

The cyborg is the message: A monstrous perspective for communication theory

by

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Table of Contents

Introduction	1
Re-characterizing the cyborg figure.....	5
Narrow/Broad	5
Concrete/Abstract	7
Natural/Unnatural	9
The medium is the message, or, understanding the ground.....	11
Tetradic analysis of cyborg.....	15
Cyborg.....	17
Cell phone.....	23
Social Networking and Dating Websites.....	26
Implications/Conclusions	29
Bibliography	33

Introduction

"We are the Borg. You will be assimilated. Resistance is futile."—*Star Trek: Voyager*

The cyborg was so named by Manfred Clynes and Nathan Kline in the 1960s to describe their work on self-regulating human-machine systems, or cybernetic organisms. Yet beyond its scientific-military applications in the sixties, the cyborg finds its lineage rooted firmly in science fiction. The Borg from *Star Trek*, the *Terminator*, the replicants in *Bladerunner*, the *Six-Million-Dollar Man*, exemplify this fictional cyborg: "figures in black rubber suits with tubes and wires piercing their faces and torsos" (Fuchs, 282). The science fiction cyborg is (or was or aims to be once again) human, the body enhanced and the mind manipulated or controlled by technology. It represents humanity's evolving relationship with technology.

The science fiction cyborg is often such an exaggerated presence, in mind, body, and philosophy, serious inquiry into the concept can seem futile. And yet it has been successfully reframed as a legitimate model for understanding broader cultural issues, such as reproduction, war, and sexuality. Donna Haraway is credited by many scholars for relocating the cyborg in legitimate academic inquiry. Her essay, "A Cyborg Manifesto" (first published in the journal *Socialist Review* in 1985) introduces the cyborg as a "cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. . . . that changes what counts as women's experience in the late twentieth century" (149).

Haraway introduced the cyborg as a response to eco, Marxist, socialist, and radical feminist efforts to build on dualisms of mind/body, animal/machine, and idealism/materialism when approaching issues of science and technology (154). She believed these dualisms inevitably reinforce the boundaries of gender, race, labor, and domain, (incorrectly) bolstering ideas of female innocence, wholeness, and victimhood more successfully than any patriarchy (160). While Haraway did not deny the body as a map "of power and identity," she saw the cyborg body as an opportunity to move beyond the stereotypical (even within feminist studies) boundaries of the female body:

a cyborg body is not innocent; it was not born in a garden; it does not seek unitary identity and so generate antagonistic dualisms without end (or until the world ends); it takes irony for granted.

One is too few, and two is only one possibility...The machine is not an *it* to be animated, worshipped, and dominated. The machine is us, our processes, an aspect of our embodiment...Cyborgs might consider more seriously the partial, fluid, sometimes aspect of sex and sexual embodiment. Gender might not be global identity after all, even if it has profound historical breadth and depth. (180)

For Haraway, the cyborg breaks long established boundaries of gender embodiment, specifically, feminine embodiment—that wholeness is the desired state and “skill in mothering and its metaphoric extensions” (180) constitutes wholeness. The hybridization of machine and organism upsets the ideal of a unitary identity. Instead, to assume the hybrid identity of a cyborg, in Haraway’s treatment, is to commit to “partiality, irony, intimacy, and perversity” (151), resistance, transgressions, and contradictions (154). And in so doing, cyborgs problematize the neat hierarchies associated with traditional dualisms (for example the male/female dualism has historically implied a male hierarchy and limited gender roles for both male and female), redefining them as the parts of a complete being, while at the same time shunning wholeness and unity (see also Hogle).

After Haraway’s manifesto, the cyborg garnered the attention of scholars from a wide variety of academic backgrounds, such as law, social and behavioral sciences, human consciousness, medicine, anthropology, agricultural biotechnology, and history (Gray, Figueroa-Sarriera, and Mentor 478-480). Not surprisingly, the cyborg is a prominent figure in feminist, as well as Marxist, multicultural, spiritual, modern, post-modern, humanist, and even Unabomber¹ studies. The scholars who study the cyborg present it as the next step in human (and machine) evolution (Dyens; Laughlin; Warwick; Rothenberg; Baudrillard) or a symbiotic relationship between biological and technological (Haraway; Figueroa-Sarriera). For some, the cyborg is a metaphor (Mentor *Witches*; Hess; Dyens; Wajcman). For others, the cyborg is real (Dumit and Davis-Floyd; Warwick; Hogle; Clynes):

¹ An excerpt from the *Unabomber Manifesto*, written by Ted Kaczynski: “It is certain that technology is creating for human beings a new physical and social environment radically different from the spectrum of environments to which natural selection has adapted the human race physically and psychologically. If man does not adjust to this new environment by being artificially re-engineered, then he will be adapted to it through a long and painful process of natural selection. The former is far more likely than the latter” (in Heim 29).

Cyborgs do actually exist; about 10% of the current U.S. population are estimated to be cyborgs in the technical sense, including people with electronic pacemakers, artificial joints, drug implant systems, implanted corneal lenses, and artificial skin. A much higher percentage participates in occupations that make them into metaphoric cyborgs, including the computer keyboarder joined in a cybernetic circuit with the screen, the neurosurgeon guided by fiber optic microscopy during an operation, and the teen gameplayer in the local video arcade. (Hayles *Life Cycle* 322)

But in Haraway's configuration, there is no either/or. As a hybrid, the cyborg is "simultaneously" a machine and an organism, "a myth and a tool, a representation and an instrument, a frozen moment and a motor of social and imaginative reality" (Haraway in Gray, Mentor, and Figueroa-Sarriera 1).

Despite all this general attention, the cyborg's incorporation in communication theory is limited at best. One exception is David Gunkel's article "We Are Borg: Cyborgs and the Subject of Communication" published in *Communication Theory* in 2000. The article questions what the hybridization of machine and organism, or cyborg, means "for the concept of the communicative subject and the subject matter of communication studies" (332). Gunkel's premise is that the cyborg "comprises a reconfiguration of the subject that not only undermines the concept of human subjectivity but also threatens and promises to transform the very subject matter of the study of human communication" (333). He asks scholars to consider how the traditional subject privileges "the intentional activity of the information source or sender" (341) whereas the cyborg subject supports "the social and material conditions by which various subject positions become possible" (346). Gunkel concludes that "it is through the paradoxical figure of the cyborg that the subject of communication begins to disengage itself from the limited presuppositions and restricted possibilities imposed by the traditions of humanism and modern science" (348).

Gunkel provides the base for many of the ideas I expand upon here, but while he is ultimately concerned with the cyborg as figure, I propose it is equally useful when approached as ground². To move from figure to ground requires a re-characterization of the monstrous cyborg figure and a communication theory heuristic—Marshall McLuhan's tetrad. The cyborgian ground that is uncovered

² Think of figure and ground in Gestalt terms.

provides the insight into the cyborg perspective from which the foundational issues of communication theory: subject, knowledge, reason, reality, authority, understanding, argument, persuasion, meaning, objectivity, and agency can be examined.

