
We don't want to miss a thing. Objecthood in a digital universe

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Abstract

How do observers determine that a region of space in the visual input is occupied by an object? Can we provide a neutral, precise metrics to analyze objecthood judgments and devise a taxonomy of different conceptions of objecthood within a unified framework? This work presents a preliminary proposal in this direction. We shall use digital, computational devices known as cellular automata (hence CA) as "toy universes" in which to explore the complex interplay between cognitive processes and conceptual issues in visual object detection. Our goal is to provide a rigorous theoretical and methodological framework for an investigation of objecthood judgments in CA universes. We shall argue that a study of the computational conditions under which groups of cells in a CA universe are assigned the status of object promises to provide interesting insights on the nature of the psychological processes of objecthood assignment, as well as a well-behaved and regimented basis to investigate the philosophical status of the notion of object.

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