

Description of Additional Supplementary Files

Supplementary Movie 1:

Visualization of navigation strategies which emerge in optimal control under uncertainty depending on the availability and reliability of spatial cues. Blue ellipses show spatial uncertainties regarding position of the navigator and internally represented positions of landmarks and previously visited object locations. Based on internal representation paths to navigational goals can be planned (vector-based navigation). The belief state keeps track of position and the associated positional uncertainty taking into account changes in linear and angular velocity and their magnitude (path-integration). Walking towards a visible goal allows for correcting noisy motor actions and reaching the navigational goal successfully (beaconing). Landmarks provide orientation about position and heading direction (landmark-based navigation).

Supplementary Movie 2:

Visualization of triangle completion (human vs. model behavior) for different experimental conditions (self-motion, combined, conflict) for (simulated) participants in the proximal environment by Zhao et. al 2015.

Supplementary Movie 3:

Visualization of model behavior in the triangle completion for different experimental conditions (landmark, self-motion, combined, conflict 15°) in the proximal environment by Zhao et. al 2015.

Supplementary Movie 4:

Visualization of model behavior in the triangle completion for different conflict conditions (15°, 30°, 45°, 90°) in the proximal environment by Zhao et. al 2015.