

Influence by others' opinions: social pressure from agents in immersive virtual environments

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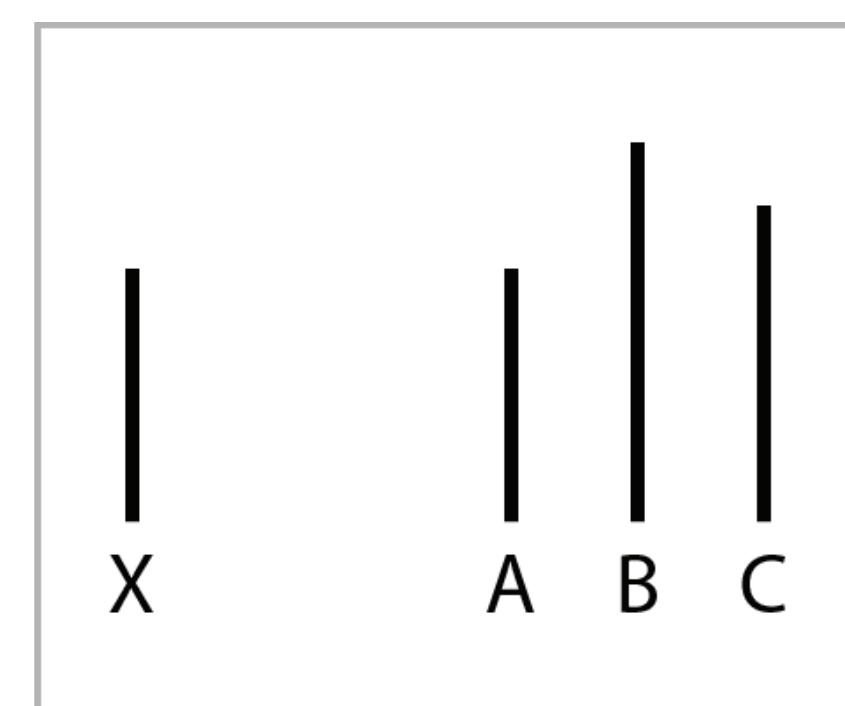


EXPERIMENT

We designed a VR version of the Solomon Asch conformity experiment with a between group experimental design.

- **Control group** - the participant was in the virtual room alone.
- **Experimental Group** - the participant was in the virtual room with five agents.

TASK



Each participant was experiencing one session of 12 trials. Each trial was a simple visual test with lines' length comparison.

The five agents were giving a wrong answer on 8 of the 12 trials. The answers of the agents were predefined and always unanimous.

User-avatar was selected in advance by the experimenter for each session, between a male and a female character, depending on the gender of the participant. The movement of participant's head was tracked, by the tracker integrated in the HMD device and mapped to the virtual camera.



DATA COLLECTED

- Participants' answers.
- Participants' response time on each trial.
- Questionnaire data.

PROCEDURE

After a 60 second familiarization phase elapsed, the first trial appeared on the boards and the agents began to respond in turn. Once the real participant stated his estimate for the visual test of the current trial, the researcher noted his answer and the process continued with the next trial. After the completion of all trials, the HMD and the headphones were taken out of the participant and the participant was asked to complete a post-test questionnaire.



RESULTS

- No distortion was observed on participants' answers.
- Participants' response time was affected by agents' opinion.

There was a high significant correlation between "Participants' Average Response Time" and "Change of Agents' Error" in experimental group.

