NEW DIRECTIONS IN EXPERIMENTAL SEMANTICS

In recent years, experimental approaches have come to play an increasing role in formal semantics and pragmatics, prompted by a desire to confirm and augment data grounded in linguistic intuitions, as well as by the greater availability of easy-to-implement experimental methods. This workshop highlights contemporary work that applies experimental techniques to developing and distinguishing between theoretical accounts of meaning in language. After an introductory lecture surveying the motivations for the trend towards experimentation and the diverse applications of experimentally generated data, three talks by semanticists working this area provide case studies illustrating how experimental approaches have yielded insights into important theoretical questions in semantics.

PROGRAM

THURSDAY 3/27 – Room C198

4:15-5:45 Scott Grimm (University of Rochester)
- Inclusive and Exclusive Plurality: Experimental Investigations

6:15-7:45 Stephanie Solt (ZAS Berlin)
- Experimental contributions to a theory of vagueness and gradability

FRIDAY 3/28 – Skylight Room

10:30-12:00 Martin Hackl (MIT)
- On the Processing and Acquisition of *Only*: Question-Answer Congruence, Scalar Presupposition and the Structure of Alternatives
Certain uses of the plural form of indefinite nouns, such as in (1), have long been puzzling because they appear to include reference to singular entities.

(1) a. Q: Do you have children?
   A: Yes, I have one.
   b. Ed didn't see dogs. (False if Ed saw one dog)

Based on such examples, many researchers have argued that plural indefinite nouns are actually "inclusive", designating 'one or more' (including singular entities), rather than "exclusive", designating 'more than one' (excluding singular entities). Sauerland et al. (2005) further relate the inclusive reading to downward-entailing environments (such as negation or the antecedent of conditionals), claiming number "marking on indefinites in a downward entailing environment does not affect truth conditions".

This talk presents experimental and empirical evidence that the inclusive readings (i) cannot be causally related to downward-entailing environments, as this association both under- and over-generates and (ii) cannot be associated with indefinites in general, but only with non-specific/non-referential indefinites. Instead, the experimental results indicate that the key factor is whether the indefinite can be construed as non-referential/generic, which favors inclusive readings, or referential, which resists them. The contexts which permit inclusive readings, e.g. negation and interrogatives, are shown to be just those which may in general block referential commitment. I argue this lack of referential commitment promotes inclusive plural readings. I then discuss the typological prediction of this account, namely that inclusive plural readings should only occur in languages for which the bare plural has non-referential/generic uses, a claim which receives support from languages such as Armenian.
Gradable adjectives such as *tall* in (1) present a cluster of properties that are challenging for truth-conditional semantics. They are context-sensitive, being dependent for their interpretation on a comparison class that provides a frame of reference or standard of comparison. And even when the context is apparently fixed, they are vague, in that there are borderline cases for which the adjective seems neither clearly to apply nor clearly not to apply.

(1) Anna is tall (for a gymnast / a basketball player / a 8-year-old girl)

In this talk I present the results of a program of experimental research into speakers’ use and interpretation of gradable adjectives, with the goal of informing formal theories of vagueness, context sensitivity and gradability. Findings that are not unexpected but nonetheless theoretically relevant are that speakers leave a ‘gap’ between the positive and negative extensions of vague adjectives, and furthermore do not treat the negation of an adjective as coextensive with its antonym. More significant findings relate to context sensitivity. Speakers are highly sensitive to statistical properties of comparison classes in determining the thresholds of application for adjectives such as *tall*; furthermore, the patterns of contextual variation in judgments provide evidence that the truth conditions for such adjectives cannot be stated in terms of ordinal scales derived from orderings on comparison classes, a finding that contributes to constraining theories of gradability and scales. A more general conclusion from our research is that not all theoretical questions in this area lend themselves equally well to resolution through experimentally sourced data.
The starting point of this talk is a long-standing puzzle in L1 acquisition of the exclusive particle *only*. Crain et al. (1992; reported in Crain et al 1994) discovered that children up to age 6 display surprising difficulties understanding sentences with “subject-only” such as (1a) while seemingly having no difficulty understanding sentences with “VP-only”, (1b). Moreover, when they misconstrue (1a) children understand it to mean what (1b) does. E.g. Kermit’s answer to the question *What happened?* in (1a) is judged to be true relative to the scene in (1c) and the justifications indicate that (1a) is assigned the meaning expressed by (1b).

(1) a. Only the cat is holding a flag.              c. 
    b. The cat is only holding a flag.

This raises a number of questions: Why are sentences with subject-only relatively difficult for children? Why are sentences with VP-only relatively easy? Why do children, when they misunderstand subject-only, misconstrue it as VP-only? What are the factors that govern the ease/difficulty of understanding only sentences and to what extent are they operative in adults? In this talk I will present a series of acquisition and adult processing studies that explore the interaction of three factors: Question-Answer Congruence and Question-Accommodation, the scalar Presupposition of only, and the structure sensitivity of alternatives.