Posthumanism, New Materialism and Feminist Media Art

María Fernández
Cornell University
mf252@cornell.edu

Abstract

Some scholars understand the theoretical orientations of posthumanism and new materialisms to be in tension if not in distinct opposition to previous feminisms. This essay explores select works by two contemporary artists to suggest that posthumanism and new materialism have antecedents in previous feminist media arts. This proposition encourages the recognition of feminist contributions to the history of posthumanist and post anthropocentric art practices.

Introduction

The work of women artists working with technology is poorly represented in the art historical record. [1] Even today when both digital media and feminism have become popular, few publications about this art exist. The paucity of recognition in the art world notwithstanding, new media art by women continuously proliferates. [2] While some works address traditional feminist concerns such as the female body, identity, representation, feminist history and consumerism, others directly engage with recent theoretical currents in posthumanism and new materialisms. Some scholars understand these latter theoretical orientations to be in tension if not in distinct opposition to previous feminisms to which notions of gender, embodiment, subjectivity, legibility and signification were central. Such understandings often erase the contributions of feminism to the history of posthumanism. In this essay I will examine select works by two contemporary artists, Paula Gaetano Adi and Karolina Sobecka, who exemplify post-humanist and new materialists orientations and I suggest that this work has precedents in previous feminist media art. This proposition contests the erasure of feminist contributions from the history of post-humanist, materialist and post-anthropocentric art practices.

Posthumanism and New Materialisms

Katherine Hayles explains posthumanism as the deconstruction of the humanist subject and the attributes normally associated with it such as free will, self-determination and mastery. [3] In her book *How We Became Posthuman* (1999), Hayles countered posthumanism that proposed a future in which the human mind would function as pure data and humans eventually would be replaced by machines. Drawing from evolutionary biology and cognitive science she proposed an embodied posthumanism that recognized minds as inseparable from the material and historical specificities of bodies. She viewed posthuman subjectivity as developing from a world always in the process of change. Consequently this subjectivity is chaotic rather than in control, distributed rather than autonomous and located in consciousness. [4] In more recent work she posits that in our era, digital technologies are integrated in our daily lives and communications infrastructure to such a great extent that we have evolved with them and it is difficult to differentiate human from nonhuman agencies. [5]

Similarly, the philosopher Rosi Braidotti associates humanism with a universalizing notion of the subject (white, male, able bodied), and proposes a critical posthumanism with special attention to subjectivity. Her critical posthuman subject is relational, constituted in and by multiplicity and is simultaneously embodied and located, not only geographically, but also affectively along hierarchies or gender, race and class. Critical posthumanism for her involves interconnections between humans, nonhumans, and the environment as well as the dissolution of "self-centred individualism," associated with traditional humanism.For Braidotti, the end of classical humanism is an opportunity to create new kinds of subjectivities, exemplified by contemporary cultural mestizajes and the ongoing propagation of genders and sexualities. The critical posthuman subject practices an ethics of relationality by building affirmative interconnections with humans and nonhumans. [6] After Donna Haraway for Braidotti, nonhumans include machines, animals and bacteria. [7]

Posthumanism shares some of the concerns of "New Materialisms," which investigate interrelations between technological, biological, environmental and social processes and human action. [8] Drawing from recent advances in fields such as physics, biology, chemistry, informatics and nanotechnology, new materialists refute traditional notions of matter as inert and predictable and instead understand it to be active, self-generating and unstable. In this framework, phenomena emerge and develop in relation to a multiplicity of interacting systems and forces that render untenable the ontological distinctions between organic and inorganic, animate and inanimate, human and animal, individual and environment. Consequently, like many posthumanists, new materialists reject traditional notions of subjectivity, unilinear models of causation, human mastery over nature and other nonhuman entities and detach intentionality from agency. The main difference between the two theoretical currents is the new materialists' emphasis on the dynamism and agency of matter.

Materialist theorist and political scientist Samantha Frost has argued for the necessity of feminism to come to terms with the interdependence of bodies and matter including the materiality or the body itself. In her

opinion, for several generations feminism was invested in constructivist analyses of how human bodies were formed by power through language, culture and politics. In contrast, new materialists argue for complex entanglements of chemical, biological, geological, social and cultural processes that shape both organisms and environments. New materialist feminists do not demand that feminists abandon the insights provided by constructivism. They do ask that feminists acknowledge the agency of matter and biology in their own right and "relinquish the unidirectional model of causation in which either culture or biology is determinative and instead to adopt a model in which causation is conceived as complex, recursive, and multilinear." [9] The goal is to investigate the ways in which matter contributes to support consolidate or disrupt power relations. These theorizations find affinities in contemporary art.

