

A constraint-based approach to the meaning and use of quantified expressions

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Theoretical and experimental research in semantics and pragmatics has made a substantial contribution to the understanding of number terms. For instance, the apparent polysemy of bare numerals (their exact, “at least” and “at most” meanings) has been documented and explored in some detail. There is also a thriving literature on the meaning of numerically quantified expressions. Researchers have demonstrated, for various different constructions, the inadequacy of the ‘classical’ accounts of meaning, in which the construction is interpreted in the formally obvious way.

However, as most of these studies have been concerned with the interpretation and use of a small family of constructions (Nouwen (forthcoming) is one exception), there has been comparatively little attention paid to the relation of these constructions to others within the system, except insofar as they compare in order of acquisition etc. From a Gricean perspective, this is an important omission, as we would expect the pragmatic inferences that are licensed by the use of a certain expression to be a function of the alternative expressions that were available to the speaker but not used.

One approach to analysing the numerical quantifier system *in toto* is to use a constraint-based framework. Within this line of enquiry, we see the choice of numerical quantifier as governed by a set of constraints, independently motivated by considerations of communicative and cognitive efficiency. These constraints may be irreconcilable (e.g. to be maximally informative and to use the briefest possible or the logically least complex expression), in which case the optimal expression will be the one which incurs the fewest or least significant constraint violations. This approach is akin to that practised in Optimality Theory, which has been brought to bear in the numerical domain by Krifka (2007).

We are collaborating to develop and assess a range of existing accounts on certain families of expressions (e.g. Breheny 2008, Geurts 2006 for numerals; Geurts and Nouwen 2007, Nouwen 2008 for superlative and comparative modifiers), as well as a novel constraint-based account which aims to accommodate the full range of numeral and quantifier usage. This project has five main components. First, we will review existing accounts and spell-out an alternative constraint-based account. To do the latter, we will test the validity and predictive utility of specific individual constraints. Then, we will formulate a model within which these constraints can interact, thus permitting us to generate testable predictions about quantifier use and interpretation. We will also spell out the predictions of existing accounts where possible and review existing empirical findings. Finally, we will test the predictions arising from these models experimentally, and evaluate whether they are descriptively and explanatorily adequate.

The ultimate objective of this study is either to construct an adequate model of numerical quantifier usage, or to demonstrate that no model of this type is a practical proposition. In either case, this would represent a substantial contribution to the state of our knowledge as regards the meaning and use of numerically quantified expressions.

References

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