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Structural Signatures of Individual Object and Event Units

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Abstract

The physical world provides humans with continuous streams of experience in both space and time. The human mind, however, can parse and organize this continuous input into discrete, individual units. In this work, we characterize the representational signatures of basic units of human experience across the spatial (object) and the temporal (event) domains. We propose that there are three shared, abstract signatures of individuation underlying the basic units of representation across the two domains. Specifically, individuals in both the spatial domain (objects) and temporal domain (bounded events) resist restructuring, have distinct parts, and do not tolerate breaks; non-canonical individuals in both the spatial domain (substances) and the temporal domain (unbounded events) lack these features. In a series of experiments, we confirm these principles and discuss their significance for cognitive and linguistic theories of objects and events.