Human beings are dependent on technology idea is one that has recently become popular, usually as a criticism of how much time the current generation spends 'plugged in' to computers and cell phones. Certainly, the extended hours today's child spends on the internet makes it easy to feel nostalgic for a time when young people were more engaged in the "real world" rather than simply staring at a screen. However, these somewhat tired concerns about the well being of the future generation do call into question our narrowly defined view of technology. Obviously, complex new developments like personal computers, tablets, and smart phones are fairly common examples of technology in the modern world. That being said, other less popularly realized technological tools exist all around us. In the first scene Stanley Kubrick's iconic "2001: A Space Odyssey", a primitive man-ape has an epiphany when he comes to the realization that a bone can be used as a tool. After successfully utilizing the bone as a weapon to gain control of the man ape tribe, the creature triumphantly throws the tool into the sky, and slowly, the scene transitions from the falling bone to a satellite, millions of years into the future. This narrative, while fictionalized, shows the pivotal role that tools play in the evolution of human kind; even simple tools can be viewed as revolutionary technologies that enhance the human experience. This shatters popularly held contemporary definitions of "technology", and, additionally, raises the question: how much of our supposed 'real world' has been constructed by created technologies? From the dawn on our existence, the fate of our species and that of the machines that we create has been intertwined. Just as we have become dependent on technology, technology's evolution is dependent on us, the creators. And so a simulated symbiotic relationship unfolds, where humanity depends on technology, and vice versa. As human kind progresses, the line between humanity and technology becomes more and more blurred. In this sense, we are all cyborgs.

The word "cyborg" is short for *cybernetic organism*, and is simply defined as a being that contains both biological and artificial parts. Technically, due to the use of the word cybernetic, the term cyborg refers to a combination that includes some sort of self-regulating feedback system. While often dismissed as such, the cyborg is not merely a creature of science fiction, though various fantasies of robots and automata have existed within the Western imagination since the Enlightenment, at the very latest (Kunzru, 7). By today's definition, the world's first recorded cyborg was a white lab rat that was fitted with a tiny osmotic pump that released chemicals into it's bloodstream, as a part of a program at Rockland State Hospital in the 1950s. The story of Rockland Rat was popularized in the text that marks the invention of the term cyborg itself, a 1960 paper called ""Cyborgs and Space," by Manfred Clynes and Nathan Kline. In the paper, Clynes and Kline used the rat as an example, in order to envision some sort of future augmented human; in particular an astronaut who- along with other enhancements- had a nuclear powered fuel cell instead of lungs (Kuzru, 6). Since then, the term cyborg itself has taken on many different interpretations. Obviously, the concept of a cyborg has spurred too many shiny chrome science fiction interpretations to count. But beyond the Terminator and the Bionic Woman lies a plethora of real life cyborgs, within medicine, engineering, and the military. Countless experimental military weapons and devices, and humans fitted with artificial heart valves and diabetics with insulin pumps are just a few examples of very real cyborgs.

However, the term 'cyborg' can be further applied to fusions of humans and technology in the abstract. Arguably, the metaphysical and physical attachments humans have formed to even the most basic technologies already make them cyborgs. The ability to create and use even the simplest of tools is a turning point in human evolution, and the dependent relationships humans have formed with inventions that may not be popularly considered as technologies- such

as written language- the advancement of our species is in direct correlation with the development of tools and technologies. With this in mind, we are all already cyborgs. Donna Haraway, credited as the mother of a school of thought known as cyborg theory, defines a cyborg in four distinct ways. According to Haraway, a cyborg can be "a cybernetic organism, a hybrid of machine and organism, a creature of social reality, or a creature of fiction". It is important to realize that these definitions are in no way mutually exclusive, and instead, quite co-determinate.

"Time and again, scientific reasoning melts into metaphysical speculation about evolution, human boundaries, and even the possibility of what Clynes and Kline call 'a new and larger dimension for man's spirit.' The cyborg was always as much a creature of scientific imagination as of scientific fact." (Kuzru, 5) Cyborg Theory is, essentially, a school of thought that was initially sparked by the series of ideas and concepts presented in "A Cyborg Manifesto" an essay by biologist and feminist scholar Donna Haraway. While countless other texts have elaborated, reinterpreted, and referenced Cyborg Theory, Haraway's essay remains the quintessential text on the topic. On the surface, Haraway's "Manifesto" is a criticism of the traditional notions of institutionalized feminism, as well as modernist ideas put forth by the then-popular so-called "Goddess feminism" which preached female-as-nature spiritual rhetoric that Haraway argued were constructed. Haraway uses the cyborg to imagine a feminism that moves beyond dualisms, as well as moving beyond the constraints of traditional ideas about gender, identity, and politics (Haraway, 5). Haraway's conception of a cyborg is one that aims to deconstruct rigid ideological boundaries, particularly the constructed dichotomy that separates what is considered natural and what is considered artificial. Technology does not separate 'human' from 'animal', and, at the same time, does not separate 'human' from 'machine'. "Our life force flows through us and out into the objects we make, she reasoned; thus there ought to be no distinction between the so-called real or natural organisms that nature produces and the artificial machines that humans make (Olson)." By discounting the separation between the natural and the artificial, cyborg theory is able to dismiss other dualisms, such as body/mind, male/female, the self/the world, nature/society, reality/fiction, as constructed.

