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**Author:** Brogaard, Berit

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**Review text:**

This book is a significant contribution to the semantics of time and change. The title reveals the author's option for temporalism, that is, the thesis that propositions can be affected by the passage of time: the backdrop of Brogaard's research is her idea that propositions can change their truth values over time. This temporalist framework allows for interesting developments in two directions, one more metaphysical in character (in accordance with the subtitle) and the other strictly logical: on the one hand, the book investigates the nature of 'temporal' (as opposed to 'eternal') propositions; on the other hand, it tries to offer a correct account of the logical form of tensed sentences.

The opening chapters are devoted to the first line of research. Chapter 1 'Characterizing temporalism' (pp. 13-29) describes temporalism in contrast with eternalism: the key point is whether or not propositions make always reference to a specific time. A temporalist has to defend that some contents include no reference to a time (this is why a proposition can be affected by the passage of time, remaining the same content, but undergoing a change in truth value). Thus, Content Invariance and Truth Variance are highlighted as the two main commitments of temporalism. But the most important section in the chapter is the one devoted to emphasizing (against what Brogaard calls the Incompleteness Hypothesis) that this temporally neutral content is by itself truth evaluable: the time  $t$  which may be required for evaluating a given neutral proposition needs not be a constituent of the proposition itself. This awareness that time can be involved in propositions at different levels is in my opinion crucial to Brogaard's purpose, even though this important aspect of the metaphysics of propositions

is not emphasized enough, and remains somewhat hidden among other more technical results.

Chapters 2 and 3 ‘Reporting belief’ (pp. 30-65) and ‘Disagreeing across time’ (pp. 66-77) are aimed at substantiating the temporalist ascription of fully propositional character to temporal contents. With some well documented references to recent debates and what looks as an intuition-based account of how we store and pass on information, Brogaard first replies to Mark Richard’s arguments with a novel account of belief retention, and second she draws a simple picture of what a genuine disagreement involves.

Chapters 4 and 5 ‘Representing time’ (pp. 78-101) and ‘Reviving Priorian tense logic’ (pp. 102-116) are devoted to the second line of research mentioned before: the search for an account of the logical form of tensed sentences. The author confronts Jeff King’s quantificational account with Arthur Prior’s operational account, comparing their respective abilities to accommodate linguistic data. Brogaard exhibits her acquaintance with recent discussion, and takes into account the main controversial examples: time adverbials and their interaction with tenses, relative clauses and the effect of tense on denotation, Partee sentences and double-access sentences, they all are shown to be naturally treated within a framework of intensional operators and temporal contents.

Chapter 6 ‘Embedding under tense operators’ (pp. 117-144) has the interest of merging the two main approaches of the book: the temporalist account of propositions and the operational interpretation of tensed language. This is a long and learned chapter, which deals with many issues and discusses the ideas of several authors: however, this richness (in my opinion) distracts attention to some extent from Brogaard’s point in defence of temporalism. The focus of the chapter is the question about which content is embedded under tense operators, and temporal propositions want to be shown as the correct answer. Kaplan’s argument for a temporal content is presented, and four lines of reply are discussed (Stanley’s ‘two-content’ strategy, Lewis’ ‘one step’ approach, Richard’s turn to linguistic meaning, and King’s rejection of tense operators). A new rebuttal of King’s quantificational approach is the main contribution of this chapter. It is based on a bold thesis, crucial to Brogaard’s project: the redundancy of the present tense. To defend temporalism inside the operational framework, Brogaard has to reject the tenseless reading of the sentences embedded under tense operators, and thus dissolve the apparently intuitive difference between the embedded sentence (with no tense operator) and the present-tensed sentence (which is seen as containing a redundant present-tense operator). On the other hand, she has to stress the usually unnoticed difference between unembedded present-tensed sentences and indexical sentences with ‘now’, which leads to an

interesting discussion of context-shifting operators.

Chapter 7 ‘Representing eternally’ (pp. 145-163) suggests a new division of labor between eternal and temporal propositions. Against the eternalist view that eternal propositions are the objects of propositional attitudes, whereas temporal propositions are merely the semantic values of sentences, Brogaard puts forward an ambiguity thesis, according to which tensed sentences can express either eternal or temporal contents, depending on the context of use, and both can play the roles traditionally ascribed to propositions. As a particular result, the ambiguity thesis is shown to give a better account of existential statements than the quantificational analysis.

The final chapter ‘Representing the world egocentrically’ (pp. 164-178) presents temporalism as a special version of non-indexical contextualism. Brogaard defends a contextual idea of relative truth against the monadic theory of truth proposed by Cappelen and Hawthorne, basing her arguments on some data from perception. Finally, she offers her last and allegedly strongest argument for temporalism, which is based on the phenomenology of conscious representation. Since, plausibly, there are some propositional attitudes whose content does not include any specific time (even implicitly) as a constituent, it seems reasonable to conclude that there are some temporal propositions, which are not true or false simpliciter, but can change their truth-values as time passes.

Although the book is mainly addressed to the specialist, metaphysicians and philosophers of language with broader interests can also enjoy it. As a help to the reader, each chapter ends with a ‘Signpost’ with the points that the author wants to give more prominence to. In addition, the ‘Introduction’ (pp. 3-12) and the brief ‘Closing remarks’ (pp. 179-181) do more than simply summarize Brogaard’s points: they situate her defence of temporalism within an unorthodox but promising framework, namely, a view of logical analysis as essentially concerned with ordinary language and mental representation, and a desire to make room for the point of view of subjects which are situated in (and try to conceptualize from the inside) a changing world. Even if Brogaard has not achieved a final proof of temporalism (she rather shows it as a sensible option, which avoids important problems and allows for consistent developments), her book will be essential for future studies in the logic of change. Both temporalists and eternalists will profit Brogaard’s acquaintance with the relevant literature, and will be incited by the many interesting issues that are discussed in these pages.

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