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SCIENTIFIC REPRESENTATION

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Scientific Representation

Elements in the Philosophy of Science

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Abstract: This Element presents a philosophical exploration of the notion of scientific representation. It does so by focusing on an important class of scientific representations, namely scientific models. Models are important in the scientific process because scientists can study a model to discover features of reality. But what does it mean for something to represent something else? This is the question discussed in this Element. The authors begin by disentangling different aspects of the problem of representation and then discuss the dominant accounts in the philosophical literature: the resemblance view and inferentialism. They find them both wanting and submit that their own preferred option, the so-called DEKI account, not only eschews the problems that beset these conceptions, but further provides a comprehensive answer to the question of how scientific representation works. This Element is also available in the Open Access on Cambridge Core.

Keywords: representation, scientific modelling, epistemology of science, model-world relation, DEKI

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