

## Linguistics Meets Philosophy

Linguistics and philosophy, while being two closely related fields, are often approached with very different methodologies and frameworks. Bringing together a team of interdisciplinary scholars, this pioneering book provides examples of how conversations between the two disciplines can lead to exciting developments in both fields, from both a historical and a current perspective. It identifies a number of key phenomena at the cutting edge of research within both fields, such as reporting and ascribing, describing and referring, narrating and structuring, locating in time and space, typologizing and ontologizing, determining and questioning, arguing and rejecting, and implying and (pre-)supposing. Each chapter takes on a phenomenon and explores it through a set of questions which are posed and answered at the outset of each chapter. An accessible and engaging resource, it is essential reading for researchers and students in both disciplines, and will empower exciting and illuminating conversations for years to come.

DANIEL ALTSHULER is Associate Professor of Semantics at the University of Oxford. His first book, *Events, States and Times* (2016), won De Gruyter's Emerging Scholar Monograph Competition. Altshuler is an associate editor for *Linguistics and Philosophy* and serves on the editorial board for *Semantics and Pragmatics*.

# Linguistics Meets Philosophy

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## Linguistics Meets Philosophy: A Historical Preface

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Barbara H. Partee

Before 1965, the level of mutual awareness and interest between linguists and philosophers was relatively low, and interactions were largely by chance.\* A decade later,<sup>1</sup> the picture was very different, and foundations for much of the subsequent history had been laid. From the mid-1970s onward, various paths converge, intertwine, and diverge, as linguistic semantics matures and new directions develop in linguistics and in philosophy, with links between the two fields ebbing and flowing. This brief preface offers some historical context for this volume, describing interactions and influences between linguists and philosophers in the development of formal semantics. I focus on the decade of explosion, roughly 1965–74, with some earlier background and brief notes on developments after that period, including some major topics that didn't emerge until later, sometimes involving questions that opened up only as progress was made. This is not a short history of formal semantics, but an offering, based partly on personal reminiscences, of sketches of people, events, and topics of discussion and debate that may give a picture, necessarily very incomplete, of some of the mutual influences and cross-fertilization that marked the emergence of our field.

### Before 1965

There was a great deal of relevant work in logic and philosophy of language before 1965. Philosophers and logicians had been discussing aspects of natural language and studying formal properties of logical languages for decades

\* I am grateful first of all to Daniel Altshuler for giving me the exciting challenge of writing this preface, for excellent suggestions on the first draft, and for helpful advice as I proceeded. Thanks also to Larry Horn for help in tracing the routes by which linguists learned of the work of Paul Grice. For valuable comments on the first draft I am also grateful to Angelika Kratzer, Hans Kamp, and two anonymous contributors to the volume. I thank three of Daniel's students for proofreading the first draft, catching typos and identifying unclarity of content and infelicities of style. All remaining shortcomings are my own.

<sup>1</sup> Of course these dates are an oversimplification. I picked them just from the density of events in a timeline I drew for myself. Another simplification, noticed by Hans Kamp, is that I often use the term "philosophers" to include logicians, even if that is sometimes problematic.

before any substantial interaction with linguists began. We could easily go back at least to Aristotle and mention Buridan, Leibniz, de Morgan, Boole, and Peirce, and say a great deal about the foundational giant Frege, but here I focus on strands of influence and interaction in the twentieth century.<sup>2</sup> I note only that Frege made explicit that his interest in formalizing a good logical language that avoided some of the shortcomings (from a logical point of view) of natural language did not mean that he did not value natural language: he wrote that he did not see himself as offering an analysis of natural language, but a tool to augment it, as the microscope augments the eye, acknowledging that natural language, like the eye, is an excellent instrument for human purposes (Frege 1972: 105). And even Bertrand Russell, who famously criticized natural language syntax as illogically putting *every man* and *Smith* into the same syntactic category, wrote in 1903: “The study of grammar, in my opinion, is capable of throwing far more light on philosophical questions than is commonly supposed by philosophers” (Russell 1903: 42).

Many other philosophers and logicians were important to the development of semantics as a part of logic and philosophy of language in the first half of the twentieth century, sometimes for their work, sometimes for their influence on their students, sometimes for their active encouragement of interactions. I mention a few examples.

Hans Reichenbach (1891–1953) was one of the few logicians who looked closely at constructions in natural language, including modifiers and tense and aspect, both discussed in his logic book (Reichenbach 1947) and followed up later by formal semanticists. He taught at UCLA from 1938 until his death in 1953, and helped establish UCLA as a leading philosophy department in the United States in the postwar period, introducing a strong curricular tradition rooted in studies in logic and the philosophy of science. His PhDs included Hilary Putnam (1926–2016, PhD 1951).

