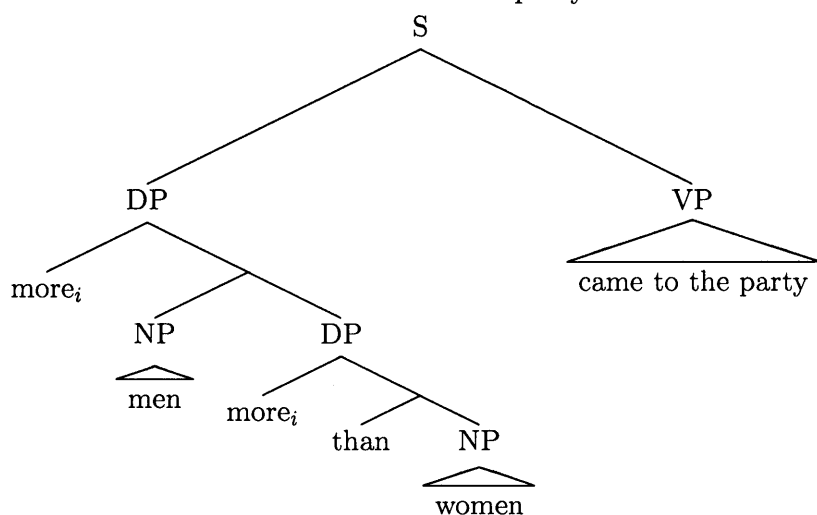
2 Previous analyses

To my knowledge, there are two existing analysis of subset comparatives,¹ each of which is summarized below. Unlike the analysis put forward here, these previous analyses treat subset comparatives as special cases of phrasal comparatives; the differing predictions of phrasal and clausal analyses will be discussed in section 4.

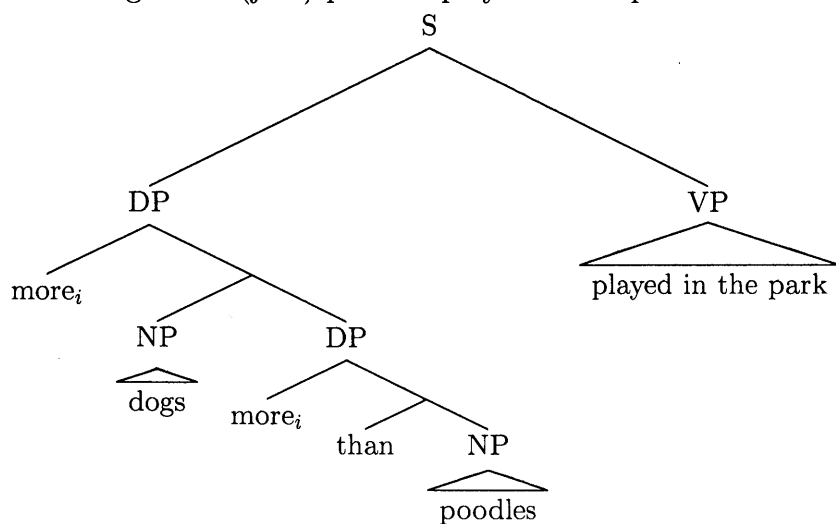
2.1 Grant 2010, 2013

Grant (2010, 2013) gives subset comparatives the DP-shell analysis that was previously proposed by Izvorski (1995) for DP-internal subcomparatives like *more men than women*. On this view, the subset comparative does not have a clausal source; rather, the standard (the predicate *poodles*, in the case of (14)) appears by itself as the argument of *more*.

- (13) More men than women came to the party. (subcomparative)



- (14) More dogs than (just) poodles played in the park. (subset comparative)



¹Additionally, Matushansky and Ionin (2011) discuss a construction in Russian that seems similar to a subset comparative, but differs somewhat in its truth conditions and its syntax.

Grant proposes that there are two different lexical entries for *more* at work. The meaning of the subcomparative in (13) involves comparing sets of degrees, with the familiar *more* of (e.g.) Heim 2000. By contrast, the subset comparative in (14) compares sets of individuals, as in (15b). Additionally, this second meaning for *more* introduces the presupposition that the intersection of the set denoted by the complement of *than* and the set denoted by the matrix VP is non-empty.

- (15) a. $\llbracket \text{more}_1 \rrbracket = \lambda D_{\langle d,t \rangle}. \lambda D'_{\langle d,t \rangle}. \max(D) < \max(D')$
 b. $\llbracket \text{more}_2 \rrbracket = \lambda Q_2. \lambda Q_1. \lambda P: Q_2 \cap P \neq \emptyset. \{Q_2 \cap P\} \subset \{Q_1 \cap P\}$

In addition, Grant (2010) suggests a separate analysis for subset comparatives with singular standards, such as (16).

- (16) a. More men than just my father came to the party.
 b. More men [than my father is ~~a~~ many men] came to the party.

However, Grant (2013) comes down in favor of unifying the two types of subset comparatives under the DP-shell analysis. She suggests that individual-denoting expressions like *my father* are type-shifted into type $\langle e, t \rangle$ predicates, in order to evaluate the subset relationship in the truth conditions produced by the modified meaning of *more*.

2.2 Aparicio 2014

Aparicio (2014) points out several problems with Grant's analysis, the first of which is the semantic type of the standard. Aparicio argues that the case where the standard is an individual should be taken as basic, rather than the case where it is a property. The reason for this is that several different kinds of individual-denoting expressions can serve as subset-comparative standards (including demonstratives and complex definites, in addition to proper names).²

- (17) a. John read more books than just those.
 b. John read more books than just the ones Mary wrote.
 c. John read more books than just *Don Quixote*.

Aparicio also points out that in Grant's example *More dogs than just poodles played in the park*, the bare plural standard is interpreted as the name of a kind, and thus can also be analyzed as an expression of type *e*. So a sentence like *More dogs than just poodles played in the park* is true if there were other kinds of dogs in the park — that is, if there were non-poodle dogs present in addition to the poodles.

Another problem Aparicio points out concerns the presuppositions. Grant (2013)'s subset-comparative meaning for *more*, repeated below as (18), introduces a presupposition. This presupposition is what I am calling the preadjacent — in the case of (17c), this is the proposition that John read *Don Quixote*. The subset presupposition, however, is actually part of the assertion according to this definition.

²Most of the data in Aparicio 2014 are from Spanish, but the same observations can be made in English.

$$(18) \llbracket \text{more}_2 \rrbracket = \lambda Q_2. \lambda Q_1. \lambda P: Q_2 \cap P \neq \emptyset. \{Q_2 \cap P\} \subset \{Q_1 \cap P\}$$

As Aparicio notes, this leads to incorrect predictions, especially when negation is taken into account.

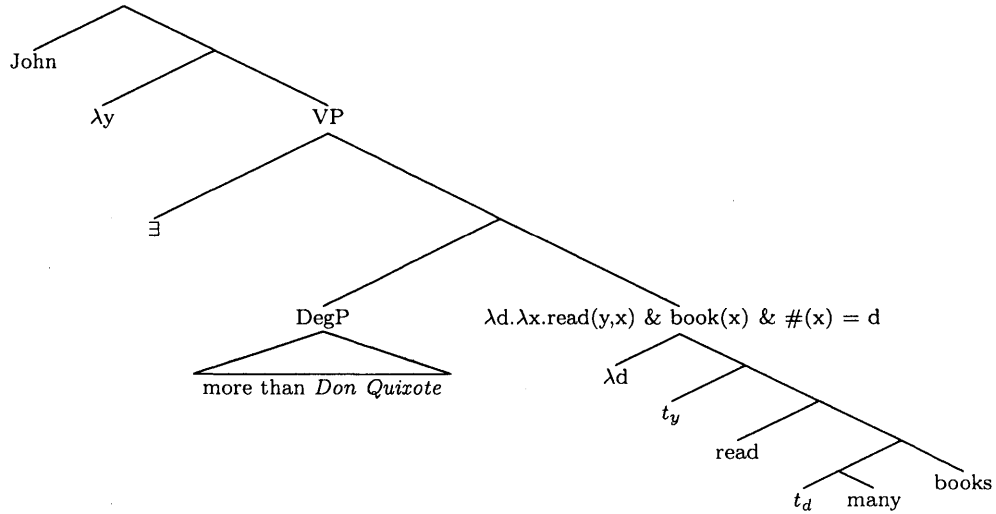
- (19) It's not the case that John saw more students than just Olivia.
 $\neg[\llbracket \{ \text{Olivia} \} \cap \{y : \text{John saw } y \} \subset (\{x : x \text{ is a student}\} \cap \{y : \text{John saw } y \}) \rrbracket]$
 Presupposition: $\{ \text{Olivia} \} \cap \{y : \text{John saw } y \} \neq \emptyset$

The meaning that Grant would predict for (19) presupposes that John saw Olivia, and asserts that the set containing Olivia is not a proper subset of the set of students John saw. These truth conditions would hold in a situation where Olivia is not a student, and John saw at least one student. But in this case, what we actually observe is presupposition failure.

Aparicio (2014) proposes a version of the Direct Analysis for subset comparatives, which is illustrated in (20). The analysis makes use of the lexical entry for *more* shown in (20c): a three-place *more*, as in Heim 1985. This *more* takes an individual like *Don Quixote* as its first argument, and moves with it to the VP edge, as shown in (20). The silent *many* in the matrix clause is a function that maps individuals to their cardinalities. The predicate *d-many books* acts as a predicate modifier for the main verb via Chung and Ladusaw (2004)'s Restrict operation, forming the second argument of *more*. Existential closure then applies at the VP level.

- (20) a. John read more books than (just) *Don Quixote*.

b.



- c. $\llbracket \text{more} \rrbracket = \lambda y. \lambda g_{(d,et)}. \lambda x. \max\{d' : g(d')(x) = 1\} \succ \max\{d'' : g(d'')(y) = 1\}$
 d. $\llbracket \text{John read more books than } \textit{Don Quixote} \rrbracket =$
 $\exists x[\max\{d : \text{read}(j, x) \wedge \text{book}(x) \wedge \#(x) = d\} \succ \max\{d' : \text{read}(j, \text{DQ}) \wedge \text{book}(\text{DQ})$
 $\wedge \#(\text{DQ}) = d'\}]$

The sentence is true iff there exists a plurality of books John read, whose cardinality is greater than the number d such that John read *Don Quixote* and *Don Quixote* is a book and the cardinality of *Don Quixote* is d . If we are in a world where *Don Quixote* is not a book, or if John did not read it, then there is no such number, and presupposition failure

results. But if the presupposition that *Don Quixote* is a book that John read is met, then the sentence is true iff John read more than one book.

In the next section, I will motivate and present an alternative analysis of subset comparatives, according to which the standard is not an individual but an elided clause. In section 4, I will show how this analysis can be applied to various types of subset comparatives. I will come back to Aparicio (2014)'s analysis in section 4.5.

3 Subset comparatives as comparative quantifiers

3.1 Empirical motivation

The guiding intuition for the analysis I am pursuing is that the meanings of subset comparatives like (21) have certain properties in common with those of comparative quantifiers with numerals, like (22).

(21) John saw more phonologists than just Mary and Bill.

(22) John saw more than two phonologists.

Provided that the presupposition of (21) is satisfied, and Mary and Bill are indeed phonologists that John saw, the sentence is true just in case John saw more than two phonologists — that is, the number of phonologists that “just Mary and Bill” amounts to.

The first thing to note is that comparative quantifiers can have presuppositions of their own. As pointed out by Hackl (2000:66), the (a) sentences in (23) and (24) are significantly degraded compared to the (b) sentences:

(23) a. # More than one student met in the hallway.

b. At least two students met in the hallway.

