Pedestrian collision avoidance on narrow sidewalk: a meeting between psychology and virtual reality
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**PEDESTRIAN COLLISION AVOIDANCE ON NARROW SIDEWALK: A MEETING BETWEEN PSYCHOLOGY AND VIRTUAL REALITY**

**Context:** NARROW SIDEWALKS

- Pedestrians manage social interpersonal distances
- Encountering two pedestrians is impossible
- Walking in the opposite way on narrow sidewalks when encountering a pedestrian

**Problem:** Why do we choose to step down or stay on the sidewalk?

- Pedestrian is expected to step down when:
  - He walks fast
  - He is attentive
- For the participants, no gender effects

**Goal:** To simulate a social virtual pedestrian (non player character) in order to study this kind of situation in virtual environment

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

**Social Perception Model**
- Speed and attention influence the decision to step down from the narrow sidewalk

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

**Results:**
- Overall ranking of the model-based videos.
  - d = 0.8
  - Median = 4

**Discussion:**
- Needs to take into account the empowerment/authority