Re-characterizing the cyborg figure

*And what was I? Of my creation and creator I was absolutely ignorant; but I knew that I possessed no money, no friends, no kind of property. I was, besides, endued with a figure hideously deformed and loathsome; I was not even of the same nature as men. I was more agile than they, and could subsist upon coarser diet; I bore the extremes of heat and cold with less injury to my frame; my stature far exceeded theirs. When I looked around, I saw and heard of none like me. Was I then a monster, a blot upon the earth, from which all men fled, and whom all men disowned?—Mary Shelley, *Frankenstein**

Clynes and Kline developed the concept of the cyborg for NASA in 1960 in an attempt to name the unconscious adaptation of human physiology for space so that the astronauts were “free to explore, to create, to think, and to feel” (31). Guided by the demands of space exploration, their aim was a creature much like Dr. Frankenstein’s: more agile, able to subsist on a coarser diet, and able to bear the extremes of heat and cold thanks to the “biochemical, physiological, and electronic modifications of man’s existing modus vivendi” (Clynes and Kline 29).

At the core of the cyborg is the physical relationship of the human *being*, mind and body, with technology. The physical relationship is the easiest to identify, as it is the basis for both the historical Clynes and Kline concept and the ubiquitous science fiction model. The alleged destruction of humanity as a result of this physical relationship justifies the cyborg figure as monster designation. But the cyborg figure, like Frankenstein’s creature, is not inherently monstrous, is not lacking humanity. I locate my argument for a positive assessment of the cyborg figure through its characterization in current academic literature. Such assessment allows me to move the discussion away from the legitimate, necessary, and yet latently (if not overtly) threatening figure of the cyborg and closer to the ground of social reality.

Narrow/Broad

Some scholars characterize the cyborg figure narrowly. Charles D. Laughlin laments the classification of the cyborg in what he deems the “sloppy metaphorical sense” (“The cyborg” 293) currently popular:

The cyborg is rapidly coming to represent virtually every techno-cultural phenomenon no matter how distant from the original meaning of the concept: e.g. people on Prozac are cyborgs, people wearing eyeglasses are cyborgs, people viewing other people on television destroying buildings with smart bombs are cyborgs. The term is now being used to characterize modern reproductive technologies (by extension, perhaps men practicing safe-sex become condom cyborgs), the sociopolitical implications of the Internet, the entire course of techno-economic development since the Second World War, and so on. (Laughlin "Evolution" 145)

Laughlin disagrees with the wide-range application of the term "cyborg" due to what he perceives as a corresponding weakening of its explanatory power—if everything and everyone are cyborgs, what is there to talk about ("The cyborg" 146)? His cyborg requires a "process of technical penetration" of the body, one that can occur at any of four stages:

Stage 1) the replacement or augmentation of the human skeleton, such as a wooden leg or false teeth; Stage 2) the replacement or augmentation of the muscle, such as a mechanical hand or mechanical heart; Stage 3) the replacement or augmentation of parts of the peripheral nervous system, autonomic nervous system and the neuroendocrine system, such as bionic arms or pacemakers; Stage 4) the replacement or augmentation of parts of the central nervous system, such as video eyes for the blind or Air Force cyborg fighter plane control. ("Cyborg Consciousness" 152)

This conception of cyborg, intended to be a reflection of Clynes³ and Kline's original cybernetic organism, limits the characterization to direct penetration of organism by machine. But the replacement or augmentation of the human skeleton by a wooden leg, or of the central nervous system by video eyes, is experienced by only a very small minority of individuals. The drastic

³ In a 1995 interview Manfred Clynes expanded on his original concept, concluding that "*homo sapiens*, when he puts on a pair of glasses, *has already* changed. When he rides a bicycle he virtually has become a cyborg. Initially it's a little hard to learn to ride a bike but once you learn it you do all of these things automatically and the bike becomes almost a part of you. When *homo sapiens* walks he doesn't pay much attention to how he walks, it's natural. In the same way, when he is on his bicycle it feels natural to the person who knows how to ride a bike. You can call that, if you want, a simple cyborg right there" (Gray "Clynes" 49).

scenarios implied by Laughlin's characterization overlooks the more common, everyday experiences of common, everyday individuals that function as the hybridization of organism and machine.

Other scholars interpret the cyborg broadly, including extensions⁴ that are so present in everyday life, so environmental, they are practically invisible:

People so easily overlook that we're all sort of cyborg. We wear false teeth or have metal or plastic implants in our natural teeth. And clothing. Clothing is so obvious that we don't see it. All of us are cyborgs walking around with synthetic fur, synthetic skin on the bottoms of our feet. Many wear lenses in front of their eyes or amplifiers in their ears and in these modern times many another artificial but well-functioning part. (Gray "Steele Interview" 69)

A broad interpretation of the cyborg figure might, initially, seem more exaggerated than productive: "They're everywhere. They're everything. You can't escape!" It is a somewhat monstrous proposition. But such a comprehensive interpretation of cyborg helps it shed its *Terminator* image and reflects the flexible, variable continuum of relationships between technology and biology. By characterizing the cyborg figure broadly, such that familiar extensions such as clothing or corrective eyewear are viewed as technologies, the cyborg designation is less threatening to humanity (when has a sweater been labeled as deterministic?). This broad characterization also opens the cyborg figure to less concrete forms of incorporating organism and machine.

Concrete/Abstract

Deoxyribo Nucleic Acid, or DNA, is genetic information, considered by scientists to be the "presumed universal substrate of all organic life" (Gunkel 335). The Human Genome Project, in its attempt to map out human DNA, has in essence transformed the biological entity into information "[the Human Genome Project] considers DNA to be nothing more than a string of information, a biologically encoded program that is to be decoded, manipulated, and run on a specific information-processing machine" (Ibid). While DNA is a concrete chemical substance, it facilitates the abstraction of the human *being* into information. This process of transforming the body into genetic information is

⁴ *Extension* encompasses Marshall McLuhan's "extensions of man"—the senses, the central nervous system, extended by external tools, like prosthetic devices or cell phones. *Extension* is also "humanity" (Rothenberg 5), or intent, extended (see also Miller).

complimented by “postmodern orthodoxy that the body is primarily, if not entirely, a linguistic and discursive construction” (Hayles *Materiality* 147). Thus if the human *being*, mind and body, can be isolated as genetic code, as signifiers, as information, the technological incorporation of the biological is made possible:

Central to the construction of the cyborg are the informational pathways connecting the organic body to its prosthetic extensions. This presumes a conception of information as a (disembodied) entity that can flow between carbon-based organic components and silicon-based electronic components to make protein and silicon operate as a single system. When information loses its body, equating humans and computers is especially easy, for the materiality in which the thinking mind is instantiated appears incidental to its essential nature. (Hayles *Posthuman* 2)⁵