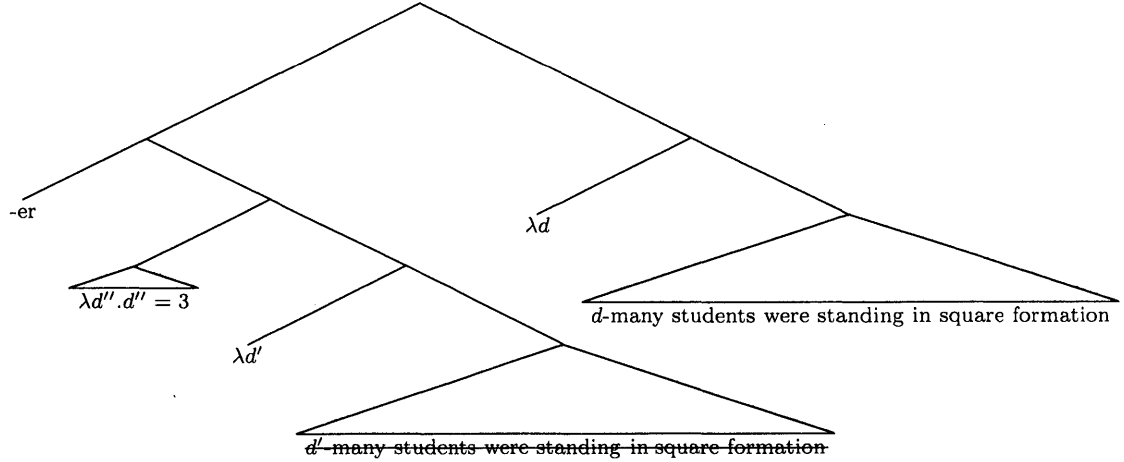
(24) a. # More than three students stood in square formation.

b. At least four students stood in square formation.

This is in spite of the fact that the sentences in each pair have the same truth conditions: if the number of students standing in square formation exceeds three, then it must be at least four. Unlike the versions with *at least*, the comparative-quantifier variants have a status similar to that of the contradictory or paradoxical *One student met in the hallway* and *Three students stood in square formation*. Hackl (2000) calls this phenomenon the Minimal Number of Participants Generalization (MNPG).

To explain the effect, Hackl proposes that the structure of comparative quantifiers involves ellipsis of a clausal source. The constituent that consists of the comparative operator and its first argument are base-generated as the degree argument of *many*, then QR to a clausal node. The standard moves to the top of the *than*-clause. The result is that two degree predicates are formed, which can be compared by *-er*; the one in the *than*-clause is then elided under identity with the matrix. The composition of the predicates in the *than*-clause — the numerical standard *three* and an unpronounced copy of the matrix VP — produces presupposition failure in a sentence like (24a).

(25) a.



- b. $\llbracket \text{-er} \rrbracket = \lambda D_{\langle d,t \rangle}. \lambda D'_{\langle d,t \rangle}. \max(D) < \max(D')$
 c. $\llbracket \text{many} \rrbracket = \lambda d. \lambda P. \lambda Q. \exists x [|x| = d \ \& \ P(x) = 1 \ \& \ Q(x) = 1]$
 d. $\max(\lambda d. d = 3 \ \& \ d\text{-many students were standing in square formation})$
 $< \max(\lambda d. d\text{-many students were standing in square formation})$

Because the predicate *standing in square formation* requires four or more participants, a degree d such that $d=3$ and d -many students were standing in square formation is an impossibility. Thus, Hackl (2000)'s explanation for the MNPG contrasts is a presupposition failure that occurs when composing the *than*-clause.

The sorts of paraphrases that comparative quantifiers can have, if the *than*-clause is made overt, illustrate the intuition behind this semantics:

- (26) More than three students came to the party.
 'More students came to the party **than if there had only been three students who came to the party.**'

Looking back at subset comparatives now, we can see that they also show a version of the MNPG: the sentences in (27) are degraded in the same way that the examples with numerical comparative quantifiers in (23)-(24) are. Moreover, they can be naturally paraphrased with counterfactuals, as (28) shows.

- (27) a. # More people than just Mary met in the hallway.
 b. # More musketeers than just Athos, Porthos, and Aramis stood in square formation.
 (28) More phonologists than just Mary came to the party.
 'More phonologists came to the party **than if only Mary had come to the party.**'

Alxatib (2013, 2014)'s modification of Hackl (2000)'s analysis gives comparative quantifier *than*-clauses the semantics of a conditional with an exhaustified antecedent. On this analysis, the truth conditions of (29a) are as in (29c).

These truth conditions require only that John saw more than one phonologist; the connection between the degree standard and the identity of the individual in the *than*-clause is lost. In order to project the observed presuppositions properly, the *than*-clause will have to be enriched.

3.2 The proposal

In this section, I will propose an adaptation of Hackl (2000)'s analysis of comparative quantifiers for subset comparatives like the sentence in (1a), repeated below as (31).

(31) John saw more phonologists than just Mary.

Based on what we have seen so far, the desiderata for the analysis are as follows: in addition to the truth conditions (John saw more than one phonologist), we should derive the subset presupposition (Mary is a phonologist), the prejacent (John saw Mary), and the MNPG.

The discussion will make use of some concepts from situation semantics. As will become clear later in this section, we are concerned with the truth of propositions not only in different possible worlds, but also in parts of those worlds (*situations*). The definitions of these terms are given below:

- (32) a. A situation *s* **exemplifies** a proposition *p* iff whenever there is a part of *s* in which *p* is not true, then *s* is a minimal situation in which *p* is true.
 b. A situation is a **minimal** situation in which a proposition *p* is true iff it has no proper parts in which *p* is true.

(Kratzer, 2007)

A minimal situation of John seeing Mary, for instance, would consist solely of John seeing Mary. By the definitions in (32), this situation also exemplifies John seeing Mary. A situation where John sees Mary and Bill, or where John sees Mary and eats an apple, is not a minimal or exemplifying situation of John seeing Mary. This is because such situations contain subparts that are irrelevant to the truth of the proposition *John sees Mary*.

To replace the numeral from the comparative quantifier structure, we will need another DegP to take its place. I propose that the structure is as in (33), with the Deg head defined in (34). As in Hackl (2000)'s comparative quantifier structure above, *-er* and its arguments are base-generated as the degree argument of the matrix *many*, then move out; the standard is base-generated in the complement of the lower copy of *many*. The lower copy of the degree predicate $\lambda d. \textit{John saw } d\text{-many phonologists}$ is deleted under identity with the matrix. The standard, *Mary*, moves to a left-peripheral position in its clause, the rest of which is also deleted. I will discuss this ellipsis process further in section 5.1.

We can now see how to derive the interpretation of the sentence *John saw more phonologists than just Mary* in (33). Applying the operator from (34) yields the following for the first argument of *-er*:

$$(36) \quad \lambda d. \forall w \in F[(\text{John just saw Mary in } w) \rightarrow \iota d'. (\text{John saw } d'\text{-many phonologists in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just saw Mary} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just saw Mary}]) \geq d]$$

This set of degrees contains the degrees d such that in every world where John sees only Mary, the maximal situation in that world where John sees only Mary is a situation of John seeing d -many phonologists. If Mary is indeed a phonologist, this set will consist of the number 1.

Next, we combine *-er* with both its arguments and yield the following truth conditions:

$$(37) \quad \llbracket \text{John saw more phonologists than just Mary} \rrbracket = 1 \text{ iff} \\ \max(\lambda d'. \text{John saw } d'\text{-many phonologists}) > \max(\lambda d. \forall w \in F[(\text{John just saw Mary in } w) \rightarrow \iota d'. (\text{John saw } d'\text{-many phonologists in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just saw Mary} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just saw Mary}]) \geq d])$$

That is, the number of phonologists John saw in the actual world exceeds the (highest) number d such that John sees d -many phonologists in situations where he only sees Mary. These truth conditions will be met if John saw more than one phonologist. If Mary is not a phonologist, the set of degrees in the *than*-clause will be empty, leading to the observed failure of the subset presupposition in this case. The preadjacent presupposition is due to the presence of *just*, which will be discussed below.

Recall also that the MNPG effects of comparative quantifiers come about as the result of a *than*-clause making reference to a situation where the number of participants does not satisfy the requirements of the predicate:

$$(38) \quad \# \text{ More students than just John, Mary, and Bill stood in square formation.}$$

The problem occurs when we try to compose the *than*-clause:

$$(39) \quad \lambda d. \forall w \in F[(\text{just J, M, and B stood in square formation in } w) \rightarrow \iota d'. (d'\text{-many students stood in square formation in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{just J, M, \& B stood in square formation} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{just J, M, \& B stood in square formation}]) \geq d]$$

Since a world or situation where only three people stand in square formation is an impossibility, this is a degree predicate that cannot be true of any degrees. Here, too, the result is presupposition failure.

Next, we will revise the analysis to account for another instance of presupposition failure. Consider the sentence in (40):

$$(40) \quad \text{John saw more phonologists than just Mary and Bill.}$$

This sentence presupposes that both Mary and Bill are phonologists. If Mary is a phonologist, but Bill is not, something goes wrong with the composition of the sentence, and we want the analysis to reflect this.

Making just one additional assumption about how measure functions based on degree properties work will allow us to capture the subset presupposition. This assumption is as follows: only situations that exemplify *John saw d -many phonologists* for some d in the first place will have a measure on this scale at all. The definition in (35), then, can be revised to reflect this, by adding a presupposition of exemplification:

- (41) For any D of type $\langle d, st \rangle$:
 $\mu_D := \lambda s : \exists d[\forall s'[s' \sqsubseteq s \rightarrow D(d)(s) = 1] \vee (D(d)(s) = 1 \ \& \nexists s'[s' \sqsubseteq s \ \& \ D(d)(s') = 1]]$.
 $\iota d(D(d)(s) = 1)$

The presupposition of (41) requires the situation in question to satisfy Kratzer's definition of exemplification for the combination of the degree predicate and some degree. That is, there is a degree d such that either the proposition $\lambda s'. D(d)(s') = 1$ is true in all subsituations of s , or $\lambda s'. D(d)(s') = 1$ is true in s but not in any proper subpart thereof. Thus, a situation where John sees the phonologist Mary and the non-phonologist Bill is not mapped to the degree 1 by this function; rather, the result is undefined. However, its subsituation where John only sees Mary does get mapped to 1 by the function.

So, in the case of (40), the *than*-clause refers to a set of degrees d such that the situation of John seeing Mary and Bill measures at least d on the measure function we get by applying (41) to the degree predicate $\lambda d. \textit{John saw } d\text{-many phonologists}$. However, since in this case the relevant situation includes John seeing the non-phonologist Bill, it has no measure on this scale. As in the MNPG-violating case, we end up with an empty set of degrees and presupposition failure.

3.2.1 What *just* does

We have now seen how the present analysis of subset comparatives can account for the subset presupposition, as well as the MNPG. There is one component of the meaning that still needs to be addressed, namely the prejaçant presupposition. In addition, if subset comparatives and numerical comparative quantifiers are to be unified under a single analysis, the account should provide an explanation of why the former give rise to a prejaçant presupposition and the latter do not.

- (42) a. John saw more phonologists than just Mary and Bill.
 b. John saw more than two phonologists.

While (42a) presupposes that John saw Mary and Bill, the inference that John saw two phonologists is an entailment in the case of (42b). If John did not see at least two phonologists, (42b) is merely false.

Recall that both Alxatib (2013)'s analysis of comparative quantifiers and the analysis of subset comparatives that I have proposed above involve a conditional with an exhaustified antecedent in the *than*-clause. The *than*-clause is the set of degrees d such that John sees d -many phonologists if he sees only two phonologists, or if he only sees Mary and Bill.

The difference between the individual and numerical standards in (42) can be explained if the numeral in comparative quantifiers, unlike the subset comparative standard, comes with an exhaustified meaning from the start. Kennedy (2015) gives an analysis of numerals whereby their truth conditions are as in (43):

(43) $\llbracket \text{John saw two phonologists} \rrbracket = 1$ iff $\max(\lambda d. \text{John saw } d\text{-many phonologists}) = 2$

In other words, on this view, *John saw two phonologists* is true iff he saw exactly two phonologists.

If maximality is part of the interpretation of numerals in this way, this has the immediate consequence that the conditional antecedent in the *than*-clause in (42b) has the kind of exhausted meaning that Alxatib proposes. Thus, we derive the following truth conditions for (42b) without having to presuppose a prejacent:⁴

(44) $\llbracket \text{John saw more than two phonologists} \rrbracket = 1$ iff
 $\max(\lambda d. \text{John saw } d\text{-many phonologists}) > \max(\lambda d. \forall w \in F[(\text{John saw exactly } 2 \text{ phonologists in } w) \rightarrow \iota d'. (\text{John saw } d'\text{-many phonologists in } \iota s.s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John saw exactly } 2 \textit{ phonologists} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John saw exactly } 2 \textit{ phonologists}]) \geq d])$

Subset comparative standards that do not contain numerals, on the other hand, are not automatically exhausted. This is where an exclusive particle like *just* comes in.

