## PRESUPPOSITIONS AND IMPLICATURES

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## INTRODUCTION

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From January 2007 to June 2008 the Department of Linguistics and Philosophy of MIT and the Department of Cognitive Studies of the École Normale Supérieure in Paris organized a research and exchange program on the topic "Presuppositions and Implicatures", sponsored by the MIT France Program and the MIT France Seed Fund for Collaborative Research. The project was coordinated by Paul Égré and Danny Fox, and originated from an idea of Philippe Schlenker. At the end of May 2007 a two-day workshop on presuppositions and scalar implicatures was held at the École Normale Supérieure in Paris on this topic, and several individual exchanges took place between MIT and Paris during that year and the following. The workshop and collaborations that ensued were so fruitful that the idea of putting together a volume of working papers quickly made its way. The present volume collects papers written during that period by the participants in this exchange, the majority of which was presented during the workshop. Its aim is to present new and recent contributions to the theory of presuppositions and implicatures, as well as to give a reflection of the creative reciprocity which this exchange made possible.

Formal pragmatics has witnessed a tremendous development in the last ten years, especially with respect to the theories of presuppositions and scalar implicatures. In the seminal work of Robert Stalnaker in the 70's (Stalnaker (1973, 1974, 1979)), it was claimed that presuppositions should be treated as a pragmatic phenomenon, analyzed in terms of certain rational inferences on the part of the agents. While keeping some of Stalnaker's formal insights, the ground-breaking work of Lauri Karttunen in the 70's (Karttunen (1973, 1974) and Karttunen and Peters (1979)), and then of Irene Heim in the early 80's (Heim (1988a, 1990)), explored a rather different direction, one in which presuppositions are part and parcel of the recursive procedure that defines semantics. While dynamic semantics (Kamp (1981), Heim (1983, 1988b)) has been the cornerstone of most work on presuppositions and their projection should in fact be handled by compositional semantics or whether they can be reduced to pragmatic mechanisms, as reflected in Gazdar (1979), van der Sandt (1992), Geurts (1999), Abusch (2002), Simons (2003) and others. This debate between

semantic and pragmatic approaches to presuppositions has been taken further in recent work by Philippe Schlenker (Schlenker (2005, 2008)), who argues that almost all the formal results of Heim's semantic approach can be derived within a theory which is pragmatically inspired and furthermore far more predictive than any version of Heim's analysis. The proper division of labor between semantics and pragmatics has also been at the core of recent research in the theory of scalar implicatures. Since work by Paul Grice in the late 60's (Grice (1975)), scalar implicatures have been accounted for as pragmatic inferences derived by general purpose principles of rationality (in so-called 'neo-Gricean' theories of scalar implicatures, in particular in Horn (1972, 1989), Gazdar (1979), Fauconnier (1975), and Levinson (1983, 2000)). Yet, recent research by Gennaro Chierchia (Chierchia (2004)), building on ideas of Fred Landman (Landman (1998)) and Manfred Krifka (Krifka (1995)), has argued that this pragmatic account, at least in its simplest form, makes inadequate predictions for the case of complex sentences. These results have led to substantial refinements of the initial pragmatic account (as in work by Sauerland (2004), van Rooij and Schulz (2004), Spector (2007), and others) as well as to more radically alternative accounts that construe the computation of scalar implicatures entirely within grammar rather than delegating it to pragmatics (as in Chierchia (2004, 2006), Fox (2007) and Levinson (2000) among others). Finally, these developments in the theory of presuppositions and implicatures have had deep and important consequences for the proper treatment of a variety of grammatical facts, such as the free choice effect and the distribution of negative polarity items. This volume documents this tremendous ferment, by contributing to these theoretical developments as well as to their applications to the proper treatment of various linguistic facts.

Three papers in the volume address issues in the theory of presuppositions. *Chemla* shows that standard tests for presuppositions (e.g. embedding under negation) are not conclusive, in the sense that other inferences (e.g. scalar implicatures) might indeed pass those same tests. *Pérez Carballo* suggests a solution for the classical problem of presupposition projection out of the consequent of a conditional (the so called "proviso problem") based on Stalnaker's semantics for indicative conditionals. Finally, *Schlenker* develops a new notion of local context and uses it to develop a general account of presupposition projection that is theoretically principled and at the same time empirically adequate.

A second set of papers deals with the theory of scalar implicatures. *Chierchia, Fox & Spector* present new evidence for embedded implicatures, by using a special constraint on disjunction (the so called "Hurford Constraint") as a probe. *Geurts & Pouscoulous* present experimental results on the robustness of implicatures embedded under a variety of operators and bring it to bear on the current debate between Gricean and localist theories of scalar implicatures. *Fox & Katzir* discuss the issue of the proper definition of the set of scalar alternatives used in the computation of scalar implicatures, concentrating on the distinction between formal grammatical vs contextually relevant alternatives as well as on the distinction between alternatives for scalar implicatures vs alternatives for focus semantics. Finally, *Magri* provides evidence that scalar implicatures are computed blind to common knowledge, by arguing that the oddness of various sentences is due to a mismatch between their blind scalar implicatures and common knowledge.

A third set of papers in the volume deals with applications of the theory of presuppositions and implicatures to the proper treatment of a variety of linguistic facts. *Abrusan* provides a semantics for a special focus particle in Hungarian based on the exhaustivity operator and explores consequences of her analysis for a proper treatment of the free choice effect. *Beyssade* argues against the existing literature that exclamatives are not presupposition triggers, based on the consideration of a variety of tests that pull the two phenomena apart. *Domingo* discusses various challenges against a proper formal algorithm for the computation of presuppositions of complex sentences. *Égré* discusses the link between factive verbs and the selection of interrogative complements, arguing that veridicality, rather than factivity in the presuppositional sense, is sufficient to account for the question-embedding behavior of verbs that take declarative complements. *Katzir & Singh* propose a new solution for the problem of the cross-linguistic lack of lexical entries meaning "some but not all" within a framework where logical operators are constructed out of the min and max operators. Finally, *Klinedinst* proposes a new solution of the well-known problem of counterfactual conditionals with disjoined antecedents, in terms of a modification of Lewis's semantics for counterfactuals together with an independently motivated assumption about the pragmatics of conversation.

Before closing this introduction, we wish to thank Omer Preminger and Emmanuel Chemla for their valuable help in typesetting this volume, and Benjamin Spector for helpful comments. Further thanks go to Philippe Schlenker and Danny Fox, without whom this exchange on implicatures and presuppositions would not have happened. On behalf of all involved in this volume, we wish to thank the MIT France Program, and in particular April Julich Perez and Richelle Amado for their kind assistance, as well as the MIT Linguistics and Philosophy Department, the Department of Cognitive Studies of ENS, and Peter Graff for his assistance with publishing at MITWPL.

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