"Cyborgs not only disrupt orderly power structures and fixed interests but also signify a challenge to settled politics, which assumes that binary oppositions or identities are natural distinctions. Actually those oppositions are cultural constructions. Haraway underlines the critical function of the cyborg concept, especially for feminist politics. The current dualistic thinking involves a 'logic of dominance' because the parts of the dualisms are not equivalent. Thus, the logic produces hierarchies that legitimize men dominating women, whites dominating blacks, and humans dominating animals."(Robert)

The "natural" argument has been, and continues to be, a tool of oppression. Women have been silenced and exiled to domesticity because it was natural for them to be subordinate to men. The pseudoscientific 'fact' that Africans were 'naturally' inferior to Europeans served as the justification for slavery, a age old prejudice that remains the foundation of a lot of the racism that continues to exist in the United States to this day . Homosexual people are continually denied basic rights and protections because heteronormative societies preach their sexual orientation is inherently unnatural. These are just a few examples of the unfortunate repercussions that come from subscribing to the constructed natural/artificial dichotomy, a larger dualism that serves as the umbrella under which many others fall.

By recognizing these rigid dualisms as constructed, humans can begin to become reconstructed. In conjunction with technology, cyborg theory calls even the most basic assumptions about humankind into question, and it becomes for one to construct their own

sexuality, gender, and overall identity on their own terms. While this idea may seem far-fetched, as humankind advances into the digital age, it is becoming more and more plausible. "We are living in a time in which definitions of self and community are changing as we learn to live simultaneously in physical reality and virtual reality....Cyberspace allows us to be multi-gendered, to have multiple personalities, and to be multiple bodied. It is now possible to choose to be multi-gendered, multi-bodied, and have multiple personalities" (Blandy, Congdon 270). The virtualization of the body is an idea that threatens the current state of our society, one in which an individuals identity and quality of life is unfairly dependent on their bodily appearance. As the lines between digital and physical reality blur, and lives on the Internet become more important, traditional incarnations of identity and humanity are being challenged. The Internet creates scenarios in which one is able to almost completely control how they define themselves, and therefore, how they are perceived and how they interact with others. This, combined with the decreased importance of one's physical being, may allow Haraway's theories to become a reality.

Cyborg theory is not solely about the freedom to construct oneself outside of the rigid boundaries of traditional doctrines. As the cybernetic aspect of the term cyborg implies, cyborg theory is also about networks. Just as cyborg theory challenges the mind-body dichotomy, it also takes another departure from Cartesian thinking in the sense focuses on networks rather than on the notion of selfhood. "From the individual consumer to the misunderstood loner, modern citizens are taught to think of themselves as beings who exist inside their heads and only secondarily come into contact with everything else. Draw a circle. Inside: me. Outside: the world. Philosophers agonize about whether the reality outside that circle even exists. They have a technical term for their neuroses - *skepticism* - and perform intellectual acrobatics to make it go away. In a world of doubt, getting across that boundary, let alone to other people, becomes a real problem" (Kunzru, 3). Cyborg theory, instead, presents the individual as a collection of different systems, a single yet important cog that is constantly processing information in and out of a multitude of larger networks. A relationship between two people, a community within a city, a corporation or company, and the World Wide Web are just a few examples of feedback systems that humans might typically belong to. When one considers the underlying systemic nature of human societies, the ways in which humans can be considered cybernetic beings becomes much more clear. When one takes into account the millions of networks and systems one encounters and takes part in on a daily basis, the cyborg perspective becomes less abstract, and more sensible then the crippling isolation of Cartesian philosophy. This part of cyborg theory is especially important in an age when so much of human social interaction has become digital.

According to Haraway and her contemporaries, humankind is already well into the midst of the cyborg age. However, when confronted with the complex ideas that cyborg theory addresses, one cannot help but wonder what they mean for the future of the human race. If we are truly all cyborgs, what will the world look like in the not so distant future? More importantly, what will the human body itself look like? Countless predictions about what lies ahead, in conjunction with theories similar to Haraway's, have been weaved by authors, artists, and scientists alike. As the disparity between what we can imagine and what we can create begins to close, these prophecies become more and more plausible. Oftentimes, these conjectures propose a future where human evolution and technological development have become one in the same. For years, humans have implanted machines of some kind within the body to correct medical issues. However, some scientists predict that within the next ten years will we begin to see a new sort of implant, one that is designed to enhance human capabilities. "Discoveries in the 'nano'

technologies of bio, molecular, and micro engineering will reedit the nomenclature of ‘natural’ versus ‘unnatural, blurring if not erasing the line of distinction between ‘machine’ and ‘organism’” (Mead, 15). Nanotechnologies and Bioengineering will allow for a redesign of the human body from the inside out. As human beings venture farther into outer space, Kline and Klyne’s fuel cell lunged astronaut does not seem to be as much of a wild conjecture. Whatever the future may hold, it is undeniable that technology has already begun and will continue to change not only the way we live, but also the way we interact with others and define ourselves. In our current world, one’s identity is often unfairly defined by factors of their bodily appearance- sex, gender, race, etc. - a future in which one can design not only their own identity, but also their own body sound surprisingly appealing. Technology may just be the key to breaking down social constructs, and the ability to modify the body may be the first step in doing so. But what exactly does it mean to be human in a world where the differences between man and machine become more philosophical than physical? Perhaps the performance artist Stelarc, who has been modifying himself to become a cyborg since the early 60s, says it best: “The body has become biologically inadequate....Only through a radical redesign of the body will we succeed in having significantly different thoughts and philosophies...Being human means being constantly redefined”(Migletti,194)

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