Subset Comparatives as Comparative Quantifiers

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This paper is concerned with the meaning of the "subset comparative" construction in (1a), which seems to include the asserted content in (1b) and the two presuppositions in (1c):

(1) a. John saw more phonologists than just Mary.

  b. Assertion: John saw more than one phonologist.

  c.   John saw Mary. (prejacent)

    Mary is a phonologist. (subset presupposition)

Together, the assertion and the two presuppositions entail that John saw other phonologists in addition to Mary. In this paper, I argue that the meaning of (1a) can be derived by an extension of the analysis originally proposed by Hackl (2000) for comparative quantifiers like *more than three*.

Previous analyses by Grant (2010) and Aparicio (2013) have treated subset comparatives as phrasal. I provide evidence suggesting that subset comparatives have clausal properties. In German, for instance, the case in the *than*-clause must match the corresponding constituent in the matrix: accusative in (2a), and dative in (2b).

(2) a. Ich habe dir mehr **Leute** als nur **den Hans** empfohlen.
      'I recommended more people than just Hans to you.'

  b. Ich habe dich mehr **Leuten** als nur **dem Hans** empfohlen.
      'I recommended you to more people than just Hans.'

In Finnish, the distinction between phrasal and clausal comparatives is marked morphosyntactically: phrasal comparatives mark the standard with the partitive case, while clausal comparatives like (3) occur with the word *kuin* 'than' and show case-matching effects. Subset comparatives – as well as comparative quantifiers – occur with the clausal form, as (4) shows.

(3) **Minulla**   on parempi kynä käytössäni   **kuin sinulla**.
    me-ADESS is better   pen use-INESS-1SG.POSS than you-ADESS
    'I'm using a better pen than you.'

(4) a. Kysyin   siitä   **useammalta kuin kolmelta ihmiseltä**.
      asked.1SG DEM-ELAT more-ABL   than three-ABL person-ABL
      'I asked more than three people about it.'

  b. Kysyin   siitä   **useammilta ihmisiltä**   **kuin vain Liisalta**.
      asked.1SG DEM-ELAT more-PL-ABL person-PL-ABL than only L.-ABL
      'I asked more people than just Liisa about it.'

In English, subset comparatives can occur with multiple remnants, which is another property that clausal comparatives have and phrasal comparatives lack.

(5)   John read more books to the children than just *Treasure Island* to Bill.

In addition, the analysis in Aparicio 2013 is designed to predict that subset comparatives should always scope below universal modals and negation, due to a type mismatch. However, subset comparatives in English can be ambiguous between a *de dicto* and a *de re* reading:

(6) John is required to read more books than just *Ulysses*. (*more* > □, □ > *more*)

If subset comparatives do have a clausal source, what is in the elided clause? Here I point to several similarities that exist between subset comparatives and comparative quantifiers. Hackl (2000) proposes a clausal source for comparative quantifiers in order to explain such contrasts as the Minimum Number of Participants Generalization (MNPG), illustrated in (7). Subset comparatives also show a version of the MNPG, as shown in (8).

(7) a. #More than three students were standing in square formation.
     b. At least four students were standing in square formation.

(8) #More musketeers than just Athos, Porthos, and Aramis were standing in square formation.

Furthermore, as Hackl (2000) points out, a sentence with a comparative quantifier like *More than three students came to the party* can have a counterfactual paraphrase: "More students came to the party than if there had been three students who came to the party." Similarly, (1a) means that John saw more phonologists than he would have if he had only seen Mary.

In Alxatib (2013)'s modification of the Hackl 2000 analysis, the *than*-clause is interpreted as a conditional, so that *More than three students came to the party* means that the number of students who came to the party exceeds the number d such that if three students came to the party, then d-many students came to the party. I show that if this is implemented by universally quantifying over minimal situations in the actual world (in the sense of Kratzer 2007), then appropriate meanings for both comparative quantifiers and subset comparatives can be derived. The Alxatib 2013-style LF for (1a) is given in (9a). The sentence is true iff (9b) – expressed in words as (9c) – holds.

(9) a. [[-er [$\lambda d'$. [if [just Mary] λx. John saw x] [then [(John saw d'-many phonologists)]]]] [λd. John saw d-many phonologists]]
     b. $[\![$-er$]\!]$($\lambda d'$. $\forall s$[MIN(John only sees Mary)(s) $\rightarrow$ MIN(John sees d'-many phonologists)(s)]) (λd. John saw d-many phonologists)
     c. The number of phonologists John saw is greater than the number d' such that every minimal situation of John only seeing Mary is a minimal situation of John seeing d'-many phonologists.
        (Presupposition: John saw Mary.)

If Mary is not a phonologist, then the degree in the *than*-clause does not exist: a situation of seeing Mary cannot be a minimal situation of seeing n phonologists, no matter what number n is. (With a plural in the *than*-clause, like *John saw more phonologists than just Mary and Sue*, a similar failure occurs if one or both is not a phonologist: there is no number n such that a minimal situation of seeing Mary and Sue is a minimal situation of seeing n phonologists.) If John did not see Mary, the sentence will suffer from presupposition failure due to the fact that *just* presupposes its prejacent. Thus, both of the observed presuppositions can be derived.

Selected references:
Alxatib, S. (2013). *"Only" and Association with Negative Antonyms*. Doctoral dissertation, MIT. • Aparicio, H. (2013). Additive readings in Spanish amount comparatives. ESSLLI 2013 Student Session. • Grant, M. (2010). Subset comparatives: a psycholinguistic investigation. Ms., UMass Amherst. • Hackl, M. (2000). *Comparative Quantifiers*. Doctoral dissertation, MIT. • Kratzer, A. (2007). Situations in natural language semantics. *Stanford Encyclopedia of Philosophy*.