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PARTICIPANT INFORMATION SHEET (PIS)

Name of Principal Investigator/Supervisor (PI): Prof. Mark Billinghurst

Name of Student Researcher(s): Andreia Valente, Joshua Schaefer

Dear Participant, thank you for your interest in our user study. This research aims to explore how different visual settings in virtual reality influence your eye movements and physiological responses. This research could help improve VR experiences and potentially develop new ways to manage stress and attention in virtual environments.

You may participate if you:

- are aged 18 years or older
- **have normal or corrected-to-normal vision**
- have a proficient understanding of the English language
- have no known allergic reactions to adhesive materials, metals (e.g., nickel, silver, silver chloride, or stainless steel), or latex
- have no known cardiac problems that could potentially impact heart activity
- have no neurological disorders
- have no history of photosensitive epilepsy, vestibular disorders, or severe motion sickness
- are comfortable viewing emotionally evocative video content
- are not currently taking any medications that affect autonomic nervous system functions

Participation involves:

Setup of sensors (30 minutes)

Phase 1 (30 minutes): Baseline establishment

- watching a series of film clips with varying emotional content
- wearing ECG electrodes on your chest to monitor heart rate
- wearing EDA (skin conductance) sensors on fingers of your non-dominant hand
- completing brief questionnaires after viewing content

Phase 2 (30 minutes): VR experience

- completing a fun 3D puzzle-building task in VR using a Meta Quest 3 headset
- experiencing different visual settings while your eye movements are tracked
- wearing the same physiological monitoring sensors as Phase 1
- completing brief questionnaires about your VR experience

Total time commitment: 1.5 hour

This study has been approved by the University of Auckland Human Participants Ethics Committee (UAHPEC26829). All monitoring is completely safe and non-invasive.

What you get:

- $20 Westfield Gift Card

Data collected:

Physiological Data: This includes measurements from biosensors that monitor heart rate and heart rate variability, and skin conductance responses.

Eye Tracking Data: Eye movement patterns and gaze behavior during the VR experience.

Questionnaire Responses: Self-Assessment Manikin (SAM) ratings of your emotional responses in terms of valence (pleasant/unpleasant), arousal (calm/excited), and suppression, plus VR experience questionnaires.

Demographic Information: Basic demographic and health screening information collected via questionnaire.

VR Performance Data: Task completion metrics and interaction patterns during the 3D puzzle-building activity.

What will happen to your data:

- **Data retention:** If you participate, your data will be kept for 6 years. After six years, all data will be automatically deleted from the Research Drive platform, and paper records will be destroyed.

- **Data de-identification:** At the end of the study, all questionnaires and physiological records will be de-identified and identified solely by a unique numerical participant tag. This tag will not have a direct link to your identity and will be communicated to you. Video recordings will not be anonymized, but they will not contain any information about your name or identity. These recordings will be used only for behavioral analysis.

Your rights as a participant:

- You can withdraw your data within **two weeks of participating** in the study without providing a reason. Simply email the researcher with your participant tag, and your data will be deleted from storage. Requests for data withdrawal beyond the two-week mark will not be considered.

- You can also request a copy of your data collected during the study without providing a reason. Email the researcher with your participant tag to make this request.

- If you're a student of the researchers, your participation or non-participation in the study will not impact your grades or relationship with the University. Any concerns can be addressed by contacting your academic head.

- Participation in this study is entirely voluntary.

- You may stop the experiment entirely at any time without penalty

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Dissemination of results:

In this study, your data will be utilized solely for research purposes, maintaining strict privacy safeguards. Please be aware that de-identified data may be shared with other researchers for scientific purposes, adhering to rigorous ethical and legal data protection standards.

If you have any questions or want more details (including equipment safety guidelines or detailed data management), refer to the Experiment Details document and do not hesitate to contact us.

WHO WE ARE

Empathic Computing Lab
Systems That Create Understanding

The **Empathic Computing Laboratory** (ECL) is an academic research laboratory at the University of South Australia in Adelaide, Australia, and at the University of Auckland in Auckland, New Zealand. Directed by Prof. Mark Billinghurst, the ECL is exploring new ways for technology to enable people to better understand one another.

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For any concerns regarding ethical issues, contact:
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