Chapter 12
Ethics in Virtual World Environments Research

Amit Goel
University of Central Florida, USA

Michele Montgomery
University of Central Florida, USA

William A. Rivera
University of Central Florida, USA

Waldemar Karwowski
University of Central Florida, USA

Peter Kincaid
University of Central Florida, USA

Neal M. Finkelstein
US Army Research Laboratory, USA

ABSTRACT

With increased use of virtual worlds in education, training, military, arts, engineering, architecture, astronomy, medical, physical sciences, and many other fields, research in the field of distributed virtual world simulation environments has increased manifold in the last decade. This astounding growth has motivated us to think seriously about issues related to ethics in such research. Awareness of ethical issues is not only a responsibility of the researcher conducting research in virtual worlds, but also for ethics committees and institutional review board members. In this chapter we provide an overview of the past and current research attempting to identify ethics issues related to distributed virtual world simulation environments research. We raise questions related to virtual world research ethics that researcher and ethics committee members should ponder, and we provide several references for the reader to engage in thought provoking further study and discussion.

INTRODUCTION

Virtual worlds have grown beyond merely being a tool for gaming and enjoyment, and have become prolific in many areas of human life, being used for modeling, simulation, analysis, social interactions, and conducting business transactions. In addition, virtual world simulation environments are being used for conducting research in diverse areas such as education (Balula & Moreira, 2014), training (Gomes, Abade, Campos, Harriso, & Silva, 2014), military (Scacchi, Brown, & Nies, 2012), medical (Diener, Windsor, & Bodily, 2009; Gomes et al., 2014), physics, astronomy (Henckel & Lopes, 2010; Lopes,

2009), arts (Duran & Villagrasa, 2013), engineering (Duran & Villagrasa, 2013), architecture (Duran & Villagrasa, 2013), and many other fields. Overall, millions of users worldwide are involved with some kind of virtual world.

Events related to ethical issues in virtual worlds have been studied, including cyber rape (Dibbell, 1993, 1994) in LambdaMOO and Facebook's emotional contagion experiment (Kramer, Guillory, & Hancock, 2014). The Facebook experiment manipulated user feeds without users being aware of it, resulting in an outcry from the public that included a call for a review of ethical questions such as issues of informed consent before conducting human subject research. In response, some researchers voiced the opinion that in online contexts it is difficult to determine when research requires informed consent (Rosenberg, 2010). These examples demonstrate us it there are situations that make us think about issues of ethics in virtual worlds.

The purpose of this chapter is to raise awareness regarding issues related to ethics in the use of virtual reality in research. First, background information is provided on virtual worlds, ethics, and a brief literature review of published articles related to the topic of ethics and the use of virtual reality. Second is a discussion of ethical issues, including moral and ethical context, human subjects, public and private space. Third is a discussion of ethics in research including military research, ethics in mobile learning for K-12 and ethics in SecondLife. Fourth is a discussion of future research directions, followed by concluding remarks.

BACKGROUND

In this section we provide a brief overview of virtual worlds and ethics followed by related work in ethical issues in virtual worlds, their usage in general, and their usage n particular in research.

Virtual Worlds

A virtual world is computer-based interactive simulation environment where users take the form of an avatar, own virtual assets, perform virtual actions, and interact with other users and computer-controlled actors known as bots or non-player characters (NPC) (Bell, 2008; Schroeder, 2008).

Virtual worlds include three-dimensional (3D) interactive environments such as Second Life and OpenSimulator. Furthermore, the term virtual world represents Multi User Virtual Environment (MUVE), Massively Multiplayer Online Game (MMOG), Massively Multiplayer Online Role-Playing Games (MMORPG), and Massively Multiplayer Online Social Games (MMOSG). Note that there are subtle differences in each of the above-mentioned terms, but those subtleties make no difference while discussing the issue of ethics. For example, MMORPG focuses on structured objective-based game play, whereas MMOSG focuses on social interaction and communication without a pre-defined structure.

Metaverse is the collective sum of all virtual worlds, virtual reality and augmented reality. The term metaverse was coined in a futuristic science fiction novel titled Snow Crash authored by Neal Stephenson in 1992 (Stephenson, 1992). In the Snow Crash novel human-controlled avatars interact with each other and with computer controlled agents known as bots, in a 3D space that uses the metaphor of the real world. In virtual worlds, users immerse themselves in a 3D environment using avatars to socialize, move around, buy objects, construct objects that they can sell or share, and communicate with other avatars and bots. Thus the immersive and global nature of virtual worlds with large number of users and complex

Related Content

Learning via Virtual and Real Museums: A Comparative Study on Presence and Retention
Zeynep Tatli, Derya Altiniik, Hasan enand Ünal Çakrolu (2021). *International Journal of Virtual and Personal Learning Environments (pp. 38-53).*
www.irma-international.org/article/learning-via-virtual-and-real-museums/267976

Teaching Basic Programming Concepts to Young Primary School Students Using Tablets: Results of a Pilot Project
Emmanuel Fokides (2020). *Mobile Devices in Education: Breakthroughs in Research and Practice (pp. 805-821).*
www.irma-international.org/chapter/teaching-basic-programming-concepts-to-young-primary-school-students-using-tablets/242647

Mentoring Teams as a Model of Supporting Distance Teaching: The Croatian Example
Lidija Kralj (2021). *Handbook of Research on Teaching With Virtual Environments and AI (pp. 86-118).*
www.irma-international.org/chapter/mentoring-teams-as-a-model-of-supporting-distance-teaching/273022

Access, Relevance, and Inclusivity: Assessing What Matters Most to Virtual Faculty
Amber Dailey-Hebert, Emily Donnelli-Sallee, Jamie Elsand Stacey Kikendall (2019). *Handbook of Research on Virtual Training and Mentoring of Online Instructors (pp. 132-165).*
www.irma-international.org/chapter/access-relevance-and-inclusivity/208830

Understanding the Use of Online Tools Embedded Within a Virtual Learning Environment
Eleanor Jane Dommett (2019). *International Journal of Virtual and Personal Learning Environments (pp. 39-55).*
www.irma-international.org/article/understanding-the-use-of-online-tools-embedded-within-a-virtual-learning-environment/218216