

Abstracting Matter

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Abstract

Some disagreements have arisen in the last few years regarding the role played by material properties when modeling, simulating and experimenting on physical systems (Morrison 2008, Parker (forthcoming), Winsberg (forthcoming), Guala 2002, 2005; Morgan 2005). The question has proven more involved than it first appears. A number of significant and correct points have already been made, but some confusions remain. In this paper I attempt to sort them out. After pointing out the importance of some distinctions that need to be drawn, I explain the ways in which material properties matter in modeling and simulations.

Keywords: matter, idealization, simulation, model, analogue model, mathematical model, physical model, physical similarity, similar system, physically similar systems, dimensionless parameter

Subjects: [General Issues: Models and Idealization](#)

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