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Location, Location, Location: Environmental constraints on interpreting spatial terms

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Abstract: The environment can constrain the way we think and act within it. Such an influence has been largely ignored within the domain of spatial language, which has largely focused on objects and their identities, independently of the environments in which they occur. To investigate whether the environment also has an influence, we instructed participants to place a located object either near or far from a reference object within survey perspectives of manipulated 3D environments. When a geographical feature in that environment was present and had meaningful semantic content, it systematically altered the distance, direction and orientation of the placements, with these alterations well beyond the range expected based on a geometric definition of the spatial term. This environmental influence is consistent with a situated view of cognition.