

# The Barwise-Seligman Model of Representation Systems: A Philosophical Explication

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As an application of their channel theory, Barwise & Seligman sketched a set-theoretic model of representation systems. Their model has the attraction of capturing many important logical properties of diagrams, but few attempts have been made to take advantage of the model's explanatory potential by applying it to actual diagrammatic systems. We attribute this to a lack of precision in their explanation of what their model is about - what a "representation system" is. In this paper, we propose a concept of representation system on the basis of Barwise & Seligman's original ideas, supplemented by Millikan's theory of reproduction. On this conception, a representation system is a family of individual representational acts formed through a repetitive reproduction process that preserves a set of syntactic and semantic constraints. We will show that this concept lets us identify a piece of reality that the Barwise-Seligman model is concerned with, making the model ready for use in the logical analysis of real-world representation systems. (This is a joint work with Dave Barker-Plummer)