

Representation as a Process of Model-Building: A Case from Economics

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What does it mean to say that a theory *represents* the targeted phenomenon that it aims to explain? Our interpretation of “representation” is closely related to the methodological position that we would adopt in answering the question of realism in science. As is pointed out by Nancy Cartwright, according to the traditional syntactic approach of explaining scientific theorization, the question of realism is about how *accurately* the sciences can represent the world; in the semantic approach, however, the focus of the question shifts to a concern about the range of science—i.e., how *much* of the world the sciences can represent. This shift in the methodological concern is by no means trivial; it indicates that there is a change of content in the concept of representation from a static idea to a dynamic one. The static idea of representation concerns how reliably the formal structure of a class of sentences—i.e., the formal structure of a theory—can stand for the targeted phenomenon. The dynamic idea, however, perceives a theory as a class of models and explores the development of these models; that is, the dynamic idea of representation investigates how a theorizer uses these models to stand for reality. As a consequence of this shift from a static to a dynamic mode of thinking, it seems that model-building constitutes the main content of the concept of representation. By comparing two differing contemporary accounts of the nature of economic models and presenting a case study in economic theorizing, this paper argues that representation is a process of economists’ repeatedly using “realistic representation of the isolated unrealistic world” at each step of their theorizing to build up a class of “unrealistic constructed credible worlds.”