Paula Gaetano Adi

Paula Gaetano Adi makes art in a variety of media including sculpture, installation, performance and robotics. By her own description, her work attempts "to promote bodily inter-species, intercultural live encounters and explore the effects and 'affects' of different discourses in technoscience." [10] This statement alone indicates the artist's commitment to posthuman explorations.

Her robot Alexitimia (2007) consists of an autonomous agent, a semi-sphere made of clay covered with a soft latex skin that responds to touch by perspiring. [11] Plastic hoses and sensors placed under the robot's skin trigger water flow from a receptacle placed beneath the agent to simulate perspiration. By reducing the robot's expression to a corporeal process, the artist indicates the affective potential of robotic agents and calls attention to a decidedly expressive and underestimated body organ: the skin. According to a variety of experts the skin plays a fundamental role in the formation of subjectivity as it functions as the body's boundary between the inside and the outside. Hence it is central to the formation of the subject's body image and her identification with it. Through touch the skin becomes a site of communication and negotiation basic to the differentiation of the self from others or what we call personal identity. [12]

Alexitimia (in English Alexythimia) is a clinical term used to describe an inability to understand, identify, express or describe feelings experienced by the self or by others. [13] People with Alexithymia can only communicate emotions through their bodies and behavior. In humans, perspiration is associated not only with systemic regulation but also with affective states such as nervousness, excitement and fear. By sweating the robot simulates the powerful effect of material bodily processes for emotive communication in the absence of language.

Gaetano Adi's recent project *TZ'IJK* (2013) designed in collaboration with the architect Gustavo Crembil, incorporates traditional Latin American building technologies with contemporary robotics. The proposed installation, which already has a prototype, consists of a group of spherical robots. The body of each robot consists of an interior laser-cut polycarbonate geodesic membrane held together with an armature made with *angarilla* wood. The exterior of the sphere is then covered with *quincha*, an indigenous construction method consisting of clay mud mixed with thick grass, which is renowned for its strength and resilience. [14]

The robots lack the capacity to see, make sounds or ambulate. They can rock back and forth using motorized wheels set in the sphere's interior but the movement serves no specific purpose. According to Gaetano Adi, the project draws from the history of mestizaje and critical theories of postcolonial technoscience. Its tactical use of high and low technologies embodies "Latin America's anthropophagic, cannibalistic, and hybrid nature, and so proposes an alternative approach to the development of embodied artificial life." [15] Like *Alexitimia*, *TZ'IJK*'s behavior simulates emotional states. Rocking back and forth in humans and other animals signals stress and anxiety. The inability of the agents to speak and their seemingly erratic behaviors, not only question the instrumental efficiency of traditional robots by bringing attention to different kinds of abilities or "intelligence" but also open to reinterpretation recurrent narratives about the technological backwardness of indigenous and colonized peoples. The unification of traditional indigenous technologies with modern robotics manifest the robot's mestizaje, explores new avenues for creativity and affirms indigenous inventiveness.

Both *Alexitimia* and *TZ'IJK* are part of an important current in modern robotics that questions notions of intelligence as centralized and expressed through the manipulation of symbolic systems, ideas fundamental to traditional artificial intelligence research. To the roboticist Rodney Brooks the essence of intelligence consists of the ability to move around and sense a surrounding environment to the degree required to sustain an organisms' life and reproduction. [16] Some roboticists have demonstrated that even simple mechanisms such as a Weasel Ball can learn to explore its environment. [17]

Unlike the Weasel Ball neither of Gaetano Adi's robots ambulates. *Alexitimia* sweats and *TZ'IJK* rocks back and forth. Through these actions they evoke another kind of awareness that resides in the body. Some scientists investigate expressiveness in robots or other artificial agents, primarily through the emulation of human emotions by anthropomorphic or animal-like agents. [18] Gaetano Adi's robots resemble no humans or animals. They evoke affective states solely through their materials and behavior. In this way the artist expands the concept of the body and its matter to include synthetic components in line with current materialisms.

Karolina Sobecka

Karolina Sobecka works with a variety of media to engage public space and explore the ways humans interact with the world**.** *Thinking Like a Cloud* consists of a Cloud Collector launched on a weather balloon. Inspired on modern fog collectors used in areas of the world where water is scarce, The Cloud Collector consists of a 2 wing raschel-weave mesh that extracts 30% or moisture or 0.5-1.5 grams of water per cubic meter of cloud, a connecting funnel and a sample container with a reflux valve. [19]