I assume that *just* in subset comparatives has the same semantics as it does in more well-known contexts, i.e. that *John just saw Mary and Bill* presupposes that John saw Mary and Bill and asserts that he did not see anyone else:

(45) $\llbracket \textit{just} \rrbracket = \lambda p. \lambda w : p(w) = 1. \forall q [q \in ALT(p) \rightarrow q = 0]$

This is what allows the antecedent of the conditional to take us to worlds where John saw Mary and Bill and no-one else.

The presupposition contributed by *just* is inherited by the sentence as a whole, leading to the presence of a prejacent presupposition in the subset comparative where the numerical comparative quantifier lacks one.

Another possibility is that numerals do not come with an automatically exhausted meaning, but comparative quantifiers include a covert exhaustivity operator (like Chierchia et al. (2008)'s *O*), which is like *only* except that it asserts that its propositional argument is true instead of presupposing it. If this is the case, then the question is why non-numerical subset comparatives cannot be formed with *O* in this position.

When considering this, it may seem initially promising that some English speakers accept subset comparatives without *just*; however, since the presuppositions of these sentences are the same for those speakers regardless of whether *just* is overtly present, it seems that they have a covert *just* in subset comparatives and not a covert *O*.

⁴In fact, it is possible to have a prejacent presupposition with a numeral — just in case the standard is exhausted overtly with *just* rather than the covert exhaustification that is always available to numerals.

- (i) a. John doesn't have more than three arms.
- b. #John doesn't have more than just three arms.

This contrast in felicity seems to be due to the fact that *John has three arms* is presupposed in the second case. If the presupposition is met, the sentence is acceptable again:

- (ii) John doesn't have more than just two arms.

3.2.2 Presupposition triggers, suspension, and *just*

A consequence of what I am proposing here is that the prejacent and the subset presupposition have different sources. While the prejacent is triggered by *just*, the subset presupposition must be true in order for the measure function in the *than*-clause to be defined. This is another difference between the present analysis and that of Aparicio (2014): I have been distinguishing between the prejacent and the subset presupposition and accounting for them separately, while Aparicio's analysis treats them as two parts of a single presupposition that is triggered by applying a degree predicate to the phrasal standard. That is, on Aparicio's view, *John saw more phonologists than just Mary and Bill* introduces the single presupposition that Mary and Bill are phonologists that John saw.

There is, in fact, evidence that the prejacent and the subset presupposition have separate sources; this evidence comes from their suspension behavior. Some kinds of presuppositions are known to be more easily suspendable than others. The following data, from Abusch (2010), illustrate the contrast:

- (46) a. I have no idea whether John ended up participating in the Road Race yesterday.
But if he won it, then he has more victories than anyone else in history.
- b. I have no idea whether anyone read that letter. #But if it was John who read it, let's ask him to be discreet about the content.

The presupposition triggered by the verb *win* in (46a) — i.e., that John participated in the Road Race — can be suspended in a context where the speaker is ignorant of whether it holds. *Win* is thus an example of a soft presupposition trigger. The presupposition of a cleft is not suspendable in this way, as evidenced by the infelicity of the continuation in (46b), and so clefts belong to the class of hard triggers.

When we test the presuppositions of subset comparatives in such contexts, we see that they differ in the same way.

- (47) *Context: John's woodwind quintet is looking for a new bassoon player. Because they only need one person, the musicians have decided for now that they will contact people one at a time and wait for a definite yes or no from each one, to avoid a situation where they have two candidates and have to choose between them. John in particular thinks that this is important, in order to avoid an awkward situation.*
- a. *Further context: One potential candidate is Mary, an acquaintance of John and his colleagues. They have decided that Mary is the person they will contact next. One day, John overhears two of his fellow quintet members talking about bassoonists, and he says the following:*
I don't know if you talked to Mary. **But if you talked to more bassoonists than just Mary**, then we may have a problem.
- b. *Alternative further context: John overhears a conversation between two of his fellow quintet members. He's not sure exactly what they're talking about, but he thinks they're talking about bassoonists, and the name 'Bill' keeps coming up. John says the following:*
I don't know if Bill is a bassoonist. #**But if you talked to more bassoonists than just Bill**, then we may have a problem.

That is, the prejacent patterns with soft presuppositions: in the scenario in (47a), the speaker is ignorant of whether the prejacent is true, and so the antecedent of the conditional in the continuation ends up meaning something like “if you talked to more than one bassoonist” (the scenario that John is interested in in this context). The subset presupposition, on the other hand, is hard and not suspendable, as (47b) shows.

Just acts as a soft trigger in contexts other than subset comparatives as well:

- (48) I don’t know if you talked to John about the issue. But if you just talked to John, you might have gotten a biased view of the situation.

Abrusán (2016) has argued that the hard or soft status of a presupposition does not necessarily tell us anything about its source. Even if this is so, the fact that the two presuppositions appear to have different types of triggers is evidence that they are indeed triggered separately. This is predicted by the present account, but not by Aparicio (2014).

We have seen how the present analysis can account for subset comparatives with proper names as standards, and how it preserves the insights of Hackl (2000) and Alxatib (2013) for deriving the truth conditions of numerical comparative quantifiers. In the next section, we will further examine the predictions of this analysis: we will see how to deal with standards other than proper names, as well as taking a look at some advantages of this account over previous analyses.

4 Applications and extensions

In section 3, I laid out an analysis of subset comparatives that can account for examples with proper-name standards. In the following sections, I will show how the analysis captures the behavior of other kinds of standards: mass nouns, bare plurals, predicate adjectives, standards involving disjunction, and standards that consist of multiple remnants. Additionally, we will see that some of these phenomena provide further evidence for a reduced clausal analysis and against a direct analysis of subset comparatives.

4.1 The interpretation of mass and bare plural standards

The present analysis can easily be extended to account for subset comparatives that have mass nouns as standards, such as (49).

- (49) John drank more than just coffee.

If the presupposition that John drank some coffee is met, then this sentence is true iff John drank something that was not coffee.⁵ The truth conditions are given in (50):

- (50) $\llbracket \text{John drank more than just coffee} \rrbracket = 1$ iff
 $\max(\lambda d. \text{John drank } d\text{-much}) > \max(\lambda d. \forall w \in F[(\text{John just drank coffee in } w) \rightarrow \iota d'.$
 $(\text{John drank } d'\text{-much in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just drank coffee} \ \& \ \neg \exists s'[s' \sqsubseteq w$
 $\ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just drank coffee}]) \geq d])$

⁵The subset presupposition is not contributing much in this case: it amounts to presupposing that coffee is a substance that one can drink, i.e. that a situation where John drinks coffee has a value on the measure function that corresponds to the degree predicate $\lambda d. \textit{John drank } d\text{-much}$.

The *than*-clause denotes the set of all degrees d' such that if John just drank coffee, John drank at least d' -much.⁶ The sentence then asserts that the maximal amount that John drank in total exceeded all of these degrees.

That John drank some non-coffee substance is an entailment of the sentence: if John only drank coffee, the sets of degrees in the *than*-clause and the matrix are identical, and the sentence is false. This is why it is impossible to “drink more than just coffee” merely by drinking more coffee.

A related and seemingly puzzling fact is that the standard can also be a bare plural:

(51) More dogs than just poodles are in the park. (Grant, 2013)

Aparicio (2014) predicts that this sentence should have a kind reading, whereby *poodles* is interpreted as a type e expression. The predicate *in the park* is true of the kind *poodles* when there are individuals in the park that instantiate the poodle kind. This is illustrated in (52), using Chierchia (1998)’s Derived Kind Predication.

(52) $\llbracket \text{Poodles are in the park} \rrbracket = 1$ iff $\exists x[\cup^{\cap} \text{poodles}(x) \ \& \ \text{in-the-park}(x)]$

We can then use this to understand Aparicio’s predicted truth conditions for (51), which are given in (53).

(53) $\llbracket \text{More dogs than just poodles are in the park} \rrbracket = 1$ iff
 $\exists y[\max\{d': \text{in-the-park}(y) \ \& \ \text{dogs}(y) \ \& \ \#(y) = d'\} > \max\{d: \text{in-the-park}(\cap^{\cap} \text{poodles}) \ \& \ \text{dogs}(\cap^{\cap} \text{poodles}) \ \& \ \#(\cap^{\cap} \text{poodles})=d\}]$

That is, *more dogs than just poodles are in the park* presupposes both that there are poodles in the park and that poodles are dogs, and the sentence is true iff more than one kind of dog is represented in the park (the cardinality of *poodles* being “1 kind of dog” in this case).

The kind reading is indeed a possible candidate for the interpretation of (51). However, a subset comparative with a bare plural standard that unambiguously counts individuals and not kinds will be a problem for Aparicio’s analysis.

A differential phrase can disambiguate between an individual- and a kind-counting reading. Like comparative quantifiers, subset comparatives are generally resistant to differentials, but differential *many* is an exception:

(54) The new company policy has benefited many more employees than just women.

⁶Here, I assume that the worlds that count as “closest” for the purposes of the antecedent of the conditional are worlds where John drank the same amount of coffee that he did in the actual world. This is a particularly natural interpretation of an overt counterfactual with mass nouns that stand in a similar subset relationship:

- (i) If John had only drunk red wine, how much wine would he have drunk?

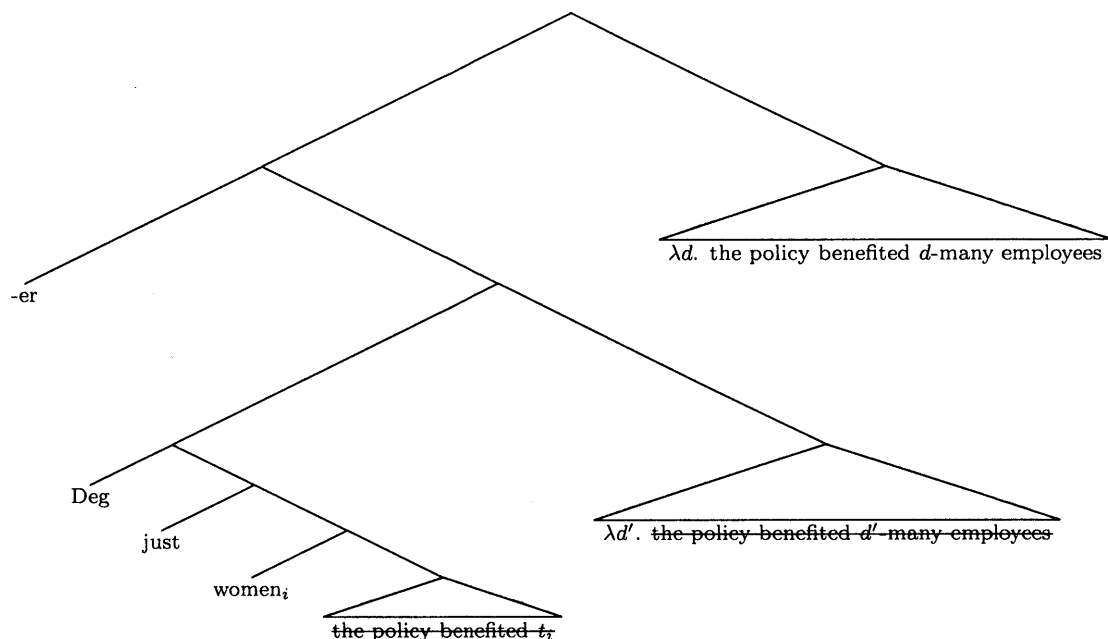
This question can be answered with the amount of red wine that John actually drank.

It is also possible to reason about John’s behavior in answer to (i): for instance, “if John had only drunk red wine, he would have had three glasses” would also be a felicitous answer in a world where he had one glass of red and two glasses of white, but had decided beforehand to have exactly three glasses of wine. The fact that a reading of this kind is available for conditionals but not subset comparatives seems to be telling us something about the nature of the modal base.

The differential phrase here makes it clear that individuals are being counted, not kinds: in this case, there is only one other salient kind of employee (namely men⁷), making differential *many* infelicitous or nonsensical on the kind reading.

The analysis proposed in the previous section composes the meaning of a sentence like (54) in the following way:

(55) a.



