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Tensed and Tenseless Theories of Time

Time is often understood to be a mere timeline of events in which moments move from the future, to the present, to the past, and then into the increasingly distant past. While this interpretation is not necessarily inaccurate, it fails to differentiate between time and temporal reality, the difference between time and the world in this time. Time is a substance; a thing in itself, and it is in virtue of this thing that the world (temporal reality) can be what it is. Temporal reality is not a substance, but rather, a collection of the independent moments that occur within time. It is because time exists that temporal reality is made possible.

There are two generic views that have been developed in an attempt to explain the nature of temporal reality. They are the "tensed" and the "tenseless" theories, also known as the "A" and "B" theories. It is appropriate to consider these views generic, rather than specific, because of the particular ways in which they each account for the nature of temporal reality. For example, one view of the tensed theory is that only the present exists and the past and future do not. Another is that only the present and past exist and the future does not (also known as the "growing back" theory). Each of these views is a different way of expressing temporal reality in a tensed way. Views under the tenseless theory, on the other hand, include theories that distinguish between sentence tokens and sentence types, and favoring the date of a sentence token rather than the token itself. However, these specific accounts are differing on how they account for the truth conditions of tensed sentences, not on how they account for the nature of temporal reality. It is for these reasons that it is easier to give specific accounts for the tensed view, rather than the tenseless view, because the tensed view has multiple, specific accounts of the nature of temporal reality, whereas the tenseless view only has one: that all moments are ontologically homogeneous.

By saying that the tenseless theory is "ontologically homogeneous" means to say that everything in time shares the same ontological status, that there are no distinctive temporal properties to distinguish one moment from another. The tensed theory, on the other hand, is ontologically heterogeneous, meaning that there are, in fact, distinctive temporal properties that distinguish one moment from another. The moments in a tenseless theory hold permanent temporal relations, and the moments in a tensed theory hold permanent temporal relations in addition to possessing temporary temporal properties.

The difference between a tenseless sentence and a tensed sentence lies in the truth conditions of their respective sentence "tokens" or "utterances". A tensed sentence type contains both true and false tokens, because the truth of the sentence depends on when it is uttered. A tenseless sentence type, on the other hand, contains either all true or all false tokens, since the truth of the sentence is not dependent upon when the sentence is uttered. For example, "It is now 1980" has a true sentence token when the year is really 1980, but a false sentence token when it is uttered in any year that is not 1980, so therefore the sentence is tensed. "The Battle of Waterloo occurs in 1815" has all true sentence tokens, because it is true no matter when the sentence is uttered, and therefore the sentence is tenseless.

In his essay, *The Need for Tense*, D.H. Mellor presents a token-reflexive account of the "new" tenseless theory of time. He claims that the truth conditions of tensed sentences differ from those of tenseless sentences, on account that they mean different things, but that these tensed sentences are made true by the same features of the world that tenseless sentences are, by way of temporal indexes. For example, the tensed sentence "I stand" is true only when the act of me standing is simultaneous with the time the sentence is uttered. Similarly, the tensed sentence "I stood" is true only when the act of me standing occurred before the utterance of "I stood". Mellor uses these temporal indexes to show that there is no need to posit distinct temporal properties on sentences (namely, pastness, presentness, and futurity) in order to account for the truth conditions of tensed sentences. Temporal relations of simultaneity, earlier than, and later than, according to Mellor, are sufficient in explaining the truth of tensed sentences.

What makes Mellor's theory a "new" theory is that it differs from the original, "old", tenseless theory of time. This old theory held that tensed and tenseless sentences mean the same thing, and

therefore the use of tensed sentences (the positing of temporal properties) is superfluous. Mellor rejects the old tenseless theory because he notices a change in truth conditions between tensed and tenseless sentences, and believes that this change in truth indicates a change in meaning as well.

In the essay, *Problems with the New Tenseless Theory of Time*, Quentin Smith points out two major objectives to Mellor's new tenseless theory: 1) Mellor's theory is incoherent, and 2) Mellor's theory can't account for logical relations between tensed sentences in particular.

In his first objection, Smith claims that Mellor's theory is contradictory because it states that tensed and tenseless sentences both do and do not have the same truth conditions. Oaklander's response (in defense of Mellor) is that it is the tokens of sentences that have the same truth conditions, and that it is the sentence types that have differing truth conditions. In other words, a tensed sentence type has a different truth condition than a tenseless sentence type, but the tokens that make each of the sentence types true are the same. Oaklander argues that Smith is simply not distinguishing between sentence tokens and sentence types.

In his second objection, Smith accuses Mellor's theory of not being able to account for the entailment relations of tensed sentences without positing temporary temporal properties. While Smith is correct in pointing out this problem of logical relations, he is incorrect in assuming that the only way to correct this flaw is to resort to the tensed theory. Mellor is not able to account for the entailment of tensed and tenseless sentences by relying on the token-reflexives as the truth conditions, however there are many other, tenseless, ways to account for them, such as the method proposed by L.A. Paul and L. Nathan Oaklander. Rather than relying on tokens, Paul and Oaklander rely on the context of sentence types to explain the entailment relations of tensed sentences.

It is for these reasons that one is able to defend Mellor's theory against one of Smith's objections, but not both of them. By relying on sentence tokens, Mellor is unable to account for the entailment relations of tensed sentences, however, by adopting Paul and Oaklander's method, one is able to account for the entailment relations while not abandoning the tenseless theory. Thus, Smith is wrong to assume it necessary to posit temporal properties in order to account for these relations.