

## *Diagrams ≠ Pictures ≠ Maps*

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Visualization is crucial to amassing data and to generating models and theories across the sciences. Geometric proofs and biochemical mechanism sketches often involve diagrams. Electron micrographs and fMRIs are pictures. The United States Geological Survey and the China Geological Survey produce maps. Scientific visualizations abound. But important differences in the practices and representational content associated with diagrams, pictures, and maps require illumination. Diagrams are not pictures are not maps. Each is something other than the other. Even so, there can be representational multifunctionality in that diagrams or pictures can be “taken to be” maps, for instance via analogy.

**Fig. 5.**

