

FINITE, INFINITE AND METAFINITE

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The original paper on Metafinite Model Theory was provoked by an observation that ostensibly finite structures, like weighted graphs, turned out to be, well, metafinite. They involve infinity but in a modest way. The infinity “should not manifest itself too obtrusively, deviating our attention to phenomena that are pertinent to infinite structures only.”

In a reversal of roles, some ostensibly infinite structures turned out to be metafinite of sorts in closer examination. For example, consider a finite-dimensional Hilbert space and fix a basis. One aspect of this new scenario is naturality or rather the lack thereof.

We’ll finish with some musings on finite vs. infinite.

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