Alien (Post)phenomenologies of Synthetic Media

Jussi Holopainen

University of Lincoln, UK

jholopainen@lincoln.ac.uk

Philip Carlisle

University of Lincoln, UK

pcarlisle@lincoln.ac.uk

Abstract

We propose an approach based on postphenomenology, object-oriented ontology, and research through design in investigating the impact of widespread synthetic media in our lives. We use a project on synthetic performances as an example of the approach.

Introduction

The research and development of the technologies involved in synthetic media continues to progress rapidly. The challenges these systems will pose for economic, political, legal, aesthetic, ethical, and societal issues have remained little explored in a systematic way. It is important to foster reflective and critical engagement not just with how things are at the present, but what could be developed in the future (Redström and Wiltse 2018). Thus, this engagement should carefully explore the consequences of introducing such designed objects, systems, and assemblages to our lives.

In order tackle this we propose an approach based on postphenomenology and Object-Oriented Ontology (OOO) as theoretical frameworks guiding the speculative and critical Research through Design (RtD) inquiry on synthetic media systems.

Postphenomenology

This approach originating from philosophy of technology studies the relationships that form between humans and the technologies they use. Postphenomenlogy is interested in questions such as: How do technologies shape our actions, choices, experiences, and world-views? How do technologies inform and shape our politics, economics, ethics, and the texture of our everyday life? (Rosenberger and Verbeek 2015)

Object-Oriented Ontology (OOO)

We have adopted OOO to widen our analytical perspectives from the anthropocentric bias of postphenomenology. Bogost's (2012) "alien phenomenology" is a particularly suitable to an OOO approach for our purposes as it promotes 1) "ontography," investigating objects and their relationships on equal footing with humans, 2) "metaphorism," speculation about the "inner lives" of objects, and 3) "carpentry," creation of artefacts to illustrate the objects' respective perspectives. In other words, alien phenomenology invites us to imagine what is it like to be other objects.

Research through Design (RtD)

RtD is a research approach based on the practice of design (see e.g. Zimmerman, Forlizzi, and Evenson 2007). New knowledge is created by designing and making actual artefacts that respond to the research questions. This future looking approach allows to anticipate and prepare for the future rather than just respond to the changes as they come.

Combinations of these approaches have been gaining traction during the last couple of years in Human-Computer Interaction (HCI). For example, Hauser (2018) explores how postphenomenology can inform design oriented HCI while Lindley et al. (2020) do the same for OOO based approaches.

Synthetic Performances

We are currently exploring the suitability of the approach in an ongoing project focusing on synthetic performances in virtual environments. The aim is to create a system that incorporates virtual actors that are capable of delivering human-actor like performances in a dramatic

scenario. This involves utilizing advances in fields such as robotics, computer vision and machine learning in order to develop a model of motion behaviour for virtual actor performances and the staging of scenes from virtual dramas. From robotics, we apply the concept of learning behaviour by viewing demonstrations known as imitation learning in which a policy is learnt for an agent in order to conform to some motion extracted from demonstrations of a similar motion. From computer vision we use an ensemble of models to extract parameterizations like the poses of characters or their facial expressions. We also extract parameterizations of the scene within which the demonstration actions are taking place, for instance, extracting image composition via object detection. The purpose of this ensemble of computer vision analysis models is to generate a dataset for a given body of demonstrations in the form of a series of video clips of an acted scenario. This dataset is used to train a deep learning model that translates the per-frame data from the input video into an extended PROSE language description of the scene and its motion behaviours (Ronfard et. al. 2013). This description is finally used in a generative system to create a videogame scene that recreates the acted performance using a sequence translation model involving neural machine translation and generative adversarial networks.

We are currently designing a series of user interfaces, interaction architectures, and distribution mechanisms based on the affordances revealed by building the core system. These tentative designs allow us to speculate how various stakeholders would engage with such systems. Constructing the systems and interfaces have given us invaluable insights into what kinds of objects (as per OOO) are involved in the deployment and maintenance of such synthetic media services. This ontography includes not only the human-centric ones, such as end users, corporations, copyright owners, creators and so on, but also objects such as artistic styles, algorithms, databanks, and copyright legislations. The analysis will then inform a postphenomenological inquiry into the multifaceted impact of synthetic media in our lives.

References

Bogost, Ian. 2012. *Alien Phenomenology, or, What It's like to Be a Thing*. Minneapolis: University of Minnesota Press.

Hauser, Sabrina. 2018. "Design-Oriented HCI through Postphenomenology." PhD Thesis, Communication, Art & Technology: School of Interactive Arts and Technology.

Lindley, Joseph, Haider Ali Akmal, and Paul Coulton. 2020. "Design Research and Object-Oriented Ontology." *Open Philosophy* 3, no. 1: 11–41. https://doi.org/10.1515/opphil-2020-0002.

Redström, Johan, and Heather Wiltse. 2018. *Changing Things: The Future of Objects in a Digital World*. London: Bloomsbury Publishing.

Ronfard, Rémi, Gandhi Vineet, Laurent Boiron, and Vaishnavi Ameya Murukutla. 2015. "The Prose Storyboard Language: A Tool for Annotating and Directing Movies." arXiv.org, arXiv:1508.07593v4.

Rosenberger, Robert, and Peter-Paul Verbeek. 2015. *Postphenomenological Investigations: Essays on Human-Technology Relations*. Lexington Books.

Zimmerman, John, Jodi Forlizzi, and Shelley Evenson. 2007. "Research through Design as a Method for Interaction Design Research in HCI." In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 493–502. San Jose, Ca.: ACM.

Biographies

Jussi Holopainen is a Senior Lecturer in Games Computing at University of Lincoln. He has worked in game design and HCI research for more than two decades.

Philip Carlisle is the Programme Leader for Games Computing in the School of Computer Science, teaching across various modules related to games technology. Having spent more than a decade creating commercial videogames, in 2004 he moved into academia where his focus has been the creation of believable characters.