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## MEMe model: a generalized coupling theory

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Generalized coupling theories are characterized by a nontrivial coupling between the gravitational metric and matter, which is mediated by an auxiliary rank-2 tensor. The actions generating the field equations are constructed so that these theories are equivalent to general relativity in a vacuum, and only differ from Einstein's theory within a matter distribution. This talk will focus on one of the simplest realizations of these theories, termed the MEMe model. The MEMe model admits an exact solution for the coupling for a single perfect fluid. An analysis of the evolution of homogeneous and isotropic spacetimes in the MEMe model reveals the existence of cosmic histories with both an inflationary phase and a dark era characterized by a different expansion rate. I also discuss the propagation speed of GWs through matter and some recent work on the PPN analysis for the MEMe model.

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