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PATRICK SUPPES' VIEW ON MODELS:  
THINKING ABOUT THE DETAILS OF SCIENCE

*Abstract*

The introduction of the concept of model in the philosophy of science constitutes one of the distinctive traits of Patrick Suppes' epistemological analysis. Models, described as set-theoretical predicates, become the central notion starting from which to build a completely different characterization of scientific theories. A scientific theory is determined by the class of its possible realizations and to axiomatize it means, following a famous Suppes' slogan, to define its set-theoretical predicates. In this framework are models, and not correspondence rules (as in the traditional syntactic view), to give interpretation to the axioms of the theory. Models, of course, can be of different types; Suppes, however, argues that the primitive notion of model (intended as the one from which the others derive) is the Tarskian one: models are possible realizations in which all the valid sentences of a theory  $T$  are satisfied. Other scholars have advocated a less formal nature of models and proposed the so-called model view, based on the acknowledgement of the practical role models play in scientific practice. What I want to argue is that the semantic view (whose Suppes is widely recognized as the father) plays a central role by connecting the previous syntactic view and the further model view, letting emerge some constancies in the philosophy of science of the XX century. In particular, I discuss an example where a specific class of models, namely computational models, is adopted for the explanation of a scientific process. This shows how computational models, apparently distant from the original ones discussed by Suppes, may be adopted as explicative tools in current epistemology, pointing out strong connections with Suppes' approach in terms of models ability to represent, investigate, and structure reality.