

DXARTS Qualifying Exam / Field One—History and Theory

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Over the past two years in the Digital Arts and Experimental Media (DXARTS) program at the University of Washington (UW), I have dedicated my studies to developing my expansive long-term project and Ph.D. dissertation topic, "Disobedient Robots." Beyond representing a singular piece of research or artistic installation, the project's title reflects an attitude and a focus on robotics in the sphere of contemporary art. Disobedient Robots serves not only as a research platform but also as a theoretical framework inspiring the ideas behind the artworks I have created and will continue to develop in the following years. This evolving platform encapsulates the challenges and artistic opportunities within my exploration of robotics, forming the basis for future dialogues with artists working on similar concepts. These ideas are deeply rooted in personal intentions and experiences, influenced by the works of artists and scholars such as Ernesto Oroza, Bruno Latour, and Paula Gaetano Adi, among others.

How can we think about robots, instead of objects, as subjects and, rather than tools, as collaborators? As a point of departure, Disobedient Robots interrogates how robots can 'disobey' their categorization as mere extensions of the human body to become bodies with agency themselves. My project takes on the challenge of defying the purpose of mainstream robot fabrication and AI production, responding to the productive and surveillance imperative that drives most modern-day robotics. The concept of disobedience, derived from 'technological disobedience,' a term coined by artist Ernesto Oroza (2002), encapsulates the necessity-driven ingenuity and creativity employed to subvert, assemble, repair, and imagine technology outside the mainstream. For Disobedient Robots, I draw inspiration from these works, which are products of everyday makeshift artisans who anonymously give shape to various artifacts and devices.

In contemporary art, I see this attitude reflected first and foremost in the work of Marcel Duchamp, who pioneered object decontextualization in the field with his "readymades." On the same line, the Situationists International, guided by the theories of Guy Debord in "The Society of the Spectacle" (1995), pioneered the technique of "détournement" (in English, rerouting or hijacking), which focused on using "expressions of the capitalist system and its media culture against itself" (Holt & Cameron, 2010, p. 252). With the same spirit, art has evolved in different contexts to reuse and recontextualize objects intended for other purposes. In Latin America, this has increasingly become part of the artistic expression of numerous artists and collectives, such as Leonello Zambon, Javier Bustos, Colectivo Gambiologia, Claudia González, Constanza Piña, Francesco Mariotti, Guillermo De Orbegoso, among many others. These artists and collectives use the same strategies documented by Oroza, with the difference that Oroza's research points to everyday objects instead of purposefully created artworks.

While Oroza primarily refers to the Cuban technoscape, these ways of understanding technology have been a constant in my life, growing up in Lima, Peru, an epicenter for technological disobedience. In Lima, makeshift machines and DIY creations fascinated me during my childhood, cultivating a unique way of relating to artifacts and devices. For example, my grandfather and I fabricated toys together in his workshop. Living in a country in crisis, we often couldn't access technology like the modern world did. Instead, we had to imagine and envision different ways of using and making artifacts essential to our everyday lives. Like Oroza's disobedient objects, we imagined, created, and repaired our devices by reinventing older parts and assembling unrelated pieces. In today's world, however, it seems we have become accustomed to consuming already-packaged artifacts, a way that enforces a divide between us humans and those "alien" objects.

I now give sense to this modern-world divide through the lens of Bruno Latour's critique of modernity, as described in "We Have Never Been Modern" (1993). Latour critiques modernity's attempt to separate culture from nature, emphasizing the illusory essence of this division, which he terms the "Great Divide." In his book "Technosis," Erik Davis (2015) effectively summarizes Latour's perspective and connects it to technology:

The Great Divide [...] disenchants the world, enthroning man as the sole active agent of the cosmos. From within the paradigm of the Great Divide, technology is simply a tool, a passive extension of man. It does not have its own autonomy; it simply acts upon, but does not change, the world of nature. (p. 2)

Conditioned by crises like in Oroza's Cuba, I think my grandfather and I were not immersed in this "Great Divide." Instead, we embraced and were absorbed by the alchemical idea that everything was possible with anything, in closer connection with the machines and things surrounding us. This different type of awareness is closer to what Latour describes as the "anthropological matrix," succinctly explained by Erik Davis as a "webwork" in which nothing "can be nearly divided between nature and culture. Instead, this matrix is composed of "hybrids"—"speaking things" that are both natural and cultural, real and imagined, subject and object" (Davis, 2015, p. 2).

