

REFLECTIONS ON ETHICS IN A VR (TRAINING) CONTEXT



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HIGHLIGHT ON 3 MAIN ASPECTS

USER PROTECTION

- Data privacy
- Data security
- Transparency



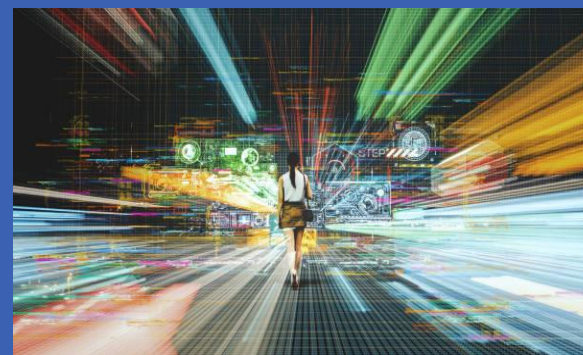
WELL-BEING

- “Do not harm”
- Physical
- Psychological



ETHICS IN VR DESIGN

- Avatar/NPC representation
- Ethics in VR environments



USER PROTECTION

- VR training tools collect a lot of data, e.g.
 - Haptic data
 - Biophysiological data (e.g., heart rate)
 - Audio-visual data
 - Eye-tracking data
 - Personal data

- Where does all these data go to?



SAFEGUARDS TO ENSURE USER PROTECTION

- Discuss with the developers
 - Which data are collected
 - How the data are stored and protected
 - Who has access to the data
 - What the data can be used for
- Data Processing Agreement
- Letter of intent to adhere to GDPR
- Transparency towards users/trainees
- Think about what you as organisation can do



WELL-BEING OF TRAINEES

- Goal of VR training
 - Similar experience to real-life situations
 - “Presence”, “immersion”
- Impact on well-being of trainees
 - Physical (e.g., motion sickness)
 - Psychological
 - Confrontation with possibly stressful and traumatic experiences
 - Similar physical, emotional and mental state as in real-life
 - Can lead to real-world emotional pain



SAFEGUARDS TO ENSURE WELL-BEING OF TRAINEES

- Discuss with technology provider how they will minimize negative physical effects
- Develop training scenarios with clear pedagogical goals and objectives
 - “It is not because it’s possible in VR, that trainees should be exposed to it”
 - Find a good balance!
- Need for follow-up and psychological support
- Guidelines for appropriate behavior in VR



ETHICS IN VR DESIGN

- Risk of stereotyping/stigmatising certain groups
- Examples:
 - Always choosing stereotypical characters for certain roles (e.g., suspect)
 - Lack of diversity in ‘skins’ for the trainees
- Safeguards:
 - Large avatar/NPC database with variety in ethnicity, culture, religion, gender, age, and physical appearance
 - Reflection on choice of NPC’s in each VR training scenario



- VR training is not a game!
 - It is not an ego-shooter game
 - Making mistakes as part of the learning process is fine, but intentional unethical, illegal or disrespectful behavior is not
- Safeguards:
 - Consider a Code of Conduct in VR training
 - Implement automatic warnings for 'Critical Mistakes'
 - Clear implications for 'disrespectful play'
 - Embed VR training in a clear didactical curriculum



CONCLUSION

- Ethics: complex, very broad domain
- Still a long way to go
- Responsibility of all; thorough reflection beforehand is needed
- Helpful: co-design, user-centred design



QUESTION

When you think about ethics in VR, which issues come to mind?