The idea of “brains in a vat or somehow downloaded into immortal computers” (Gray, Mentor, and Figueroa-Sarriera 7) is, grantedly, a monstrous scenario, one represented in countless B-movie plots, nevertheless many scholars find the transformation of the concrete biological entity into abstract information to be a key component of the cyborg. As Jay David Bolter and Richard Grusin describe it, the human being is not disembodied by technology, but is “embodied in a particular mediated form (as electronic text, with a return address, a user ID, a signature, and so forth)” (234). The human *being*, mind and body, is sent as information, allowing the cyborg “to reconstruct the meaning of the body to almost any desired depth and complexity” (Stone 244; see also Sandoval; see also Fornäs et al.). The cyborg, with its newfound mode of abstract being, is able to “commute on electronic highways, carry on virtual romances, and work out in brain gyms” (Hess 371). This abstract embodiment of a concrete being is not without its dangers, as individuals do not always represent themselves honestly, or use the disembodiment to commit illegal acts, such as identity theft or online rape (see Lister et al. 169). But it also allows for a freedom from the concrete, an escape from the

⁵ It is important to note that Hayles does not believe consciousness exists outside of the body: “If my nightmare is a culture inhabited by posthumans who regard their bodies as fashion accessories rather than the ground of being, my dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival” (Hayles *Posthuman* 5).

real, that millions of people find so irresistible as to transform themselves into information again and again.

Besides allowing for a deeper level of hybridization between human *being* and technology, characterizing the body as information allows us to begin to question the status of the natural (mind and body) as the essence of humanity and that the hybridization of the natural and unnatural is monstrous.

Natural/Unnatural

The cyborg, like Frankenstein's creation, is characterized as a monster, "a blot upon the earth," because of its "hideously deformed and loathsome" figure, "The body, while being the real, great domestic technology, is represented as the emblem of naturalness. The body has always represented the maximum of naturalness; not in itself, but rather represents a historically determined naturalness that has the potential to be recreated at any given moment" (Fortunati 72). The hybridization of human *being* and machine destroys naturalness, perverting natural order,

The chemical or physical inventor is always a Prometheus. There is no great invention, from fire to flying, which has not been hailed as an insult to some god. But if every physical and chemical invention is a blasphemy, every biological invention is a perversion. There is hardly one which, on first being brought to the notice of an observer from any nation which has not previously heard of their existence, would not appear to him as indecent and unnatural. (Haldane in Bostrom 4)

The indecency of hybridization is alluded to in references to codependency of, addiction to, and reprogramming involved in the act of destroying the natural (Gray, Mentor, and Figueroa-Sarriera 2; Dumit and Davis-Floyd 1). This indecency reaches its apex with Baudrillard's conclusion that "the human body is superfluous" (qtd in Hayles 5). The implication that the unnatural is monstrous is unmistakable and it is an implication that "our romanticism for the 'Whole,' our desire for the transcendent, and our notions of the human" (Hogle 214) drive many assessments of the cyborg. In contrast, the categorization of the unnatural as good takes the perspective that:

life doesn't have to be organic. No human, divine, or environmental principle requires life to follow biological possibilities alone. Chemical compounds are not the exclusive materials of life. Life is a

phenomenon, a dynamic, and, as such, is not tied to matter (as artificial life scientists have discovered). Life is an interaction, a thrust, an energy. Life simply uses the forms and material that are most useful to it. (Dyens 19)

The categorization of the unnatural as good recognizes that the hybridized human *being* and machine offers “dangerous possibilities” (Haraway *Cyborg Manifesto* 154) from which life can thrive.⁶

Of course, the cyborg resists such characterization, based on what could easily be considered rather simplistic binaries of narrow and broad, concrete and abstract, natural and unnatural—good and bad. But such judgments are implied in every assessment of the cyborg. The unnatural, abstract, and broad characterizations can be easily understood as representative of a destructive, dangerous, exaggerated, and threatening figure. Or they can just as easily be understood as representative of a constructive, sound, moderate figure. The latter assessment moves the cyborg figure further from its science fiction burden and closer to its theoretical potential. It also begins to hint at the nature of the ground, that which defines the figure.

⁶ Even this can be taken to the extreme: “it doesn’t mean everyone has to become a cyborg. If you are happy with your state as a human then so be it, you can remain as you are. But be warned—just as we humans split from our chimpanzee cousins years ago, so cyborgs will split from humans. Those who remain as mere humans are likely to become a sub-species. They will, effectively, be the chimpanzees of the future” (Warwick 4).

The medium is the message, or, understanding the ground

Marshall McLuhan offers a communication theory justification for the cyborg as ground. He is perhaps best known for his media communication theories and his McLuhanisms such as the global village, the extensions of man, and the medium is the message. McLuhan was a controversial figure in the 1960s and is still to this day. His work was the subject of several books, including *McLuhan: Hot & Cool* (1967) and *McLuhan: Pro & Con* (1968), that asked scholars to, essentially, pick a side. He has been accused of being “the dupe of new technologies” (Simon 95), “a high priest of Popthink who conducts a Black Mass (for dilettantes) before the altar of historical determinism” (Stearn xv), and “a kind of bogeyman of technological determinism” (Jeffrey 3). McLuhan also had his supporters, including Tom Wolfe, who famously wondered: “suppose he is what he sounds like, the most important thinker since Newton, Darwin, Freud, Einstein, and Pavlov—what if he is right” (15)? Though his ideas were formed well before many of the cyborg theories discussed here, McLuhan’s theories are remarkably transferable and have been “carried forward” by scholars including Harold Innis, Eric Havelock, Donald Theall, Neil Postman, Walter Ong, Jean Baudrillard, Umberto Eco, Fredric Jameson, and Mark Poster (partial list from Strate 10-11). For modern day scholars, his ideas can “help us make sense of our new digital age” (Levinson 1) and he is often referenced in recent discourse regarding technology, communication, and cyborgs (Hayles; Laham; Landow; Aerseth; Bolter; Gabilondo; Tomas). His theory concerning the medium is particularly useful for examining the cyborg, as both are concerned with an incorporation of human consciousness within a technological environment.

McLuhan’s theory, summarized (in part) by “the medium is the message” states that “any invention or technology is an extension or self-amputation of our physical bodies, and such extension also demands new ratios or new equilibriums among the other organs and extensions of the body” (McLuhan *Understanding Media* 45). So the telephone is the extension of the ear, or money is an extension of the hand⁷. These extensions allow humans to “increase power and speed”

⁷ “In the beginning, its function of extending the grasp of men from their nearest staples and commodities to more distant ones is very slight. Increased mobility of grasp and trading is small at

(*Understanding Media* 90) of the senses through specialization and fragmentation, such as the wheel, as extension of foot, allows the speed-up of movement. Yet in order for the central nervous system to bear this amputation, fragmentation, and subsequent speed-up, it must numb itself and as a result “self-amputation forbids self-recognition” (*Understanding Media* 43)—humans are unable to see the effects of the medium on the central nervous system. The use of extensions becomes unconscious, just as Clynes and Kline envisioned the cyborg functioning.

