

Understanding the dynamics of direction giving and following during navigation

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Abstract Getting from place to place is essential to everyday life. Often, we rely on directions from others to help us navigate to unfamiliar destinations, such as tourist sites. These route descriptions may contain a variety of cues, including cardinal directions (e.g., north, south), left and right turns, landmarks, and street names. The goal of this project was to understand the cues people use when giving directions for navigation. Experiment 1 investigated whether the information provided depended on recipient perspective. Sixty-four college student participants provided directions to help a fictitious recipient get from starting locations to destinations in a fictitious model town. The model town included labeled streets and landmarks (i.e., mall, gym, lake) on a 6 ft. × 4 1/2 ft. piece of plywood. On half of the trials, participants were instructed to provide directions for a fictitious recipient who was driving in the town (a route perspective). On the remaining trials, participants were instructed to provide directions for a fictitious recipient who was looking at a map of the town (a survey perspective). As predicted, people included significantly more landmarks and left-right descriptions when addressing a recipient driving in the town. In contrast, they used significantly more cardinal descriptors when addressing a recipient looking at a map. Participants included street names very often, regardless of condition. These findings suggest that recipient perspective affects

direction-giving processes. Experiment 2 examined the effectiveness of these navigation directions from the recipient's perspective. A new group of 80 college student participants read sets of descriptions (provided by participants in Experiment 1) for navigating particular routes in our fictitious model town. They were asked to rate each route description based on its effectiveness for aiding navigation using a 7-point Likert-type scale. Participants rated as highly effective the descriptions that utilized left-right turns and distance references. In contrast, they rated as less effective descriptions that made use of cardinal directions. Our findings indicate that adults are skillful at adapting the navigation information they provide to the needs of the listener. Moreover, adults understand how the information provided by others affects the effectiveness of directions for aiding navigation. Together, these findings confirm that direction giving and following are dynamic processes that depend on interactions between those providing directions, the recipients of such directions, and the environments through which they navigate. Thus, they add to our understanding of skillful direction giving and following in the service of navigation.

Keywords Navigation • Communication • Route perspective • Survey perspective

