

Uli Sauerland and Kasuko Yatsushiro, eds.
Semantics and Pragmatics: From Experiment to Theory.
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In 2007 Humbolt University Berlin held a conference on experimental pragmatics, which formed the basis of this volume. The editors wisely chose between invited talks and submitted papers, organizing the contributions around three parts: implicature, negation, and presupposition. The result is a much more coherent volume than typical conference proceedings. As the editors note, the three topics are conceptually connected: implicatures (scalars at least) are sensitive to negative polarity items and presupposition, unlike entailment, is typically invariant under negation. And both presupposition and implicatures interact with projection and compositionality.

Part I: ‘Implicatures’. Chapter 1 (‘Implicatures’) by M. Krifka provides an excellent brief introduction and overview of implicature work, concentrating on the study of so-called ‘scalar’ implicatures. The four remaining chapters, as well as Chapter 8 of the next part, review experiments related to either i) the categorization of material as a part of what is ‘said’ or what is implicated (Chapter 5, ‘Distinguishing the Said from the Implicated Using a Novel Experimental Paradigm’, by M. Larson, R. Doran, Y. McNabb, R. Baker, M. Berends, A. Djalali, and G. Ward) or ii) uncovering evidence for or against various theories of the mechanisms underlying the comprehension of implicatures. These latter discussions, dealing with implicatures, include L. Bott’s ‘Changes in Activation Levels with Scalar Implicatures’ (Chapter 2); ‘A Large Scale Investigation of Implicature’ (Chapter 3) by P. Hendriks, J. Hoeks, H. De Hoop, I. Krämer, E-J. Smits, J. Spenader and H. De Swart; ‘Evaluating Under-Informative Utterances with Context-Independent Scales: Experimental and Theoretical Implications’ (Chapter 4), by N. Katsos; and ‘Experiments on QUD and Focus as a Contextual Constraint on Scalar Implicature Calculation’ (Chapter 6), by A. Zondervan.

Part II: ‘Negation’. In Chapter 7 (‘Meaning and Inference Linked to Negation: An Experimental Pragmatic Approach’) I. A. Noveck surveys some relevant work on negation. Mainly this has to do with the issue of the scope of negation raised in such sentences as ‘The present King of France is not bald’. Does ‘not’ have narrow scope, i.e. over just the predicate ‘bald’, or wide scope, i.e. over the whole sentence; or is it indeterminate until uttered in a context? Noveck also reviews the contributions to the present part of the volume which are: ‘The DE-Blocking Hypothesis: The Role of Grammar in Scalar Reasoning’ (Chapter 8), by A. Bezuidenhout, R. Morris, and C. Widmann; ‘Experimental Pragmatics and Parsimony: The Case of Scopally Ambiguous Sentences Containing Negation’ (Chapter 9), by A. Gualmini; ‘How are Pragmatic Differences between Positive and Negative Sentences Captured in the Processes and Representations in Language

Comprehension?’ (Chapter 10), by B. Kaup; and ‘Brain Potentials for Logical Semantics/Pragmatics’ (Chapter 11), by J. E. Drury & K. Steinhauer.

Part III: ‘Presupposition’. Sauerland’s ‘Presupposition: From Theory to Experiment’ (Chapter 12) reviews some linguistic points regarding presupposition, relates that notion to the notions of ‘common ground’ and ‘accommodation’, and previews the contributions to this part. These contributions are ‘The Real-Time Use of Information About Common Ground in Restricting Domains of Reference’ (Chapter 13), by D. Heller, D. Grodner, and M. K. Tanenhaus; ‘An Experimental Approach to Adverbial Modification’ (Chapter 14), by E. Chemla; ‘Weak Definite Noun Phrases: Rich But Not Strong, Special But Not Unique’ (Chapter 15), by N. M. Klein, W. M. Gegg-Harrison, R. S. Sussman, G. N. Carlson, and M. K. Tanenhaus; and ‘The Neuropragmatics of “Simple” Utterance Comprehension: An ERP Review’ (Chapter 16), by J. J. A. Van Berkum.