McLuhan’s medium is “a milieu—medium in the sense of growing medium for plants” (E. McLuhan qtd in Benedetti and DeHart 126). This growing medium constitutes a setting so environmental (McLuhan and Fiore 68) that the individual cannot separate himself/herself from it: “man remains as unaware of the psychic and social effects of his new technology as a fish of the water it swims in” (McLuhan qtd in Norden 237). Kenneth Burke compares this dialectic between environment (what Burke terms scene) and individual (what Burke terms agent) to the paintings of the pointillist Seurat,” which “carry the sense of consistency between scene and agent to such lengths that his human figures seem on the point of dissolving into their background” (“Grammar” 1306).

The medium as environment is further developed with McLuhan and Power’s conception of figure, or “area of attention,” and ground, or “very much larger area of inattention” (5). The medium is the ground⁸ that defines the “scale and form of human association and action” (McLuhan *Understanding Media* 9). Because the ground defines the figure, we do not notice the ground. Or in the case of the Seurat example, we make every attempt to distance (numb) ourselves until the figure is at last distinct. Furthermore there is, much like the Seurat example, no definitive line separating figure and ground:

All situations comprise an area of attention (figure) and a very much larger area of inattention (ground). The two continually coerce and play with each other across a common outline or boundary or interval that serves to define both simultaneously. The shape of one conforms

first. . . Trading by currency is based on the principle of grasping and letting go in an oscillating cycle” (McLuhan *Understanding Media* 132).

⁸Consider also that ground, as soil, is the ultimate “growing medium.”

exactly to the shape of the other. Figures rise out of, and recede back into, ground, which is configurational and comprises all other available figures at once. (McLuhan and McLuhan *Laws of Media* 5)

Lance Strate takes this concept one step further, arguing that figure and ground are interchangeable, “technology is the content and biology is the medium. Technology is produced by the biological, extends the biological, and also acts on the biological. Of course, technology as a medium itself can in turn use the biological as its content” (31). Once again we return to transgressed boundaries: figure becomes ground, ground becomes figure, either way, without one the other does not exist.

The effects of the medium, according to McLuhan, are all-encompassing, for “all technology has the property of the Midas touch; whenever a society develops an extension of itself, all other functions of that society tend to be transmuted to accommodate that new form; once any new technology penetrates a society, it saturates every institution of that society. New technology is thus a revolutionizing agent” (McLuhan qtd in Norden 239; see also Miller “Technology as a Form” 229). The problem: as society is shaped by the medium, so is consciousness, for “it is the medium that shapes and controls the scale and form of human association and action. The content or uses of such media are as diverse as they are ineffectual in shaping the form of human association” (McLuhan *Understanding Media* 9; see also McLuhan and Fiore 8).

This problem is exacerbated by the fact that society is concerned more with the effects of the content, over the effects of the medium, an example of how pervasive the narcosis is: “for the ‘content’ of a medium is like the juicy piece of meat carried by the burglar to distract the watchdog of the mind” (McLuhan *Understanding Media* 18). McLuhan’s solution to this problem is overcoming the narcosis, or awareness, “for any medium has the power of imposing its own assumptions on the unwary. Prediction and control consist in avoiding this subliminal state of Narcissus trance” (*Understanding Media* 15). But because humanity is numbed to the extensions, it is numbed to the effects.

And yet McLuhan believed there was one individual in particular who was more capable than others of avoiding the subliminal state—the artist: “the effects of technology do not occur at the level of opinions or concepts, but alter sense ratios or patterns of perception steadily and without any resistance. The serious artist is the only person able to encounter technology with impunity, just because he is an expert aware of the changes in sense perception” (*Understanding Media* 18). For example, much of the current cyborg discourse includes some (or is based entirely on) analysis of the themes in cyborg art, literature, film, comic books, television, and video games (for a comprehensive list, see the bibliography of *The Cyborg Handbook*, edited by Chris Hables Gray, Heidi J. Figueroa-Sarriera, and Steven Mentor). *The Terminator*, *Blade Runner*, and *Star Trek: The Next Generation* (Casper; Dyens; Edwards; Fuchs; Goldberg; Haraway; Hayles; Hess; Hogle; Macauley and Gordo-López) all figure prominently in scholarly work, as does William Gibson’s novel *Neuromancer* (Dyens; Edwards; Gray and Mentor; Gusterson; Hogle; Macauley and Gordo-López; Sandoval; Warwick).

The cyberpunk artists, “being hybrids themselves” (Dyens 73), see the ground, they have begun to recognize patterns, most significantly with regard to promise, invasion, ambiguity, and loss of humanity (Oehlert 226; Dyens 73). However, if one is not an artist, McLuhan offers a heuristic that will force the ground into the area of attention: the tetrad.

Tetradic analysis of cyborg

The cyborg is the medium, the ground. But how does one comprehend the cyborg and, following McLuhan's logic, the message? The tetrad is McLuhan's "practical means" of understanding media, a heuristic to make visible the invisible, by bringing the ground into focus and forcing comparison with the figure. "In tetrad form, the artefact is seen to be not neutral or passive," McLuhan explains, "but an active logos or utterance of the human mind or body that transforms the user and his ground" (*Laws of Media* 99). Likewise, in tetrad form the cyborg can be understood to be an active utterance of the human *being* and technology.

McLuhan's tetrad is useful as a starting point for understanding the cyborg perspective because it is simply that, a starting point, or in McLuhan's words, a probe. McLuhan's own application of the tetrad reveals alternate versions (aptly subtitled "this version" and "that version"), chains, loops, and clusters of analysis. The tetrad is meant to introduce discussion, not conclude it. For the purposes of introducing the cyborg to communication theory, it seems a fitting tool.

The cyborg is not merely the mechanization of the human being, it is the dynamic transgression of boundaries—figure and ground, mind and body, biology and technology "continually modifying each other" (McLuhan and McLuhan *Laws of Media* 18). The tetrad facilitates the initial discussion of the cyborg perspective by seeking the responses to four questions:

1. What does any artifact enlarge or enhance;
2. What does it erode or obsolesce;
3. What does it retrieve that had been earlier obsolesced;
4. What does it reverse or flip into when pushed to the limits of its potential? (McLuhan and Powers 9)

A key factor in McLuhan's tetrad is simultaneity. The four processes, enlargement/enhancement, erosion/obsolescence, retrieval, and reversal, are in no way rigid or linear. Instead, the form of the tetrad reflects the continuum of transgressed boundaries, the hybridization that characterizes both McLuhan's conception of medium and more recent scholarly definitions of the cyborg. This is

expressed visually by placing the responses in contrast to one another in a grid, and while the grid⁹ cannot adequately reflect the looping or resonating between the elements of the tetrad that McLuhan intended, it can suggest multiple comparisons. The following tetradic analyses¹⁰ of a refrigerator and a satellite exemplify how this process brings the ground into view:

Refrigerator (Laws of Media 139)

1. Enlarges/enhances: availability of wider range of foods	4. Reverses: Homogeneity of flavour and texture
3. Retrieves: leisure of cook and provider (storage)	2. Erodes/obsolesces: dried food, salted, spiced (the taste of fresh food)

Satellite (Laws of Media 150-151)

1. Enlarges/enhances: the planet	4. Reverses: implosion (population reverses from content/spectator to actor/participant)
3. Retrieves: ecology	2. Erodes/obsolesces: Nature (programmed environments)

The analyses of the refrigerator and satellite move the focus away from the uses of these particular technologies and toward the impact of the satellite and refrigerator within the medium. Examined through the tetrad, the refrigerator does not just preserve food, it impacts the production, transportation, and consumption of food. It affects how time is perceived and how tastes develop. The satellite is more than a giant orbiting transmitter. It retrieves ecology, by creating a greater awareness of (and tenderness for) the “blue planet” by supplying information from a new perspective—space. At the same time the satellite obsolesces Nature through its very existence as a man-made celestial body, a programmed environment that has the ability to sustain human life. The distinctions McLuhan

⁹ The grids I present are laid out as McLuhan laid out his grid, with no apparent logic or pattern that links the grid to the numbered questions that guide the analysis. But again, his tetrad represented the looping and resonating that exists between the elements of the ground.

