Distributivity and interpretation: in support of a modal treatment of the progressive

Each and *every* are both universal distributive quantifiers. When a phrase headed by a distributive quantifier is combined with a predicate, the predicate is understood as applying to each individual member in the quantified set rather than to the set as a whole. *Each* has been analysed as requiring a fully distributive event structure, in which each individual object in the restrictor set must be associated with its own distinct subevent. In contrast, *every* is subject to a weaker restriction, requiring an event structure of at least two distinct subevents (Tunstall 1998). I demonstrate that the above analysis does not extend to the progressive, and argue that the interaction of the progressive with distributively quantifying objects provides support for an intensional treatment.

In progressives, *every* forces a collective interpretation of its object, where each member of the restrictor set is associated with a single subevent. In the perfective form, (1a), the chairs may be brought one at a time; however, the progressive, (1b), sounds very odd in the same context:

(1)   a.   John brought every chair.
        b.   ?John was bringing every chair.

The only possible reading of (1b) is one in which John was bringing all the chairs together, in a stack, for example. The awkwardness of *every* in progressives is unexpected, because as Tunstall has shown, *every* is allowed to be fully distributive. Non-distributive quantifiers are not restricted to collective readings. In (2), the chairs may be brought individually, or in a stack:

(2)   a.   John was bringing some chairs.
        b.   John was bringing the chairs.
        c.   John was bringing chairs.

Replacing *every* with *each*, as in (3), shows that the two determiners are not interchangeable in progressive contexts. In both the perfective (3a) and progressive (3b) forms, the chairs must be brought separately. *Each* forces a fully distributive event structure in both forms: a collective or partially distributive reading is not possible:

(3)   a.   John brought each chair.
        b.   John was bringing each chair.

(3b) is subject to a different restriction than (1b): felicitous use of *each* with progressives seems to require the existence of a plan or intention, where John is systematically carrying out the task of bringing the chairs. This does not seem to be essential for the interpretation of (2). Another interesting contrast is shown in (4). The interpretation of (4a) parallels (1b): George was pushing all the carts together, like a stack of shopping trolleys. Such a reading is not possible for (4b):

(4)   a.   John was pushing every cart.
        b.   ?John was pushing each cart.

But suppose there was a row of trolleys, and John was walking along the row giving each one a push. *Each* is fine in this context, but *every* is slightly odd. A similar contrast is shown in (5):

(5) a. Charlotte was stepping on each crack.
     b. ?Charlotte was stepping on every crack.

The progressive in (5a) with *each* is compatible with a context where Charlotte is playing a game where she has to step on every crack in the sidewalk, while in (5b), *every* is odd.

Vendler observed that there must be a pragmatic reason for using *each* rather than *every*: *each* emphasises the distributive nature of the event and stresses that each object was affected individually. *Every* emphasises the exhaustive nature of the event, and stresses that the total number of objects was affected. The domain restriction of *each* is always contextually restricted, while that of *every* can be free. *Every* can be used in generic contexts: *John likes every girl*. In the *each* sentences, the progressive does not apply to a single event. Instead, there is quantification over events such that each element of the restrictor set is associated with its own distinct subevent. The idea of a plan or intention carried out systematically is central to the interpretation. I will argue that event differentiation licenses the planning reading; however, such differentiation needs to be supported by context. *Every* cannot have a fully distributive event structure in progressives, because we don't know whether the domain is restricted or not. Therefore, we can't determine whether a plan exists, which is crucial to the interpretation. The contrasts in (6) demonstrate how a restricted range improves *every* in progressives:

(6) a. John was smoking every cigarette in the pack.
     c. John was eating every cake on the plate.
     b. John was trying on every pair of shoes in the shop.

Zimmermann (1992/93) hints that *every* has an amount or summation reading compatible with intensional contexts, as well as its reading as a distributive quantifier. I suggest that the PP adjuncts in (6), where a range is defined, are in fact reduced degree relatives, giving *every* the amount reading instead of the distributive quantificational reading. In the final section of this paper, I will demonstrate how the acceptability of *each* Ns in progressives is not predicted by the extensional analysis.

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