James Higginbotham
Tense, Aspect, and Indexicality.
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James Higginbotham, Distinguished Professor of Philosophy and Linguistics at the University of Southern California (and formerly Professor of General Linguistics at the University of Oxford), has always been concerned with philosophical problems in linguistics, especially semantics. He justifies his largely English-centered approach in the following way: 'despite its hybrid Germanic-Romance status, and its limited morphology, English is after all well constructed, in the sense that its Tenses and Indexicals, and the Progressive and Perfect aspectual heads, contribute definite context-independent conditions on interpretation, to be clarified through the application of modern logic' (x-xi).

This book brings together revised versions of twelve articles published between 1995 and 2008, devoted to tense, aspect, events and indexical expressions in natural language. The articles are followed by cumulative references and an index. The first nine chapters focus predominantly on tense, from a very broad—linguistic, logical and philosophical—perspective. Higginbotham assumes, following an early proposal by Bar-Hillel, that the tenses of human languages are indexical expressions 'in that repetitions of the same sentence may differ in truth value simply because of tense' (83); however, in contrast to context-dependent temporal adverbials, they are not fixed in interpretation.

Chapter 1 relates the issue of tense and temporal cross-reference to indexicality, and the extension of the notions of logic to indexical languages. In addition, Higginbotham discusses the appropriate notation, the 'notation of natural language' (2), and his treatment is considerably influenced by Davidsonian semantics. The chapter's conclusion neatly summarizes Higginbotham's overall approach to language and logic: 'The larger lesson, both for logic and philosophy, is that we should be prepared to elaborate systems and conceptions of truth and of consequence that show context and language working together' (17). Chapter 2 concentrates on events in linguistic semantics. In Higginbotham's approach, which closely follows the basic tenets of Chomskyan generative grammar, the basic aim of linguistic semantics is to determine what native speakers know about the relations of form to meaning (and how this knowledge is acquired). This chapter aims to build a restrictive semantic framework for explaining event-reference (and state-reference) in human languages. Higginbotham develops his earlier proposal, based on Davidson's insight, that every predicative head has an associated special argument position (present in the thematic grid), and he also shows the importance of Montagovian semantics and the construal of events as properties of moments of time. In Higginbotham's approach, events 'enter semantic computation only

as they are linguistically represented through thematic grids, and discharge of open positions takes place only under structurally controlled conditions' (51-2).

Chapters 3 and 4 are devoted to 'tensed thoughts'. Higginbotham discusses the differences between tensed and tenseless thoughts, the parallels between tense in thought and tense in language, and he shows the consequences for an appropriate semantic theory. These chapters include an interesting discussion of tense and modality, in which Higginbotham claims that the peculiar behavior of modality may efface distinctions among thoughts. Higginbotham's notation, in this and all other chapters in the collection, aims at elucidating meaning, and it shows how the formal approaches to natural language have developed over the years, at the same time preserving the fundamental ideas present already in Frege's postulates.

In Chapter 5 Higginbotham investigates the obligatoriness of sequence of tense. The basic assumption is that sequence of tense obtains semantic effects through anaphora, and that temporal relations and reference (as expressed in tense) are relations between events. In this chapter Higginbotham devotes considerable attention to data not only from English, and he contrasts the English past tense and the Italian imperfect. Chapter 6 extends the discussion of sequence of tense to some semantic properties of the English perfect, and it further comments on indexical mismatch, as that between adverbials and tense. The two underlying theoretical assumptions in this chapter are connected with Higginbotham's approach to semantics in general: both main predicates and complement predicates have in their predicate structure appropriate event positions, and tenses express binary relations (of temporal overlap or inclusion) between times. He also shows the inadequacy of 'notation-free' approaches to semantics.

Chapter 7 concentrates on accomplishments. On Higginbotham's approach, accomplishments are syntactically represented by ordered pairs of positions for events, and the accomplishment interpretation of a predicate stems from the thematic structures of prepositions and syntactic adjuncts, rather than head verbs. In Vendler's classical study, accomplishments are telic since they contain a reference to an inherent endpoint. Higginbotham introduces the notion of 'telic pairs', appropriate complex thematic structures. The formation of such telic pairs is achieved through a compositional process. He further demonstrates that causation is derivative upon the formation of primitive accomplishment predicates, and in demoting the role of causation Higginbotham defends lexical decomposition approaches.

Chapter 8 offers a reexamination of the English progressive, with special attention devoted to the imperfective paradox. The three main issues discussed in this chapter involve the interpretation of tense and aspect, the very nature of the syntactic structures to be interpreted, and the principles through which the mapping from syntactic structures to the meaning is accomplished. In his analysis Higginbotham takes into account earlier studies of counterfactuals, the issue of telicity, and possible influences of context. The

chapter concludes with a brief comment on possible cross-linguistic implications of the proposed analysis.

The English perfect (with particular attention to result perfect) is once more discussed in Chapter 9, this time in connection with the metaphysics of events. The major claim is that the English perfect is purely aspectual (a claim already made by Jespersen), and consequently it is not involved in the tenses system, except derivatively. In terms of the 'Event Semantics' developed throughout these papers, it may be said that the perfect serves to shift from a predicate of events *e*, to a predicate of events that are results of *e*. Certain metaphysical issues are connected with the fact that 'any account that takes positions for events and situations as implicated in the semantics of human first languages must find them in a variety of causal and other contexts, and even in adverbial and quantificational expressions' (178).

The last three chapters tackle different issues in the analysis of indexicals, demonstratives and anaphora. The general methodological assumption is that the notion of semantic competence, or knowledge of meaning, should 'be seen as including the principles governing demonstrative and indexical expressions' (181). This semantics should incorporate rules of use and explain how speakers of language acquire and make use of mutual knowledge and surrounding information. It might be noted at this point, that Higginbotham's approach, in comparison to the Chomskyan paradigm, considerably extends the scope and aims of linguistic theory. In Chapter 10, Higginbotham discusses indexical and demonstrative constructions, and complement clauses used to classify acts of speech and states of mind, including the semantics of beliefs, and also a brief note on the relativization of truth to acts of reference. Chapter 11 focuses on implicit anaphora, within an extended version of binding theory in which Higginbotham introduces open positions in thematic grids. Finally, Chapter 12 is devoted to first-personal interpretations of certain anaphoric forms, the syntactic and semantic complexities involved in misidentification, and 'ways of remembering and imagining' (with syntactic and semantic properties of the verbs *remember* and *imagine*).

Papers gathered in this volume show all characteristic features of Higginbotham's research: a highly influential and innovative combination of syntactic analysis (within the generative paradigm), accompanied by careful and rigorous semantic analysis. He elaborates on the lines of research proposed by Yehoshua Bar-Hillel, Arthur N. Prior, Zeno Vendler, David Dowty, and Donald Davidson, and innovatively develops formal linguistic semantics, together with necessary notation. An accompanying volume, of Higginbotham's earlier texts dealing with semantics (such as 'On Semantics', 1985, and 'Elucidations of Meaning', 1989), is an idea worth considering.

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