The effects of regularity in spatial inferences with and without landmarks on spatial learning

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Abstract: Spatial inferences during wayfindign could be closely related to spatial learning. We examined the effects of regularity in the inferences on learning of relative locations through wayfinding in the context of available information about an environment. In the experiment using a real maze, participants visited multiple targets in one of four conditions by a combination of two factors: an updating mode (regular or irregular) and an environmental information (with or without global landmarks). The results suggest that although the global landmarks facilitate the learning regardless of the updating modes, the difference in the regularity produces opposite effects depending on the landmark conditions. While the irregular updating, which involves multidirectional self-to-object updating, has a facilitation effect when the landmark information is available, it impedes the learning without the landmarks. The regular updating, which would allow a relatively easier wayfinding strategy facilitates the learning only in the latter condition.