

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Social wayfinding in complex environments

Permalink

<https://escholarship.org/uc/item/2270d8cg>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 39(0)

Authors

Barisic, Iva

Thrash, Tyler

Schinazi, Victor R.

et al.

Publication Date

2017

Peer reviewed

Social wayfinding in complex environments

Iva Barisic

ETH Zurich, Zurich, Switzerland

Tyler Thrash

ETH Zurich, Zurich, Switzerland

Victor R. Schinazi

ETH Zurich, Zurich, Switzerland

Christoph Hoelscher

ETH Zurich, Zurich, Switzerland

Abstract: Wayfinders in a group can be influenced by various factors, including other group members and environmental structure, but social wayfinding is an underexplored topic. This experiment investigated differences in wayfinding decisions between individuals and groups and their dependence on environmental structure. Participants navigated through a train station with or without market stalls, either as individuals or as groups. There was a significant main effect of environmental structure on task efficiency, and an inconclusive interaction between environmental structure and group membership on task efficiency ($p=0.05$). Because of heterogeneity of variance, we conducted targeted t-tests. T-tests revealed that groups were slower than individuals with market stalls ($p=0.02$) but not without ($p=0.91$). There was significant main effect of the environmental structure on number of turns. The main effect of group membership on number of turns and the interaction were not significant. We will analyze walked and Levenstein distance as wayfinding efficiency indicators.