Putnam is an important part of the story both before and after 1965. He went to high school with Chomsky in Philadelphia in the early 1940s, and they became friends as undergraduates in Zellig Harris’s class at UPenn. He taught at Princeton 1953–61, MIT 1961–65, and then Harvard 1965–2000. His Princeton PhDs included Jerry Fodor (1960), his MIT PhD was George Boolos (1966), and his Harvard PhDs included Ned Block, Hartry Field, Georges Rey, and Norbert Hornstein. He and Kripke were crucial parts of the ‘direct reference’ revolution; he famously argued that “Meanings ain’t in the head” (Kripke 1972; Putnam 1975).

Alfred Tarski (1901–83) didn’t interact with linguists as far as I know, but had great influence through his writings and his students and grandstudents –

<sup>2</sup> Cocchiarella (1997) is a good source for the contributions of Descartes, Leibniz, Boole, Frege, and early twentieth-century philosophers to the development of ‘formal philosophy of language’.

he was instrumental in adding semantics to logic, influencing Carnap while still in Europe and many others once at Berkeley. He is best known among semanticists for his seminal contributions to model theory and the semantic conception of truth (Tarski 1944). He taught at UC Berkeley from 1942 until his death in 1983, and founded his influential interdepartmental program in Logic and the Methodology of Science there in 1957; his students included Richard Montague (PhD 1957), and Dana Scott as an undergraduate. Scott left Berkeley and got his PhD from Princeton under Church in 1958.

The logician and philosopher Alonzo Church (1903–95) is a major figure in many ways, including for the invention of the lambda calculus, his detailed construction of the Fregean and Russellian intensional logics, and his stellar list of PhD students (including Scott, Turing, Henkin, Rosser, Kleene, Kemeny, and Smullyan). And as Angelika Kratzer (2022) observes,

By the time Church wrote “The Need for Abstract Entities in Semantic Analysis,” he had designed formal languages that were similar enough to natural languages for him to conclude that “although all the foregoing account has been concerned with the case of a formalized language, I would go on to say that in my opinion there is no difference in principle between this case and that of one of the natural languages.” (Church 1951: 106)

He joined the UCLA Philosophy Department in 1967 after retiring from Princeton, and taught there until 1990, though he didn’t interact directly with the linguists there.

Rudolf Carnap (1891–1970) played a major role in the developments that led to formal semantics, including with his work in (Carnap 1947) on the extension/intension distinction with possible worlds as state-descriptions, the notion of intensional isomorphism, and the introduction of meaning postulates, among much else. He had a major influence on Yehoshua Bar-Hillel, David Kaplan, and others. Like Church, he spent the last part of his career at UCLA, arriving in 1954, the year after Reichenbach died.

Others who richly deserve their own descriptions include W. V. O. Quine, for his many contributions to set theory and logic, his views, influential on the East Coast, that only first-order predicate logic is real logic, and that intensions are “creatures of darkness,” and his keen insights and classic puzzles about the semantics of natural language (Quine 1960); Haskell Curry for his work on combinatory logic; Julius Moravcsik for his tireless efforts to get philosophers, logicians, and psychologists acquainted with one another’s work; Evert Beth in the Netherlands for his contributions to logic and to supporting interdisciplinary collaboration; Jaakko Hintikka for his linguistically sensitive work on varieties of modality and epistemic logic in the analysis of knowledge and belief. And many more.

One last mention: the name of Yehoshua Bar-Hillel comes up frequently in the history of linguistics–philosophy interactions, partly from his own foundational work on topics from categorial grammar to indexicality, but also from

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his influence on others and his efforts at building bridges. He was born in Vienna in 1915, emigrated to Palestine in 1933, and got his PhD in Philosophy from Hebrew University. Bar-Hillel was influenced by the works of Reichenbach and Ajdukiewicz and later did foundational work on categorial grammar. He met Zellig Harris in Palestine in 1947 and was convinced by Harris that natural languages could be described by context-free grammars that could be arrived at by “discovery procedures.” He also became convinced that philosophers and logicians could not ignore linguistics. He was a major disciple of Rudolf Carnap, deeply influenced by his pre-semantic *Logische Syntax der Sprache* (Carnap 1937); he held a postdoctoral position with Carnap at Chicago in 1950 and collaborated on a volume with Carnap (Carnap & Bar-Hillel 1952). But he strongly disagreed with Carnap’s stated belief that the tools being applied so successfully to the study of language in general could not be applied to natural language. According to Carnap,