- b. $\llbracket (\text{The policy benefited more employees than just women}) \rrbracket^w = 1$ iff $\max(\lambda d. \text{the policy benefited } d\text{-many employees in } w) > \max(\lambda d. \forall w \in F[(\text{the policy just benefited women in } w) \rightarrow \iota d'. (\text{the policy benefited } d'\text{-many employees in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{the policy just benefited women} \ \& \ \neg \exists s' [s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{the policy just benefited women}])] \geq d])$

That is, we ask: if only women had benefited from the policy, how many employees would that have been? These are the degrees of which the degree predicate in the *than*-clause is true. The sentence is then true iff the total amount of employees who benefited from the policy is greater than the maximal element of that set.

This example can also tell us something about the subset presupposition. In our initial example with a bare plural, *More dogs than just poodles are in the park* seemed to depend on *poodles* being a subset of *dogs*. However, in this case we do not presuppose that the set of women is a subset of the set of employees.

The present analysis correctly predicts this weaker presupposition, as we can see in (55b) above. These truth conditions compare the total number of employees who benefited to the

⁷One might wonder whether the kind reading of (54) could be salvaged by counting other predicates: that is, relevant “kinds of employees” in this scenario might include not only men and women, but also (for instance) programmers and accountants. If this were the case, then (54) could be true even if only women benefited from the policy, as long as it was also true that programmers benefited, accountants benefited, left-handed people benefited, and so on (for enough kinds to count as “many more than 1”). However, in this case the sentence is actually judged to be false. The truth conditions of (54) require the policy to have benefited non-women.

number of employees who benefited in the subsituation that only contains women. In order for the set of degrees in the *than*-clause to be nonempty, there must be some degree(s) *d* such that if the policy benefited any women, then the policy benefited *d*-many employees. For this to be the case, there must be some employees who are women.

Given this, we can revise our description of the subset presupposition: a sentence of the form *More P than just Q are R* presupposes that some *P* are *Q* (and entails that some *P* are not *Q*), no matter what the type of *Q* is. Thus, we can even characterize *John saw more phonologists than just Mary* as presupposing that some phonologists are Mary and entailing that some phonologists are not Mary — from which it follows that Mary is a phonologist.

4.2 Adjectival *than*-clauses

So far, we have seen instances of subset comparatives where the standard is a (singular or plural) individual, a bare plural, and a mass noun. More puzzling still are cases where the standard is not a nominal at all, but a predicative adjective:

- (56) This computer is more than just fast. (Its graphics capabilities are also quite good.)

These presuppose their prejacent in the same way that ordinary subset comparatives do, as seen by the fact that the continuation in (57) is contradictory.

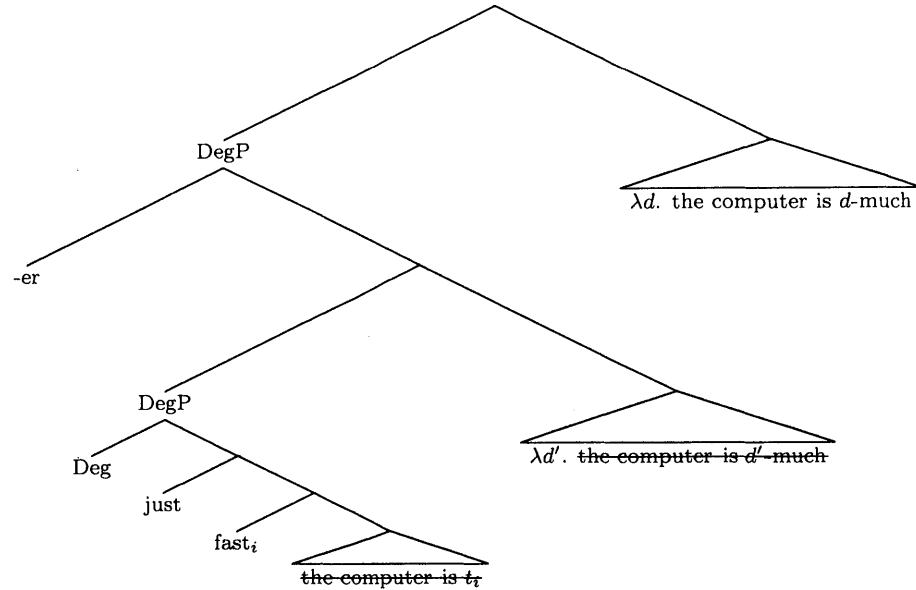
- (57) This computer is **more than just fast**: it has amazing graphics and tons of memory, **#despite not being fast at all**.

A sentence like (56) seems quite different from other subset comparatives, and especially from their comparative-quantifier cousins: unlike in the case of *More than three students came to the party*, it is not immediately clear what is being counted in this case.

However, the situation-semantic account of subset comparatives provides us with a solution to this problem. As long as we can conceive of and make reference to a small abstract subsituation that consists only of the computer and its fastness property, we can compare that situation to the real-world situation consisting of the computer and all the salient properties it actually has.⁸

⁸The fact that we are counting properties here is what differentiates subset comparatives with adjectival standards from a comparative like *Mary was more than happy to fix the computer*. In the latter case, *more than happy* means something like “extremely happy”, and does not trigger a presupposition that Mary was happy (rather, this is an entailment). Giving an account of *more than happy* is beyond the scope of this paper.

(58) a.



- b. $\llbracket \text{The computer is more than just fast} \rrbracket = 1$ iff:
 $\max(\lambda d. \text{the computer is } d\text{-much}) > \max(\lambda d. \forall w \in F[(\text{the computer is just fast in } w) \rightarrow \iota d'. (\text{the computer is } d'\text{-much in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{the computer is just fast} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{the computer is just fast}) \geq d])$

Like in previous cases, we presuppose the prejacent, but there is no subset presupposition: only the requirement that there is some degree d such that if the computer is fast, then the computer is d -much.

Thus, the account that I have proposed for *John saw more phonologists than just Mary* is capable of covering the adjectival case as well, without having to add any new semantic machinery.

Furthermore, subset comparatives of this kind can occur not only with adjectives in the standard, but also with verbs. Pinkham (1985:96) gave (59) as an example of a comparative that would be difficult to analyze in terms of ellipsis from a clausal source, but which we can now recognize as a subset comparative *avant la lettre*:

(59) This machine **does more than type**.

The treatment of adjectival standards that I have proposed can be extended to these cases as well.

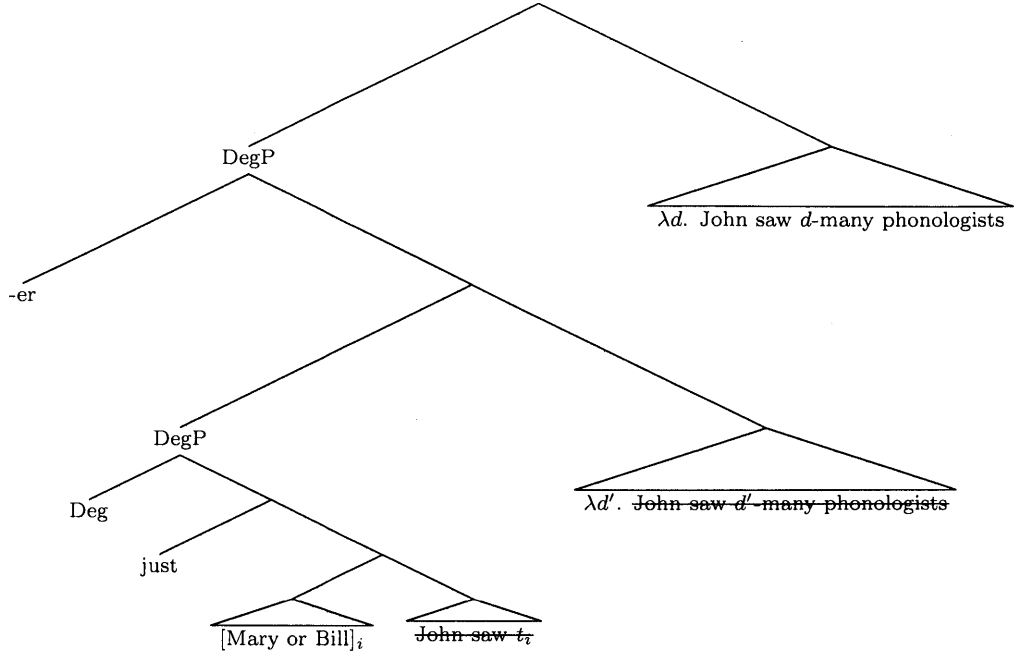
4.3 Disjunction in the *than*-clause

Another advantage of the present analysis over a direct analysis is that it is better equipped to deal with a standard involving disjunction, as in (60).

(60) John saw more phonologists than just Mary or Bill.

The LF and truth conditions of (60) are given in (61):

(61) a.

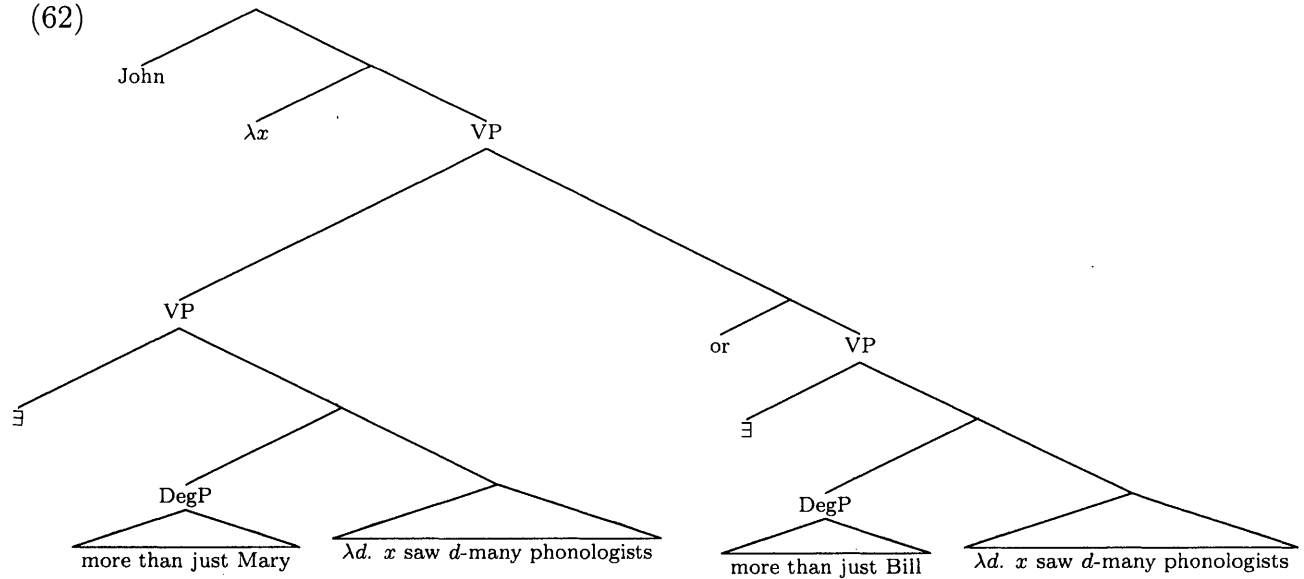


- b. $\llbracket \text{John saw more phonologists than just Mary or Bill} \rrbracket = 1$ iff
 $\max(\lambda d. \text{John saw } d\text{-many phonologists}) > \max(\lambda d. \forall w \in F[(\text{John just saw Mary or Bill in } w) \rightarrow \iota d'. (\text{John saw } d'\text{-many phonologists in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just saw Mary or Bill} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just saw Mary or Bill}]) \geq d])$

In other words, (60) is true just in case John saw a number of phonologists greater than the number of phonologists he sees in a situation where he only sees Mary or Bill (and the prejacent, that John saw Mary or Bill, is presupposed). If the subset presupposition is met, then any situation of John seeing Mary or Bill is a situation in which John sees one phonologist. So (60) entails that John saw more than one phonologist, and presupposes that at least one of the phonologists he saw was Mary or Bill.

The challenge for Aparicio (2014)'s account, which derives its truth conditions by mapping individuals to their cardinalities, is how to do so for a disjunction of individuals: can *Mary or Bill* even be said to have a cardinality?

