3.

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Few *and* fewer

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It seems reasonable to assume a close relationship between the semantic representation of the positive form *few* and that of the comparative *fewer*. The following contrasts are then unexpected: Both (1a) and (1b) have distributive readings, according to which fewer than ten/few people drank ten bottles each. But (1a) also has a cumulative reading (Scha 1981; Krifka 1999; Landman 2000), under which there was a total of ten bottles consumed by some group numbering less than ten. Oddly, the equivalent reading is absent in (1b).

(1) a. Fewer than ten people drank ten bottles of wine.
b. Few people drank ten bottles of wine.

Even more clearly, (2a) (based on examples in Krifka 1999) has a cumulative reading: there is some group of employees numbering less than ten who together account for 90% of the relevant work. But (2b) lacks this reading, allowing only the unlikely distributive interpretation:

(2) a. Fewer than ten of our employees do 90% of all the work.
b. ??Few of our employees do 90% of all the work.

A perhaps related contrast is the following, which similarly involves reference to a period of years as a single unit:

(3) a. John finished his degree in fewer than five years
b.* John finished his degree in few years

Krifka (1999) uses the existence of cumulative readings in examples such as (4a) to support the position that numerical noun phrases are not generalized quantifiers but instead predicates that must be existentially bound. In this view, (4a) thus has the logical form in (4b), where X and Y are groups that can be interpreted cumulatively.

(4) a. Three boys ate seven apples
b. $\exists X[3\text{-boys}(X) \& \exists Y[7\text{-apples}(Y) \& \text{eat}(X,Y)]]$

Both *few* and *fewer than n* exhibit parallels to unmodified cardinal numbers; for example, all are licensed in *there*-insertion contexts and following certain determiners (*the three/few/fewer than three boys*). But with regards to cumulative interpretations, *fewer than n* patterns with cardinal numbers, while *few* does not.

Interestingly, the missing cumulative reading for *few* can be obtained by replacing it with *a few*. Thus (5a) allows a cumulative interpretation, and (5b) is felicitous, as is (5c) (the latter pattern of alternation between *few* and *a few* having been noted by Klima 1964). In each of these cases, the reading that obtains matches what we would expect from *few*.

(5) a. A few people drank ten bottles of wine.
b. A few of our employees do 90% of all the work.
c. John finished his degree in a few years.

To capture these facts, we might suggest that noun phrases formed with *fewer than n* and *a few*, like those formed with unmodified cardinal numbers, are able to introduce groups into the semantic representation that can be interpreted cumulatively, as in (6a,b). *Few*, by contrast, appears to require an entirely different logical form that does not allow cumulative interpretation, perhaps along the lines of (6c).

(6) a. $\exists X[<10\text{-people}(X) \& \exists Y[10\text{-bottles}(Y) \& \text{drink}(X,Y)]]$ (1a: fewer)
b. $\exists X[\text{few-people}(X) \& \exists Y[10\text{-bottles}(Y) \& \text{drink}(X,Y)]]$ (5a: a few)
c. $\text{few}[\{x:\text{person}(x) \& \exists Y[10\text{-bottles}(Y) \& \text{drink}(x,Y)]\}]$ (1b: few)

The question that follows is how these various logical forms could be derived from a single basic meaning for *few*.

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