In consequence of the unsystematic and logically imperfect structure of the natural word-languages (such as German or Latin), the statement of their formal rules of formation and transformation would be so complicated that it would hardly be feasible in practice. (Carnap 1937: 2)

Bar-Hillel got a position at MIT 1951–53, where he was the first academic to work full-time in the field of machine translation in 1952. Later, influenced by Chomsky, he famously expressed doubts about its feasibility. In 1953, he moved to the Philosophy Department of Hebrew University, where he taught until his death in 1975. He was a good friend of Chomsky, and of Montague, and tried repeatedly to get each to pay attention to the other’s work (see, for instance, Bar-Hillel 1954b).

Chomsky had studied philosophy and mathematics as well as linguistics at Penn, and was influenced by Nelson Goodman there; then, as a Junior Fellow at Harvard, he got to know other philosophers, especially Quine. The three philosophers cited in *Syntactic Structures* (Chomsky 1957) are Bar-Hillel, Goodman, and Quine. And when Chomsky and Halle started the PhD program at MIT in 1961, with the first three cohorts including James McCawley, Barbara Hall (Partee) (both PhD 1965), and Haj Ross (third cohort, PhD 1967), the philosophers Jerry Fodor and Jerrold Katz were junior faculty members in the Humanities and part of Chomsky’s circle, and Putnam had just joined the MIT faculty. I was able to take a course from Putnam in my first year, and later a course at Harvard from Quine. David Lewis, who was then studying with Quine at Harvard, sometimes came to Chomsky’s lectures at MIT, and he and I and Gil Harman would sometimes puzzle over the differences between Chomsky’s and Harris’s transformational grammar. Other philosophers were sometimes there as well. John Searle spent a semester at MIT in the early 1960s, where he and Chomsky clearly enjoyed arguing vigorously.

Chomsky was ambivalent about semantics (Partee 2018), but Katz and Fodor, and then Katz and Paul Postal (a philosopher–linguist pair), worked on adding semantics to generative grammar (Katz & Fodor 1963; Katz & Postal 1964), and linguistics students at MIT in the 1960s sometimes shared with each other their “discoveries” of interesting work by philosophers. I recall us passing around a copy of *Reference and Generality* (Geach 1962), with its novel anaphora puzzles – donkey sentences, Hob-Nob sentences – around the same time (and with the same excitement) that we were passing around a copy of *Catch-22* (Heller 1961).

But I don’t remember anything resembling conferences or workshops that brought linguists and philosophers together, although one important event for me was an interesting summer 1960 course at Penn, taught by Henry Hiz, on Structural (Zellig Harris-style) Linguistics, with some sort of external funding, designed for undergraduate students with backgrounds in mathematics, philosophy, or psychology; it was the first introduction to linguistics for three of us from Swarthmore – David Lewis, Gil Harman, and me. Katz and Fodor, who had just completed their PhDs in Philosophy at Princeton, sat in the back of the room and kibitzed. (Harris was one linguist who believed that linguists and philosophers should be interacting more; like Bar-Hillel, he deplored the attitude expressed by Carnap, Russell, and others that natural languages were too unsystematic to study formally.)

Perhaps linguistics–philosophy interactions might have begun earlier if not for Chomsky’s negative reply to Bar-Hillel’s invitation in *Language* for closer cooperation between linguists and logicians (Bar-Hillel 1954b; Chomsky 1955; see Partee 2011). But I think it’s more likely that interactions increased after more linguists started working on semantics, which is closer to more issues in logic and philosophy than syntax or phonology are. And I should add that Chomsky’s influence on the convergence of linguistics and philosophy of language was overall a great positive, as emphasized by both Stanley (2008) and Kratzer (2022). Stanley writes:

Chomsky’s work made the project of transferring the tools of the logician to the analysis of meaning considerably more tractable. If natural languages have a systematic syntax, then there is no obstacle to mimicking the formal semantic project directly for natural languages. (Stanley 2008: 424)

By 1965, philosophers had thought a great deal about reference, quantification, and indexicality, logical structure, intensionality, tense, aspect, and modality, the logic of modifiers, the semantics of interrogatives, and many other semantic issues which were very new to linguists in the 1960s and early 1970s. Linguists, on the other hand, had generally thought more about syntactic structure and syntactic constraints on possible interpretations, and when they began to interact with philosophers, they were very good at generating examples that could challenge any suggested generalization.



