Pedestrian collision avoidance on narrow sidewalk: a meeting between psychology and virtual reality
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First Experiment – Questionnaire

- 64 videos of pre-jousting, before any modification of trajectory
- 96 counterbalanced videos
- Participants told who was to step down: pedestrian at left or at right in the jousting
- Participants said why the virtual pedestrian stepped down (speed, sex, distraction) with Likert scales
- 64 videos of complete jousting with a Likert scale.

Social Perception Model

- Speed and attention influence the decision to step down

Assumption: speed and attention increase the detection time in the ORCA model. Detection time is then a score.

Virtual pedestrian decides to step down if his detection time is greater than the other pedestrian involving in the jousting.

N.B.: the virtual pedestrian sees pedestrian in the public space, and detects him in the social space.

Discussion

- To use Social Pedestrian Non Player Characters
- In VR environment is feasible
- Needs to take into account the empowerment/authority

2nd Experiment – Results

- Credibility of model-based videos and fake videos according to the subjects’ answers

Overall ranking of the model-based videos, Median = 4

- Needs to take into account the empowerment/authority

Problem: why do we choose to step down or stay on the narrow sidewalk when we encounter a pedestrian walking in the opposite way?