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Pointing North Online: Using photographs of known environments to evaluate north pointing accuracy

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Abstract

Previous research has found that cognitive maps are not consistently oriented towards north as people tend to bias their north-pointing estimates towards nearby roads (Brunyé et al., 2015). While pointing studies are typically conducted within familiar environments, it is not clear whether north-pointing estimates will show a similar bias towards nearby roads when individuals are not physically located in the environment. In essence, a north-pointing task when not located within the environment is a perspective-taking task. In a series of experiments, participants rated their familiarity with the Texas A&M campus and two nearby cities, completed a self-assessment of sense-of-direction, and then pointed towards north. The pointing task used photographs of the A&M campus to provide a location and initial orientation. These experiments provide new insights into individual differences in north pointing and perspective-taking skills when an individual is not physically present within the environment.