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### 1965–1974: The Blossoming of Linguistics–Philosophy Interaction

Interaction between linguists and philosophers in the second half of the 1960s and through the 1970s played a major role in the development of semantics. The earliest conferences that included both linguists and philosophers were organized by philosophers; later ones were increasingly organized by linguists.

By 1965, people who in 1955 had still been in high school (Terry Parsons, David Lewis, Max Cresswell, Gil Harman, Ed Keenan, Rich Thomason, Hans Kamp, George Lakoff, Barbara Partee, Arnim von Stechow, Lauri Karttunen, etc.) or were undergraduates (David Kaplan, Ed Keenan, James McCawley, etc.) were emerging onto the scene with interests in or heading towards semantics and philosophy of language. And the first work in generative semantics was beginning.

In the mid to late 1960s, there were a number of developments that soon led to an acceleration of linguistics–philosophy interactions.

#### 1965–1967

Two early milestones were international, with the main impetus coming from philosophers who had an interest in and appreciation of recent work in linguistics.

In 1965, Frits Staal, a philosopher, linguist, and Vedic scholar in Amsterdam (and a friend of both Chomsky and Montague) and an international group of colleagues, including linguists Morris Halle and Peter Hartmann and philosopher Benson Mates, founded the journal *Foundations of Language* with a call for interdisciplinary cooperation. That journal became an important venue for papers in linguistics and philosophy and lasted until 1976, when it was succeeded by *Linguistics and Philosophy*, which began in 1977 and still continues.

In the summer of 1967, Staal, Bar-Hillel, and Curry organized a symposium during the 3rd International Congress for Logic, Methodology, and Philosophy of Science, on “The Role of Formal Logic in the Evaluation of Argumentation in Ordinary Language.” Bar-Hillel prepared an opening position paper, and participants included Montague, Jerrold Katz, Dummett, Geach, Hintikka, and others – almost all philosophers. Edited proceedings were published in *Foundations of Language* as (Staal 1969).<sup>3</sup> From Staal’s editorial introduction:

The discussion, moreover, contains brief expositions and applications of two important recent trends in the analysis of natural language, i.e., transformational generative

<sup>3</sup> Audio recordings of that meeting are now available. Montague’s part can be found on a site established in 2021 by Ivano Caponigro: [www.richardmontague.com/home](http://www.richardmontague.com/home).

grammar as represented by Jerrold J. Katz and model theory as represented by Richard Montague. Many may be familiar with either of these trends, but few appear to be conversant with both. In addition, many comments made by other participants throw light on basic issues, such as the observations made by John Lyons on the nature of sentencehood and the type/token distinction, those of Max Black on the possibility of a theory about context, and those of several participants on indexical expressions, sentences, statements, and propositions. (Staal 1969: 256)

Linguists were also becoming increasingly interested in semantics. In 1967, a three-day conference that involved only linguists marked perhaps the earliest intensive discussion of the relation between syntax and semantics, including early statements of, or contributing to, the generative semantics program. The conference was organized by Emmon Bach and Robert Harms at the University of Texas, Austin, on the topic of universals in linguistic theory. The four presented papers were Fillmore, “The case for case”; Bach, “Nouns and Noun Phrases”; McCawley “The role of semantics in a grammar”; and Kiparsky, “Linguistic universals and linguistic change,” published in (Bach & Harms 1968). Discussants at the conference included George Lakoff and Haj Ross, Ed Klima, Terry Langendoen, Paul Schachter, and György Szepe. The lively discussion led to revisions in the papers, including the addition of a postscript in McCawley’s paper stating that deep structures can be taken to be identical with semantic representations.

Another landmark event, which did not reach the attention of linguists until a little later, was Paul Grice’s delivery of the 1967 William James Lectures at Harvard. The history of the publication of various lectures in that series is complex (Horn 2020). The most influential second lecture, in which Grice defines and exemplifies the notions of conversational and conventional implicature, was published as (Grice 1975); the sixth lecture, which also discusses those notions, appeared earlier in the journal *Foundations of Language* (Grice 1968). I heard Grice lecture in 1971 at the Irvine Institute (see below), and had heard about his work before that, possibly from Larry Horn, who had a teaching job at Berkeley in 1970–71, where Grice was from 1967 until his death in 1988. Horn, who made a great deal of use of Grice in his dissertation work on scalar implicatures (Horn 1972) and in subsequent papers beginning with (Horn 1973), was one of the first linguists to appreciate the impact that Grice’s ideas could have on explanation in linguistics, helping to distinguish entailment from implicature and various kinds of implicatures from one another.<sup>4</sup> By the mid-1970s, partly as a result of

<sup>4</sup> Linguists and philosophers both found Grice’s work important, but for different reasons. Philosophers focused on Grice’s goal of showing that logical and natural languages were not as different as the Ordinary Language philosophers claimed, once we can understand and factor out the pragmatic effects of implicatures. Linguists found the classification and behavior of implicatures a major step towards making pragmatics a field of study rather than a “wastebasket.”

