Introduction

This study will investigate the accuracy of distance judgments made from another person’s viewpoint.

- Movement and navigating the world requires:
  - Accurate perception of spatial layout AND
  - Spatial updating, or continuously updating one’s location relative to external space and objects
- The blind-walking task, in which one walks to a previously-viewed target location, requires both accurate perception of the target and spatial updating.
- Blind-walking has been shown to be accurate for distances up to about twenty-five meters (Loomis & Philbeck, 2008; Rieser, Ashmead, Taylor, & Youngquist, 1990).
- Spatial updating from one’s own perspective is automatic and typically accurate, but it is unknown whether spatial updating from an imagined perspective is as accurate as from one’s own viewpoint.
- In this study, we compare the accuracy of spatial updating from another person’s perspective to spatial updating from a non-human landmark.
- Hypothesis: blind-walking to targets will be more accurate when adopting another person’s viewpoint than when adopting a viewpoint indicated by a non-human marker.

Method

2 (condition: person, non-person) x 3 (target distance: 3, 5, 7m) within-subject design

- Condition 1: adopt another person’s perspective (Figure 1)
- Condition 2: adopt an imagined (non-person) perspective (Figure 2)

Procedure:
- View a person or non-person object that is facing a target.
- Target placed at a distance of 3, 5, or 7 m from adopted perspective (each distance repeated 3 times in random order).
- Imagine viewing the target from the person’s/non-person’s perspective.
- Lower a blindfold and walk as far as the target is from the other person/non-person.
- Spatially update while walking from the newly-adopted perspective to the target (as viewed from the newly-adopted viewpoint).

Predicted Results

On each trial the distance walked is measured, as an indicator of the accuracy of spatial updating.

Repeated-measures ANOVA will assess:
- Accuracy of blind-walking to targets at different distances from two imagined perspectives.
- Great accuracy when adopting another person’s perspective would suggest that spatial updating from that perspective is accurate.

Discussion and Future Directions

This pilot experiment has implications for theories of spatial perception but also for social psychology theories of empathy and perspective-taking.

- Future Experiments
  - Does the physical similarity of the other person make it easier to adopt his/her perspective?
  - Can one make other spatial judgments that do not involve spatial updating (e.g. target distance, size, visibility, accessibility) from another person’s perspective?

References


Figure 1: Another Person’s Perspective

Figure 2: Imagined (non-person) Perspective