¹⁰ McLuhan believed the tetrad had applications beyond what is conventionally considered to be media, as evidenced by his application of the tetrad to the Copernican Revolution (Laws of Media 184-185).

1. Enlarges/enhances: role of the sun as central	4. Reverses: relativity (center and margins)
3. Retrieves: Aristarchus (sun-centered)	2. Erodes/obsolesces: the earth

makes between the retrieval of ecology and the obsolescence of Nature seem almost contradictory, but it is in keeping with the dynamic nature of the medium. The contradictions more clearly reflect the transgressed boundaries of the medium—there is no clear line between enhancement and obsolescence, retrieval and reversal.

By applying the tetrad to the cyborg we begin to move away from our focus on the figure, the physical relationship between human *being* and technology, and the binaries that define it, to a focus on the ground, the medium and its message.

Cyborg

1. Enlarges/enhances: (inhuman) growth	4. Reverses: noise
3. Retrieves: equilibrium	2. Erodes/obsolesces: binary logic

1. Enlarges/enhances (inhuman) growth

The cyborg enhances (inhuman) growth. This analysis returns us to both the original conception of the cyborg and to McLuhan's development of the medium. The growth enhanced by the cyborg is both physical and mental/informational, and is experienced by both the medium and the human being, due to the constant interaction. The cyborg is the realization of McLuhan's concept of medium as ground or environment, the ultimate growing medium. It also brings with it the idea of relinquishing control to other entities in order to facilitate growth. The growth is enhanced by the parts working together to achieve what each cannot (or will not) on their own:

Protists like *M. paradoxa* seem to show in mid-stream the ubiquitous, life-changing association of events that brought motile, oxygen-using, or photosynthetic bacteria into other cells, perhaps originally on an opportunistic hunt for a nutritious meal or a secure medium for their metabolic transactions. Some predators settled down inside their prey and struck up quite an energy and information-exchange economy. . . "With the elapse of time, the internal enemies of the prey evolved into microbial guests, and, finally, supportive adopted relatives. (Haraway *Cyborgs and Symbionts* xviii).

Haraway's example reflects the fears of the unwilling host, or prey, in current discussions of the cyborg. It also brings to light that the exchange required for growth is not always deliberate or

conscious, but neither is it “unnatural.” As with the protists, the whole of the cyborg is a medium for growth for all of its individual parts.

The analysis that the cyborg enhances growth also reflects the original intention of the cyborg. For Clynes and Kline, the incorporation of “exogenous components” in order to create a self-regulating organism was not only for the purposes of space exploration. Their belief was that the cyborg would free the human element from the tedium of controlling its environment and therefore allow for greater “spiritual exploration,” (23) and intellectual and personal growth:

Man’s exploration of space has been successful from the technical point of view during the last decade, but his emotional exploration of his new experience and environment have not been spectacular. It may be too much to expect astronauts to provide us with a fully communicated view of their new enlarged experience: the exigencies of piloting their vehicles necessarily make great demands on them: so we must be satisfied with the language of ‘wows’ and ‘man-oh-man’ and similar expletives, whose implications we can only guess at from their contexts on good old earth. (Clynes 36)

More recent cyborg scholars have expanded on this idea of emotional and intellectual freedom, claiming that thinking, freed from the burdens of current ideologies, such as objectivity and individualism, will be restored to “its radical uselessness” (Baudrillard *Impossible Exchange* 111; see also Haraway; see also Gunkel).

The cyborg is freed from objectivity by complicating existence. The question “what is reality,” so complex as to remain the subject of debate for several thousand years is now complicated by virtual reality and hyperreality. The cyborg is freed from individualism by incorporating not only the human and technological perspectives, but the perspectives of other cyborg minds, present as a part of the medium, as well. The result, pattern seeking for its own sake, creates radical uselessness of thought. And it is through this radical uselessness, coupled with the freedom from the tedium of controlling its environment (as Clynes and Kline intended), that the cyborg experiences inhuman growth. The metamorphosis of Gregor Samsa in Franz Kafka’s novella *The Metamorphosis* exemplifies inhuman growth:

The metamorphosis that Gregor endures (invokes?), as will be the case for numerous cyberpunk characters of this late-twentieth-century genre, is therefore a way for him to retreat into different representational realms, where the repressive forces of a 'normal' world cannot exist. The more Gregor is transformed, the less he needs to think about human problems. The more Gregor is transformed, the farther away he gets from humanity, and the more he frees himself from any human demands. His inhumanity is his freedom. (Dyens 61)

The cyborg is inhuman, in large part, because it erodes binary logic. The mutual incorporation of human being and machine involves the breaking down of boundaries that, up until this point, were understood to be permanent, unquestionable.

2. Erodes/obsolesces binary logic

Viewed through binary logic, the boundaries between biological and technological, natural and artificial, human and machine, animate and inanimate, thought and process, autonomous and automated, real and virtual, constitute "one of the cornerstones of Western thought" (Gunkel and Dery qtd in Gunkel 335-336; see also Eglash; see also Fuchs; see also McLuhan). Splitting and separating, as a means of control, dominates Western military, economic, political, industrial, and linguistic logic: divide and conquer. Binary logic is "an opposition of two terms where the difference between the terms is thought to tell us something about each of them. So, what is to be 'feminine' gains some meaning by not being 'masculine,' and what it is to be 'strong' gains meaning if we know what 'weak' means" (Lister et al. 295). What is human gains meaning by not being machine, what is biological gains meaning by not being technological, what is real gains meaning by not being virtual, and so on. Historically, binary logic has imposed a hierarchy within the oppositional terms, along lines of power and control, understood in terms of self and other. That which is "not the self" is used to define the other: animal is "not human," woman is "not man," and so forth.