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Horn's fruitful applications of Grice's ideas, many people working on semantics appreciated the value of Grice's work in helping to define what kinds of data a semantic theory should or should not be responsible for. First the generative semanticists, and later formal semanticists and others, began developing those ideas as part of a serious field of pragmatics. As Horn notes in his 2020 lecture, Chomsky paid early attention to Grice in a paper first distributed in 1970, discussing how presuppositions seem to come in different varieties, and suggesting that Grice's ideas be developed and sharpened to sort out which kinds should be accounted for in grammar and which should better be left to something like "conversational implicature" (Chomsky 1971b).

#### *1967–1968*

From 1967 to 1969, the philosophers Donald Davidson and Gilbert Harman were both at Princeton, intensely interacting, optimistic about potential fruitfulness of linguistics–philosophy interactions. Harman had done his PhD at Harvard with Quine and Roderick Firth, while spending a great deal of time at MIT learning from Chomsky, having discussions with him, and interacting with the linguists; he was at Princeton from 1963. Davidson appreciated the potential value of Chomsky's syntactic work for progress in semantics: "Recent work by Chomsky and others is doing much to bring the complexities of natural languages within the scope of serious semantic theory" (Davidson 1967b: 315).

Davidson was very interested in logical form, and Harman convinced him to look at what the generative semanticists were doing to develop a notion of logical form with both linguistic and logical grounding. They influenced each other's work, and together they produced some exciting conferences and influential edited collections bringing philosophers and linguists together, to be described below.

David Lewis stayed at UCLA for a relatively short time, 1966–70, but his UCLA period was an important one for the field of semantics, not least because of Lewis (1968, 1969, 1970). His colleagues during those years included Richard Montague, David Kaplan, Keith Donnellan, Rudolf Carnap, and Alonzo Church. Hans Kamp was at UCLA at the beginning of that period, finishing his PhD under Montague. And the famous UCLA "logic year" was in 1967–68, David's second year there, with visitors including Wilfrid Hodges, Jon Barwise, and Jerome Keisler. David Lewis introduced me to Montague and I first sat in on a seminar of Montague's at UCLA (with David Lewis and Frank Heny) in 1968.

The year 1968 was also when the young philosopher Terry Parsons circulated the first version of his manuscript, "A Semantics for English" – a project

similar to Montague's, but using combinatory operators rather than variables and lambda abstraction. He visited UCLA around then, mainly to meet with Montague, and Frank Heny, David Lewis, and I got acquainted with him and his work then. The later version (Parsons 1972) was circulated in 1972. After moving to UMass Amherst in 1972, Parsons and Partee joined forces on further research extending "Montague grammar," and Parsons never published a final version of his manuscript.

### 1969

Two early notable conferences on semantic topics happened in the Midwest in 1969, both organized by linguists and attended mainly by linguists. In April 1969 Charles Fillmore organized the "1969 Spring Semantics Festival" at The Ohio State University, leading to the volume (Fillmore & Langendoen 1971). From the preface:

The theme of the conference was chosen to reflect the current concerns of generative grammarians to develop an adequate linguistic account of semantics. It should be noted straight off that not all current issues in semantics nor all current theoretical positions are represented in this collection. The major issues that are discussed are the separability of syntax from semantics and the nature of presuppositions; the major position that is represented is that of generative semantics (see particularly the paper by Postal).<sup>5</sup> Only the paper by Langendoen and Savin attempts to develop the deep interpretive semantics position currently held by Jerrold Katz, while surface interpretive semantics as recently expounded by Noam Chomsky, Ray Jackendoff, and others is not represented at all. Three papers (Partee, Garner, Fillmore) relate current linguistic concerns with semantics to past linguistic concerns or to philosophical concerns, either past or present. (Fillmore & Langendoen 1971: vi)<sup>6</sup>

The other 1969 conference on the relation between syntax and semantics was CLS 5,<sup>7</sup> the 5th Annual Meeting of the Chicago Linguistic Society, April 18–19, just after the Ohio State conference, so that many linguists were able to attend both. That year the main session of CLS was on Syntax and Semantics. Presenters included Davison, Emonds, Fraser, Green, Heringer, Horn,

<sup>5</sup> Other papers with a generative semantics approach were by George Lakoff, Robin Lakoff, James McCawley, and Sandra Thompson.