Here are two potential ways for the direct analysis of subset comparatives to get around this problem. First, we could assume that (60) comes about via disjunction reduction, as in (62). This would produce the truth conditions in (63).



- (63) $\llbracket \text{John saw more phonologists than just Mary or Bill} \rrbracket =$
 $\exists x[\max(\{d: \text{see}(\text{John}, x) \ \& \ \text{phonologist}(x) \ \& \ \#(x) = d\}) > \max(\{d': \text{see}(\text{John}, \text{Mary}) \ \& \ \text{phonologist}(\text{Mary}) \ \& \ \#(\text{Mary}) = 1\})] \vee$
 $\exists x[\max(\{d: \text{meet}(\text{John}, x) \ \& \ \text{phonologist}(x) \ \& \ \#(x) = d\}) > \max(\{d': \text{meet}(\text{John}, \text{Bill}) \ \& \ \text{phonologist}(\text{Bill}) \ \& \ \#(\text{Bill}) = 1\})]$

The at-issue content of the sentence would then be along the lines of “John saw more than one phonologist or John saw more than one phonologist.” The two disjuncts differ only in that one presupposes that Mary is a phonologist that John saw and the other presupposes that Bill is.

The problem with this is that in general, the assertion ϕ or ϕ is infelicitous. This is the case not only if the proposition ϕ is repeated verbatim, as in (64a), but also if the sentence has two equivalent “disjuncts” that differ in their surface expression, as in (64b).

- (64) a. # Either 7 is a prime number, or 7 is a prime number.
 b. # Either 7 is a prime number, or 7’s only divisors are itself and 1.

Disjoining two propositions with the same truth conditions is still impossible even if their presuppositions are different, as shown in (65):

- (65) a. # Either John even gave a [BOOK]_F to Mary, or John even gave a book to [MARY]_F.
 b. # John [even gave a [BOOK]_F to Mary] or [even gave a book to [MARY]_F].

Since the truth conditions of a sentence with *even* are the same as those of its prejacent, the two disjuncts are equivalent except for their presuppositions: the first disjunct presupposes that John also gave Mary some likelier presents than a book, while the second presupposes that John gave books to some likelier people than Mary. Disjunction is still impossible in this case, regardless of whether the disjuncts are full clauses or VPs. Giving the disjuncts non-equivalent truth conditions, as in (66), makes these sentences acceptable:

- (66) a. Either John even gave a [BOOK]_F to Mary, or John even gave a book to [BILL]_F.
 b. John [even gave a [BOOK]_F to Mary] or [even gave a book to [BILL]_F].

Turning our attention back to subset comparatives, we find that overtly disjoining VPs or full clauses results in infelicity here as well:

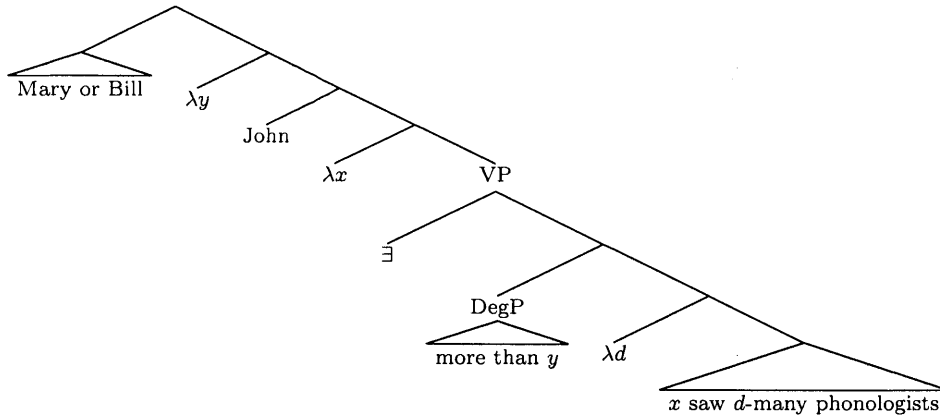
- (67) a. # John (either) saw more phonologists than just Mary or saw more phonologists than just Bill.
 b. # Either John saw more phonologists than just Mary, or John saw more phonologists than just Bill.

If (60) results from the ellipsis of a disjunction of VPs, as illustrated in the tree in (62), then we should expect to see the same effect of redundant disjunction as in (65-67). However, (60) is perfectly acceptable.

The second way of interpreting disjunctions under Aparicio (2014)'s phrasal analysis would be to lift *Mary or Bill* to type $\langle et, t \rangle$:

(68) $\llbracket \text{Mary or Bill} \rrbracket = \lambda P_{et}. P(\text{Mary}) = 1 \vee P(\text{Bill}) = 1$

(69)



However, the resulting truth conditions would be identical to the ones in (63), so uttering (60) would still amount to asserting a disjunction of propositions with the same at-issue content.

But questions still remain for the present analysis as well: the truth conditions in (61) require only that John saw more than one phonologist (one of whom was Mary or Bill, by the prejacent and subset presupposition). The prediction is that the sentence should be true in a scenario where John saw both Mary and Bill, and no other phonologists. However, in neutral contexts, speakers report that (61) sounds false or strange in this case.

Nevertheless, it is possible for subset comparatives with disjunctions in the *than*-clause to be judged as true and felicitous even in a context where only the two disjuncts are true. Consider the following dialogue:

- (70) *Context: John is meeting with his college advisor to select courses for the upcoming semester.*

John: So far, I've picked three classes. For my fourth and final class, I want to take something in linguistics so that I can declare the major at the end of the semester.

I've narrowed it down to two classes: either Semantics or Phonology.

Advisor (consulting the official requirements): If you want to declare the major this semester, **you'll need to take more linguistics classes than just Semantics or Phonology**. You need at least two classes' worth of credits before you can do that.

In this scenario, John could fulfill the requirement if he took both of the linguistics classes he mentioned, and no others. So it is possible to interpret “taking more linguistics classes than just Semantics or Phonology” as “taking more than one linguistics class,” as predicted.

In addition, it is worth noting that although (71b) is perhaps somewhat better than (71a), it is still not perfect; and furthermore, that replacing *or* with *and* makes the sentence felicitous, as in (71c).

- (71) a. I saw more phonologists than just John or Mary — #I saw John and Mary.
 b. I saw more phonologists than just John or Mary — #?I saw John, Mary, and Bill.
 c. I saw more phonologists than just John and Mary — I saw John, Mary, and Bill.

The contrast between (71b) and (71c) suggests that the reason for the oddness of (71a) is an implicature (triggered by *or*) that *I saw John* and *I saw Mary* are not both true. If this is the case, then these observations are not inconsistent with (60) or (71a) merely entailing that more than one phonologist was seen, as the present analysis predicts.

Another question is whether John seeing both Mary and Bill in the actual world is a problem for the conditional in the *than*-clause. The truth conditions of *John saw more phonologists than just Mary or Bill* are repeated below:

- (72) $\llbracket \text{John saw more phonologists than just Mary or Bill} \rrbracket = 1$ iff
 $\max(\lambda d. \text{John saw } d\text{-many phonologists}) > \max(\lambda d. \forall w \in F[(\text{John just saw Mary or Bill in } w) \rightarrow \iota d'. (\text{John saw } d'\text{-many phonologists in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just saw Mary or Bill} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just saw Mary or Bill})] \geq d])$

Worlds where John saw both Mary and Bill are not included in the antecedent of the conditional in the *than*-clause, since *John just saw Mary or Bill* is not true in those worlds. Nor is there a unique maximal subsituation of these worlds where John saw Mary or Bill, since there is a situation for each of them. However, the modal base is counterfactual, so the actual world does not need to be part of it. (In a simpler example, like *John saw more phonologists than just Mary*, the actual world is also not part of the modal base if the sentence is true, since it asserts that John did not just see Mary.) So the evaluation of the truth conditions of the sentence involves comparing the number of phonologists John saw in the actual world to the set of degrees derived from the counterfactual modal base. For the sentence to be true, John is required to have seen more than one phonologist, which is consistent with seeing both Mary and Bill.

4.4 Multiple remnants

The possibility of multiple remnants in the *than*-clause is a hallmark of reduced clausal comparatives (Merchant, 2009). Subset comparatives in English are also capable of hosting multiple remnants. There are two ways of doing this:

- c. $\llbracket \text{John read more books to the children than just } TI \text{ to Mary} \rrbracket = 1$ iff
 $\max(\lambda d. \text{John read } d\text{-many books to the children}) > \max(\lambda d. \forall w [\text{John just read } TI \text{ to Mary in } w \rightarrow \iota d' (\text{John read } d'\text{-many books to the children in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just read } TI \text{ to Mary} \ \& \ \neg \exists s' [s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just read } TI \text{ to Mary}]) \geq d])$

To calculate the truth conditions, we first take the exhaustification of the prejacent *John read Treasure Island to Mary* and ask: what are the degrees d such that in a world where the prejacent is true, the corresponding situation s in that world measures d on the measure function that maps situations to the number of books John read to the children?⁹

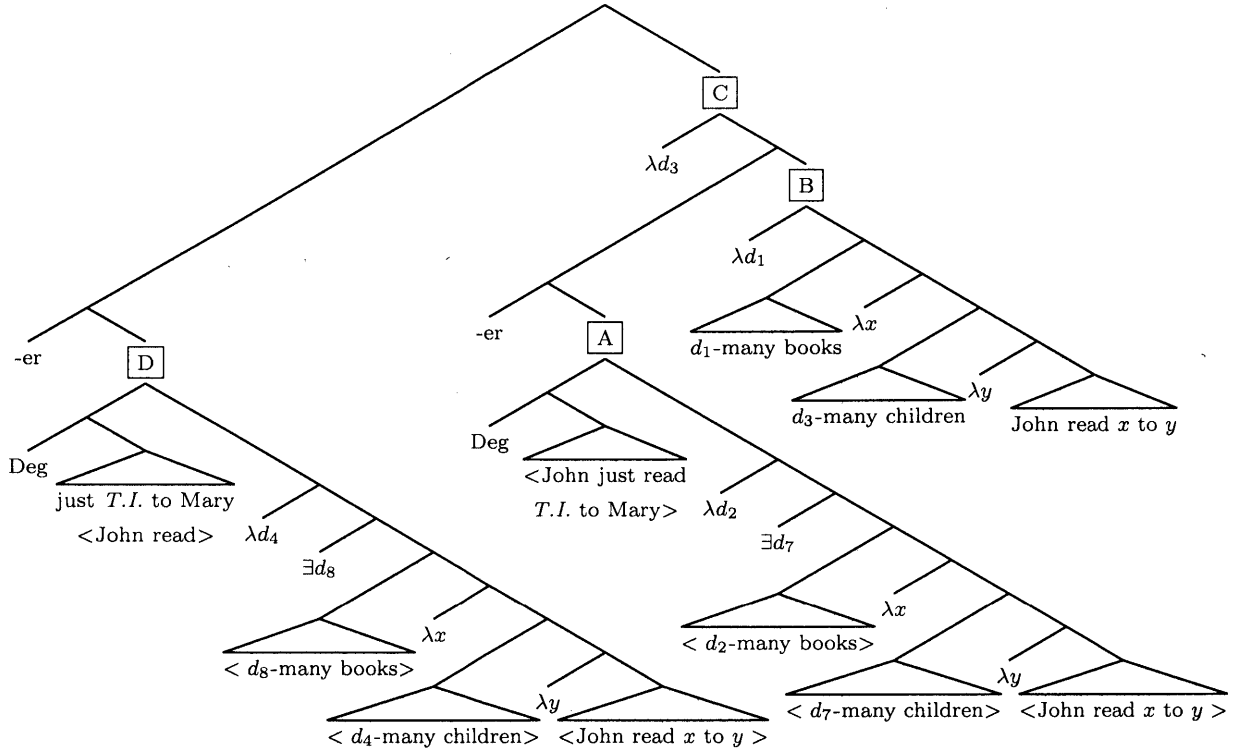
In order for there to be any such degrees, the following must hold: first, as explained in the previous section, these worlds must be sufficiently close to the actual world; that is, John has to have actually read *Treasure Island* to Mary. Second, in order for the situations in question to have a measure on the relevant measure function and not be undefined, a situation of John reading *Treasure Island* to Mary must be a situation of John reading a book to the children: that is, *Treasure Island* must be a book and Mary must be one of the children. Any situation of this kind is a situation where John read one book to the children, so the set of degrees denoted by the *than*-clause contains 1.

