This is a wide-ranging discussion of tense logics and the semantics of tense in natural languages. Chapter 1 contains some remarks on the origin of tense logic and an outline of the monograph. In Chapter 2 the author, after a brief survey of some of the linguistic phenomena to be included under the heading 'tense', comes to the rather unilluminating conclusion that tense is the trio of relations anteriority, simultaneity and posterity. He then describes three early accounts of the semantics of tense--Otto Jesperson's, Hans Reichenbach's and William Bull's--and concludes by discussing the phrase structure rules for English tensed sentences. The standard treatment (McCawley's) is said to generate all tense forms from three primitives PAST, PRESENT and FUTURE, but the author recommends a simplification in which only PAST and FUTURE are used. It is hard to see how either treatment can accommodate all the insights of the early semantic discussions.

Chapter 3 outlines a tense logic for the language (LTP) of propositional logic augmented by the unary tense connectives P and F. (G and H are defined.) An attempt is made to separate that part of the semantics which represents something 'real' from that which represents some kind of mental construction. The models contain 'moments', subsets of these called 'streams' and a linear order on each stream representing the flow of time. In addition a set P(i) of perceived pasts and P(i) of perceived futures (reviewer's terminology) is associated with each moment i. Since P(i) and F(i) are used in the truth definition in place of the linear orders much of the information in the model is superfluous. Restrictions on the valuation function are contemplated as a means of expressing properties of the 'structure of history' (which is not identified with the 'flow of time'). The chapter concludes with a confusing discussion of the relation between formulas of tense logic.
and properties of time. Completeness and correspondence are not mentioned.

Chapter 4 deals with two refinements of LTP. LTP-2 contains two past operators (P, P) and two future operators (F, F). Formulas are evaluated relative to two indices. Simplifying slightly, Pφ is true at (i, j) if there is a k before j such that φ is true at (j, k) and Pφ is true at (i, j) if j is before i or there is a k between i and j such that φ is true at (j, k). The language is allegedly motivated by a desire to bring LTP closer to natural languages, but P and P seem to have no natural readings in English. Furthermore they have some rather odd properties. (P^P is valid, for example.) However, Kamp's 'since φ, ϕ' and 'until φ, ϕ' are definable in LTP-2 as well as connectives expressing 'for at most one stretch φ' and 'φ wholly before ϕ'. LTP-3 is designed to make it possible to determine which of a set of described events are simultaneous. P and F are replaced by families of connectives \{P^u \} and \{F^u \}. All occurrences (in one formula) of like operators with like exponents refer to the same time. It is shown that every LTP-3 formula is equivalent to an LTP formula (which seems to suggest that the perceived need for this refinement was mistaken).

In the fifth and final chapter a variety of extensions of tense logic are mentioned and discussed briefly. Among the languages considered are ones with names for times, temporal function symbols, temporal quantifiers, names for streams, an epsilon operator on streams and sorted predicates which apply to individuals, times and streams.

This work contains some interesting observations, but suffers from the lack of a clear objective. The main thesis—that tense logics do express 'tense' when that term is construed in a sufficiently abstract way—hardly seems surprising. It certainly doesn't warrant the extensive discussions of English grammar and esoteric tense logics which constitute the bulk of the writing. The bibliography is sparse considering the scope of the monograph and the volume of relevant literature.

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