<sup>6</sup> See also a retrospective review eight years later (Williams 1979).

<sup>7</sup> CLS 4, 5, 6, and 7 (1968, 1969, 1970, and 1971) were all on the shortlist heading the bibliography of work on semantics and syntax by linguists that I prepared for philosophers during the 1971 "summer school" described below. McCawley's students were among the active organizers of the CLS conferences, which were centers for reporting work in semantics, especially generative semantics, in those years.

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Karttunen, G. Lakoff, R. Lakoff, Morgan, Newmeyer, Postal, Ross, Stanley, and Zwicky, all linguists. Newmeyer (1980: 152) lists five of the papers from that conference as papers that “were to define a research strategy for the majority of the theoretical linguists in America”: (Horn 1969; Lakoff 1969; Morgan 1969; Postal 1969; Ross 1969).<sup>8</sup> Larry Horn was my PhD student at UCLA (PhD 1972), but he spent the year 1969–70 at Michigan by invitation of George and Robin Lakoff and McCawley, all visiting there that year, and later wrote his beautiful generative semantics dissertation on negation and quantifiers.<sup>9</sup>

### *The First Real Linguistics and Philosophy Conference*

The first real linguistics and philosophy conference was in August 1969, organized by Davidson and Harman; it took place at the Center for Advanced Study in the Behavioral Sciences, in Stanford. Generative semantics was well represented. Geach presented “A Programme for Linguistics,” countered by McCawley’s “A Programme for Logic.” Harman recalls that at the conference the philosophers included Quine, Geach, and David Kaplan; the linguists included Bach, Lakoff, McCawley, and Partee. They published a set of papers in a pair of double issues of *Synthese* in 1970, with neither all nor only authors who were at the conference (e.g. that’s where Lewis 1970 and Montague 1970 were first published), then expanded it into an edited volume that became a classic reference, adding Kripke 1972 and papers by McCawley, Ross, Ziff, and Strawson. That volume gives a good picture of the state of linguistics–philosophy interaction just before Montague began to have a big influence.<sup>10</sup> I believe that the conference and the two publications had a large and beneficial impact.

The topics in the big volume included several that were addressed by both linguists and philosophers, especially the biggest “joint” topic of that era, semantic theory and its relation to grammar, which was addressed in the papers by the philosophers Harman, Lewis, Quine, Strawson, and Geach and the linguists Lakoff, McCawley, and Fillmore. The family of issues of reference,

<sup>8</sup> He also lists a seminal paper by James McCawley from the previous year’s CLS meeting (McCawley 1968a).

<sup>9</sup> Larry Horn recalls (interview with the author, January 2014) that those were very exciting times for a graduate student just getting interested in semantics and pragmatics, with those two conferences, the La Jolla syntax conferences of the winters of 1969 and 1970, and the conference in the church basement at UCLA in 1970, to be described below. And indeed he was present at several of the very first conferences on such topics.

<sup>10</sup> See also Gil Harman’s reflections on his interactions with Davidson and their jointly organized conferences and co-edited books all in the interest of linguistics–philosophy connections (Harman 2013).

coreference, and anaphora were addressed by Kripke, Donnellan, and Partee, and the semantics of action sentences was addressed by (Jerry) Fodor and Ross. Topics addressed only by philosophers were modifiers (Parsons), philosophy and grammar (Strawson, Linsky, Wallace), semantics and logic (Scott), pragmatics (Stalnaker, Montague), modality (Hintikka, Castañeda), propositional attitudes (Ziff), metaphor (Cohen and Margalit), and probabilistic grammars (Suppes).

### 1970

Richard Montague died in March 1971; it is remarkable in hindsight to see how few conferences he attended that included any linguists. There were two in 1970, the “church basement conference” at UCLA and the conference at Stanford that included Montague’s last paper. But before describing them, let me describe a seminar I taught at UCLA in spring 1970, after which I expanded and circulated a bibliography on “Logic and Language” that I had put together for that course (Partee, Sabsay, & Soper 1971). The list of topics on the syllabus is a good representation of what I and a number of others were thinking about then (worrying about opacity and indefinites and anaphora, but not yet in a position to appreciate the special problems of donkey sentences; worrying about nondeclaratives, but ineffectively – it was seven years before Karttunen’s landmark paper on questions [Karttunen 1977], etc.). It is an interesting inflection point, just before Montague’s influence began to be widely felt; it shows how primed linguists and philosophers were to appreciate the tools and ideas he, David Lewis, Terry Parsons, and others offered, and how indeed his work was not happening in a vacuum.