Latour sustains that we have never been modern. Never genuinely immersed in the "Great Divide," the illusion of modernity easily breaks apart to reveal the pre-modern "anthropological matrix." I believe, however, that the fantasy of modernity strives to prevail, and energy and intention are necessary to rebel against the Western-centric aspiration. With this spirit, *Disobedient Robots* calls to transgress the Great Divide, dismantling the imaginary walls that create an illusion of modernity. This approach requires a conscious relationship with the hybrids surrounding us by recognizing their agency and hybridity in the first place.

In recognizing agency and hybridity to subjects-objects, I take distance from the problem-solving techno-positivist ideas of singularity, machine consciousness, and sentience. The latest developments in Large Language Models (LLMs) correlate with increasing questions and hopes of machines becoming conscious (Huckins, 2023). Artifacts equipped with LLM-powered verbal articulation proliferate. But these "voices" are far from approaching the idea of hybrid subjects-objects and "speaking things." On the one hand, LLMs are impressive models specialized in generating "statistically likely continuations of word sequences" (Shanahan, 2022). By doing so, they have become outstanding mimickers of human language, thus creating the impression that they are human-like. This creates a "temptation" to anthropomorphize algorithms, regardless of their embodiment in objects or robots.

On the other hand, oversimplified anthropomorphism can be problematic because it reinforces the Great Divide. When objects are merely seen as mimicking human characteristics without recognizing their agency and unique perspectives, anthropomorphism perpetuates that humans are the "sole active agents of the cosmos" (Davis, 2015). To go beyond this risk, Eduardo Viveiros de Castro's "perspectivism" (2004) defines an ontological framework that helps revise oversimplified¹ anthropomorphism. Perspectivism, a way of understanding Amazonian indigenous cosmologies, highlights the existence of different beings, human and non-human while they retain their perspectives and agencies on the world they exist in. *Disobedient Robots* embraces indigenous perspectivism, as described by Viveiros de Castro, as a philosophy to learn from and contribute to from the viewpoint of robotics in the sphere of contemporary

¹ I emphasize "oversimplified" because Viveiros de Castro specifically challenges Western anthropomorphism without denying the same concept to Amerindian societies.

art. In this regard, I embrace the influence of César Calvo's "Las tres mitades de Ino Moxo y otros brujos de la amazonía," (2011) a book that contains and communicates teachings on Amazonian perspectivism.

From the Amerindian ontological viewpoint, LLMs could be perceived as a "cannibal spirit, as an intelligent weapon, as a data-hungry machine" (Bonaldo & Pereira, 2023). While this view gives agency and subjectivity to hybrid subject-objects like Artificial Intelligence (AI) and LLMs, it also suggests a predatory relationship between humans and AI. To achieve one of the Disobedient Robot's goals of understanding our relationship with robots as collaborative instead, I believe it is necessary to move beyond the imposition of human language and communication into machines. In "Language and Symbolic Power," Pierre Bourdieu (1991) explored the role of language in social structures and power dynamics. Bourdieu argues that language is a form of "social capital" that can be wielded, for example, in colonial domination. Through linguistic domination, colonizers were determined to undergo a process of erasure, essentially silencing the voice of the colonized population. Drawing a parallel with LLMs and robotics, in imposing human language, mainly English, I believe we might be missing the opportunity to help robots find a voice of their own.

In this task, Disobedient Robots shares similar perspectives with others addressing robotics in contemporary art. For example, I admire the work produced by Gilberto Esparza. Specifically, his "Urban Parasites" and "Nomadic Plant" projects suggest symbiotic relationships between machines and our urban and natural environments, enabling robotic species "whose metabolic cycle has the potential to repair [...] ecological damage" (Esparza, n.d.) Another project I greatly appreciate is Paula Gaetano Adi's "Mestizo Robotics." Together with her "Robocalyptic Manifesto," Gaetano Adi emphasizes the need for "an urgent call to endorse a robot general strike to overthrow the instrumental definition of both technology and humans [...] to think of robots as comrades in the fight for repairing our planet" (Gaetano Adi, n.d.) Like Esparza and Gaetano Adi, many artists are increasingly starting to work with robots. Nicole L'Huillier, Michael Candy, Jan St. Werner, and Geumhyung Jeong are among many artists who embrace robotics within their artistic practices, ultimately defying the mainstream purpose of commercial and surveillance robots.

Despite having robotics grow as a subfield in the arts, there needs to be a significant connection between practitioners to come together and discuss, exchange, and move forward as a new field. In this sense, Disobedient Robots aims to function as an interdisciplinary artistic research platform and a point of convergence. Together, artists and practitioners can tackle challenges and opportunities within the field of artistic robotics, forming the basis for continuous dialogues and exchange. In the future, Disobedient Robots could organize various events such as publications, exhibitions, workshops, classes, and research experiences. These events would connect, inspire, and grow the community of artists and practitioners working with robotics in contemporary art.

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