

# Relativity of Simultaneity and Eternalism: In Defense of Blockworld

Peterson, Daniel and Silberstein, Michael (2007) Relativity of Simultaneity and Eternalism: In Defense of Blockworld.

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## Abstract

Ever since the now infamous comments made by Hermann Minkowski in 1908 concerning the proper way to view space-time, the debate has raged as to whether or not the universe should be viewed as a four-dimensional, unified whole wherein the past, present, and future are equally real or whether the views espoused by the possibilists, historicists, and presentists regarding the unreality of the future (and, for presentists, the past) are best. Now, a century after Minkowski's proposed blockworld first sparked debate, we seek a more conclusive argument in favor of the eternalist picture of space-time. Utilizing an argument based on the relativity of simultaneity in the tradition of Putnam and Rietdijk and novel but reasonable assumptions as to the nature of "reality", we will show that the past, present, and future are equally real, thus ruling out presentism and other theories of time that bestow special ontological status to the past, present, or future as untenable. Finally, we will respond to our critics who would suggest that: 1) there is no metaphysical difference between the positions of eternalism and presentism, 2) the present must be defined as the "here" as well as the "now", or 3) presentism is correct and our understanding of relativity is incomplete because it does not incorporate a preferred frame. We call eternalist response 1 deflationary since it purports to dissolve or deconstruct the age-old debate between the two views and response 2 compatibilist because it does nothing to alter special relativity (SR) arguing instead that SR unadorned has the resources to save presentism. Response 3 we will call incompatibilism because it adorns SR in some way in order to save presentism a la some sort of preferred frame. We will show that neither move 1 nor 2 can save presentism and move 3 is not well motivated at this juncture except as an ad hoc device to refute eternalism.

**Keywords:** Blockworld, special relativity, presentism, eternalism, relativity of simultaneity, realism

**Subjects:** [Specific Sciences: Physics: Relativity Theory](#)  
[General Issues: Realism/Anti-realism](#)

**ID Code:** 3696

**Deposited By:** [Silberstein, Michael](#)

**Deposited On:** 03 December 2007

**Additional Information:** Currently under review at PoS