From the initial syllabus:

#### Topic Areas

- I. The relation of syntax and semantics in formal systems  
 Tarski; Carnap; examples with logic and other formal systems
- II. Formal languages vs. natural languages  
 Reasons for constructing formal languages; their expressive power, their limitations; vagueness and ambiguity; syntax of formal languages
- III. The nature of semantics for natural languages  
 Katz et al.: interpretive feature-theory semantics  
 Lakoff et al.: generative logico-feature theory syntax/semantics  
 Jackendoff et al.: surface interpretive logico-feature theory semantics  
 Tarski, Montague et al.: truth-conditional semantics on nonnatural syntax  
 Davidson, Parsons, Heny: truth-conditional semantics on natural syntax  
 The question of speaker–hearer asymmetry

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#### IV. Problems in syntax/semantics

Quantifiers; negation; pronominalization<sup>11</sup> and deletion, including conjunction reduction, relativization, Equi-NP deletion; “sentence radicals” vs. declaratives, interrogatives, imperatives, etc.; performatives; pragmatic rules; presuppositions; reference.

#### *The Church Basement Conference*

On May 6 and 7 of that spring quarter, 1970, there was a small Symposium on Linguistics and Philosophy jointly organized by the Linguistics and the Philosophy Departments of UCLA, memorable in part because it was moved to the basement of a church after Reagan closed the University of California in the wake of protests over the bombing of Cambodia. Besides the speakers listed below, those attending included Lauri Karttunen and students Michael Bennett (philosophy) and Larry Horn (linguistics). That was the time when I intervened in an argument between Lakoff and Montague about whether it was crazy not to derive pre-nominal adjectives from relative clauses or whether it was crazy to do so,<sup>12</sup> outlining briefly to each of them where the other’s position was coming from, and during the coffee break got a memorable “compliment” from Montague – “Barbara, I think that you are the only linguist who it is not the case that I can’t talk to.”<sup>13</sup>

The talks in that conference were:<sup>14</sup>

- Julius Moravcsik ( $\phi$ ), “Semantics and Syntax in Philosophy and Linguistics”
- George Bedell ( $\lambda$ ), “Abstractness in Syntax”
- George Lakoff ( $\lambda$ ), “Linguistics and Natural Logic”
- Montague ( $\phi$ ), “Universal Grammar”
- Robin Lakoff ( $\lambda$ ), “Modal Illogic”
- John Vickers ( $\phi$ ), “Referential Transparencies”
- Partee ( $\lambda$ ), “Does de Morgan’s Law Operate in English?”
- Martin Tweedale ( $\phi$ ), “Grammar and Innate Knowledge”
- Plus a Graduate Linguistics Club Lecture by George Lakoff:  
“Generative Semantics.”

<sup>11</sup> Note the term “pronominalization” rather than “anaphora,” reflecting the syntactic treatment of the topic in transformational grammar, starting from Lees and Klima’s seminal paper (Lees & Klima 1963) “Rules for English pronominalization.”

<sup>12</sup> Lauri Karttunen wrote in a letter to Robert Wall that he kindly shared with me: “I recall hearing Montague present what must have been an early version of PTQ [actually UG]. George Lakoff gave a talk about Natural Logic. The mutual incomprehension was total.”

<sup>13</sup> My memory of the wording was confirmed by Larry Horn (p.c.), who recorded the utterance as part of his research on negation at the time.

<sup>14</sup> I annotate  $\lambda$  for linguists and  $\phi$  for philosophers.

*The 1970 Stanford Conference*

Then in the fall of 1970 came the conference “Approaches to Natural Language” at Stanford, organized by the philosophers Moravcsik and Hintikka and the polymath Patrick Suppes, at which Montague presented PTQ (Montague 1973). There was a “part two” of the conference, in December, where the invited participants gave formal comments on each other’s papers.<sup>15</sup> The topics at that conference were quite wide-ranging, including syntax, semantics, phonology, computational syntax, language acquisition, mathematical linguistics, and philosophy of language. Participants included philosophers Hintikka, Montague, Kaplan, Gabbay, Moravcsik and linguists Bresnan, Peters, Partee, Wexler; and others.