When we apply *-er* to both its arguments, we end up asserting that John read more than one book to the children and presupposing both the prejacent and the subset presupposition. Thus, we can derive the correct truth conditions for a sentence with multiple remnants in the same way as for the subset comparatives with only one remnant that we saw in section 3.

The structure with two instances of *more* is shown in (77). Here, we have two *than*-clauses, each of which starts as the argument of one of the *mores* in the matrix. Each of the *than*-clauses is elided under identity with the matrix, leaving only one instance of the standard.

(77) John read more books to more children than just *Treasure Island* to Mary.

⁹As mentioned above, I am assuming that *the children* can have a team-credit interpretation, i.e. that *John read Treasure Island to the children* can be true iff John read it to *any* of the children.



We'll start by composing the inner *than*-clause, marked as \boxed{A} in (77):

$$(78) \quad \llbracket \boxed{A} \rrbracket = \lambda d. \forall w \in F[(J \text{ just read T.I. to M in } w) \rightarrow J \text{ read } d\text{-many books to children in } (\iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } J \text{ just read TI to M} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } J \text{ just read TI to M}])]]$$

We can only quantify over one degree variable at a time, so the degree argument of one *many* undergoes existential closure in each *than*-clause. In \boxed{A} , this is the variable associated with *d-many children* (in the other *than*-clause, marked \boxed{D} , we'll existentially close *d-many books*¹⁰). \boxed{A} ends up referring to the number of books that John reads to any children at all in the situation where he reads *Treasure Island* to Mary.

\boxed{A} will be the first argument of *-er*. Its contents will give rise to the prejacent presupposition that John read *Treasure Island* to Mary, and the presupposition that a situation where John reads *Treasure Island* to Mary is a situation of reading a book to a child. The second argument comes from the matrix, and is marked \boxed{B} .

$$(79) \quad \llbracket \boxed{B} \rrbracket = \lambda d. \text{ John read } d\text{-many books to } g(3)\text{-many children}$$

The variable d_3 is still free at this point. When we apply the comparative operator to its two arguments and then abstract over this variable, this results in the following degree predicate:

$$(80) \quad \llbracket \boxed{C} \rrbracket = \lambda d. \max(\lambda d'. \text{ John read } d'\text{-many books to } d\text{-many children}) > \max(\lambda d''. \forall w \in F[(J \text{ just read T.I. to M in } w) \rightarrow J \text{ read } d''\text{-many books to children in } (\iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } J \text{ just read T.I. to M} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } J \text{ just read T.I. to M}])]])$$

¹⁰The two *than*-clauses could, of course, have ended up in either order after both undergoing QR.

This degree predicate contains the degrees d such that the number of books John read to d -many children exceeds the maximal number d'' such that the maximal exemplifying situation in which John only reads *Treasure Island* to Mary consists of John reading d'' -many books to some child. More simply, it contains the degrees d such that John read more than one book to d -many children.

This last degree predicate is then compared to \boxed{D} , the degree predicate in the outer *than*-clause. Its semantics are similar to those of \boxed{A} , except that which variable is quantified over and which is existentially closed are reversed:

$$(81) \quad \llbracket \boxed{D} \rrbracket = \lambda d. \forall w \in F[(J \text{ just read T.I. to M in } w) \rightarrow J \text{ read books to } d\text{-many children in } (\iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } J \text{ just read T.I. to M} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } J \text{ just read T.I. to M}])]]$$

\boxed{D} gives rise to the same presuppositions as \boxed{A} , and contains the degrees d such that John reads to d -many children in a situation where he only reads *Treasure Island* to Mary. The second instance of *-er* takes \boxed{D} as its first argument and \boxed{C} as its second argument, and we end up with the following truth conditions for the sentence:

$$(82) \quad \llbracket \text{John read more books to more children than just } \textit{Treasure Island} \text{ to Mary} \rrbracket = 1 \text{ iff } \max(\lambda d. J \text{ read more than 1 book to } d\text{-many children}) > \max(\lambda d'. \forall w \in F[(J \text{ just read T.I. to M in } w) \rightarrow J \text{ read books to } d'\text{-many children in } (\iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } J \text{ just read T.I. to M} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } J \text{ just read T.I. to M}])])$$

In other words, the sentence is true iff John read more than one book to more than one child.¹¹

As it stands, the present analysis predicts that *than*-clauses should be able to contain multiple remnants from any pair of syntactic positions. It is therefore surprising that (83), with a subject and an object remnant, is ungrammatical.

$$(83) \quad * \text{ More linguists visited (more) philosophers than just John Mary.}$$

However, this is not universally true: in German, for instance, sentences of this kind are grammatical.

$$(84) \quad \begin{array}{l} \text{Mehr Sprachwissenschaftler haben Philosophen besucht, als nur die} \\ \text{more linguists} \quad \quad \quad \text{have philosophers visited} \quad \text{than only the.NOM} \\ \text{Maria den} \quad \quad \text{Hans.} \\ \text{M.} \quad \quad \text{the.ACC H.} \\ \text{'More linguists visited philosophers than just Maria <visited> Hans.'} \end{array}$$

Even in English, a subject remnant is slightly degraded but still possible, if the other remnant is a PP.

$$(85) \quad ? \text{ More linguists talked to philosophers than just John to Mary.}$$

¹¹The collective interpretation, where there is a set of two or more books and a set of two or more children, and John read some combination of the former to some combination of the latter, is the most salient reading here.

This is reminiscent of another ellipsis constraint in English: in instances of sluicing that have two *wh*-phrases, most English speakers prefer for the second *wh*-phrase to be a PP. Lasnik (2013) presents the following contrasts:

- (86) a. ? Someone talked about something, but I can't remember who about what.
 b. ?* Someone saw something, but I can't remember who what.
- (87) a. ? Mary showed something to someone, but I don't know exactly what to whom.
 b. ?* Mary showed someone something, but I don't know exactly who what.

Here, too, the examples with prepositions are somewhat degraded, but they clearly contrast with their prepositionless counterparts. This suggests that the ungrammaticality of (83) is merely due to a more general constraint on ellipsis in English, and not a property of subset comparatives themselves.

If subset comparative standards are not remnants of full clauses, but smaller constituents introduced as arguments of the comparative, then the existence of subset comparatives with multiple remnants raises several questions. The first is how multiple remnants are possible with only one instance of *more*, on the assumption that phrasal comparatives are capable of introducing only one standard. The second question is the status of the remnants in relation to each other. On the view that subset comparatives have a clausal source, we should expect that the remnants should stand in the same relation to each other that they would in the corresponding full clause. If there is no clausal source (granting for the sake of argument that multiple remnants are even possible without one), there is little that we can tell about their syntactic positions relative to each other. What we find, in fact, is that the first remnant can bind the second:

- (88) *Context: Bill is listening to pairs of CDs. Each pair consists of two recordings of the same piece of music, one by a flutist and one by a violinist. After listening to both versions of each piece, Bill compares the performances. He doesn't know the identities of the musicians. Unbeknownst to him, Sue is the performer – once as a flutist and once as a violinist – on both recordings of the same piece in one of the pairs.*

Bill compared more flutists to violinists **than just Sue_i to herself_i**.

This fact provides further evidence that there is indeed a larger elided clause, where *Sue* and *herself* appear in a configuration that allows binding,¹² as illustrated in (89).

¹²Furthermore, we can tell that *herself* is an anaphor and not a logophor in this context, because of the impossibility of a pronoun in this position:

- (i) *Bill compared more flutists to violinists than just Sue_i to her_i.

(91) John didn't read more books than just *Don Quixote*.

This sentence is most naturally understood to mean that John did not read *Don Quixote* (the prejacent), and that there are other books (on a contextually salient reading list, for instance) that John also neglected to read. A good paraphrase would be “*Don Quixote* is not the only book that John *didn't* read.”

However, interpreting subset comparatives of this kind with the other scope can be possible in some contexts even in English, as shown in (92). (93) is an example with an NPI, whose licensing requires an LF with negation scoping above the comparative and thus forces the corresponding reading.

(92) a. If **you haven't read more books than just *Don Quixote***, this point in the semester is a good time to start remedying that.

b. A: Sure, John read *Don Quixote*, but he read some other books too.

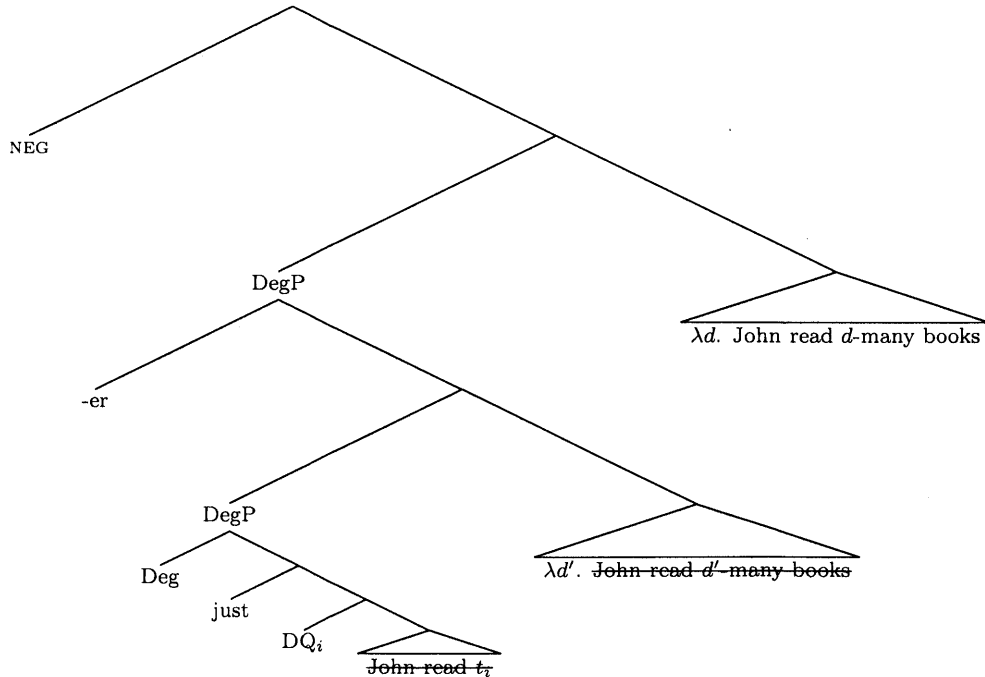
B: That's not true! **John didn't read more books than just *Don Quixote***.

(93) John didn't read **any** more books than just *Don Quixote*.

The analysis from section 3 can generate both readings. Either negation is given the highest scope, in which case we end up with the negation of the proposition that John read more books than just *Don Quixote*, as in (94); or we scope the comparative quantifier above negation and include a copy of the negation in the *than*-clause in order to make ellipsis possible, as in (95).

(94) “*Don Quixote* is the only book John read” reading:

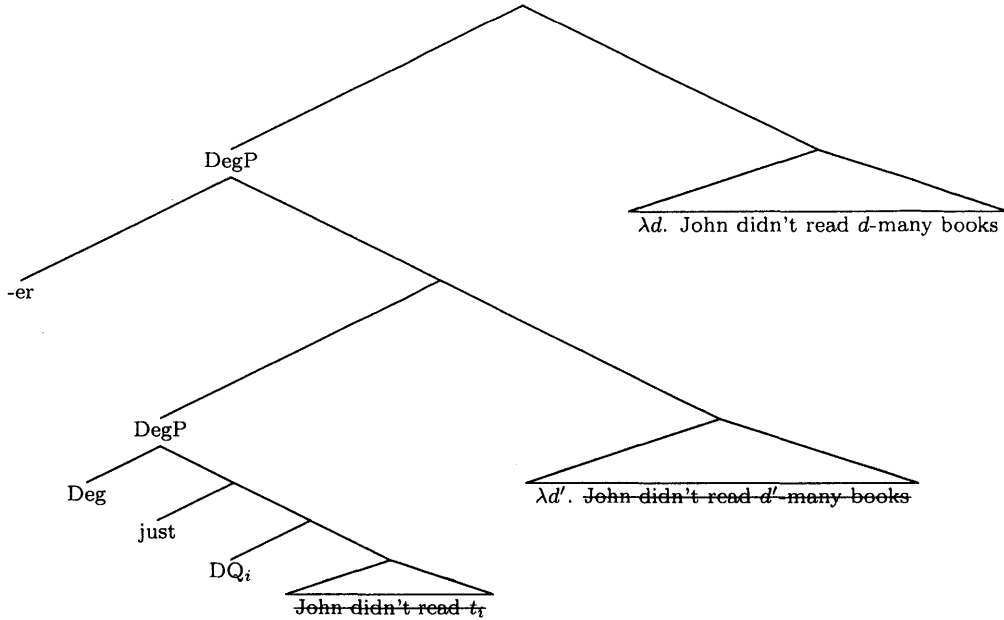
a.



b. $\neg (\max(\lambda d. \text{John read } d\text{-many books}) > \max(\lambda d. \forall w \in F[(\text{John just read DQ in } w) \rightarrow \iota d'. (\text{John read } d'\text{-many books in } \iota s.s \sqsubseteq w \ \& \ s \text{ exemplifies } \text{John read DQ} \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \text{John read DQ}]) \geq d]))$

(95) “*Don Quixote* isn’t the only book John didn’t read” reading:

a.



