Vagueness, approximation, and Grice's maxim of quality

Vague expressions of natural language such as "many" or "tall" raise two challenges for a theory of meaning: one is to explain how speakers manage to successfully communicate by means of vague expressions; another is to explain the rationale for the existence of vague expressions as opposed to only precise ones. In a seminal paper, Frazee and Beaver (2010) have proposed a common answer to both questions. According to them, scalar terms like "tall" or "many" are vague in so far as they constrain "some measure relative to a value which cannot be known in principle or in practice". On their approach, in agreement with standard theories of the meaning of gradable expressions (see Kennedy 2007), "tall" semantically means "taller than t", and "many" means "more than m", but speaker and hearer are typically uncertain about those threshold values t and m. What the speaker communicates, therefore, is in fact a statistical distribution over those values, and the sentence is informative when the hearer gets a better indication of the true state of affairs than prior to the utterance (see also Lassiter and Goodman 2017).

In this paper, our goal is to give a more specific account of the rationale for lexical vagueness in relation to speaker-uncertainty about the world (Égré 2017; Sutton 2017), with emphasis on the interpretation of approximator words such as "around" and "about" (see Krifka 2007, and Sauerland and Stateva 2007). In order to do that, we draw attention to the relation between vagueness and the Gricean maxim of Quality (Egré and Icard 2017). Grice's maxim is twofold: firstly, it says that one should assert only what one believes to be true, but moreover, it says that one should not assert that for which one lacks adequate evidence. Our basic observation is that in situations of imperfect discrimination, a cooperative speaker may not be able to abide by the maxim of quality if the language contains only precise expressions.

Consider a situation in which a speaker is returning from a party, where the speaker could not count exactly how many people attended (see Williamson 1994 for a similar case involving a crowd, and Fults 2011 on the centrality of the approximate number system in relation to vagueness). Then there is no number n such that the speaker can truthfully and justifiably assert "there were n persons at the party". For every value of n, either the sentence is going to be false, or it will be true without warrant. The speaker may, however, abide by Grice's quality maxim if the language permits the expression of precise comparison and intervals, as in: "there were more than n people", or "there were between n and m people". The main problem then is that the intervals for which the speaker might be 100% confident to include the true value may be too large to be informative, this time in violation of Grice's maxim of quantity. A related problem, connected to the sorites, is that there may not be a last stable value for which the speaker can be sure that it is the last one for which he or she is 100% confident.

On the other hand, if the speaker S is starting from her best guess of the actual number of people, then the use of a lexically vague expression guarantees truthfulness. Suppose the actual number of attendees at the party was 33 but the speaker has no clear idea about that and her best estimate is 50. By saying "around fifty people", S can speak truly and justifiably as matter of principle, supposing "around n" to be true of k if there is an interval centered around n that includes k. Semantically, there is always such an interval. Yet the utterance is non-vacuous. In effect, the speaker has in mind a particular probability distribution of values around 50. The hearer does not have access to that probability distribution, but should be

in a position to infer that the speaker holds 50 to be more likely than other values. One way to derive this is to assume that "around n" denotes the set of all intervals $[n-k, n+k]$, with a probability distribution on them, such that the probability of n is at least as high as the probability of the other values within each interval.

One aspect the present account shares with Williamson's epistemic theory is the idea that vagueness issues in part from our limited powers of discrimination. Another is that assertion should be grounded in knowledge and evidence. However, vagueness here is viewed primarily as a mechanism of error reduction and truthfulness, rather than as an expression of ignorance simpliciter.

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