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## SUMMARY

### Time Travels as a Philosophical Problem

Time travel is a relatively recent field of rational inquiry. Before the twentieth century the physicists and the philosophers did not focus on this issue; time travels were regarded as the pure science-fiction. It was empirical success of Einstein's general relativity that made them a subject of study in theoretical physics. Physically plausible models of time travel become an important topic of inquiring in philosophical discussion on the nature of time, free will and personal identity.

The very concepts of „time travel” and „time machine” need to be precisely determined. However defining them experiences several difficulties in both the philosophy and the classic relativistic theory of gravitation. The preliminaries lead to paradoxes or a specific conceptualization of personal identity; our Universe seems to observe additional principles called „consistency constraints”, „cosmic censorship” or „chronology protection” which preclude time travels. The topological features of the space-time which operates on so called „Thornian” time machines entail „no-go” theorems in relativistic theory. The aim of this article is the demonstration of these difficulties as genuine philosophical problems, and especially the formulation of an ethic objection to the presentistic variant of time travel.

Keywords: time travel, time machine, eternalism, presentism, philosophy of time