- b. $(\max(\lambda d. \text{John didn't read } d\text{-many books}) > \max(\lambda d. \forall w \in F[(\text{John just didn't read } DQ \text{ in } w) \rightarrow \iota d'. (\text{John didn't read } d'\text{-many books in } \iota s. s \sqsubseteq w \ \& \ s \text{ exemplifies } \textit{John just didn't read } DQ \ \& \ \neg \exists s'[s' \sqsubseteq w \ \& \ s \sqsubseteq s' \ \& \ s' \text{ exemplifies } \textit{John just didn't read } DQ]) \geq d]))$

The latter case raises further questions: what does it mean to be a situation that exemplifies John not reading *Don Quixote*? That is, what is contained in such situations, and how can we count them?

The first thing to note is that that (95) seems to require certain books to be contextually salient. This is reminiscent of Kroch (1998)’s observation that manipulating the context can alleviate negative island effects, as shown by the following contrast:

- (96) a. * How much didn’t you pay?
 b. How much didn’t you pay that you were supposed to?

Adding the presupposition that there was an amount that you were supposed to pay, but didn’t, turns the negative island into a plausible question. Similarly, the at-issue entailment of the subset comparative *John didn’t read more books than just Don Quixote* is a statement about how many books John failed to read. If the context provides some salient books (on a reading list, for instance), there can be a situation in which John stands in the “fail to read”-relation to one or more of them.

Thus, we can see that the present analysis is capable of accounting for both readings of subset comparatives with negation, in languages where this ambiguity arises. The unavailability of the reading with low negation in Spanish may be a consequence of a more general fact about scope in Spanish, and not specifically related to subset comparatives at all.

4.5.2 Languages that mark the phrasal/clausal distinction

In English, both phrasal and clausal comparatives occur with the standard marker *than*. In some other languages, the distinction between phrasal and clausal comparatives is marked morphologically on the standard marker. Greek is a well-known example of such a language: phrasal comparatives occur with the standard marker *apo*, while clausal comparatives combine this standard marker with the free relative item *oti*.

- (97) a. I Maria pezi kithara kalitera **apo** ton Gianni.
 the M.NOM plays guitar better than.PHRASAL the G.ACC
 ‘Maria plays the guitar better than Gianni.’
- b. I Maria pezi kithara kalitera **ap’oti** pezi kithara o Gianni.
 the M.NOM plays guitar better than.CLAUSAL plays guitar the G.NOM
 ‘Maria plays the guitar better than Gianni plays the guitar.’
 (Merchant 2009)

When reduced clausal comparatives occur in Greek, the standard marker is the clausal *ap’oti*. The case of the standard matches its matrix correlate: for instance, *Maria* and *Giannis* are both nominative in (98).

- (98) I Maria pezi kithara kalitera **ap’oti** o Gianni.
 the M.NOM plays guitar better than.CLAUSAL the G.NOM
 ‘Maria plays the guitar better than Gianni.’ (Merchant 2009)

The prediction of an analysis like Aparicio’s is that subset comparatives should only be possible with phrasal standard markers, and not clausal ones. For Greek, the prediction appears to be borne out:

- (99) I Ariadne diavase parapano vivlia apo/*ap’oti tin *Odyseia*.
 the A.NOM read more books than the.ACC *Odyssey*.ACC
 ‘Ariadne read more books than just the *Odyssey*.’ (Aparicio 2014)

However, this is not the case in every language that marks phrasal and clausal standards differently. In Finnish, there are also two ways of marking standards: with the partitive case, as in (100a), or with *kuin* ‘than’, as in (100b). For simple examples like the one in (100), either strategy can be used to produce the same interpretation.

- (100) a. Liisa on **minua** pitempi.
 L.NOM is me-PRT tall-COMP.NOM
 ‘Liisa is taller than me.’ (phrasal)
- b. Liisa on pitempi **kuin minä**.
 L.NOM is tall-COMP.NOM than I.NOM
 ‘Liisa is taller than I am.’ (clausal)

As with *ap’oti* in Greek, ordinary reduced clausal comparatives with *kuin* exhibit matching of case between the standard and its matrix correlate. In (101), for instance, this is the allative case.

- (101) Matti antoi **Liisalle** enemmän kirjoja **kuin minulle**.
 M. gave L.-ALLA more books-PL.PRT than me-ALLA
 ‘Matti gave Liisa more books than (he gave) me.’

The choice of standard marker can also affect interpretation, as seen in (102). With *kuin*, the standard can be nominative, matching the matrix subject *Matti*, and be interpreted as a subject; if it appears in the partitive construction, the comparative is interpreted as a predicative one.

- (102) a. Matti tykkää pitemmästä tytöstä **kuin minä**.
 M. likes tall-COMP-ELA girl-ELA than I.NOM
 ‘Matti likes a taller girl than I do.’
 b. Matti tykkää **minua** pitemmästä tytöstä.
 M. likes me-PRT tall-COMP-ELA girl-ELA
 ‘Matti likes a girl who’s taller than me.’

Subset comparatives occur with *kuin*, and show case-matching effects. The standard is marked accusative¹³ to match the direct object in (103); in (104), it is marked ablative (as is its correlate, ‘more people’), since this is the case that the verb *kysyä* ‘to ask’ takes.¹⁴

- (103) Matti näki **enemmän ihmisiä** **kuin vain Liisan**.
 M. saw more person-PL-PRT than only L.-ACC
 ‘Matti saw more people than just Liisa.’
 (104) Kysyin siitä **useammilta ihmisiltä** **kuin vain Liisalta**.
 asked.1SG DEM-ELA more-PL-ABL person-PL-ABL than only L.-ABL
 ‘I asked more people than just Liisa about it.’

Comparative quantifiers with numerals use the clausal standard-marking strategy, in much the same way:

¹³We don’t see accusative morphology on *enemmän ihmisiä* ‘more people’; this is an example of the divide in Finnish between partitive- and accusative-marked objects. Certain quantifiers, *enemmän* ‘more’ among them, assign partitive case to their arguments; see Kiparsky 2001. (The whole DP may still be accusative in some abstract sense.) For these purposes, it suffices to observe that both the standard *Liisa* and its matrix correlate appear in the same case they would have as direct objects in a simple transitive clause:

- (i) Matti näki enemmän ihmisiä.
 M. saw more person-PL-PRT
 ‘Matti saw more people.’
 (ii) Matti näki Liisan.
 M. saw L.-ACC
 ‘Matti saw Liisa.’

¹⁴(103) and (104) have different words for ‘more’. *Enemmän* is the comparative of *paljon* ‘much/many’; like *paljon* (see Zimmermann 1999), its distribution is limited to certain direct-object positions. Elsewhere, the synonymous quantifier *usea* and its comparative *useampi* are used, as in (104).

- (105) Kysyin siitä useammalta kuin kolmelta ihmiseltä.
 asked.1SG DEM-ELA more-ABL than three-ABL person-ABL
 ‘I asked more than three people about it.’

Although the preference for the phrasal standard marker in Greek is consistent with subset comparatives being phrasal, it does not constitute evidence that they do not have a clausal source. Finnish is a counterexample to the hypothesis that only the dedicated phrasal standard-marking strategies can give rise to subset comparatives in languages where we can tell the difference.

5 Syntactic issues

5.1 The nature of the ellipsis

Throughout this paper, I have argued that subset comparatives have a clausal source. In this section, I will discuss in more detail how this clausal source is reduced to form the observed standard.

A potential starting point is the phenomenon of fragment answers: utterances that consist of a non-sentential phrase and serve as the answer to a question. Like subset comparatives, fragment answers can occur with a variety of syntactic categories:

- (106) a. A: Who did she see?
 B: John.
 b. A: When did he leave?
 B: After the movie ended.
 c. A: What did John do to the car?
 B: Totalled it.
 (Merchant, 2004)

Merchant (2004) argues that fragment answers are derived from ellipsis of a clausal source, as shown below:



The clause undergoes TP-ellipsis (the TP being the argument of an F head with an ellipsis feature E), leaving only the fragment answer pronounced. Merchant provides several types of evidence for this analysis; I will summarize the points that are most relevant to subset comparatives here.

To show that there is an elided clause, Merchant gives examples of connectivity effects, such as (108):

- (108) A: Who will punish Bill if he fails?
 B: *Himself.

The fragment answer in 108 is ruled out because of the ungrammaticality of the clausal source, *Himself will punish Bill if he fails*. The same is true of a subset comparative:

- (109) *Mary wants more people to punish Bill if he fails than just himself.¹⁵

Merchant contrasts preposition-stranding languages with languages where preposition stranding is disallowed, in order to provide evidence for A'-movement in fragment answers. In a language that allows preposition stranding, like English, a fragment answer can omit a preposition that is present in the question (and the elided TP):

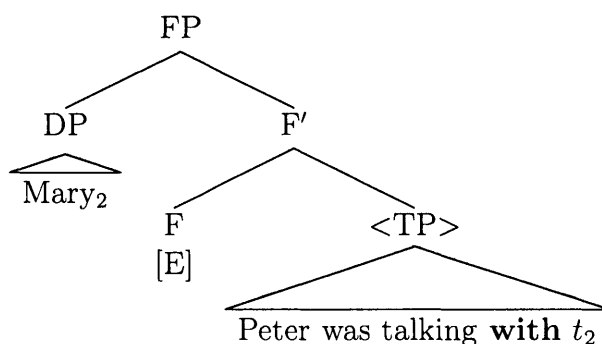
- (110) A: Who was Peter talking with?
 B: (?With) Mary.

In a language that does not allow preposition stranding, like German, the preposition must be part of the fragment answer:

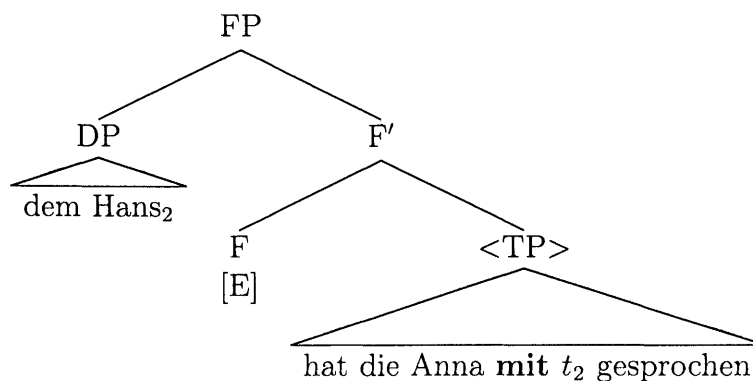
- (111) A: Mit wem hat die Anna gesprochen?
 with whom.DAT has the A. spoken
 'Who did Anna speak with?'
 B: *(Mit) dem Hans.
 with the.DAT H.
 'With Hans.'

In English, a preposition can be stranded and deleted with the rest of the TP; in a pied-piping language like German, the preposition must move with its argument.

- (112) a.



- b. *



¹⁵The embedding here is meant to discourage a logophoric reading of *himself*.

The same pattern holds for subset comparatives: English does not require preposition matching in the standard (in fact, prepositions often sound degraded here¹⁶), while prepositions do appear in German subset comparative standards.¹⁷

- (113) John has lived in more cities than just (??in) Boston.
- (114) Ich habe mit mehr Pianisten gesprochen, als nur mit dem Hans.
 I have with more pianists-DAT spoken than only with the.DAT H.
 ‘I talked with more pianists than just Hans.’

