

Posthuman Engagements

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Central to posthumanist theory is the interrogation and eventual elimination of boundaries, particularly through the transgression of the biological with the technological. The human body ceases to be understood as a complete, homeostatic entity, but is—and has been since the very first use of tools—a body prosthetically expanded and articulated through tools and media technologies.¹ This alternative configuration of embodiment produces the possibility of new identities and ontologies. The decentering of the human subject from a position of privilege, moreover, recognizes the agency of other living and nonliving entities. Here, the paper by Leach approaches this question by interrogating materialist philosophies of contemporary digital tools and objects. The agency of nonhuman entities is further explored by the other papers in this section through modalities of expanded embodiment and interaction between humans and intelligent machines.

In *How We Became Posthuman*, N. Katherine Hayles traces a genealogy of posthumanist theory as one closely linked to the history of cybernetics, the science of communication, feedback, and control in both living and machine systems that emerged as a paradigm and transdisciplinary field of study during the Macy Conferences on Cybernetics held between 1943 and 1954.² The ideas that emerged from these conferences not only began to “dismantle the liberal humanist subject” (by looking at humans as “information-processing entities” and models for machine intelligence), but also laid the foundations for thinking about the behavior and language of first- and second-order cybernetics, which define interactive protocols and open systems.³

Second-order—or “learning, conversing” systems⁴—are the operational basis for Beesley’s “Hybrid Sentient Canopy.” The synthetic system achieves life-like behavior through the combination of a broad spectrum of distributed, cooperative sensor technologies, curiosity-based learning algorithms, and form-found digitally fabricated spatial structures capable of kinetic movement. Farahi explores sentient behavior at a more intimate

scale in a “body architecture” that combines smart material actuators and multimaterial 3D printing with sensing and interactive capabilities. Both explore the design of life-like behaviors and experiment with the production of emotional and cognitive relations between humans and synthetic systems. Costa Maia and Meyboom, whose paper describes experiments with models of interaction that aim to empower inhabitants, explore the question of participant agency in the field of Interactive Architecture (IA). In different ways, López, Pinochet, and Eisinger and Putt also experiment with the novel creative agencies afforded to “humans” in posthuman collaboration with digital machines.

In aggregate, the papers in this section explore tools, objects, and modes of existence beyond human-defined consciousness-based life, and thus contribute to growing conversations regarding the posthuman. Instead of amplifying anxieties about conditions of alienation produced by advanced technologies and machines, these projects suggest that computation and technology might be used to discover material and “thing languages”⁵ that allow for newfound intimacies and relations between ourselves and the world around us.

1. Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: McGraw Hill, 1964).
2. N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 7.
3. *Ibid.*
4. Hugh Dubberly, Usman Haque, and Paul Pangaro, “What is Interaction? Are There Different Types?” *Interactions* 16, vol. 1 (2009): 75.
5. Kyla Anderson, “Object Intermediaries: How New Media Artists Translate the Language of Things,” *Leonardo* 47, vol. 4 (2014): 352.

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