The collector gathers cloud samples in the troposphere. The water it collects is then consumed by volunteers who record the effects of their ingestion in a log. According to Sobecka, "the cloud microbiome is incorporated into the human microbiome, rendering its new host part-cloud." A diagram in the project's blog explains that the resulting human is "10 trillion cells 5% human, 1% cloud 94% other." The "other" refers to microflora in the human body. The project offers participants a bacteria tasting menu that includes some species of microbes found in the cloud in a specific location, day and time. Sobecka proposes that the cloud water may affect the participants' ideology by making them think of "water, clouds, microbes, humans and systems "a little differently." [20] This conjecture resonates with the work of the theorist Elizabeth Wilson, who argues for the primacy of the gastrointestinal tract in the psychological development of humans. Literally, the gut is an open tube that brings the outside world into the body. According to Wilson, the outside world engenders the relations of self and other and through them the development of the self. [21] Then, one could propose that possibly one could ingest ideas and orientations towards the world. In sync with new materialisms, Sobecka's work emphasizes the complex relations of environment, mind and body. The work of both Gaetano Adi and Sobecka shares with previous feminist media art interests in expanding notions of subjectivity and stimulating reflexions about collective futures.

Examples from Previous Feminist Media Art

Even though before this century few feminist artists engaged with topics such as the human microbiome, the physics of virtual particles and nanotechnologies, the historical record demonstrates the existence of orientations now identified as "posthumanist" or "new materialist" in previous feminist media art.

Since the 1970's Lynn Hershman-Leeson has investigated posthuman dimensions of identity and the body. In her performance of Roberta Breitmore, a fictitious person who lived a real life during a four-year period (1974-1978) Hershman makes clear that identity is fictive, multiple, unstable and boundless. Hershman's replication of Roberta by commissioning four other women impersonate her further demonstrates her understanding of subjectivity as multiple and distributed. [22] In Hershman's later media works identity transcends the boundaries of the given body to admit a variety of couplings, structural and prosthetic, with machines. Her

photographic series *Phantom Limb* (1988) portrays women-machine hybrids in a variety of poses. The machines, such as TV monitors and cameras signal the media's alluring power over body and psyche to the extent that they have become naturalized body parts. Hershman's integration of humans with machines continued in her film Teknolust (2002) in which a scientist creates artificial agents that subsist on human sperm and in her artificial intelligence agents that exhibit human appearance, Agent Ruby (2002) and DiNA(2004).

Natalie Jeremijenko's almost entire artistic production since the 1990's has sought to provide opportunities for convivial collaboration, communication and exchange between the environment, humans and animals including geese, amphibians, fish, pigeons, butterflies, salamanders and rats. These projects exemplify aspects of the critical posthumanism outlined by Braidotti as they foster relationality across species and materially distinct entities. Many of Jeremijenko's experiments investigate the health of the environment, humans and other living beings. She understands "health" as a project shared among all of these entities and she employs contemporary technologies to facilitate connections among them. [23]

In her renowned work *OneTrees*, which began in 1999 in collaboration with plant geneticists at the University of California Davis, Jeremijenko cultivated and later planted clones of a hybrid walnut tree around California's Bay Area to show how the environment and the climate affected the growth of each tree. In the project as each specimen grew, it developed unique characteristics through interaction with its surroundings. Thus the physical identity of each tree was both singular and multiple, an idea communicated in the title of this work. This multiplicity in singularity indicates that genetics alone did not determine the evolution of each tree but rather its health was the product of a complex of interacting factors. In addition people could purchase artificial life clones of the trees in a CD ROM to grow in their computer screens. The a-life clones were linked to C02 monitors that analyzed the air in the location of the monitor, which in turn affected the growth of the simulated trees. This work demonstrated complex interconnections among multiple systems in the development of living entities. In that respect it could be seen as anticipating new materialist orientations.

Sobecka and Jeremijenko's interest in systems interaction have parallels in the work of other artists. For instance, Kim Abeles, made several "Smog Collectors" beginning in the 1990s. These objects, ranging from silk to dinner plates, register through color changes the quality of the surrounding air when exposed to it. All of the works discussed above have more distant antecedents in ecological art including site specific works of the late 60s, 70s and 80s by artists such as Betty Beaumont, Agnes Denes and Patricia Johanson.

Conclusion

Hershman has been making art since the late 60's and Jeremijenko since the early 1990's. Consequently their work is neither all contemporary nor exclusively historical. Like them Gaetano Adi and Sobecka in their work exceed the social and political construction of individual human identities and the restatement of human rationality and control by engaging with other organisms, materials and systems that render the human unstable and distributed. While Gaetano Adi and Sobecka address subjectivity and affect in their work, they incorporate new technologies and scientific knowledge in their art to reach across geographical, historical, cultural and material differences and establish affirmative and generative connections. The greater involvement of these two artists with contemporary scientific discourses and their affinities with new materialisms notwithstanding, in the history of feminist new media art, feminist, posthumanist and new materialist orientations overlap and remain difficult to disassociate.

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