How is any of this relevant to the philosophy of language? Good question. The above studies contain mostly linguistics and psycholinguistics. Linguistic analysis is typically language internal and concerned with linguistic units, levels and principles. Psycholinguistics is typically concerned with the acquisition and processing of those units. Philosophy of language, on the other hand, is typically concerned with word-world relations, such as are involved in reference, truth, felicitous speech acts and implicature. In these areas the world and beliefs about the world loom large. There is, of course, overlap, but so far less on the experimental side. Implicature and presupposition, at least, are topics one can legitimately cover in a philosophy of language course, though the time-course of understanding, and the mental representations and memory mechanisms deployed are not legitimate.

Implicature. H. P. Grice introduced the concept of implicature into the philosophy of language primarily as a way of deflating some philosophical analyses. According to Grice, the philosopher would suggest that concept X involved concept Y (or that a term is ambiguous between X and Y), and Grice provided an alternative explanation for the intuitions behind these suggestions that involved ‘pragmatic’ inferences rather than ‘semantic’ structures. Grice’s proposal was broadly speaking epistemological; we might call it ‘linguistic epistemology’, as it provided an alternative justification for a class of intuitions. It was not officially psychological, though successors quickly took his proposed inferences to constitute psychological mechanisms recruited in communication. One still sees remnants of this conflation in the literature and in the papers in Part I of this collection. However, Grice did appeal to intuitions regarding what was said, meant, and implicated, even though his theory recognized how hard it could be for intuition to separate these factors.

Chapter 5 seeks to supplement introspection with experiment. Larson *et al.* first review the weaknesses of earlier categorization experiments, e.g., one-sided diet of materials, confusing subject instructions, and theoretical narrowness. They then propose to answer three related questions: Can speakers access a level of meaning corresponding to the Gricean

notion of what is said? Do different types of Generalized Conversational Implicatures ('GCIs') behave similarly with respect to truth-conditional meaning? Can previous methodologies be improved on? Their experiments used 4 blocks of 22 stimuli for each of 72 subjects. The results suggest that, yes, subjects do have access to something like truth-conditions as opposed to GCIs. And, yes, different GCIs do behave differently. Finally, by distinguishing an explicitly 'literal' observer ('Literal Lucy') the authors were able to magnify the resulting chances of getting truth-conditions separated from GCIs, improving on previous methodologies.

Grice also distinguished between particularized (conversational) implicatures, which depend on the particularities of the context of utterance, and generalized (conversation) implicatures, which tend to go with the words uttered and are carried in a wide variety of contexts. Chapter 4, by Katsos, explores aspects of the experimental side of this distinction. His main purpose is to 'explore whether the distinction between GCIs and PCIs is psychologically real, and in particular whether it is reflected in the pattern of child language acquisition' (34). He is also interested in the consequences for the dispute between 'unitary' and 'default heuristic' pragmatic theories. He finds experimental evidence that children do not favor context-independent (C-I) scalar implicatures over context-dependent (C-D) ones, consistent with unitary theories, though adults reject (with revisions) false C-I implicatures more than false C-D ones, in accordance with default theory. He suggests we may have both by assuming that C-I implicatures are more frequent, give rise to a privileged psychological status, and thus are more prone to revision and rejection when false.

Presupposition. Frege introduced the idea that (as least some) sentences with singular terms presuppose rather than entail—some say assert—the existence of their purported referent, in the sense that the falsity of the presupposition precludes the sentence from having a truth value (while the falsity of an entailment falsifies the original sentence). This notion, familiar in the philosophical literature, does not make an appearance in Part III. What does appear is variously called 'linguistic' or 'pragmatic' presupposition. Still, however, the discussion is often confusing. For example, in Chapter 12 Sauerland gives 'Sue knows that Joe is asleep' as presupposing that Joe is asleep, while entailing that Sue believes that Joe is asleep, presumably on the ground that the negation 'Sue doesn't know that Joe is asleep' also carries the 'presupposition' that Joe is asleep (219). But for philosophers 'X knows that P' typically entails both 'P' and 'X believes that P', and the supposed presupposition would be explained by the scope of negation (and maybe conversational implicature).

The upshot of this discussion is that experimental work on semantics and pragmatics impacts philosophy mainly either when philosophers rely on linguistic intuitions for data, or appeal to particular psychological mechanisms in explanations. This volume is a good survey of the state of the art at present with respect to both intuitions and mechanisms.

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