Another issue common to both subset comparatives and fragment answers is case-marking. We have seen examples of subset comparatives in German, Greek, and Finnish where the case of the DP(s) in the standard matches that of their matrix correlates; the same sort of case matching is seen in fragment answers in these languages. In English, however, both subset comparative standards and fragment answers appear in the accusative, even if they would be nominative in the full clause:

- (115) a. A: Who watered the plants?
 B: Me. / *I. (Merchant, 2004)
- b. More people watered the plants than just (me / *I).

There are a few different potential explanations for this. One is that the accusative form of the pronoun is the default in English. Merchant (2004) suggests that focus might be responsible. Another alternative is that nominative case in English depends on overt agreement with T, and if T is elided, the subject cannot be marked as nominative (see Emonds 1986). Each of these explanations can apply equally to English fragment answers and subset comparatives, and potentially to other English comparatives as well.

5.2 Comparative illusions

The present analysis of subset comparatives also potentially has something to contribute to the understanding of the phenomenon of *comparative illusions*. Comparative illusions have been studied for their psycholinguistic properties (e.g. by Wellwood et al. 2017, Fults and Phillips 2004), but many aspects of the phenomenon remain puzzling.

A comparative illusion is a sentence that resembles an amount comparative of a certain kind, but which has a peculiar pattern of acceptability: speakers often initially accept it, then try to think of what the sentence might mean, at which point they decide that it is unacceptable after all. Some examples are given in (116):

¹⁶This contrasts with the cases of multiple remnant standards we saw earlier, where the preposition facilitates the subset comparative.

¹⁷A phrasal comparative could also have a standard consisting of a PP. However, the possibility of a PP standard implies a certain flexibility of semantic type. Aparicio (2014) notes that the following sentence (where the preposition is fully optional) is a potential problem for her analysis, because PPs are not usually understood to be type *e* expressions:

- (i) Juan se ha deshecho de más libros que (d)el Quijote.
 J. SE has gotten-rid of more books than (of)-the Q.
 ‘Juan has gotten rid of more books than just (of) *Don Quixote*.’

- (116) a. ??More Americans have been to Russia than I have.
b. ??More linguists hate broccoli than I do.

A frequent observation about comparative illusions is that when speakers do (temporarily) accept them, they tend to give them the same interpretation as a subset comparative. For instance, Wellwood et al. (2017) give the paraphrases *I'm not the only American who has been to Russia* and the actual subset comparative *More Americans have been to Russia than just me* as possible interpretations of the comparative illusion *More Americans have been to Russia than I have* that are volunteered by informants.

The similarities between comparative illusions and subset comparatives go even further: the illusory interpretation of *More Americans have been to Russia than I have* also seems to include the same presuppositions that are present in the interpretation of the subset comparative *More Americans have been to Russia than just me*. In fact, Alexis Wellwood (p.c.) reports an exchange along the following lines, in a judgment-seeking context:

- (117) A: More Americans have been to Russia than I have.
B: But you're not American!

That is, the subset presupposition here is so salient that a speaker who is merely making a grammaticality judgment picks up on it. We can imagine a similar discourse for the prejacent:

- (118) A: More Americans have been to Russia than I have.
B: But you've never been to Russia!

Given these similarities between comparative illusions and subset comparatives, the next question is whether we can explain why comparative illusions have these properties. The combination of the present analysis of subset comparatives and the ideas about ellipsis from the previous section may provide a starting point.

One hypothesis about comparative illusions that has previously been proposed (which Wellwood et al. entertain but ultimately argue against) is that the illusory interpretation of comparative illusions is the result of *more* being misinterpreted as additive. The ambiguity between comparative and additive *more* is responsible for the two readings of (119):

- (119) Yesterday John interviewed three students. Today he interviewed more.
(Greenberg, 2010)

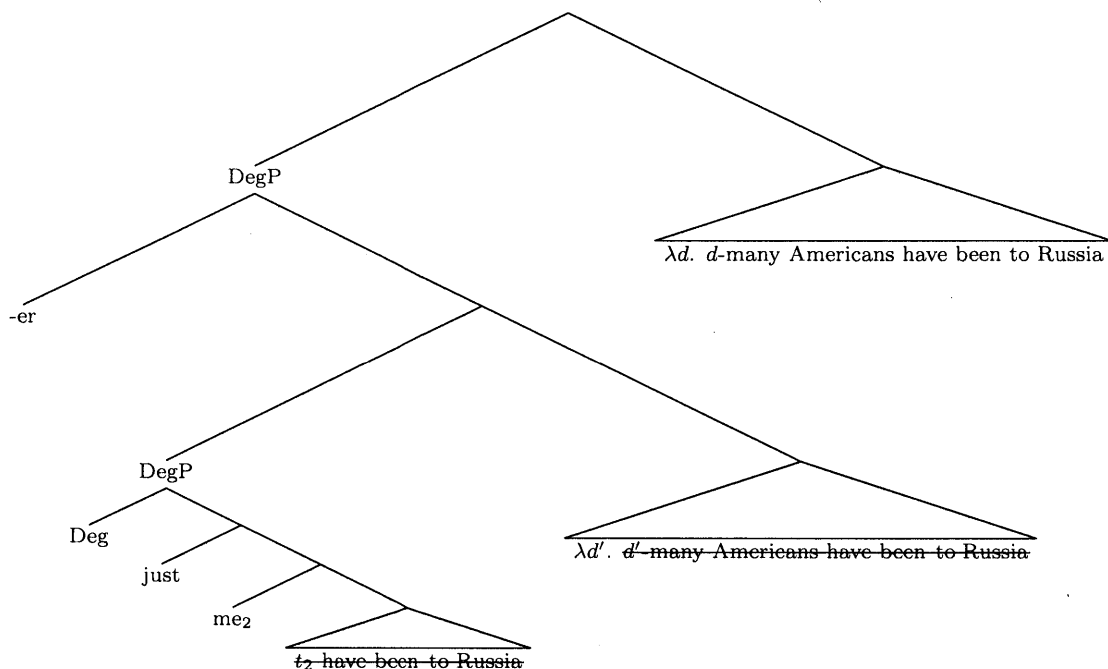
On one reading, John interviewed four or more students today (the comparative reading); on the other reading, John merely interviewed some students in addition to the three he interviewed yesterday, possibly fewer than three (this is the additive reading). Based on the behavior of *more* in these contexts, as well as cross-linguistic evidence, additive *more* is understood to be a separate lexical item that relates degrees and events, which happens to be homophonous with comparative *more* in English (Greenberg, 2010; Thomas, 2010).

One of the properties of the present analysis of subset comparatives is that it uses the ordinary comparative meaning of *more* to produce a meaning that could be described as “additive” in a sense, due to the effects of the presuppositions it generates. For instance, we saw in section 4.1 how this analysis can derive the meaning of *John drank more than just coffee* by comparing the maximal amount of stuff that John drank, across all beverage types,

to the maximal amount of coffee that John drank. So the apparent additive interpretation of comparative illusions is not necessarily the result of a confusion between comparative and additive *more* either.

In fact, the possibility I would like to raise here is that comparative illusions are actually a form of subset comparative. First, here is the structure of the subset comparative *More Americans have been to Russia than just me* according to the present analysis:

(120)

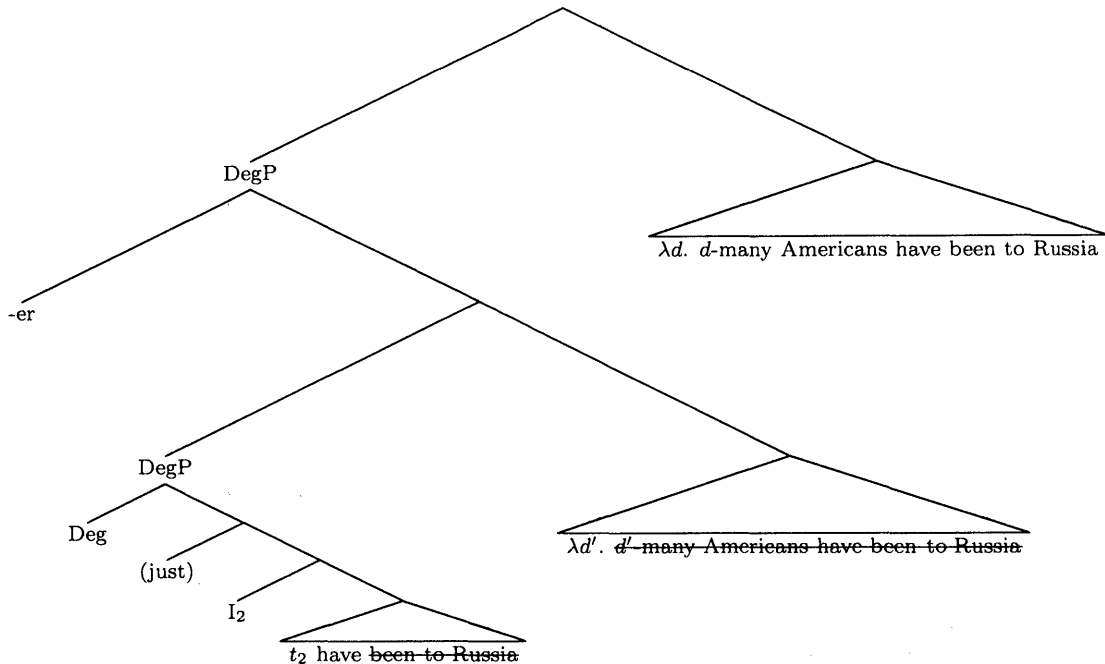


What happens if we keep the same syntactic structure, but elide less material — only a VP? The result is shown below:¹⁸

(121) ??More Americans have been to Russia than I have.

¹⁸What is behind the impossibility of *just* in this case? I have no explanation for this, but this too is shared with fragment answers:

- (i) A: Who here has been to Russia?
- B: Just me.
- B': (*Just) I have.
- B'': (*Just) John has.



As suggested in the previous section, we see an alternation between TP-ellipsis and no nominative case on the one hand, and VP-ellipsis and nominative case on the subject pronoun agreeing with the verb on the other. In addition, the version with the smaller ellipsis has some associated oddness (this is the comparative illusion). Once again, we see a parallel with sluicing: this is reminiscent of the unacceptability of VP-ellipsis in sluicing contexts.

- (122) a. They want to hire someone who speaks a Balkan language, but I don't know which.
 b. *They want to hire someone who speaks a Balkan language, but I don't know which they do.
 (Merchant, 2001)

In other words, perhaps the questionable acceptability of comparative illusion sentences is a MaxElide effect (Merchant, 2001), comparable to (122). If this is the case, then this would mean that the perceived oddness of comparative illusions is primarily syntactic in nature.

In order for the subset comparative to be merely odd and not outright ungrammatical with VP-ellipsis, however, the comparative must be in subject position:

- (123) a. More Americans have been to Russia than I have.
 b. *I have been to more countries than [_{FP} Russia₂ [_{TP} I have [_{VP} ~~been to~~ *t*₂]]].

If the comparative is not in subject position, as in (123b), there is no illusory acceptability; the only option here is full TP-ellipsis, resulting in an ordinary subset comparative.

6 Conclusion

This paper has proposed a novel analysis of subset comparative constructions, motivated by the properties that they have in common with comparative quantifiers involving numerals.

The major difference between this analysis and previous ones that have been proposed is that it derives the meanings of subset comparatives from a reduced clausal structure, via a derived measure function that allows for a comparison of situations. The appeal of this account is that it unifies subset comparatives and numerical comparative quantifiers as two variants of the same phenomenon (depending on what the *than*-clause contains), additionally deriving subset presuppositions and the Minimal Number of Participants Generalization from the same source. As we have seen, this analysis also makes many correct predictions about the behavior of subset comparatives — including their ability to occur with standards that are not of type *e*, and the possibility of introducing multiple remnants — some of which are difficult for previous analyses to explain. In addition, the proposed ellipsis that goes on in subset comparatives shares some similarities with well-known ellipsis processes (such as sluicing and fragment answers), as well as a possible connection with the phenomenon of comparative illusions.

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