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Posthumanism and Design

Abstract Since at least the mid-1980s, design has been dominated by a human-centered and user-centered paradigm. Currently, the implications of technological and environmental transformations are challenging designers to focus on complex socio-technical systems. This article traces emergent discussions around posthumanism from across a range of disciplines and perspectives, and considers examples from emerging design practices that emphasize the interrelations between human and nonhuman actors. Specifically, this article reviews literature from actor-network theory (ANT), feminist new materialism, object-oriented ontology, non-representational theory, and transhumanism to inform the development of new methodologies and practices in the field of design. Finally, this article presents critiques of posthumanism from critical race theory and decolonial theory to consider how emergent design perspectives might better support values such as equality and justice for humans and nonhumans that have been traditionally ignored in design processes.

Introduction

A river in New Zealand has the same legal status as a human being. A major chicken producer aims to improve the lives of its chickens. Climate change and environmental sustainability have become widely recognized as significant, pressing concerns. At the same time, there are emerging technologies that are shaping everyday life, and have begun to play a greater role in socio-cultural, political, and economic transformations. A robot is now a partner in a law firm. Driverless cars are being tested in many cities around the world. Voice-activated, in-home personal assistants are becoming common household devices. Wearable technologies are being embedded into clothing. Medical devices have become so sophisticated that some now take on what we used to think of as human functions.

These developments blur the boundaries between the familiar binaries of human and nonhuman, culture and nature, and human and animal that have dominated Western thinking since at least the Enlightenment. They underscore the ways in which nonhumans — whether environmental or technological — have new kinds of agency in the world. They also reveal new perspectives and raise questions about what, how, and why we engage in the design of the so-called "artificial" world. Over the past several decades, a growing body of social theory has developed around concepts that attempt to make sense of this blurring of boundaries and introduce hybrid, non-binary, relational modes of thinking about being in the world. This article will discuss the importance of these hybrid modes of thinking — especially that of *the posthuman* — for design research and practice.

The hybrid figure of *the posthuman* — and related concepts, such as *the nonhuman*, *the multispecies*, *the anthropocene*, *the more than human*, *the transhuman* and *the decentering of the human* — greatly expands our understandings of the multiple agencies, dependencies, entanglements, and relations that make up our world. This consideration of humanity's role in environmental and sociotechnical changes, and the ways these changes shape humans and the world, makes it possible for us to reflect on the implications of these hybridized notions for epistemology, ontology, and ethics. Furthermore, as we adjust our fundamental understandings of human and non-human knowledge and ways of being in the world, it is likely that we will also develop corresponding design methods, frameworks, and practices that better address the challenges we face as a planet.

This article serves as a brief overview of some of the most important ideas by key thinkers contending with the implications of socio-technical and environmental changes. My purpose is to present a set of related theories and concepts of the posthuman to set the stage for emerging design practices that grapple with current problems and questions facing the field. This article does not, however, offer a comprehensive literature review of the extensive scholarly work related to the posthuman, which would require a much longer discussion. While many scholars in a wide range of fields have contributed to the rich discussion of the posthuman, there are also reasons to critique and question this new theoretical framing as well as its potential application in the field of design. Even though design scholars, researchers, and practitioners are already beginning to see the relevance of these theories, associated practices remain undeveloped, leaving much of the translation work to be done in order to move from theory to practice.

What a Chicken Wants

Human-centered design is founded on understandings of the human as a discrete, individual subject. Yet, our new relations to the natural world and to socio-technical systems are calling these previous understandings into question. The field of design is also commonly beholden to neoliberal, capitalist economic models that