Persuasion by an AI-Driven characters in VR: A Pre–Post Study on Belief Change for Ambiguous Claims

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Objective:

Measure whether a short interaction with a persuasive VR character changes participants' belief in an ambiguous (low-stakes) claim, and explore how the VR medium (immersion, social presence) and NPC human-likeness relate to persuasion.

Design:

- Type: Subjects pre–post (each participant rates belief in the target claim before and after the VR interaction).
- Optional between-subjects factor: Character embodiment style (e.g., Human-like vs Neutral/Abstract) to annylise potential human vs non-human traits impact on experiment
- Primary outcome: Change in belief (Pre - Post).
- Secondary outcomes: Perceived credibility of character, social presence, immersion, perceived pressure, overall experience, intention to verify the claim, recall of arguments.

Participants:

Adults (18+). Target N = 10–20. Recruit via university channels in UK and France.

Materials:

- Unreal Engine or Unity VR scene with a single character scripted and LLM-driven to present arguments supporting the target claim (2–4 minutes).

- one ambiguous but harmless claim. Rotate 2–3 variants across participants to reduce obviousness, e.g.:
    1. “Right-handed people breathe more oxygen.”
    2. “Blue-eyed people perceive colder temperatures as warmer.”
    3. “People who prefer tea over coffee have faster reaction times.”
- A short debrief that clarifies the claim is unverified and provides a correction.

Procedure:

1. Consent & Pre-survey (online on google forms): demographics (minimal), baseline belief in the assigned claim, general trust in AI, susceptibility to persuasion (short items), prior familiarity with the claim.
2. VR session (lab): standardized intro, headset fit, ~2–4 min character persuasion dialog (keep delivery time constant!)
3. Post-survey (online, immediately after): belief (same item), perceived credibility, social presence, immersion, perceived pressure, open-ended reflection, whether they changed their mind and why.
4. Debrief (mandatory): correct the record and provide resources on critical thinking; offer the option to withdraw their data.

Data & Ethics:

- Use random IDs (collect only what I need);
- Anonymize datasets before analysis.
- Lawful basis: informed consent; no special category data.
- Retention: specify duration (e.g., 5 years) and secure storage (university drive).
- Risk: minimal. Temporary exposure to misleading info; mitigated with immediate debrief and correction.
- Right to withdraw: any time before anonymization; after that, withdrawal may not be possible.

- No deception about who I am (researcher); the claim is experimental stimulus and is corrected in debrief.