

The space of spatial relations: An extended stimulus set

Alexandra Carstensen

University of California, Berkeley

Yang Xu

University of California, Berkeley

Charles Kemp

Carnegie Mellon University

Terry Regier

University of California, Berkeley

Abstract: Spatial configurations allow for many different kinds of spatial relations between objects. Previous cross-linguistic work in this domain relies on a valuable but restricted stimulus set, the Topological Relations Picture Series (TRPS), which has two major limitations: (1) it covers a small subset of the spatial semantic domain, focusing on the IN/ON area, and (2) it covers that subset in an unsystematic way. We propose to create a large stimulus set of spatial relations that covers the space of possible relations in a more comprehensive way and includes the TRPS as a subset. The extended set will be systematically generated from a large family of spatial features describing relations between figure and ground objects, such as contact, support, attachment-by-spiking, and others that have been previously proposed. All stimuli will be rendered in 3D and released to the public to aid basic research in spatial language and cognition.