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ONTOLOGY AND THE FOUNDATIONS OF MATHEMATICS

Talking Past Each Other

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Ontology and the Foundations of Mathematics

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Abstract: This Element looks at the problem of inter-translation between mathematical realism and anti-realism and argues that so far as realism is inter-translatable with anti-realism, there is a burden on realists to show how their posited reality differs from that of the anti-realists. It also argues that an effective defence of just such a difference needs a commitment to the independence of mathematical reality, which in turn involves a commitment to the ontological access problem – the problem of how knowable mathematical truths are identifiable with a reality independent of us as knowers. Specifically, if the only access problem acknowledged is the epistemological problem – that is, the problem of how we come to know mathematical truths – then nothing is gained by the realist notion of an independent reality and in effect, nothing distinguishes realism from anti-realism in mathematics.

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