But the cyborg doesn't respect the boundaries of binary logic. The boundaries are transgressed, blurred, leaving in their place hybrids:

the virtual hand does not merely act as a prosthesis or replacement for the physical object, but, rather, it intensifies corporeality in the form of a 'technophilic body.' This process of hybridization

(i.e., the synthesis of human agency and technology) is the latest manifestation of cyborg agencies. Cyberspace is an experiential medium in which the transgression of epistemological and psychological boundaries is commonplace; categories such as object/subject, perception/action, and human/computer become somewhat unreliable when applied to experiences in cyberspace. The blurring of boundaries between humans and machines has allowed the emergence of hybrid positions. (Macauley & Gordo-López 436)

In the above example, the body (and intent) is transformed into information, is incorporated into the technological entity (in this case, cyberspace), is embodied in a mediated form (the virtual hand), responds to feedback from the technological entity, and thus extends its physical being. The example is the transgression of multiple binaries/boundaries, including human and machine, thought and process, real and virtual.

If the only way to be “whole” is to maintain the distinctions between human and machine, natural and unnatural, good and bad, then “it is, therefore, a devious monstrosity that not only challenges the boundaries that had differentiated the human form from the animal and the animal from the machine but also intentionally deforms the structure of all binary oppositions that construct and sustain Western epistemologies” (Gunkel 348). It is not, however, that the boundaries are altogether absent because the cyborg *retrieves equilibrium*.

3. Retrieves equilibrium

In the most basic sense, the cyborg retrieves equilibrium through its restorative and normalizing functions (Gray, Mentor, and Figuero-Sarriera 3; see also Hogle). The cyborg has the ability to counter poor eyesight with corrective lenses or repair a faulty heart with plastic valves. These new technologies, once introduced, require still more equilibriums be developed (McLuhan): the equilibrium that the nose, ears, and temple must develop, for example, with the frame that holds the corrective lenses, or the equilibrium the body’s immune system must develop with the plastic hardware now functioning as a heart.

In another sense, equilibrium is the result of antagonistic pairs, or “fixed oppositions,” counteracting one another to ensure “the stability and dialectical movement of the whole” (Baudrillard *Impossible Exchange* 6). Consider the following example:

‘for each muscle moving a limb one way, there is at least one other moving it in the opposite direction. The biceps which flexes our arm is counteracted or antagonized by the triceps, which extends or straightens it. Sherrington worked out the remarkable coordination between such antagonistic pairs of flexor and extensor muscles. They receive on every occasion exactly opposite commands from the command center. When one is made to contract by proprioceptive reflex, its antagonist is made to reflex simultaneously.’ (Lowenstein qtd in McLuhan and Fiore *War and Peace* 55)

Feedback requires binaries. Communication within the medium, between technology and biology, exists as feedback between a series of fixed oppositions—on and off, 0 and 1. Additionally, the cyborg, human *being* and machine in fixed opposition, recovers balance:

The real divested of the anti-real becomes hyperreal, more real than the real, and vanishes into simulation. Matter divested of anti-matter is doomed to entropy. By elimination of the void, it is condemned to gravitational collapse. The subject deprived of all otherness collapses into itself, and sinks into autism. The elimination of the inhuman causes the human to collapse into odium and ridicule. (Baudrillard *Impossible Exchange* 12)

“The cyborg establishes difference” (Goldberg 246) and then transgresses it:

Borders and transgressions are mutually dependent on each other. Only by crossing a border, at least in thought, can it be experienced as such. Ethic norms or group identities are regularly reinforced by discourses on that which is beyond the limit, on the ‘other(s).’ Conversely, crossings are only possible if there are borders to cross. For transgressions and hybrids to have any meaning and value, they must contradict established limits and bridge that which is otherwise separated. (Fornäs et al. 1)

The cyborg transgresses and blurs the boundaries between machine and organism but requires they exist nonetheless. While equilibrium requires the presence of boundaries, the hierarchies inherent in

binary logic remain eroded because of the fluidity of those boundaries. This fluidity, however necessary for maintaining the equilibrium of the whole, creates noise.

4. Reverses noise

The cyborg reverses noise. The postmodern construction of the body as rhetoric, as “thinking matter,” designates existence to the plane of consciousness:

We exist in order to inseminate this planet with representations, ideas, and culture, with conscious and thinking dynamics. This is the essence, the meaning of our existence. We are much more than simple masses of genes: We are also containers of representations, colonies of ideas, and systems of thought. (Dyens 6)

While the representations, ideas, and thoughts are often seen as socially constructed, the insemination is frequently viewed as the domain of the individual. Thus the inseminators of representations, ideas, and thoughts seek language that comes as close to “Mathematical plainness¹¹” (Lanham *Economics* 138) as possible, implying control and authority through clarity. Mathematical plainness is the requisite form of machine communication as well: 0 and 1. In Claude E. Shannon and Warren Weaver’s *Mathematical Theory of Communication* noise is what must be overcome in order to ensure mathematical plainness. Noise, in Shannon and Weaver’s model, is the cause of confusion, of message break-down. But the cyborg, very much a container of representations, colony of ideas, and system of thought, sees potential in noise, in convoluting representations, in confusing signifiers, in disrupting patterns.

In Haraway’s theory the cyborg “insists on noise,” (“Cyborg Manifesto” 176) calling attention to the boundaries it disrupts and the hierarchies it diminishes. McLuhan also reverses the historically negative understanding of noise. For McLuhan, noise, the unintentional signals, is part of the medium, “all the side-effects, all the unintended patterns and changes” (Cavell 168). The medium is the message, “hence, communication is not simply a matter of intentionality, which assumes an

¹¹ A “theory of communication that has dominated our thinking to the present day. . . The truth, like Adam and Eve before the Fall, is naturally naked. And the heart that delivers it should always be naked as well. These assumptions are so fundamental to how we think about communication that they inhere in the terminology we use to describe it: rhetoric versus reality; style versus substance” (Lanham *Economics* 138; see also Gunkel).

individual and solipsistic subject that then decides to communicate. Rather, it consists of a complex of unintentional signals that are always and already circulating throughout a particular social network” (Gunkel 343).

The cyborg creates noise—it destroys the individual through hybridization. The resulting side-effects disrupt the patterns that individuals use to understand and communicate the world around them. But “if pattern is the realization of a certain set of possibilities,” then “randomness is the much, much larger set of everything else, from phenomena that cannot be rendered coherent by a given system’s organization to those the system cannot perceive at all” (Hayles *Posthuman* 286) and it is the “much, much larger set of everything else” the cyborg seeks. In challenging hierarchies, retrieving equilibrium, and freeing itself from the burdens of humanity the cyborg opens itself to the much, much larger set of representations, ideas, and thought and all the “dangerous possibilities” (Haraway “Cyborg Manifesto” 154) that lie within.

The cyborgian ground, as revealed by McLuhan’s tetrad, is enhanced growth, eroded binary logic, retrieved equilibrium, and reversed noise. This ground, or the “very much larger area of inattention” (McLuhan and Power 5), defines the scale and form of cyborg association and action (see McLuhan *Understanding Media* 9).

The following examples apply the cyborgian ground to analyses of communication media that are “the extensions of man,” the machine half of the cyborg. The presence of the human half, however, is implicit. These analyses further locate the cyborg in communication theory and introduce how this ground can be used to understand the cyborg perspective.