The year 1970 also saw the publication of David Lewis’s classic paper “General Semantics” (Lewis 1970) in *Synthese* as one of the papers added to those of the participants of the Davidson–Harman 1969 workshop. It was reprinted in the expanded volume Davidson & Harman 1972, also as the first paper in Partee 1976.<sup>16</sup> David Lewis’s papers were more accessible, in both senses, to linguists than Montague’s papers were, partly because he knew and appreciated the work of Chomsky and other linguists. Many of Lewis’s papers have remained highly influential. See Partee 2015 and Kratzer 2022 for contemporary appreciations of his importance to the field of formal semantics.

1971

In 1971 there were a number of relevant events that contributed to the rise of interactions between linguists and philosophers.

In summer 1971, the final first edition of the language and logic bibliography (Partee, Sabsay, & Soper 1971) was “published” by the Indiana University Linguistics Club, a widely used venue for distributing unpublished manuscripts. I had sent out the 1970 version to colleagues for feedback, and had encouraging and helpful replies from Dana Scott, Montague, Jerry and Janet Fodor, Harman, Moravcsik, Kaplan, Parsons, Ross, Karttunen, and Lewis. It was clear from the correspondence and the many requests for the

<sup>15</sup> There I ventured my first comments on Montague’s syntax, comparing and contrasting it with transformational grammar (Partee 1973).

<sup>16</sup> “I invited David to contribute an original article to the volume, but he declined, saying that philosophy of language was only one of his interests and he was just then more focused on working on some problems in metaphysics. But he kindly gave me permission to reprint his ‘General semantics,’ which appeared as the first paper in the volume and served as an ideal introduction to the aims and methods of formal semantics” (Partee 2015: 341). Lewis had first presented that paper in March of 1969 at one of La Jolla syntax conferences, otherwise legendary for early debates and clashes about generative vs. interpretive semantics, where he was the only philosopher.



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bibliography that there was high demand for such an interdisciplinary bibliography in the 1970s. The second edition (Partee et al. 1979) increased in size from 60 to 91 pages.

*The 1971 Institute in Philosophy of Language and Linguistics*

A memorable event in the summer of 1971 was the six-week Summer Institute in Philosophy of Language and Linguistics at UC Irvine, organized by Donald Davidson and Gil Harman, and sponsored by the Council for Philosophical Studies.

The Institute had two 3-week sessions, each session with three philosophers and one linguist as lecturers. Each lecturer gave two lectures a week, an hour-and-a-half lecture followed by an hour and a half of discussion – a schedule unfamiliar to linguists, with time for real thought and intense discussion. Lecturers in the first session were Grice, Davidson, and Harman, and Partee as the linguist; the second session had Strawson, Quine, Kaplan, and Haj Ross as the linguist, plus a special evening lecture series by Kripke on his just-completed *Naming and Necessity*. The “students” were themselves young philosophy professors, including Rich Thomason, Bob Stalnaker, Gareth Evans, Dick Grandy, Peter Unger, Steven Stich, Bill Lycan, Bob Martin, Oswald Chateaubriand, James McGilvray, Carl Ginet, and (linguist) Sally McConnell-Ginet, plus many others; and many of them gave evening lectures.<sup>17</sup> With most of the group living together in UC Irvine dormitories that summer and eating lunch in the big cafeteria we had to ourselves, and with everyone attending those intense seminars together four days a week focused on language and linguistics, that institute was a milestone in “philosophy meeting linguistics.”

In the fall quarter of 1971, David Kaplan and I each taught an invited seminar at Stanford, back-to-back on Thursday afternoons – David from 12 to 2 on Demonstratives, then my first course on Montague Grammar (still struggling with Montague’s intensional logic). I learned a great deal from both seminars, from Kaplan and from Hintikka and Moravcsik, who both attended both seminars.

<sup>17</sup> Gil Harman reports, “After intense discussions, we would spend time in Laguna Beach, where Davidson was teaching Quine to surf” (Harman 2004). I learned a great deal from the lectures of the philosophers and got great help from the philosophy “students” in deciphering how to use Montague’s meaning postulates in derivations. As I was publicly beginning to try to put Montague Grammar together with transformational grammar (my first serious attempts were that summer), I can remember David Kaplan and especially Rich Thomason saying “Use lambdas!” and me replying “Not in the syntax!” and finally figuring out what I called the “derived VP rule” to interpret syntactic deletion of a subject variable as semantic lambda-abstraction in order to have a compositionally appropriate replacement for “Equi-NP deletion” (Partee 1972).