Cell phone

1. Enlarge/enhances: growth (conversation as companion)	4. Reverses: noise (the unintended patterns of background conversation, text messaging)
3. Retrieves: equilibrium (recovers public/private)	2. Erodes/obsolesces: binary logic (public/private, print/oral)

The cell phone is one of the most visible figures in the cyborgian ground and thus a logical starting point for analysis. The cell phone enhances growth as all communication media enhance growth, by extending the senses and diminishing the boundaries of time and space. The text messaging function of the cell phone disrupts the boundaries of print and orality, transforming a

device that has been typically understood as a vehicle for oral communication into a vehicle for both oral and print communication.

And where the telephone extends the ear and the voice, the cell phone extends the conversation. Where once the individual called from home or office (or occasionally, the phone booth) but walked, rode, waited, ate, or otherwise conducted their daily lives without the ubiquitous presence of a telephone, now there is a constant companion, instant access to conversation. The fixity of traditional phone technology encouraged purposeful conversation, calls initiated for a specific reason. The accessibility of the cell phone necessarily changes the communicative aims of individuals, and conversation becomes a tool to ward off loneliness or to pass time. The message is often “I didn’t really have anything important to say,” adapting radical uselessness to the conversation, or conversation for conversation’s sake.

This constant conversation erodes the public/private dynamic. Phone conversations very literally taking place in the public domain in grocery stores, on the sidewalk, in restaurants, in theatres (during plays and movies!). And topics of conversation that were once considered the sphere of the private, like negotiating the complicated territory of personal relationship, are now public.

At the same time, the cell phone recovers the public through community and the private through greater intimacy. The cell phone recovers community in communities of practice for users and nonusers. Though ever decreasing in number, the individuals who elect not to use cell phones think of the technology, and the conversations that result, very differently than those individuals who do, especially in terms of the usefulness and intrusiveness. Individuals who use their cell phone to send text messages also recover community, complete with a language (txt language employs ‘r’ for ‘are’ or ‘b4’ for ‘before’) that generates “normative communicative behaviors that make interaction work as smoothly as possible” (Lister et al. 175). Furthermore, the cell phone recovers a time when people shared phone lines with the community—the partyline. Partyline technology allowed members of a community access to the personal conversations of all other members of the community. This access forced individuals to either modify their conversation or open their private lives up to the community. Though the comparison is only partial, as partylines allowed listeners access to both sides of the

conversation, the public nature of partyline, and subsequently the cell phone, requires participants to balance the usefulness of the technology with the openness of the conversation. And while cell phone conversations are becoming more public, their frequency and immediacy facilitates greater intimacy. Though family and friends are more dispersed geographically (in Western societies) they are also more available.

Finally, the cell phone reverses noise, due to the community involvement in the conversation. This involvement is often not intentional, but the presence of the community, even as background noise, changes the conversation. And the public nature of many private conversations reveals unintended patterns of communication for the conversant who, perhaps, modifies his or her speech because of the presence of others. This modification may require more effort on the part of the recipient to fill in the blanks of the conversation, or to develop some sort of coded speech (“If your boss is there, say ‘chicken.’”), or to delay the conversation until a more private setting can be found.

The text messaging function of the cell phone reverses noise literally, as it is, for the most part, a silent form of communication. Yet the text itself reverses noise, introducing new signifiers, or txt language, such as lol (laugh out loud), u (you), r (are), b (be), c (see), 4 (for), 2 (to, too), l8r (later), b4 (before), -oz- (-orr-, such that ‘soz’ = ‘sorry’), and btwn (between). This language makes easier the somewhat tedious process of “typing” via scrolling through the keypad for letters. The omission of punctuation, vowels, articles, and grammar considered to be extraneous creates new patterns based on old signifiers, but meaning is still conveyed. The predictive text software function of cell phones, where the phone participates in the conversation by filling in partial words¹², also reverses noise. This function increases the potential for unintended patterns (“Pls pick up *clock* fr dryclnrs”), should the user not pay close enough attention and accept the incorrect word as suggested by the cell phone.

From a cyborg perspective the cell phone is more than a highly portable reincarnation of the telephone and social networking and dating websites are more than an online incarnation of the bar.

¹² So while typing c-l-o, the phone may choose to add s-e, u-d, n-e, c-k, or t-h-e-s to spell close, cloud, clone, clock, or clothes, based on its interpretation of the previous text.

Social Networking and Dating Websites

1. Enlarges/enhances: growth (communicating self)	4. Reverses: noise (mosaic)
3. Retrieves: equilibrium (confinement/expansion, isolation/inclusion)	2. Erodes/obsolesces: binary logic (real/virtual)

The social networking (MySpace, Friendster, Facebook¹³) and dating websites (Match, eHarmony, AmericanSingles) enhance growth just as the protists enhance cellular growth as “supportive adoptive relatives” (Haraway *Cyborgs and Symbionts* xviii). Here, the social networking and dating websites facilitate the propagation of the human species, helping individuals expand their clan, or support network, and even attract a mate. Participants present themselves as an amalgamation of textual, visual, audio, and video signifiers. In some cases, the participants complete a personality profile, which a computer program analyzes and then matches with individuals it feels compliments the given profile. In addition to the popularity of these sites for networking, their apparent success in bringing strangers together in permanent relationships supports the characterization as adoptive relatives, fulfilling the match-making role that family members once held (Herbold email). Such popularity and success is also a testament to the ease with which the human *being* can communicate the self in a mediated environment.

These social networking and dating websites also erode the binary logic of real and virtual. Participants use the forum to create a representation of their “real” self (sometimes more “real” than “actual”) in multiple mediated forms (primarily textual and visual, though increasingly including audio and video components). This format allows individuals to create or recreate their true selves, perhaps redefining their gender, or background, or personality, blurring the boundaries of real and virtual. Moreover, if, according to the hierarchies imposed by binary logic, virtual is “not real” and therefore less desirable, then virtual interactions and virtual relationships are less desirable than real interaction and real relationships. And yet the virtual relationships, conducted primarily through mediated (and often text-based—email, chatting, blogs, blog comments, etc.) interactions, are seen to be as

¹³ These social networking sites extend beyond purely human relationships. Please refer to Dogster, Catster, and Petster for examples of social networking around real pets in virtual form.

meaningful as real relationships. Indeed, individuals will often transfer previously established “real” relationships into the mediated environment of social networking websites.

The social networking and dating websites retrieve equilibrium. In order to participate, the individual must necessarily confine and isolate herself, yet her virtual experience is far from confined or isolated. The boundaries of the screen defines, very literally, the virtual self, limiting the form of the virtual to a 12"x14" section of real space. Similarly, the real self is confined by space and time. And anyone who has tried to physically share a computer quickly comes to realize that it is a tool of the individual and encourages a one-to-one interaction ratio. Yet within the virtual space of the social networking and dating websites, expansion of the virtual self is presumed to be limitless. The isolation encouraged by the technology is balanced by the inclusion of the websites. Within these virtual spaces, the virtual self is no longer isolated, but can interact with hundreds of thousands of individuals, all with the potential to develop into more meaningful relationships. The isolation of geography¹⁴ is also less of a factor, as the technology¹⁴ provides individuals from different corners of the world a (virtual) space to meet.

Lastly, the social networking and dating websites reverse noise. The virtual self is not literally text and graphics, but a combination of zeros and ones, a language that is pure noise to the majority of individuals who have a virtual self. Programmers code the zeros and ones into functions (save, print, cut, paste, close, minimize, send, etc.), oftentimes represented as icons that make up part of the interactive mosaic that is the interface. Within the interface, participants use the functions to create their own mosaic. The incorporation of multiple genres of communication has fragmented the genres. The virtual self is not entirely textual, or visual, or audio, or video, but a reconfiguration of the fragments into a new pattern, a much larger set of possibilities (Hayles and Haraway) for the human *being*.

The tetradic analyses of the cell phone and social networking and dating websites, like the refrigerator and satellite before them, move the focus away from the uses of these particular technologies and toward their impact within the medium. The cyborgian ground suggests a new

¹⁴ That said, the infrastructure that supports new technology *is* affected by geography and thus is a limiting factor on unlimited global access.

perspective, the cyborg perspective, that embraces contradiction (erodes binary logic and retrieves equilibrium), confusion (reverses noise), and uselessness (enhances inhuman growth), consequently foretelling a new direction for the foundational issues of communication theory.

Implications/Conclusions

The cyborg has limited presence in communication theory. Instead, scholars have focused their attention more on the traditional issues of communication translated by digital technologies, “what happens when text moves from page to screen” (Lanham 31), or from page to email, website, chatroom, blog, etc. Digital communication theory retains fundamental concerns of knowledge, reason, reality, authority, understanding, argument, persuasion, meaning, objectivity, and agency, while focusing on issues of nonlinearity, hypertextuality, interactivity, hypermediacy, immediacy, and remediation. These discourses often find analogies in print, for example, comparing MUDs and MOOs (Multi-User Domain and Multi-User Domain Object-Oriented) to “the traditional 19th- or 20th- century novel” and its emphasis on “the definition and maturation of character” (Bolter 199). More common comparisons include: the Internet to a library, electronic text to a codex, email to letters and the telegraph, and so forth.

To be sure, even with the focus on “what happens when text moves from page to screen” the transgressed boundaries that are central to Haraway’s cyborg are not without mention in current communication discourse. But the historical boundary between author and reader, and the hierarchies of authority, meaning, and control that it defines, is at issue in digital communication:

hypertext writers have shown how the electronic medium can accommodate a different relationship between author and reader. No longer an intimidating figure, an electronic author assumes the role of a craftsperson, working with prescribed materials and goals. She works within the limitations of a computer system, and she imposes further limitations upon her readers. Within those limits, however, her reader is free to move. If in print the subjectivity of the author was expressed at the expense of that of the reader, in electronic hypertext two subjectivities, the author’s and the reader’s, encounter one another on more nearly equal terms. The reader may well become the author’s adversary, seeking to make the text over in a direction that the author did not anticipate. (Bolter 168; see also Lister et al. 40-41)

Similar arguments have been made for email, and the difficulty of establishing authority when original messages can be modified and sent out again (Lister et al. 19).

The cyborg is more than digital communication, more than moving text from page to screen. The cyborg exists “in terms of communication” (Gunkel 342)—the medium is the message:

Writing is pre-eminently the technology of cyborgs, etched surfaces of the late twentieth century. Cyborg politics is the struggle for language and the struggle against perfect communication, against the one code that translates all meaning perfectly, the central dogma of phallogocentrism. That is why cyborg politics insist on noise and advocate pollution, rejoicing in the illegitimate fusions of animal and machine. (Haraway 176)

The cyborg is the hybridization of the machine and the organism through physical and rhetorical penetration. Though biology and technology “have traditionally been considered primarily the domain of the real” (Payne) the hybridization of the two realities results in the virtual, simultaneously unreal and more than real. The cyborg floats “suspended between points of objectivity, being constituted and reconstituted in different configurations in relation to the discursive arrangement of the occasion” (Gunkel 345). The different configurations open the cyborg perspective to the opportunity of (inhuman) growth, the breakdown of binaries, the support of equilibrium, and the possibility of noise. Thus the fundamental issues of communications theory all merit reexamination through the cyborg perspective: How can we explain the rhetorical force of the cyborg? What are the implications of inhumanity on communications? If thought is radically useless, is it also pointless? If the cyborg abolishes hierarchies, how do we determine issues of ethics? Neutrality in communication has been unachievable since the inception of language and even if it were achievable, is it desirable? Is equilibrium a new form of persuasion? How can we understand randomness without patterns? Is the ultimate goal of the transgressed boundaries a universal reality? Do the blurring of boundaries inhibit argument and thus limit growth?

For example, one of Clynes and Kline’s goals for the cyborg was to allow astronauts the freedom to focus on their “new enlarged experience” (Gray “Clynes” 36). But as Chris Hables Gray, Heidi J. Figueroa-Sarriera, and Steven Mentor point out, the new enlarged experience of the cyborg may be beyond our capability of expression:

If every important part of human life—birth, education, sex, work, aging, death—is transformed by intimate connections with technologies, then the language of technology will begin to ‘invade’ the ways we express and perceive these experiences. Just as Frankenstein’s monster. . . struggled to learn to speak as humans, we ‘humans’ will struggle to speak as cyborgs, to find the words to express very new experiences. (6)

To this point, the example of Kevin Warwick, professor of cybernetics at Reading University in Reading, U.K., who has implanted sensors in his arm that allow him to directly interface his nervous system to computers in an effort to attain a non-human sense. Here he describes his first interface: “To describe what I actually felt inside is almost impossible. There was no question of my brain taking three months or even three minutes to adapt: it was on to the new, sensory information straight away. I felt exhilarated and on a high. It was tremendous. . . . It felt absolutely incredible” (263). Warwick’s experience brings to light questions regarding the cyborg and communication—Is understanding the cyborg experience predicated on a new vocabulary? The txt language and the textual, visual, audio, and video fragments of the digital interface create new signifiers and new patterns allowing individuals new forms for their communication. And admittedly, shared experience would be a step in the right direction, but that returns us to questioning how to establish reality. Similarly, how can we ascertain the experience of the other half of the cyborg—the machine half?

Warwick, in the above example, embraces the transgression of boundaries and experiences (inhuman) growth. Nevertheless something, perhaps lack of vocabulary, perhaps noise, limits his ability to discuss the experience. And what’s the point of being a cyborg if we have no way to talk about it?

The potential of the cyborg for expanding communication discourse is greater than the preliminary overview I have provided here. It does not, at least initially, promise to simplify or clarify any of the long-standing issues of communication discourse. On the contrary, the cyborg promises to blur the established meanings, realities, authorities, reasoning, arguments, and understanding that have, for so long, provided a foundation for critical work. And yet, if, as Stephan Toulmin argues, “evolution, not revolution, is the proper model for conceptual change in a discipline” (Bizzell and

Herzberg 1411), then the evolution of the cyborg, and its monstrous perspective, foretells of a monstrous conceptual change for communication theory.

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